

Technical Report

Spring 2021

Michigan Student Test of Educational Progress

(M-STEP)

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Executive Summary

In June 2014, the Michigan legislature required the Michigan Department of Education (MDE) to develop a new assessment to administer in the spring of 2015. MDE, in conjunction with its testing vendors, worked to create a new assessment system called the Michigan Student Test of Educational Progress, or M-STEP. M-STEP is designed to effectively measure student mastery and growth in comparison to Michigan state standards. The assessment program is made up of four content areas: English Language Arts (ELA), mathematics, science, and social studies. ELA and mathematics are assessed in grades 3–7. Science and social studies are assessed in grades 5, 8, and 11. The designs for the ELA and mathematics assessments are based on assessments provided by the Smarter Balanced Assessment Consortium (Smarter Balanced or SBAC) with Michigan-specific blueprints. The science and social studies assessments are designed specifically for Michigan. Spring 2021 was the first operational assessment year aligned to the new Michigan state science standards after three years of field testing.

This technical report addresses all phases of the testing cycle with the intention of providing evidence to support the validity of the M-STEP summative assessment program. All subsequent chapters of this report constitute evidence for the validity argument that M-STEP was developed with rigor, implemented with fidelity, and validated psychometrically.

E.1 ELA and Mathematics

MDE partners with Smarter Balanced, utilizing its ELA and mathematics test items, and Data Recognition Corporation (DRC) for the creation of M-STEP ELA and mathematics assessments in grades 3–7. Smarter Balanced member states retain flexibility regarding how to customize the assessments so that they may best be used as part of each state's approach to improving their local educational systems. Michigan has taken advantage of this in 2021 by not only customizing the M-STEP blueprints, but also adding passage-based writing (PBW) items to the ELA assessments to assess writing standards. This allowed Michigan to reduce the ELA and mathematics assessments to a legislatively mandated three-hour median testing time (combined) while retaining a writing task in all grades. As a hybrid of the Smarter Balanced assessments and Michigan-selected PBW prompts for ELA, the M-STEP assessments are a key part of preparing all Michigan students for success in college and career readiness.

E.2 Science and Social Studies

M-STEP items for science and social studies are written and reviewed by Michigan educators. Teachers receive training in writing items for standardized assessment and write items testing specific Michigan content standards. Committees of educators review the items for content validity and potential bias issues. These reviews take place both before students see the items on a field test and using student data after they have been field tested. MDE staff and contractor content specialists provide guidance and review throughout this process, ultimately selecting the final items that appear on each test form to cover the full range of Michigan content standards.

E.3 MDE Office of Educational Assessment and Accountability (OEAA)

MDE's Office of Educational Assessment and Accountability (OEAA) has the responsibility of carrying out the requirements in state and federal statutes and rules for statewide assessments. The office oversees the planning, scheduling, and implementation of all major assessment activities and supervises MDE's testing contractors (i.e., DRC and Measurement Incorporated). In addition, the MDE staff from OEAA, in collaboration with outside contractors, conducts quality control activities for every aspect of the development and administration of the assessment program. For additional details for those groups, please refer to Appendix F. OEAA also actively monitors the security provisions of the assessment program.

E.4 Michigan Testing Contractors

DRC is MDE's item development contractor. DRC is responsible for providing test development content leads who work in conjunction with OEAA's content leads. DRC works with OEAA to develop test items. DRC is also a liaison between the Smarter Balanced item bank and OEAA test development staff. 99% of M-STEP assessments are administered online. M-STEP is delivered through DRC's online test engine. DRC test development staff are responsible for rendering test items according to OEAA's style guide. Each item is reviewed by both DRC and OEAA content leads to ensure each student is presented with properly formatted test items that are clear and engaging and to ensure the content of each item replicates how the item appears in the item bank.

Measurement Incorporated is Michigan's contractor for paper/pencil materials, handscoring, and reporting. Measurement Incorporated is responsible for the development, distribution, and collection of all paper/pencil test materials as well as the monitoring of test security. Measurement Incorporated produces accommodated testing materials based on the test maps OEAA provides and in accordance with industry standards. Measurement Incorporated scores all the PBW prompts using Michigan-developed rubrics. Once testing is complete, Measurement Incorporated is responsible for developing and providing student results.

E.5 Michigan's Assessment System

Michigan's assessment system is a comprehensive, standards-based system. M-STEP is an accountability assessment, which means that it is used to evaluate school and district success in Michigan's accountability system. Other assessments exist for special populations of students, such as students with significant cognitive disabilities or English learners. All students in grades 3–8 and 11 are required to take Michigan's standards-based accountability assessments. Michigan's accountability assessments are listed in Table E-1 and are described in more detail in Section 3.3.

Table E-1. Michigan Accountability Assessments

Test	Content	Grades
M-STEP	Mathematics	3–7
M-STEP	ELA	3–7
M-STEP	Science	5, 8, 11
M-STEP	Social Studies	5, 8, 11
PSAT 8/9	Mathematics	8
PSAT 8/9	ELA	8
SAT	Mathematics	11
SAT	ELA	11
MI-Access (alternate assessment)	Mathematics	3–8, 11
MI-Access (alternate assessment)	ELA	3–8, 11
MI-Access (alternate assessment)	Science	4, 7, 11
MI-Access (alternate assessment)	Social Studies	5, 8, 11
WIDA	Listening	1–12
WIDA	Reading	K–12
WIDA	Speaking	K–12
WIDA	Writing	1–12

E.6 Changes from Previous Administration

There was no spring 2020 administration due to the first SARS-CoV-2 pandemic. The first wave of the pandemic spread in the United States just before the scheduled assessments, and requirements were suspended at the state and federal waivers. The spring 2021 administration took place while Michigan was experiencing a regional wave in infections. MDE applied for and was denied another federal assessment waiver. A federal accountability waiver along with federal guidelines led to the rule that schools were required to *offer* the assessments, but students were not required to *take* them. The effects of the pandemic were uneven, both throughout the academic year and during assessment administration, leaving some schools mostly unaffected while others had no in-person learning and almost no students assessed. Michigan districts made decisions about instructional modality monthly throughout the school year. Assessment participation levels were far lower than usual, approximately 70% instead of nearly 100%. There were observed differences in both instruction and assessment by geographic area, student population, and enrollment. These non-random differences created uneven participation among demographic subgroups of students.

The most significant change to the structure of M-STEP between spring 2019 and spring 2021 was the return of the operational science assessment after three years of field testing. This was the first year of assessment under the updated science standards, using a new cluster design in the assessments.

E.7 Overview of This Report

Subsequent chapters of this technical report document the major activities of the testing cycle. This report provides comprehensive details that confirm that the processes and procedures applied in the M-STEP program adhere to appropriate professional standards and practices of educational assessment. Ultimately, this report serves to document evidence that valid inferences about Michigan student performance can be derived from the M-STEP assessments. Note that part of this report is intended to be utilized in tandem with the *Smarter Balanced 2014–15 Technical Report* (2016) and *Smarter Balanced 2017–18 Technical Report* (2018), while providing additional Michigan-specific validity and reliability information.

Each chapter of this report details the procedures and processes applied in M-STEP as well as the results. Each chapter also highlights the meaning and significance of the procedures, processes, and results in terms of validity and the relationship to the *Standards for Educational and Psychological Testing* (AERA, APA & NCME, 2014). Below is a brief overview of the contents of this report.

Chapter 1, "Background of Spring 2021 M-STEP Assessments," describes the background and history of M-STEP.

Chapter 2, "Uses of Test Scores," describes the use of the assessment scores and touches on the validity arguments the technical report intends to address.

Chapter 3, "Test Design and Item Development," describes the involvement of Michigan educators in the item and assessment development process. The assessment development process and the involvement of Michigan educators in that process formed an important part of the validity of M-STEP. The knowledge, expertise, and professional judgment offered by Michigan educators ultimately ensured that the content of M-STEP formed an adequate and representative sample of appropriate content, and that content formed a legitimate basis upon which to derive valid conclusions about student performance. This part of the technical report thus addresses Standard 4.6 of the *Standards* (AERA, APA, & NCME, 2014, p. 87). It shows that the assessment design process, and the participation of Michigan educators in that process, provides a solid rationale for having confidence in the content and design of M-STEP as a tool from which to derive valid inferences about Michigan student performance. This chapter also addresses AERA, APA, and NCME (2014) *Standards* 3.1,3.2, 4.0, 4.1, 4.2, 4.12, and 7.2.

Chapters 4 and 5, "Test Administration Plan" and "Test Delivery and Administration," describe the processes, procedures, and policies that guided the administration of M-STEP, including accommodations, security measures, and written procedures provided to assessment administrators and school personnel. These chapters address AERA, APA, and NCME (2014) *Standards* 4.15, 4.16, 6.1, 6.2, 6.3, 6.4, 6.6, 6.7, and 6.10.

Chapter 6, "Operational CAT," supports Chapter 3 in showing how assessment specification documents, derived from earlier developmental activities, guided the final phases of assessment development and ultimately yielded the assessments administered to students. This chapter thus addresses AERA, APA, and NCME (2014) *Standards* 1.11, 3.1, 3.2, 3.5, 4.0, 4.6, 4.7, 4.8, 4.10, 4.12, 7.2, 8.4, 12.4, and 12.8.

Chapter 7, “Scoring,” explains the procedures used for scoring M-STEP autoscored items and handscored items. Chapter 7 adheres to AERA, APA, & NCME *Standards* 4.18, 4.20, 6.8, and 6.9.

Chapter 8, “Operational Data Analyses,” describes the data used for calibration and scaling. For content areas for which they are appropriate, raw-score results and a classical item analysis were provided and served as a foundation for subsequent analyses. This chapter also describes the calibration and scaling processes, procedures, and results. Some references to introductory and advanced discussions of Item Response Theory (IRT) are provided. This chapter thereby demonstrates adherence to AERA, APA, and NCME (2014) *Standards* 1.8, 5.2, 5.13, and 5.15.

Chapter 9, “Test Results,” presents scale-score results and achievement level information. Scale-score results provide a basic quantitative reference to student performance as derived through the IRT models that were applied. This chapter thus addresses AERA, APA, and NCME (2014) *Standards* 5.1, 6.10, 7.0, and 12.18.

Chapter 10, “Performance-Level Setting,” provides background on the standard-setting activities and functions to address AERA, APA, and NCME (2014) *Standards* 5.21 and 5.22.

Chapter 11, “Fairness,” address validity evidence, specifically with respect to issues of bias. It demonstrates adherence to AERA, APA, and NCME (2014) *Standards* 3.1, 3.2, 3.3, 3.4, 3.5, and 3.6.

The first half of Chapter 12, “Reliability and Evidence of Construct-Related Validity,” demonstrates adherence to the AERA, APA, and NCME (2014) *Standards* through several analyses of the reliability of the 2021 M-STEP. Information on reliability/precision, standard error of measurement (SEM), conditional standard error of measurement (CSEM), and a detailed examination of classification consistency and accuracy are provided. The first half of Chapter 12 thereby addresses AERA, APA, and NCME (2014) *Standards* 2.0, 2.3, 2.13, and 2.19.

The second half of Chapter 12 addresses validity evidence, including assessment content, response processes, issues of bias, dimensionality analysis, relations to other assessments, and consequences of assessment use. It demonstrates adherence to AERA, APA, and NCME (2014) *Standards* 3.16 and 4.3. This chapter ends with a section addressing the development of validity arguments for M-STEP.

MDE and its testing vendors have maintained an unwavering focus on the gathering of validity evidence in support of M-STEP throughout the development, administration, analysis, and reporting of the 2021 M-STEP administration.

Chapter 1: Background of Spring 2021 M-STEP Assessments

1.1 Background of M-STEP

The Michigan Department of Education (MDE), partnering with Smarter Balanced Assessment Consortium (Smarter Balanced or SBAC), utilizes the ELA and mathematics test items from Smarter Balanced and the passage-based writing (PBW) prompts from Data Recognition Corporation (DRC) for the creation of M-STEP ELA and mathematics assessments. MDE uses test items written by Michigan educators for the M-STEP science and social studies assessments. MDE also partners with DRC for all online delivery, item development, and some psychometric work for the program; and with Measurement Incorporated for the paper/pencil and reporting portions of the program.

In the spring 2021 administration of M-STEP, 99% of Michigan students who took M-STEP tested online. Paper/pencil tests were available for accommodated testing for individual students and for MDE-approved schools that were unable to test online.

1.2 Purpose and Design of ELA and Mathematics M-STEP with Respect to the Smarter Balanced Assessment

Summative assessments measure students' progress toward college and career readiness in ELA and mathematics. These assessments are given at the end of the school year as a computer adaptive test (CAT).

Page ix of the *Smarter Balanced 2017–2018 Technical Report* (2018) details the purposes of the Smarter Balanced summative assessments. Represented in part for this report, the "assessments are to provide valid, reliable, and fair information about" the following:

- students' ELA and mathematics achievement with respect to those Common Core State *Standards* (CCSS) measured by the ELA and mathematics summative assessments,
- whether students prior to grade 11 have demonstrated sufficient academic proficiency in ELA and mathematics to be on track for achieving college readiness,
- students' annual progress toward college and career readiness in ELA and mathematics,
- how instruction can be improved at the classroom, school, district and state levels,
- students' ELA and mathematics proficiencies for federal accountability purposes and potentially for state and local accountability systems, and
- students' achievement in ELA and mathematics that is equitable for all students and subgroups of students.

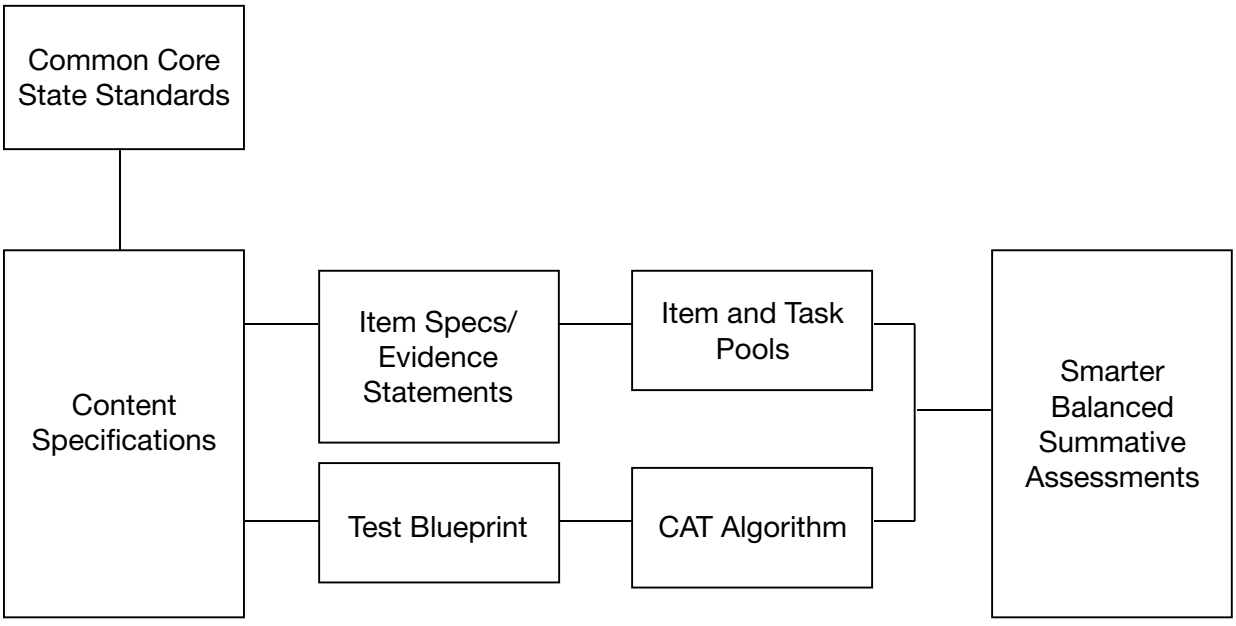
As stated on page 4-4 of the *Smarter Balanced 2017–2018 Technical Report* (2018) summative assessment scores will

- accurately describe both student achievement (i.e., how much students know at the end of the year) and student growth (i.e., how much students have improved since the previous year) to inform program evaluation and school, district, and state accountability systems.
- include writing at every grade and ask students to solve multistep, real-world problems in mathematics.
- capitalize on the strengths of CAT (i.e., efficient and precise measurement with a quick turnaround of results).
- provide valid, reliable, and fair measures of students' progress toward, and attainment of, the knowledge and skills required to be college- and career-ready.
- measure the breadth and depth of the CCSS across the full spectrum of student ability by incorporating a variety of item types (including items and tasks scored by expert raters) that are supported by a comprehensive set of accessibility resources.

The Smarter Balanced assessment system is a valid, fair, and reliable approach to student assessment that provides educators, students, and parents with meaningful results and actionable data to help students succeed.

In developing and maintaining a system of assessments, Smarter Balanced ensures that the assessments' measurement properties reflect industry standards for content, rigor, and performance. A key step in this direction is to ensure that the Smarter Balanced assessments are aligned with the CCSS, which Michigan adopted in 2010. Figure 1-1 (originally from the *Smarter Balanced 2017–2018 Technical Report*, 2018, p. 4-2), shows the components of the assessment.

Figure 1-1. Components of the Smarter Balanced Assessment Design

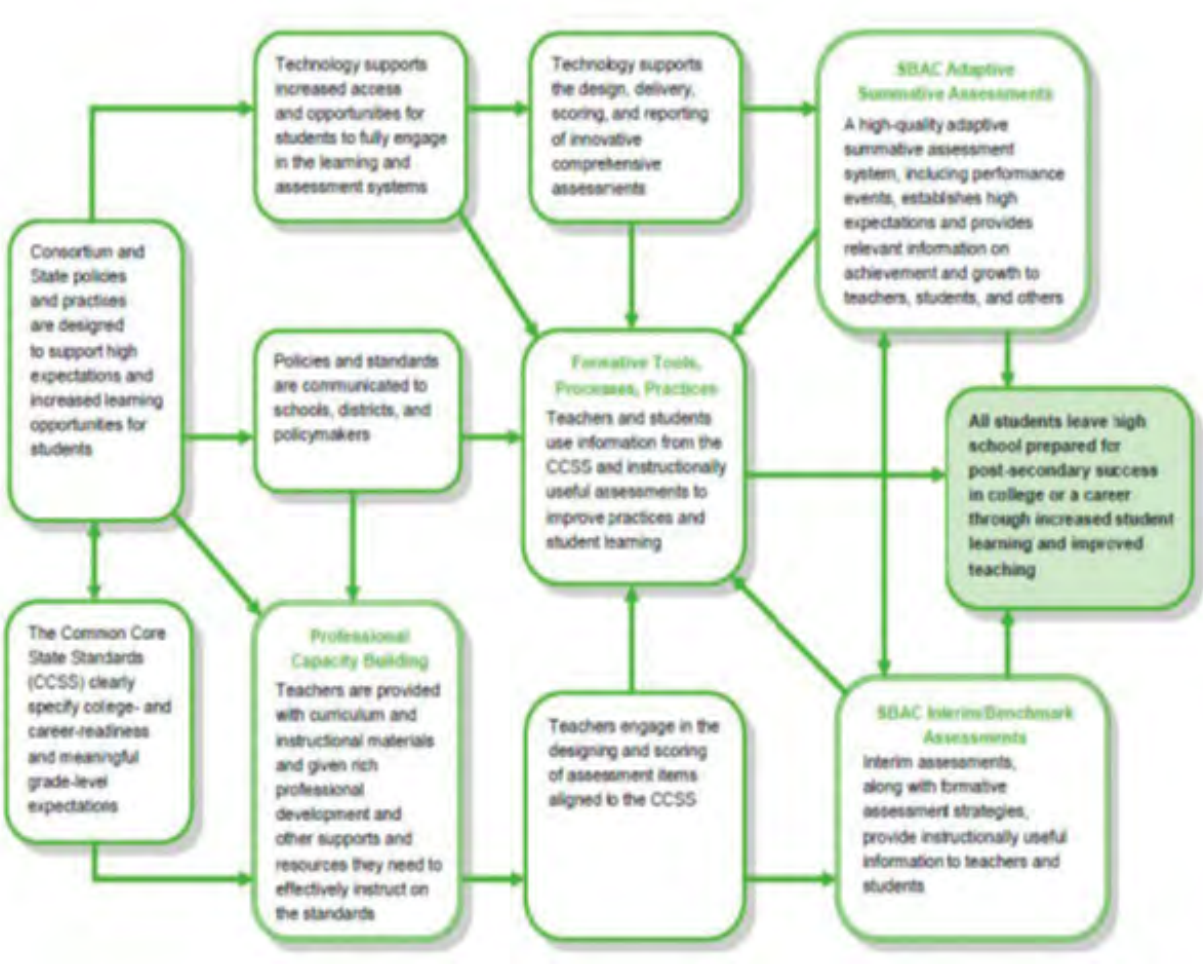


1.2.1 Background on Smarter Balanced

Smarter Balanced supports the development and implementation of learning and assessment systems to reshape education in member states in order to improve student outcomes. Through expanded use of technology and targeted professional development, the Consortium's Theory of Action calls for the integration of learning and assessment systems, leading to more informed decision-making and higher-quality instruction and ultimately increasing the number of students who are well prepared for college and careers.

The ultimate goal of the Smarter Balanced assessment system is to ensure that all students leave high school prepared for postsecondary success in college or a career through increased student learning and improved teaching. This approach suggests that enhanced learning will result from high-quality assessments that support ongoing improvements in instruction and learning. A quality assessment system strategically balances summative, interim, and formative components (Darling-Hammond & Pecheone, 2010). An assessment system must provide valid measurement across the full range of performance on common academic content, including assessment of deep disciplinary understanding and higher-order thinking skills increasingly demanded by a knowledge-based economy. Figure 1-2 presents an overview of the Smarter Balanced Theory of Action (2011, pg. 7).

Figure 1-2. Overview of Smarter Balanced Theory of Action



1.2.2 Test Blueprints

Part of the innovative aspect of the mathematics and ELA assessments is that the test blueprints sample the content domains using both a CAT engine and a PBW prompt. The test blueprints can be inspected to determine the contribution of the CAT and PBW components in a grade and content area toward the construct intended to be measured. Another aspect of the assessments is the provision of a variety of both autoscored and handscored item types. The contribution of these item types is specified in the Smarter Balanced test blueprints.

In February 2015, the governing members of Smarter Balanced adopted blueprints for the summative assessments of ELA and mathematics for grades 3–8 (Smarter Balanced, 2015a; Smarter Balanced, 2015b). These blueprints were fully implemented in the 2014–15 school year and were in effect in the 2020–21 school year for grades 3-7, with grade 8 changing to the PSAT 8/9 in spring 2019.

Since the 2017–18 school year, Michigan has slightly modified the Smarter Balanced blueprints for ELA and mathematics. To reduce testing time, the use of Performance Tasks was eliminated for both mathematics and ELA. In ELA, the PBW prompt was added to assess the writing standards. The net result was that, while the blueprints were modified, all students continued to receive a writing claim score. In mathematics, Michigan added items to Claims 2 and 4 to address any blueprint gaps caused by the removal of the PT items. This testing plan has been continued for the 2020–2021 school year. The ELA and mathematics blueprints are located in Chapter 3, Sections 3.3.1 and 3.3.2. Due to the drift from the original Smarter Balanced blueprint, it should be noted that Michigan conducted a standards validation in July 2018 to review the M-STEP cut scores and determine if any changes needed to be made. More information can be found in Chapter 10 and Appendix E.

1.3 Purpose and Design of the Science and Social Studies M-STEP

The summative assessments determine students' progress toward college and career readiness in science and social studies. These are given at the end of the school year. These assessments are primarily delivered online (99%) with paper/pencil and accommodated options. The science and social studies assessments are fixed forms. The summative assessments accurately describe student achievement (i.e., how much students know at the end of the year) to inform program evaluation and school, district, and state accountability systems.

The blueprints for science and social studies contain no constructed-response items, leading to a quick turnaround of results.

The science and social studies blueprints are located in Chapter 3, Sections 3.3.3 and 3.3.4.

Chapter 2: Uses of Test Scores

Validity is an overarching component of M-STEP. The following excerpt is from the *Standards for Educational and Psychological Testing* (the *Standards*) (AERA, APA, & NCME, 2014):

> Ultimately, the validity of an intended interpretation of test scores relies on all the available evidence relevant to the technical quality of a testing system. Different components of validity evidence . . . include evidence of careful test construction; adequate score reliability; appropriate test administration and scoring; accurate score scaling, equating, and standard setting; and careful attention to fairness for all test takers, as appropriate to the test interpretation in question. (p. 22)

As stated in the *Standards*, the validity of a testing program hinges on the use of the test scores. Validity evidence that supports the uses of M-STEP scores is provided in this technical report. This chapter examines some possible uses of the test scores.

As the *Standards* note, "validation is the joint responsibility of the test developer and the test user" (AERA, APA, & NCME, 2014, p. 13). For ELA and mathematics, the Smarter Balanced Assessment Consortium (Smarter Balanced) does not control aspects of test administration and test use. The Smarter Balanced members deliver the test, score operational items, and provide reports. Members use Smarter Balanced test scores in their own accountability models. In the *Smarter Balanced 2014–15 Technical Report* (2016)[1] and the *Smarter Balanced 2017–18 Technical Report* (2018), guidelines for administration and use are documented. Please see Chapter 1 of the *Smarter Balanced 2017–18 Technical Repor*t for the complete validity argument related to ELA and mathematics, member documentation on specific test administration procedures, reporting, and use for the Smarter Balanced assessments.

The following chapters of this technical report provide additional evidence for these uses as well as technical support for some of the interpretations and uses of test scores. The information in Chapters 3 through 12 also provides a firm foundation that M-STEP measures what it is intended to measure. However, this technical report cannot anticipate all possible interpretations and uses of M-STEP scores. It is recommended that policy and program evaluation studies, in accordance with the *Standards*, be conducted to support some of the uses of the test scores.

2.1 Uses of Test Scores

The validity of a test score ultimately rests on how that test score is used. To understand whether a test score is being used properly, the purpose of the test must first be understood. The intended uses of M-STEP scores include

- identifying Michigan students' strengths and weaknesses;
- communicating expectations for all students;
- evaluating school-, district-, and/or state-level programs; and

[1] https://portal.smarterbalanced.org/library/en/v2.0/2014-15-technical-report.pdf

- informing stakeholders (i.e., teachers, school administrators, district administrators, Michigan MDE staff members, parents, and the public) on progress toward meeting state academic performance standards and meeting the requirements of the state's accountability program.

This technical report refers to the use of the test-level scores (i.e., scale scores and performance levels), claim-level scores, and claim performance indicators[2].

2.2 Test-Level Scores

At the test level, an overall scale score that is based on student performance on the entire test is reported. In addition, an associated performance level is reported. These scores indicate, in varying ways, a student's performance in ELA, mathematics, or social studies. Test-level scores are reported at four reporting levels: the state, school district, school, and student.

Items on the ELA and mathematics test forms were developed by Smarter Balanced. Items on the braille and enlarged print ELA and mathematics forms were also developed by Smarter Balanced. Final pencil/paper and accommodated forms were created using the items developed by Smarter Balanced, but the item selections were finalized by MDE and DRC content development staff. For social studies, all items and test forms were developed by MDE test development staff.

The following sections discuss two types of test-level scores that are reported to indicate a student's performance on M-STEP: (1) the scale score, and (2) its associated level of performance.

2.2.1 Scale Scores

A scale score indicates a student's total performance for each content area on M-STEP. A "scale score" is a statistical conversion of the "raw score" (numbers of questions that are answered correctly and incorrectly) that takes into account differences in questions students might see on different versions of the test across years, forms, or adapted versions of the test. In other words, the scale score represents the student's level of performance, where higher scale scores indicate higher levels of performance on the test and lower scale scores indicate lower levels of performance. Scaling scores permits comparison of assessment results across different test administrations within a particular grade and content area.

Scale scores are not comparable across grade levels or content areas. Scores are scaled within grade levels, so even if the same numbers are used in different grades, it does not mean that the scales form a single "vertical scale." M-STEP is a standards-based test that assesses the standards for each grade, so a very high score on grade 4 standards does not provide a valid estimate of how that student performs on grade 5 standards.

[2] Claim scores are only available for ELA and Math.

Details of the development of M-STEP scale scores are described in Chapter 10, Section 10.3. The scale score is stable because it allows for students' scores to be reported on the same scale regardless of which year the students took the assessment and which form of the assessments the student took. Schools can use scale scores to compare the performances of groups of students across years. These comparisons can then be used to assess the impact of changes or differences in instruction or curriculum. The scale scores can be used to determine whether students are demonstrating the same skill and ability across cohorts within a grade and content area.

2.2.2 Levels of Performance

A student's performance on M-STEP is reported in one of the four levels of performance: Not Proficient, Partially Proficient, Proficient, and Advanced. The cut scores for the ELA and mathematics performance levels were established by Smarter Balanced during the standard setting, which occurred in three phases: online panel, in-person workshop, and cross-grade review in October 2014. These cut scores were then evaluated and confirmed in the Michigan standards validation in July 2018 (see Appendix E). The cut scores for the social studies performance levels were established by MDE in August 2015.

M-STEP performance levels reflect the performance standards and abilities intended by the Michigan legislature, Michigan teachers, Michigan citizens, and MDE. Descriptions of each performance level in terms of what a student should know and be able to do are provided by MDE and are referenced in the M-STEP & MME Performance Level Descriptors.[3]

2.2.3 Use of Test-Level Scores

M-STEP scale scores and performance levels provide summary evidence of student performance. Classroom teachers may use these scores as evidence of student performance in these content areas. At the aggregate level, district and school administrators may use this information for activities such as planning curriculum. The results presented in this technical report provide evidence that the scale scores are valid and reliable indicators of student performance.

2.3 Claim-level Sub-scores for ELA and Mathematics

Claim-level sub-scores are scores on important domain areas within each content area. In most cases, sub-scores correspond to claims, but in mathematics, Claims 2 and 4 are so intertwined that they are reported as a single sub-score. The claims and reporting categories (sub-scores) are primary structural elements in test blueprints and item development. Figures 2.2 through 2.15 from the *Smarter Balanced 2017–18 Technical Report* (2018) provide information on the claims or sub-score reporting categories for ELA and mathematics.

The claim-level performance indicators are reported for ELA and mathematics for each student. A student's performance on each of the ELA and mathematics claims is reported in one of three levels of performance: *Adequate progress*, *Attention may be needed*, and *Most at risk of falling behind*. Performance-level indicator designations are based on the standard error of

[3] https://www.michigan.gov/documents/mde/M-STEP_and_MME_Performance_Level_Descriptors_671902_7.pdf

measurement of the claim-level sub-score and the distance of the claim sub-score from the proficient cut score. If the proficient cut score falls within a 1.5 SEM error band, it is designated as "Attention may be needed." If the Level 2/3 cut score is above the error band, the sub-score is designated as "Most at risk of falling behind;" if the cut score is below the error band, the claim level sub-score is "Adequate Progress."

The purpose of reporting claim-level sub-scores on M-STEP is to show for each student the relationship between the overall performance being measured and the skills in each of the areas delimited by the claims in ELA and mathematics. Teachers may use these sub-scores for individual students as indicators of strengths and weaknesses, but they are best corroborated by other evidence, such as homework, class participation, diagnostic test scores, or observations. Chapter 12 of this technical report provides evidence of content validity and reliability that supports the use of the claim-level sub-scores. Chapter 12 of this technical report also provides evidence of construct validity that further supports the use of these sub-scores (for additional information see *Smarter Balanced 2017–18 Technical Report* (2018), p. 5-18)

Figure 2-1. ELA Claims

Claim #1—Reading

- Students can read closely and analytically to comprehend a range of increasingly complex literary and informational texts.

Claim #2—Writing

- Students can produce effective and well-grounded writing for a range of purposes and audiences.

Claim #3—Speaking and Listening

- Students can employ effective speaking and listening skills for a range of purposes and audiences. At this time, only listening is assessed.

Claim #4—Research

- Students can engage in research/inquiry to investigate topics and to analyze, integrate, and present information.

Figure 2-2. Mathematics Claims

Claim #1—Concepts and Procedures

- Students can explain and apply mathematical concepts and interpret and carry out mathematical procedures with precision and fluency.

Claim #2—Problem Solving/Claim #4-Modeling and Data Analysis

- Students can solve a range of complex well-posed problems in pure and applied mathematics, making productive use of knowledge and problem-solving strategies. Students can analyze complex real-world scenarios and can construct and use mathematical models to interpret and solve problems.
- Students can analyze complex real-world scenarios and can construct and use mathematical models to interpret and solve problems.

Claim #3—Communicating Reasoning

- Students can clearly and precisely construct viable arguments to support their own reasoning and to critique the reasoning of others.

Chapter 3: Test Design and Item Development

3.1 Overview

This chapter is particularly relevant to AERA, APA, & NCME (2014) *Standards* 4.0, 4.1, and 4.7. It also addresses *Standards* 3.1, 3.2, 3.9, 4.12, and 7.4, which will be discussed in pertinent sections of this chapter. *Standards* 4.0, 4.1, and 4.7 are from Chapter 4 of the AERA, APA, & NCME (2014) *Standards*, "Test Design and Development." AERA, APA, & NCME (2014) Standard 4.0 states the following:

> Tests and testing programs should be designed and developed in a way that supports the validity of interpretations of the test scores for their intended uses. Test developers and publishers should document steps taken during the design and development process to provide evidence of fairness, reliability, and validity for intended uses for individuals in the intended examinee population. (p. 85)

The purpose of this chapter is to document the test design and item development process used for M-STEP. This chapter describes steps taken to create M-STEP, from the development of test specifications to the selection of operational items.

Test design was not significantly affected by the first SARS-CoV-2 pandemic. Test development proceeded on its usual schedule and with all standard procedures. The only pandemic impact on item development was holding item writing and review committees virtually rather than in-person. The Michigan Item Bank System, described below, was designed from the start to support both in-person and remote committee meetings.

3.1.1 A Brief Description of Smarter Balanced Content Structure for ELA and Mathematics

The Common Core State *Standards* (CCSS) are the content standards in ELA and mathematics that many states have adopted. Because the CCSS were not specifically developed for assessment, they contain extensive rationale descriptions and information concerning instruction. Adopting previous practices used by many state programs, Smarter Balanced content experts produced content specifications in ELA and mathematics, which distill assessment-focused elements from the CCSS. The Smarter Balanced *Content Specifications for the Summative Assessment of the CCSS for English Language Arts/Literacy* (2015a) and *Content Specifications for the Summative Assessment of the CCSS for Mathematics* (2015b) were expressly created to guide the structure and content of assessment development. Within each of the two content areas in grades 3–8, there are four broad claims. Within each claim, there are a number of assessment targets. The claims in ELA and mathematics are given in Table 3–1 (from the *Smarter Balanced 2017–18 Technical Report* (2018), p. 5–18).

Table 3-1. Claims for ELA and Mathematics

Claim	ELA	Mathematics
1	Reading	Concepts and Procedures
2	Writing	Problem Solving
3	Speaking/Listening	Communicating Reasoning
4	Research	Modeling and Data Analysis

Currently, only the listening part of ELA Claim 3 is assessed. In mathematics, Claims 2 and 4 are reported together as a single sub-score, so there are only three reporting categories for mathematics but four claims.

Because of the breadth in coverage of the individual claims, targets within each claim were needed to define more specific performance expectations. The relationship between targets and CCSS elements is made explicit in the Smarter Balanced content specifications (2015a; 2015b).

The *Item and Task Specifications* (Smarter Balanced, 2015c) for ELA and mathematics provide guidance on how to translate the Smarter Balanced content specifications into assessment items. In addition, guidelines for bias and sensitivity issues, accessibility and accommodations, and style help item developers and reviewers ensure consistency and fairness across the item bank. The specifications and guidelines were reviewed by member states, school districts, higher education representatives, and other stakeholders. The item specifications describe the evidence to be elicited and provide sample task models to guide the development of items that measure student performance relative to the target.

The Smarter Balanced assessment blueprints found in the *Smarter Balanced 2017–18 Technical Report* (2018) describe the content of the ELA and mathematics summative assessments for grades 3–7 administered in the 2018–19 school year and how that content was assessed. The blueprints also describe the composition of the assessment and its scoring. Specific items administered to each student are uniquely determined based on an item-selection algorithm that includes content constraints that correspond to the test blueprint. Developed with broad input from member states, partners, and stakeholders, the summative test blueprints reflect the depth and breadth of the performance expectations of the CCSS. Smarter Balanced governing members adopted the preliminary test blueprints in 2012. The summative test blueprints that were subsequently developed contain refinements and revisions based on the analyses of the pilot and field tests.

3.1.2 Evidence-Centered Design in Constructing Smarter Balanced Assessments

The *Smarter Balanced 2017–18 Technical Report* (2018) discusses the concept of evidence-centered design:

> Evidence-centered design (ECD) is an approach to the creation of educational assessments in terms of reasoning about evidence (arguments) concerning the intended constructs. The ECD process begins with identification of claims, or inferences, users want to make concerning student achievement. Evidence needed to support those claims is

> then specified, and finally, items/tasks capable of eliciting that information are designed (Mislevy, Steinberg, & Almond, 2003). Explicit attention is paid to the potential influence of unintended constructs. The ECD process accomplishes this in two ways. The first is by incorporating an overarching concept of assessment as an argument made from imperfect evidence. This argument makes explicit the claims (i.e., the inferences that one intends to make based on scores) and the nature of the evidence that supports those claims (Hansen & Mislevy, 2008; Mislevy & Haertel, 2006). The second is by distinguishing the activities and structures involved in the assessment enterprise to exemplify an assessment argument in operational processes. By making the underlying evidentiary argument more explicit, the framework makes operational elements more amenable to examination, sharing, and refinement. Making the argument more explicit also helps designers meet diverse assessment needs caused by changing technological, social, and legal environments (Hansen & Mislevy, 2008; Zhang, Haertel, Javitz, Mislevy, Murray, & Wasson, 2009). The ECD process entails five types of activities. The layers focus in turn on the identification of the substantive domain to be assessed; the assessment argument; the structure of assessment elements such as tasks, rubrics, and psychometric models; the implementation of these elements; and the way they function in an operational assessment, as described below. For Smarter Balanced, a subset of the general ECD elements was used. (p. 4-4)

3.1.3 A Brief Description of Content Structure for Science and Social Studies

M-STEP content in science and social studies is defined by the knowledge and skills identified in the Michigan state standards. Michigan state standards were approved by the Michigan State Board of Education after consultation and collaboration with educators and the general public, representing consensus of the essential content for Michigan learners. Evidence of validity based on test content includes information about the test specifications, including the test design and test blueprint. Test development involves creating a design framework from the statement of the construct to be measured. The M-STEP science and social studies test specifications evolve from the tension between the constraints of the assessment program and the benefits sought from the examination of students. These benefits and constraints mix scientific rigor with policy considerations.

The M-STEP test specifications consist of a blueprint and test maps for each grade level and content area. For science and social studies, the 2021 M-STEP test selection specifications were finalized by MDE and its psychometricians and vendors in 2020.

The key structural aspect is the test blueprint, which specifies the target score points for each domain in science and discipline in social studies, as shown in Tables 3-6 and 3-7. The blueprints represent a compromise among many constraints, including the target weights for each domain or discipline, availability of items from field testing, and results of multiple reviews by content specialists. Test design includes such elements as number and types of items for each of the scores reported. The 2021 M-STEP operational forms matched the test blueprint that was intended for this assessment.

3.2 Test Blueprints

Test specifications and blueprints define the knowledge, skills, and abilities intended to be measured on each student's test event. A blueprint also specifies how skills are sampled from a set of content standards (i.e., the CCSS or Michigan state standards). Other important factors, such as Depth of Knowledge (DOK), are also specified. Specifically, a test blueprint is a formal document that guides the development and assembly of an assessment event/form by explicating the following types of essential information:

- content (i.e., claims/disciplines and assessment targets) that is included for each assessed content area and grade across various levels of the system (i.e., student, classroom, school, district, and state levels)
- the relative emphasis of content standards generally indicated as the number of items or percentage of points per claim and assessment target
- item types used or required, which communicate to item developers how to measure each claim and assessment target and communicate to teachers and students about learning expectations
- DOK for social studies and the Michigan Complexity Framework (MCF) for science, indicating the complexity of item types for each claim and assessment target

The test blueprint is an essential guide for both assessment developers and for curriculum and instruction. For assessment developers, the blueprint and related test-specification documents define how the test will ensure coverage of the full breadth and depth of content and how it will maintain fidelity to the intent of the CCSS and/or Michigan state standards on which the assessments are based. Full content alignment is necessary to ensure that educational stakeholders can make valid, reliable, and unbiased inferences about student, classroom, school, and state performance. At the instructional level, the test blueprint provides a guide to the relative importance of competing content demands and suggests how the content is demonstrated, as indicated by item type and DOK/MCF. In summary, an assessment blueprint provides clear development specifications and signals to the broader education community both the full complexity of the standards and how performance on these standards is substantiated.

3.2.1 Test Specifications

AERA, APA, and NCME (2014) Standard 4.1 states the following:

> Test specifications should describe the purpose(s) of the test, the definition of the construct or domain measured, the intended examinee population, and interpretations for intended uses. The specifications should include a rationale supporting the interpretations and uses of test results for the intended purpose(s). (p. 85)

The purpose of M-STEP is discussed in Sections 1.2 and 1.3 of Chapter 1. M-STEP tests the knowledge and skills that are identified within Michigan's standards-based accountability system. This framework, in turn, is based on prior consensus among MDE staff, Michigan educators, and experienced content-matter experts that the framework represents content that is important for teachers to teach and students to learn.

The test specifications are discussed in accordance with AERA, APA, and NCME (2014) Standard 4.12, which states the following:

> Test developers should document the extent to which the content domain of a test represents the domain defined in the test specifications. (p. 89)

Item and test development are guided by sets of specifications. Details on these specifications for ELA and mathematics can be found in the *Smarter Balanced 2017–2018 Technical Report* (2018), the *Item and Task Specifications* (Smarter Balanced, 2015c), and the *Content Specifications for the Summative Assessment of the Common Core State Standards for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects* (2015a). While MDE reviews all Smarter Balanced operational items, MDE utilizes the Smarter Balanced documentation for the technical details of item and test development. The remainder of this section will focus on the details for Michigan-developed assessments and items (operational items and test maps for social studies and field test items for all content areas).

A general description of development activities applying to Michigan-developed assessments (i.e., M-STEP science and social studies) is provided below. OEAA staff, contractors, and Michigan educators work together to develop these state assessments. Specifically, the development cycle includes the following steps:

- Item writer training
- Item development
- Item review
- Field-testing
- Field-test data review
- Operational test construction

3.2.2 Item Writer Training

Once item specifications are finalized, Michigan's item development contractor uses customized materials approved by OEAA to train item writers to author items specifically for M-STEP. Item writer training can last anywhere from three to five days and is conducted by contractor staff in conjunction with OEAA test development staff. The process of item writing includes cycle(s) of feedback from contractor and OEAA staff and can take between 4 and 8 weeks for an item to move from initial assignment to accepted status. All item writers are Michigan educators who have curriculum and instruction expertise for the grade and content for which they are writing items. In addition, prospective item writers are required to submit three original test items aligned to grade-specific content standards, which OEAA test development staff review and possibly approve for item authoring. Michigan's item writers possess relevant degrees and experience, and many have previous experience in item writing that is M-STEP specific.

3.2.3 Item Development

Item development is discussed in this section in compliance with the AERA, APA, and NCME (2014) *Standards*. Standard 4.7 states the following:

> The procedures used to develop, review, and try out items and to select items from the item pool should be documented. (p. 87)

For ELA and mathematics, development of item content for the operational test was completed by Smarter Balanced from 2012 to 2014. Smarter Balanced tested items and refined its approach to item development through three steps: small-scale tryouts in fall 2012, a large pilot test in 2013, and a field test in spring 2014. Items administered for the 2021 M-STEP operational test complied with Smarter Balanced content specifications and with the item and task specifications that were refined after the pilot test and before the field test. Further details can be found in Chapter 3 in the Item Development section of the *Smarter Balanced 2017–2018 Technical Report*.

For science and social studies items and Michigan-developed ELA and mathematics field test items, Michigan item writers drafted test items in accordance with item specifications approved by OEAA test development staff. Contractor staff reviewed items and OEAA test development staff conducted additional review. Sections 3.2.6 and 3.3 discuss how the items are selected for field-testing or operational use. The review consisted of meeting the following criteria:

Skill:

- Item measures one skill level.
- Item measures skill in manner consistent with specifications.
- Item assesses appropriate (i.e., realistic) level of skill.
- Item makes clear the skill to be employed.

Content:

- Item measures one primary academic standard (outside of science cluster items).
- Item measures academic standard in a manner consistent with specifications.
- Item taps appropriate (i.e., important) aspect of content associated with the academic standard.
- Item makes clear the benchmark or problem to be solved.

Relevance:

- Item is not contrived.
- Item is appropriate for the grade level to be tested.
- Item groups reflect instructional emphasis.

Accuracy:

- Item is factually accurate.
- Multiple-choice (MC) items contain only one correct or best response.
- Multi-select items contain answer choices that are clearly correct or best responses.
- Technology-enhanced (TE) items follow approved style guidelines for each grade and content area.
- If item pertains to disputed content, context for correct answer is clearly defined.
- Item is unambiguously worded.
- Item contains no extraneous material, except as required by the standard.
- Vocabulary is grade-level appropriate and clear.
- Item contains no errors of grammar, spelling, or mechanics.
- Item responses are parallel and related to the stem.
- Item responses are independent.
- Item contains no clues or irrelevant distractors.
- Item is clearly and conveniently placed on the page.
- Physical arrangement of item is consistent with OEAA style guide.
- Keys for sets of MC items are balanced (e.g., equal numbers of As, Bs, Cs, and Ds).

Bias:

- Item is free of race and gender stereotypes.
- Item contains no material known or suspected to give advantage to any group.
- Item is free of insensitive language.
- Item sets that identify race or gender either directly or indirectly are balanced with reference to race and gender.
- Item content and format are accessible to students with disabilities.
- Item content and format are accessible to students with limited English proficiency.

3.2.4 Graphics Creation

For all Michigan-developed items, MDE has an internal team of media designers who use the graphic descriptions submitted by the item writers through Michigan's Item Bank System (IBS) to create the pictures, graphs, maps, artwork, etc. that are needed for online test items. MDE and DRC staff review and approve the completed artwork in preparation for the item review.

3.2.5 Item Review

Continuing from Standard 4.7 above, AERA, APA, and NCME (2014) Standard 3.2 is particularly relevant to fairness in item development:

> Test developers are responsible for developing tests that measure the intended construct and for minimizing the potential for tests' being affected by construct-irrelevant characteristics, such as linguistic, communicative, cognitive, cultural, physical, or other characteristics. (p. 64)

The Bias and Sensitivity Review Committees (BSC) are composed of representatives from various backgrounds whose purpose was to screen the items for racial, socioeconomic, gender, and other sensitivity issues. This follows AERA, APA, and NCME (2014) Standard 3.1, which states the following:

> Those responsible for test development, revision, and administration should design all steps of the testing process to promote valid score interpretations for intended score uses for the widest possible range of individuals and relevant subgroups in the intended population. (p. 63)

Panels of educators, including those from Michigan, under Smarter Balanced patronage, reviewed all Smarter Balanced items and item stimuli for accessibility, bias/sensitivity, and content. (Item stimuli include the reading passages used on the ELA assessments and the figures and graphics used on the Mathematics assessments.) During the accessibility reviews, panelists identified issues that could negatively affect a student's ability to access stimuli or items or to elicit valid evidence about an assessment target. During the bias and sensitivity review, panelists identified content in stimuli and items that could negatively affect a student's ability to produce a correct response because of their background. The content review focused on developmental appropriateness and alignment of stimuli and items to the content specifications and appropriate depths of knowledge. Panelists in the content review also checked the accuracy of the content, answer keys, and scoring materials. Items flagged for accessibility, bias/sensitivity, and/or content concerns were either revised to address the issues identified by the panelists or removed from the item pool. The final and approved selection by Smarter Balanced educators became the Smarter Balanced computer adaptive item pool and was used for M-STEP ELA and mathematics tests.

For Michigan-developed items, after the internal reviews take place, all M-STEP items are reviewed by Michigan educators through the Content Advisory Committee (CAC) and BSC. Contractor staff trains the CAC and BSC participants using OEAA-approved materials and facilitates the committee meetings under the leadership of OEAA test development staff. All newly written test items are typically reviewed first by the BSC and then by the CAC.

An item rejected by the BSC may or may not get passed on to the CAC for review. Each review is led by experienced contractor staff, with test development staff in attendance, using the following prescribed guidelines to indicate the final status of each item:

- **Accept:** The criteria outlined in the review were met in all areas (i.e., skill, content, relevance, accuracy, and bias), and the item appears suitable for field-testing.

- **Revise:** One or more of the criteria have not been met or the item needs minor changes to make it acceptable. Reviewers recommend changes to be made to the item that will make the item suitable for field-testing.
- **Reject:** Several category conditions have not been met, are suspect, or need radical changes to make the item acceptable. In such cases, the item may be vague or ambiguous, inappropriate, or not clearly related to the text or the standard. Without extensive revisions, it is unlikely to be salvaged. Reviewers provide comments to explain why the item should be rejected.

Items that have passed bias/sensitivity and content reviews are eligible for field-testing.

3.2.6 Field-Testing

Before an item can be used on an operational test or added to the operational item pool, it must be field-tested. OEAA uses two approaches to administer field-test items: embed field-test items in an operational administration or use field-test items in a stand-alone field-test administration. Items that have passed bias/sensitivity and content review are eligible for field-testing.

OEAA embeds field-test items in multiple forms of operational fixed-form assessments or randomly assigns field-test items to students across the state during the computer adaptive test (CAT) administrations. Administering field-test items this way ensures that they are randomly distributed, and this allows a large representative sample of responses to be gathered under operational conditions for each item. Enough field-test items are administered annually to replenish and improve the item pools.

When MDE implements testing at new grade levels, for new content areas, or for revised academic standards, it can be necessary to conduct a separate stand-alone field test to obtain performance data. In 2021, MDE administered a stand-alone field test in science and for Michigan-developed passage-based writing (PBW) items.

3.2.7 Range-Finding

After the student responses to the field-tested PBW prompts are collected, a range-finding is conducted to determine scoring guidelines and score-point ranges for the different score points for each field-tested writing item. This information is then used in the preparation of materials to guide the handscoring of the PBW item student responses by a trained team of readers, as described in Chapter 7 of this report.

3.2.8 Data Review

After field-testing, MDE psychometric staff analyze results. Contractor staff and test development staff convene data review committee meetings with Michigan educators. Significant effort goes into ensuring that these committee members represent the state demographically with respect to ethnicity, gender, school district size, and geographical region. These committees receive training on interpreting the psychometric data compiled for each field-test item by OEAA psychometric staff. Content experts (usually teachers) and group facilitators apply this training to the data review process. During these data review meetings, participants review the items with field-test statistics. Data provided to the data review committees are separated by BSC and CAC. The data that are reviewed during BSC include

- *N*-count;
- adjusted *p*-value (i.e., adjusted item mean in the range of 0–1 for all items);
- Differential Item Functioning (DIF) flag;
- favored group; and
- percentage of students who choose each option (option-total correlation), omit a response (omit-total correlation), and in paper/pencil tests, submit multiple marks (multiple marks-total correlation).

The data that are reviewed during CAC include

- overall *N*-count;
- adjusted *p*-value;
- difficulty flag;
- item-total correlation;
- item-total flag; and percentage of students who choose each option (option-total correlation), omit a response (omit-total correlation), and in paper/pencil tests, submit multiple marks (multiple marks-total correlation).

Additional psychometrics are used in the review of science cluster items, as discussed in Appendix H.1, “Michigan Cluster Development Process.”

As mentioned above, specific directions are provided on the use of the statistical information and how to use Michigan’s IBS. BSC members evaluate each test item for fairness issues with respect to culture, ethnicity, gender, geographic location, and economic status, using the data listed above for this group. CAC members evaluate each test item with regard to alignment to the academic content standard, grade-level appropriateness, and level of DOK, using the data information listed above for this group. Both committees then recommend that the item be accepted, revised for additional field-testing, or rejected.

After new items have passed all reviews and field-testing, they are saved in the Michigan IBS as “Ready for Operational,” meaning they are now eligible for operational use.

3.2.9 Development of the Passage-Based Writing Items

A Passage-based Writing (PBW) item requires text-dependent analysis, based on a passage or a multiple-passage set that each student reads during the assessment. Both literary and informational texts are addressed through this item type. Students must draw on basic writing skills while inferring and synthesizing information from the passage(s) in order to develop a comprehensive, holistic essay response. The reading and writing skills required of a student in response to a PBW item coincide with the skills required for a student to be college and career ready. The current PBW items are selected from a bank of items developed internally at DRC.

Table 3-2. Item Development Process for Passage-Based Writing (PBW) Items

Step	Description
Analyze Item Bank	Existing test items in DRC's current college-and career- ready (CCR) bank are reviewed for technical psychometric quality as well as for their match to the college- and career- ready standards. During this phase, test development specialists also make a tally of the test items by content and standard expectations—including test development specialists' best thinking regarding the number of usable test items in the existing item bank. A tally is also made of the number of usable passages.
Refine Test Item Development Plan to Include Writers and Subcontractors	Item and test development specialists identify the writers who will write the test items (test development specialists or other professional item writers, subcontractors, etc.), the estimated number of writers needed, the qualifications of writers, and the approximate number of test items to be submitted by each source.
Passage Development	Passages are developed by published authors as well as technical writers that have previous publishing experience. DRC trains the writers for passage development specific to assessment ensuring that bias, sensitivity, text complexity and difficulty, as well as technical quality are adhered to as passages are being submitted for review. Once received, DRC sends the passages through a rigorous quality review process. Upon acceptance and completion of the internal processes, passages are reviewed by external educators to validate use and appropriateness for the grade level being assessed. As most passages are commissioned texts, adjustments are made as needed post review and prior to field test administration.
Train Item Writers	Item and test development specialists train item writers to write PBW items based on the big ideas in the passage or passages, as needed. Item writers receive the college-and career-ready standards as well as all other technical quality material to ensure alignment to the expected content for the CCR bank. Item writers who have written for DRC in the past receive updated information, as needed.
Write and Review Items	Test items and sample responses are written by item writers after training is complete. Feedback is provided by the item and test development specialists to item writers on a regular basis. As test items are written, they are reviewed and edited in a series of internal reviews. Item and test development specialists review and edit items to include, but not limited to, the following: match to the standard, relevance to purpose, accuracy of content, item difficulty, interest level, grade appropriateness, depth of knowledge and cognitive complexity, adherence to the principles of Universal Design, and freedom from issues of bias/fairness/sensitivity. Sample responses are reviewed and edited to ensure they are accurate representatives of student responses for the PBW items. At the same time, the process of procuring permissions (if applicable) also begins, including securing permissions for passages, art, etc.

Step	Description
Enter Test Items into Database	Upon acceptance from item writers, test items are entered into the item management system, IDEAS (*Item Development and Educational Assessment System*). Item data stored in the system database includes, but is not limited to, the following: readability, cognitive level, estimated level of difficulty, alignment to standards, and correlation to stimulus prompts and passages. The sample responses are also included with the items in IDEAS.
Review and Revise Items	All PBW items are reviewed again by test development specialists in preparation for field testing. Several rounds of internal reviews are conducted to ensure quality and adherence to standard test development practices. Item and test development specialists incorporate all review feedback, and requested edits to items are made.
Field Testing	The PBW items are all field or pilot tested in multiple state programs. In most cases, the field test is a stand-alone field test to allow for shorter testing times on the overall summative assessments. Once field tested, the items undergo a rigorous range-finding process with groups of educators or internal DRC test development content personnel in order to gather and create anchor, training and qualifying sets as needed for scoring.
Creation of Scoring Materials	The PBW items in the CCR bank are scored using a 4-point holistic rubric. It is the holistic rubric that DRC uses for all PBW items within the CCR bank. Key evaluation material including evidence and elaboration, structural organization, language demands, and grammar and mechanics are the overall focal points on the rubric. The rubric has been vetted through the scoring process as well as the quality review process to ensure accuracy and success during scoring. During the range-finding process, DRC's Performance and Assessment Scoring department create all necessary materials for scoring the items including anchor, training, and qualifying sets.
Review Results of the Field Test	Following the administration of a field test form and the subsequent range-finding and field test scoring processes for field test items, performance data for all field test items are analyzed by DRC psychometricians and test development specialists. Test item performance data that meet certain triggering criteria are flagged for additional reviews by test development specialists. Flagged field-test items with extreme performance data are considered psychometrically unusable and are removed from future operational consideration.

3.2.10 Development of the Science Cluster Items

Assessments items written to the new Michigan science standards were developed in clusters, which describe scientific phenomena and then present a series of related items asking students to engage with the phenomena. Clusters are similar to context- or passage-based items in that they present a stimulus and then a series of items related to that stimulus. Clusters differ in the degree of complexity of the stimuli provided and in the way that items are developed with intentionality as an integrated set, rather than a series of related items meant to be engaged individually.

An extended discussion of the development and review of science cluster items is available in Appendix H.1, "Michigan Cluster Development Process."

3.3 Operational Test Construction

OEAA test development staff build test maps that meet the test specifications (i.e., blueprint and psychometric specifications) inside Michigan's IBS. All test maps are reviewed for correct answer keys, accurate content standards, and appropriate statistical/psychometric information for each item. In addition, comparability of the overall test across forms and across adjacent years is also examined for social studies. Corresponding details for the content areas are presented below.

3.3.1 English Language Arts

M-STEP English Language Arts (ELA) assessments are based on Michigan's ELA academic content standards, which were adopted by the State Board of Education in 2010. M-STEP ELA consists of four claims: Reading, Writing, Listening, and Research. The assessment is administered in grades 3–7.

M-STEP ELA is a CAT using Smarter Balanced items, all of which are reviewed and approved by OEAA staff for use in Michigan's CAT. Also, each CAT form distributes one PBW prompt per student. The PBW prompts were developed by DRC and reviewed by OEAA staff. In addition, Michigan embeds five ELA field-test items in each form for grades 3–7.

In the CAT at all grades, Claim 1 (Reading) consists of both informational and literary passages, each with related items. Passages are assessed using MC items and a variety of technology-enhanced items, such as hot text, drop-down menus, and multi-select items. Claim 2 (Writing) includes student writing samples with a set of associated items, some independent items, and one PBW item. PBW prompts cover all Claim 2 content categories. Claim 3 (Speaking/Listening) consists of 3 or 4 listening passages, each with 2 or 3 associated items. Claim 4 (Research) consists of 8 or 9 independent items. The ELA assessment structure is summarized in Table 3-3.

Table 3-3. ELA Structure for Grades 3–7

Claim/Score Reporting Category	Content Category	CAT Stimuli	PBW Stimuli	CAT Items	PBW prompts
1. Reading	Literary	2	0	7–8	0
1. Reading	Informational	2	0	7–8	0
2. Writing	Organization/Purpose and Evidence/Elaboration	0	1	6–8	1
2. Writing	Conventions	0	0	5	0[1]
3. Speaking/Listening	Listening	3–4	0	8–9	0
4. Research	Research	0	0	8–9	0

[1] PBW prompts cover all Claim 2 content categories but are listed under only one in Table 3-2 to avoid double-counting.

3.3.2 Mathematics

M-STEP mathematics is based on Michigan's mathematics academic content standards, which were adopted by the State Board of Education in 2010. M-STEP mathematics consists of four claims: Concepts and Procedures, Problem Solving, Communicating Reasoning, and Modeling and Data Analysis. The assessment is administered in grades 3–7.

There are non-calculator portions of the mathematics assessment embedded throughout the online test. All items in grades 3–5 are non-calculator items.

M-STEP mathematics is a CAT using Smarter Balanced items, all of which are reviewed and approved by OEAA staff for use in Michigan's CAT. Michigan embeds five mathematics field-test items in the CAT in each form in grades 3–7.

In the mathematics assessment, the Claim 1 (Concepts and Procedures) section consists of 20 items (MC or TE) in the CAT. Details of the various TE types can be found in Section 3.7. The Claim 2 (Problem Solving) section consists of 4 items. The Claim 3 (Communicating Reasoning) section consists of 8 items. The Claim 4 (Modeling and Data Analysis) section consists of 4 items. Claims 2 and 4 are combined in the blueprint and reporting structure because of content similarity and to provide flexibility for item development. There are still four claims, but only three claim scores are reported with the overall mathematics score. The mathematics assessment structure is summarized in Tables 3-4 and 3-5.

Table 3-4. Mathematics Overall Structure: Number of Items Claim/Reporting Category

Claim/Score Reporting Category	Grades 3–7
1. Concepts and Procedures	20
2. Problem Solving and 4. Modeling and Data Analysis	8
3. Communicating Reasoning	8

Table 3-5. Mathematics Structure for Grades 3–7

Claim/Score Reporting Category	Content Category	CAT Items
1. Concepts and Procedures	Priority Cluster	15
1. Concepts and Procedures	Supporting Cluster	5
2. Problem Solving and 4. Modeling and Data Analysis	Problem Solving, Modeling and Data Analysis	8
3.Communicating Reasoning	Communicating Reasoning	8

3.3.3 Science

M-STEP science is based on Michigan's science academic content standards, which were adopted by the State Board of Education in 2015. The assessment is administered in grades 5, 8, and 11. The M-STEP Science assessment consists of three domains at each grade level: Earth Science, Life Science, and Physical Science. The science assessment is built around clusters, which describe scientific phenomena and present a series of related items asking students to engage with each phenomenon. Each form has six operational clusters and one embedded field-test cluster. Clusters do not all have identical numbers of items, and forms have similar but not identical numbers of items. There are 38-39 operational items and 5-8 embedded field-test items on each form in grade 5; 37-40 operational items and 7-9 embedded field-test items on each form in grade 8; and 42-43 operational items and 7-8 embedded field-test items on each form in grade 11. The science assessment structure is summarized in Table 3-6.

Table 3-6. Science Structure for Grades 5, 8, and 11

Grade	Domain	# of Operational Items
5	Earth Science	13-14
5	Life Science	11-13
5	Physical Science	13
8	Earth Science	12-14
8	Life Science	12-14
8	Physical Science	11-13
11	Earth Science	13-14
11	Life Science	14
11	Physical Science	15

3.3.4 Social Studies

M-STEP social studies is based on Michigan's social studies academic content standards, which were adopted by the State Board of Education in 2007. The assessment is administered in grades 5, 8, and 11. The M-STEP social studies assessment in grade 5 consists of five domains: History, Geography, Civics and Government, Economics, and Public Discourse. There are 45 operational items and 15 embedded field-test items. The M-STEP social studies assessment in grade 8 consists of four domains: History, Geography, Civics and Government, and Economics. There are 44 operational items and 22 embedded field-test items. The M-STEP social studies assessment in grade 11 social studies assessment consists of four domains: U.S. History and Geography, World History and Geography, Civics, and Economics. There are 38 operational items and 16 embedded field-test items. The social studies assessment structure is summarized in Table 3-7.

Table 3-7. Social Studies Structure for Grades 5, 8, and 11

Grade	Domain	# of Operational Items
5	History	19
5	Geography	7
5	Civics and Government	10
5	Economics	7
5	Public Discourse	2
8	History	21
8	Geography	14
8	Civics and Government	4
8	Economics	5
11	U.S. History and Geography	12
11	World History and Geography	12
11	Civics	7
11	Economics	7

3.3.5 Accommodations

Michigan is committed to ensuring all students, including English learners and students with disabilities, have access to a wide array of tools across M-STEP. Sections 4.1–4.3 in this report detail the Universal Tools, Designated Supports, and Accommodations Michigan provides. It is important to note that M-STEP is available to students who require Accommodations according to their Individualized Education Program (IEP) or 504 plan. Paper/pencil accommodated tests are available in many different forms to meet the needs of Michigan's students by providing the tests in contracted and uncontracted braille, enlarged print, and translated forms of the tests. Students may also test online with many different options such as video sign language (American Sign Language and Signed Exact English), stacked Spanish, English text-to-speech, and closed captioning (in the Listening claim). Whether students take a test with or without Universal Tools, Designated Supports, and Accommodations, the M-STEP assessments are administered during the same testing window as standard operational tests.

3.4 Sources of Items and Metadata

3.4.1 ELA and Mathematics

M-STEP ELA and mathematics have three sources for test items:

1. The Smarter Balanced Assessment Consortium
2. The Michigan Item Bank System (IBS)
3. The DRC Item Development and Educational Assessment System (IDEAS)

Smarter Balanced worked with a variety of assessment vendors, state education departments, and educators throughout 2012 to create a pool of ELA and mathematics test items in preparation for pilot testing. In the process of creating the test items, the item writers were provided trainings in evidence-centered design, universal design, DOK, accessibility, and issues of bias and sensitivity. The item writers also received content and item specifications to guide their development. Each test item passed through approval from a content committee, an accessibility committee, and a bias and sensitivity committee before being added to the item pool.

In 2013, Smarter Balanced conducted a pilot test in a small number of schools across states participating in Smarter Balanced, using items from the existing item pool. Smarter Balanced used feedback from this pilot test in preparation for further item development and testing. In 2014, Smarter Balanced administered a field test of the existing item pool to more than 4 million students across states participating in the consortium, including Michigan. Smarter Balanced conducted a subsequent data review using educator committees to evaluate the performance of the test items across the country and to ensure that the items met the quality levels required in terms of content, accessibility, and issues of bias and sensitivity to be included in the operational item pool. The items were then made available to Michigan for inclusion in the CAT item pool. Each year, additional items are field-tested to replenish the general item pool.

The Michigan IBS contains items that have been developed and reviewed by Michigan teachers using processes described earlier in this chapter. The items from both sources (i.e., Smarter Balanced and Michigan IBS) contained a mixture of MC and TE item types, with a DRC-developed PBW prompt added for each student.

Passage-Based Writing (PBW) items are developed by DRC as described in 3.2.9 and stored in the DRC IDEAS item bank. PBW items are reviewed by DRC and OEAA content leads before being included in M-STEP.

3.4.2 Science and Social Studies

The item development process for M-STEP science and social studies utilizes the Michigan IBS as its main resource. The Michigan IBS is a secure, web-based application that allows users to create contexts and test items. It leads users through all the steps of the item development process, including context review, item review, and data review as described in Section 3.2.

3.5 Import into DRC INSIGHT Test Engine

M-STEP is administered through the DRC INSIGHT test engine. The test items must be imported into INSIGHT from the various sources noted earlier. Once the items are loaded into INSIGHT, they can be rendered for review in the identical formatting structure in which a student would see the item in a test. After the items have been formatted and rendered, they can be assembled into online test forms based on the sequence and information provided in the test maps.

3.6 Psychometric Review During Assessment Construction

Content specialists and psychometricians both from MDE and from Smarter Balanced followed psychometric guidelines and targets for operational forms construction. The foremost guideline was for item content to match the test blueprint for the given content. Both groups used item flagging criteria (discussed below) to guide the assessment construction. Items with flags were avoided when possible.

Details for psychometric reviews are described below by content area groups. Such reviews for ELA and mathematics are done by the Smarter Balanced psychometrician(s), while social studies reviews are carried out by an MDE psychometrician.

3.6.1 ELA and Mathematics

The psychometric review for the items in the M-STEP CAT pool and fixed forms was conducted by Smarter Balanced. Smarter Balanced flagged items based on the following content criteria (Smarter Balanced, 2016, p. 4–22):

- The following items were flagged based on item difficulty and score distribution:
  - items with a low average item score (i.e., less than .10)
  - items with a high average item score (i.e., greater than .95)
  - items with a proportion obtaining any score category less than 0.03

- The following items were flagged based on item discrimination:
  - items with a low item-total correlation (i.e., less than .30)
  - items with a higher mean criterion score for students in a lower score-point category

- The following multiple-choice items were flagged:
  - items where higher ability students (i.e., those in the top 20% on overall score) select a distractor more often than the key
  - items with a higher criterion score mean for students choosing a distractor than the mean for those choosing the key
  - items with a positive correlation between distractor and total score

Items are also classified into three Differential Item Functioning (DIF, for corresponding details please see Chapter 11) categories of A, B, or C. The focus group was indicated by a positive value (e.g., C+), and the reference group was noted with a negative value (e.g., C-). The positive and negative values were reported for items with C DIF. DIF comparison was not done if the sample size for either group was less than 100 or if the combined sample size for the groups being compared was less than 400 (Smarter Balanced, 2017, p. 3–15.)

DIF was evaluated for eight subgroup comparisons, shown here with the focal groups listed first and the reference groups listed second.

- Gender: Female – Male
- Race/Ethnicity: Asian – White
- Race/Ethnicity: Black – White
- Race/Ethnicity: Hispanic – White
- Race/Ethnicity: Native American – White
- Individualized Education Program: Yes – No
- Limited English Proficiency: Yes – No
- Title 1: Yes – No

Items with C+ or C- DIF were flagged for data review.

Items that were not flagged for content or bias statistical issues were eligible for use in the operational pools. Flagged items became eligible for the operational pools if they were approved by a multidisciplinary panel of experts during data review.

3.6.2 Science and Social Studies

For science and social studies, the following analyses were carried out for psychometric review (note that the listed analyses are routine annual procedures):

1. Content standard distribution check: This check is to ensure that operational (OP) items on each form have the desired content coverage (i.e., the reporting categories are the same as depicted in the test blueprint; and within each reporting category, the content standards have as much variety as possible.)

2. Item position check: Equating items and common items (i.e., non-equating items that appear on multiple forms) need to appear in the same test positions across forms. Moreover, equating items are checked to make sure they are within +/-2 position change from the previous year's positions for social studies and within +/-4 for science.

3. Across year comparability check: For this check, distributions of item difficulty and item discrimination (*p*-values and adjusted item-total correlations, see Section 8.3.1.2 for details) are checked across adjacent years for unique items to make sure they are comparable. Moreover, when Item Response Theory (IRT) item difficulty and item discrimination (b-parameters and a-parameters) (see Section 6.2 and Equation 6-2 for details) are available for all OP items, test characteristic curves (TCCs), test information function (TIF) curves, and test standard error (TSE) curves are plotted to check the comparability across years.

4. Across mode comparability check: Comparability of OP items across modes (paper/pencil, online) is checked using the same approaches listed above in the across year comparability check.

5. Comparability of equating items and other OP items per form: Two analyses are involved in this comparison on each form: (1) content coverage homogeneity test (to make sure that equating items and other OP items have comparable content coverage) and (2) distributions of item difficulty and adjusted item-total correlation comparability check. These analyses are conducted to make sure that the equating items function as a mini-test (i.e., they are representative of the overall test, both statistically and in terms of content).

6. Item key distribution check: This check involves all multiple-choice (MC) items on the test (i.e., OP and field-test items). Here the desired result is for all four key options to appear relatively equally on each test map, with no same key option appearing three times consecutively. Although it is desirable to have unique field-test items on each form, if a field-test item must be repeated on multiple forms, a check is carried out to ensure that it appears in the same test position across forms.

7. Overall OP item set quality check: This check ensures that no OP items have problematic flags. Specifically, DIF results are checked to make sure that no OP items are with "B" or "C" DIF flags. All OP items that appear on the final form have been scrutinized to make sure that there are no bias or sensitivity issues involved. Moreover, adjusted item-total correlations, various item statistics flags (e.g., key option-total correlation being negative, distractor option-total correlation being positive, omit-total correlation being positive, key option percentage not being the highest), and IRT item parameters are also checked to see if items are free of concerns (i.e., adjusted item-total correlation should be $\geq$0.2, a-parameter should be >0, b-parameter should be in the range of [-3, +3], and there should be no item statistics flags).

All identified problems are documented and communicated to the corresponding content leads. Content leads then revise and resubmit test maps for another round of review. This iterative process continues until all issues have been resolved or the problematic item selections are proven to be the best selections given various constraints (e.g., content coverage considerations, and the need to avoid possible clueing).

3.7 Item Types Included

In addition to the traditional MC items, TE items were included in M-STEP. The following is a list of the TE item types used:

- Drag and Drop—Students drag pictures or words into boxes or "drop zones" to indicate an answer.
- Choice Interaction—This is similar to an MC item, but the item can have more than four options, and any number of the options can be correct.
- Hotspot (Count or Selection)—Students answer by selecting graphics, either a particular number of hotspots (Count) or a specific hotspot (Selection).
- Matching Interaction—Students select areas of an interaction grid to match options in rows and columns.
- Matching—Students make line connections between options from two sets.
- Keypad Input—Students use an embedded keyboard with mathematical functions to answer mathematics questions.
- Drop-Down—Students select options from a drop-down list.
- Hot Text Highlight (Line and Paragraph)—Text is selectable and, once selected, will become highlighted for the students. Students select one or more lines of text (Line) or words or sentences from a block of text (Paragraph).
- Order—Students answer by rearranging a list of items or sentences.
- Coordinate Graph Input—Students plot points, lines, and shapes on a coordinate grid.
- Number Line Graph—Students plot points on a number line.
- Text Input—Students enter values in a response box.
- Bar Graph—Students answer by selecting amounts to complete a bar graph.

Not all the TE item types are used in every content area.

3.8 Field-Test Selection and Administration

3.8.1 Field Test Item Selection

The OEAA content leads are tasked with selecting field-test items. The blueprints specify the number of field-test items by grade level and content area. The content leads work within Michigan's IBS to monitor the number of operational items available for each content standard. Where there are gaps in the numbers available, content leads may decide to field-test items assessing that standard. The content leads also monitor the number of items that may be overexposed and need replacement items as one way to select field-test items.

Responses on field-test items do not contribute to a student's score on the operational tests. The specific locations of the embedded items in the assessment are not disclosed. These data are free from the effects of differential student motivation that might characterize stand-alone field-test designs since the items are answered by students taking operational tests under standardized test administration procedures.

3.8.2 Field Test Administration

3.8.2.1 Mathematics and ELA

MDE-developed field-test items are embedded within the ELA and mathematics CAT assessments at all grade levels. The items are not designated as field-test items to the students, so the field-test items are not distinguishable from the operational items. This ensures that the students give the same effort to the field-test items as the operational items. All the students taking the CAT receive the same number of field-test items, and the selection and delivery of the field-test items are not affected by a student's performance on the test or the difficulty level of the field-test items. To avoid complications due to position placement, the field-test items are not distributed in the first five or the last five positions on the test.

For mathematics, the field-test items are placed at the same sequence positions throughout the CAT testing experience. For ELA, the field-test items are positioned in similar locations; however, due to the inclusion of passage sets in ELA, the field-test positions are shifted as necessary to accommodate a preceding passage set. Students receive either stand-alone field-test items or a field-test passage set containing associated items.

3.8.2.2 Science and Social Studies

Social studies assessments consist entirely of MDE-developed operational and embedded field-test items for all grade levels.

For science, one of the seven clusters on each form is a field test cluster. Of the operational clusters, three are equating and three are matrixed, rather than having all operational items common across all forms. The three online forms at each grade level are randomly administered to the student population.

For social studies, the operational item set is the same across all online forms in a grade level, appearing in the same test positions. The remaining form positions are used for field-test items, which are unique to each form. The three online forms at each grade level are randomly administered to the student population.

The paper/pencil forms for science and social studies share all the common and equating items with the first online forms. However, since TE items cannot be presented on paper/pencil forms, items in those positions are replaced either by "sibling" item versions that adapt the content for paper testing or by items assessing the same content standards and having similar item statistical profiles that were presentable on paper/pencil forms and in braille format.

Details on constructing forms and follow in Sections 3.9 and 3.10.

3.9 Online Form Building and Rendering Process

3.9.1 Overview of Rendering Process

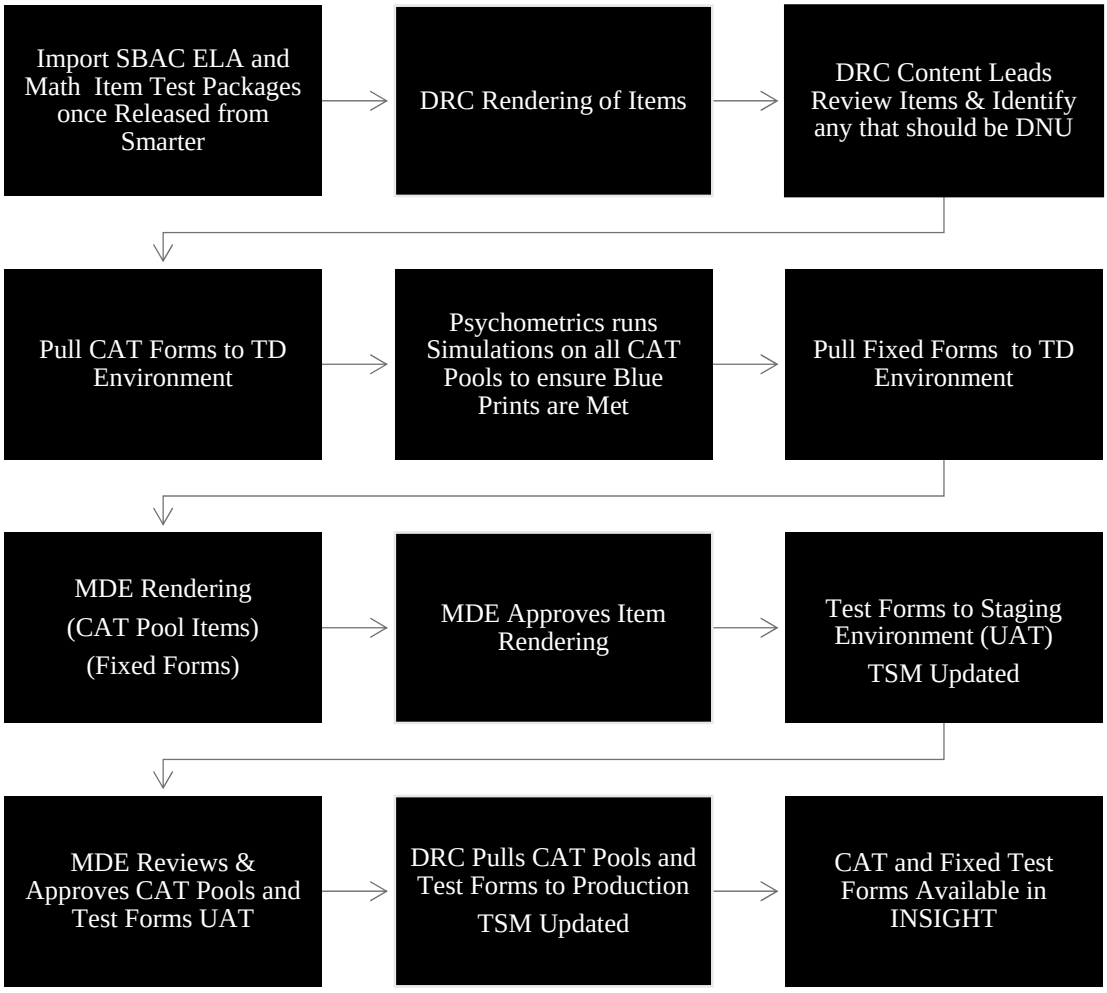
MDE and DRC follow a very rigorous rendering process for all items on the 2021 M-STEP. Using the web-based application LeanKit, MDE and DRC monitor the progress of each grade and content batch. The process begins right after the import of items from the Michigan and Smarter Balanced item banks. All parts of the rendering process are completed a month prior to the start of testing to ensure time for User Acceptance Testing (UAT) of all grades and contents. Figure 3-1 below shows the entire process for M-STEP field-test items, social studies, and science items that are imported from the Michigan IBS.

Figure 3-1. Rendering Process of Michigan-Built Items



The rendering process for the Smarter Balanced items is slightly different. Figure 3-2 shows the process followed for all items that are imported from Smarter Balanced to use for M-STEP ELA and mathematics.

Figure 3-2. Rendering Process of Smarter Balanced Items



Requirements are established and reviewed with MDE prior to the imports of the 2021 M-STEP items. The requirements include the QTI 2.2 import specifications between the IBS and DRC's IDEAS system as well as specific rules when importing each type of item. Detailed rendering requirements are also documented and reviewed.

3.9.2 Form Preparation and Rendering in INSIGHT

For all fixed forms, after the individual items are formatted and rendered, online test forms are assembled in the INSIGHT test engine based on the sequence and information provided in the test maps created by MDE. The test maps provide test-form data, item form sequence location, and metadata (e.g., content standard, DOK, item position, *p*-value, IRT parameters, answer key, points possible) for each test form for each test type (i.e., program, content, grade). DRC applies the appropriate styles and formatting to the fixed forms based on the previously set style and formatting guidelines.

The assembled fixed forms are then reviewed by content leads at DRC and MDE in a UAT setting to ensure that the forms match the exact design and data displayed in the test maps and that the forms, features, and functionality of INSIGHT appear and operate correctly. The UAT is conducted using the same INSIGHT test delivery system that the students use so the forms appear and function just as the students see them. The forms include features such as the online tools provided for each item, test directions, help files, calculators, and reference materials. Detailed information on student tools can be found in Chapter 4.

3.10 Paper/Pencil Form Building and Review Process

Although approximately 99% of Michigan students test online, there will always be paper/pencil forms available for those students who may not be able to test online and for student groups that require specific Accommodations or tests in other languages. Michigan offers the following Accommodations for students with disabilities and the following accessibility features for English learners delivered through paper/pencil assessments: enlarged print; braille; audio supports, such as reader scripts for teacher read-aloud Accommodations; audio CDs; and DVDs in Arabic and Spanish. The ELA and mathematics paper/pencil tests are provided by Smarter Balanced and align to Michigan's ELA and mathematics blueprints. OEAA's composition unit assembles the test booklets. There are several rounds of reviews conducted by OEAA content leads, OEAA assessment specialists, and OEAA's editor. Once the initial test booklets are approved, they are posted for printing by Measurement Incorporated, and the paper/pencil test maps are provided to Measurement Incorporated for use in creating braille and enlarged print forms using the American Printing House (APH) for the Blind.

The social studies paper/pencil tests are developed by OEAA's content leads using Michigan's IBS. They mirror their online counterparts with modifications, i.e., only TE items are replaced. The content leads review each item in the test map to check for text and/or graphic errors, clueing, correct answer keys, and a balance of answer keys. Once the test map is approved by the content lead, the psychometric lead reviews the test map in a similar way as mentioned above for online forms, but with more focus on comparability of paper/pencil forms to their online counterparts. Once the test maps are approved by both the content lead and the psychometric lead, the composition unit creates one item per page (i.e., "one-per") for review by both the OEAA content lead and the OEAA editor. A one-per is created for each item on the test map, showing how each item will appear in a test booklet. Content leads ensure the one-per matches the item as it is in the IBS, which is the source of truth. The item as it appears on the one-per must also follow OEAA's style guide and be free of errors. After the content lead approves the one-pers, they are reviewed by OEAA's editor. Once the editor approves the one-

pers, test booklets are created. The draft printed test booklets are reviewed first by the editor and then by the content lead. Both the content leads and the editor use OEAA's Proofing Tools Guide and its task checklists to ensure each step is followed. Once the test booklet has final approval, the test maps and approved test booklets are sent to Measurement Incorporated for mass printing and accommodated format production of enlarged print, braille, reader scripts, audio CDs, and DVDs in Spanish and Arabic.

3.11 Summary

In summary, the overall purpose of this chapter is to explicate the procedures used in the development of M-STEP. The efforts by MDE and its vendors address multiple best practices of the test industry, particularly the following AERA, APA, and NCME (2014) *Standards*:

- Standard 3.1—Those responsible for test development, revision, and administration should design all steps of the testing process to promote valid score interpretations for intended score uses for the widest possible range of individuals and relevant subgroups in the intended population.
- Standard 3.2—Test developers are responsible for developing tests that measure the intended construct and for minimizing the potential for tests' being affected by construct-irrelevant characteristics, such as linguistic, communicative, cognitive, cultural, physical, or other characteristics.
- Standard 4.0—Tests and testing programs should be designed and developed in a way that supports the validity of interpretations of the test scores for their intended uses. Test developers and publishers should document steps taken during the design and development process to provide evidence of fairness, reliability, and validity for intended uses for individuals in the intended examinee population.
- Standard 4.1—Test specifications should describe the purpose(s) of the test, the definition of the construct or domain measured, the intended examinee population, and interpretations for intended uses. The specifications should include a rationale supporting the interpretations and uses of test results for the intended purpose(s).
- Standard 4.7—The procedures used to develop, review, and try out items and to select items from the item pool should be documented.
- Standard 4.12—Test developers should document the extent to which the content domain of a test represents the domain defined in the test specifications.

Chapter 4: Test Administration Plan

Chapter 4 reviews the test administration process for both the online and paper/pencil administrations of the M-STEP assessment. Detailed information on supports, accommodations, test materials, and training and test security practices can be found throughout this chapter. According to the AERA, APA, & NCME *Standards* (2014), "[t]he usefulness and interpretability of test scores require that a test be administered and scored according to the developer's instructions" (p. 111). Chapter 4 examines how test administration procedures implemented for M-STEP strengthen and support the intended score interpretations and reduce construct-irrelevant variance that could threaten the validity of score interpretations.

The online platform components of the INSIGHT Portal and INSIGHT, which were necessary for all online test administrations, are discussed in Section 4.4. The web-based application known as the INSIGHT Portal was used for all test preparation and test monitoring, while INSIGHT was the online test delivery system used by students when taking online assessments. More information on the online components can be found in Chapter 5.

4.1 Universal Tools, Designated Supports, and Accommodations

To allow all students the ability to fully demonstrate their knowledge and skills on the statewide assessments, a variety of tools are made available across all grades, content areas, and modes of testing. The variety of tools offered attempts to ensure that an equal opportunity for a student to demonstrate what he or she knows on a test is not negatively impacted by the student's disability or English language proficiency.

MDE categorizes tools into three levels: Universal Tools, Designated Supports, and Accommodations. Universal Tools can be used by students at their own discretion. Use of a Designated Support requires an educator to identify that support type for a student because of an instructional need. Tools listed as Accommodations require that a student has an Individualized Education Program (IEP) or 504 plan and that the need to use that support is identified within that document.

Regardless of the level of the tool type, MDE requires educators to make decisions about use on an individual basis. The decision for use should be based on the individual student's instructional needs for each content area. Some tools may be classified as nonstandard, as described in the Supports and Accommodations documentation, in which case the use of those tools by students may result in invalid test scores. School districts may contact MDE if an IEP or 504 team wants to use an Accommodation that is not on the approved list. MDE will consider allowing that Accommodation for the current administration and in future administrations pending literature and research reviews and discussions with MDE's assessment content leads.

MDE's policies related to the use of Accommodations are in compliance with AERA, APA, and NCME (2014) Standard 6.2, which states the following:

> When formal procedures have been established for requesting and receiving accommodations, test takers should be informed of these procedures in advance of testing (p. 115).

Additional information about Michigan's accommodations framework and a list of which Universal tools, Designated Supports, and Accommodations are considered allowable and valid for students to use can be found in the *Supports and Accommodations Guidance Document*.[1]

4.1.2.1 Educator Guidelines

Many of the allowable Designated Supports and Accommodations require educators to perform an action for the student or on behalf of the student. For example, a student needing a scribe may have one provided to them as long as the educator is using the scribing protocol outlined in MDE's *Supports and Accommodations Guidance Document*. This manual collects guides to ensure educators are providing these Designated Supports and Accommodations in a consistent and reliable manner. Additional guidelines include read-aloud guidelines for English and other languages.

4.1.2.2 Research Base for Supports and Accommodations

Smarter Balanced has published multiple literature reviews that support the use of MDE's Universal Tools, Designated Supports, and Accommodations. Because MDE uses Smarter Balanced test content, the framework upon which the assessments have been built was based on the development efforts of Smarter Balanced. These Smarter Balanced Literature Reviews address research related to tools for students with disabilities and English learners.

4.1.2.3 Monitoring the Use of Designated Supports and Accommodations

MDE monitors Designated Supports and Accommodations used by students to ensure high reliability and validity of test results. Data audits include verification that students receiving Accommodations on the assessment had an Individualized Education Program or 504 plan. In the event that students received Accommodations without an IEP or 504 plan, schools are contacted and asked to verify the use of Accommodations and make a plan to improve their process for future student use of Designated Supports and Accommodations. Interviews are conducted with schools after assessment monitoring to verify the decision-making processes used in providing Designated Supports and Accommodations to students for use on the assessment. Data audits also include frequency analyses of certain Designated Supports and Accommodations within districts as well as statewide.

[1] https://www.michigan.gov/documents/mde/Michigan_Accommodations_Manual.final_480016_7.pdf

4.2 Online Accommodations

Appropriate Universal Tools, Designated Supports, and Accommodations were available for students to use while taking the assessment. Students with an IEP or 504 plan are required to have their assessment needs formalized in those documents prior to using any Universal Tools, Designated Supports, or Accommodations. Some embedded Designated Supports and the assessments with embedded Accommodations were delivered via fixed forms. Embedded refers to supports that were provided within the online delivery platform and non-embedded refers to supports that were provided externally from the online delivery platform. The Designated Supports and Accommodations that were embedded in the online fixed forms and used for the spring 2021 M-STEP were as follows.

- Audio Sign Language (applicable for ELA and Math) was available to students at grades 3–7. For ELA, Audio Sign Language video was available for only Listening passage stimuli and items.
- Stacked Translation (applicable for Spanish Math), with the addition of Spanish human voice audio for the 2021 administration, was available to students at grades 3–7.
- Closed Captioning (applicable for ELA) was available to students at grades 3–7. ELA Closed Captioning was available for only Listening passages stimuli.

Embedded and non-embedded Designated Supports were also available and could be selected for each student via the INSIGHT Portal.

Embedded Designated Supports and embedded Accommodations were available within the CAT assessments and the fixed-form assessments. The available embedded Designated Supports and Accommodations are listed below.

- Text-to-Speech (applicable for ELA, mathematics, and social studies) was available to students at grades 3–8 and 11. This Designated Support reads aloud items only. Text-to-Speech with Passages (applicable for ELA only) was available to students at grades 6–7 as an Accommodation. This embedded Accommodation reads aloud both items and passages.
- Masking (applicable for ELA, mathematics, and social studies) was available to students at grades 3–8 and 11 (Designated Support).
- Color Choice (applicable for ELA, mathematics, and social studies) was available to students at grades 3–8 and 11 (Designated Support).
- Contrasting Color (applicable for ELA, mathematics, and social studies) was available to students at grades 3–8 and 11 (Designated Support).

In addition to the Designated Supports and Accommodations delivered by the test engine, there are a number of non-embedded Designated Supports and Accommodations available to students. The use of these non-embedded Designated Supports and Accommodations can be indicated in the INSIGHT Portal.

The non-embedded Designated Supports and Accommodations that are listed in the INSIGHT Portal can be found below. This is not a full list of allowable non-embedded Designated Supports and Accommodations but is only a list of what MDE considers the most frequently used non-embedded Designated Supports and Accommodations.

- Administered Individually/Small Group (applicable for ELA, mathematics, and social studies) was available to students at grades 3–8 and 11.
- Noise Buffers (applicable for ELA, mathematics, and social studies) was available to students at grades 3–8 and 11.
- Oral Translated Test Directions (applicable for mathematics) was available to students at grades 3–7.
- Read Aloud (Human Reader) (applicable for ELA and mathematics) was available to students at grades 3–7.
- Bilingual Word-to-Word Dictionary (applicable for ELA, mathematics, and social studies) was available to students at grades 3–8 and 11.
- Auditory Amplification (applicable for ELA, mathematics, and social studies) was available to students at grades 3–8 and 11.
- Visual Aids (applicable for ELA, mathematics, and social studies) was available to students at grades 3–8 and 11.
- Scribe (non-writing items) (applicable for ELA, mathematics, and social studies) was available to students at grades 3–8 and 11.
- Scribe (PBW prompt) (applicable for ELA) was available to students at grades 3–7.
- OEAA Multiplication Table (applicable for mathematics) was available to students at grades 4–7.
- Abacus (applicable for mathematics and social studies) was available to students at grades 3–8 and 11.
- Non-embedded Calculator (applicable for mathematics and social studies) was available to students at grades 6-7 in mathematics and 5, 8, and 11 in social studies.
- Administrator Sign Test Directions in ASL (applicable for ELA, mathematics, and social studies) was available to students at grades 3–8 and 11.
- Administrator Sign Test Content in ASL (applicable for social studies) was available to students at grades 5, 8, and 11.
- Alt Communication Devices (ACD) (applicable for ELA, mathematics, and social studies) was available to students at grades 3-8 and 11.

Table 4-1 below presents more details for DRC INSIGHT student tools. The following tools are available only on some fixed forms or in certain content areas.

Table 4-1. DRC INSIGHT Student Tools by Grade, Content Area, and Test Type

Assessment	Gr	Pointer	Crossoff	Highlighter	Magnifier	Line Guide	Sticky Notes	Ruler	Protractor	Calculator	Graphing Tool	Dictionary/ Thesaurus	Periodic Table	Help	Flag for Review	Pause	Writing Tools
ELA – CAT	3	x	x	x	x	x	x					x		x		x	x
ELA – CAT	4	x	x	x	x	x	x					x		x		x	x
ELA – CAT	5	x	x	x	x	x	x					x		x		x	x
ELA – CAT	6	x	x	x	x	x	x					x		x		x	x
ELA – CAT	7	x	x	x	x	x	x					x		x		x	x
Math – CAT	3	x	x	x	x	x	x							x		x	
Math – CAT	4	x	x	x	x	x	x		x					x		x	
Math – CAT	5	x	x	x	x	x	x							x		x	
Math – CAT	6	x	x	x	x	x	x			x				x		x	
Math – CAT	7	x	x	x	x	x	x			x				x		x	
Social Studies	5	x	x	x	x	x	x							x	x	x	
Social Studies	8	x	x	x	x	x	x							x	x	x	
Social Studies	11	x	x	x	x	x	x							x	x	x	

Figure 4-1 provides descriptions of system tools that help with navigation, may be Universal Tools, and some that are made available based on the item type and/or when a Designated Support or Accommodation is enabled.

Figure 4-1. DRC INSIGHT Student Tools Descriptions

TOOL	DESCRIPTION/FUNCTION
Navigation Tools	
	**Back and Next**—Move to the next question or a previous question. (**Back** is only available in CAT within passage and listening sets.)
	**Go To Question**—Jump to any item or passage set on the test by choosing the item from a drop-down list (only available in fixed forms).
	**Pause**—Pause the test for a short period of time (e.g., restroom break) and resume upon return.
	**Flag**—Mark a question for review at a later point (only available in fixed forms).
	**Test Review**—Review and change answers by section and indicate whether the test is ready to be scored (only available in fixed forms).
Standard Test-Taking Tools (available at all times)	
	**Pointer**—Select, change, or unselect an answer option; select other user tools; and navigate through the test. When moved over an answer choice, the pointer converts to a pencil image.
	**Cross-Off Tool**—Cross out an MC answer selection believed to be incorrect. This tool includes an eraser to remove the cross off if a student changes his or her mind.
	**Highlighter**—Highlight a portion of text or a graphic and remove highlights.
	**Magnifier**—Magnify/enlarge a portion of the screen (i.e., object, image, or text) by two times for better viewing.
	**Line Guide**—Movable, straightedge line used to follow along with each line of text. Student can drag the guide up or down on the screen as an aid in reading an item or passage.
	**Help**—The Help Library provides information on tool usage, test directions, helpful hints, and other topics. Also includes a "What's This?" feature that allows a student to access contextual help for a specific tool or button.
	**Sticky Note**—Creates and places a small note in which a student can type a short message for later reference (multiple notes can be created for each item or passage).
	**Calculator**—Basic four-function and scientific options are available as required, either individually or together.
	**Measurement Tools**—Includes a **Protractor** for measuring angles that can be moved over any object on the screen and rotated.
	**Graphing Tool**—Used to graph one or several functions. Includes zoom and trace features.
	**Click to Respond**—Allows for placing various types of response areas in a snapshot view that a student expands to respond to the question. For example, a large graphing item can be placed in an item where it might not normally fit.
	**Click to Enlarge**—Allows for large graphics by using a thumbnail image of the graphic that can be enlarged for viewing. Student can interact with the test item and other tools simultaneously.

TOOL	DESCRIPTION/FUNCTION
Accommodations Tools (determined at the student level)	
	**Audio/Video tools**—Includes a **Text-to-Speech Synthesizer** that allows all test-related information (e.g., test directions, questions and answers, formula sheets) to be read aloud to the student. VSL fixed forms provide video for **sign language administration**.
	**Display Options**—Can be made available for all students or just those with a specific accommodation, such as **Color Overlays**, that allows a student to change the background color for text, graphics, and response areas.

4.3 Paper/Pencil Universal Tools, Designated Supports, and Accommodations

As noted earlier, OEAA provides a multitude of opportunities for students to demonstrate their knowledge on the M-STEP assessment with appropriate Universal Tools, Designated Supports, and Accommodations on the paper/pencil forms as well. Below is a list of available paper/pencil Designated Supports and Accommodations that require a specific form of the assessment.

- Braille, contracted and uncontracted for all content areas and grades
- Stacked Spanish, available for Mathematics in all grades
- Arabic, Spanish, and English DVD, available for Social Studies in all grades, to be used with form 1
- Reader Script, available for Social Studies in all grades, to be used with form 1
- English Audio CD, available for Social Studies in all grades, to be used with form 1

Referenced in Table 4-2 is the Designated Support and Accommodation information that is tracked (i.e., bubbled in) on each content area's booklet. This is not a full list of allowable Universal Tools, Designated Supports, and Accommodations but is only a list of what MDE considers the most frequently used Designated Supports and Accommodations.

Table 4-2. Paper/Pencil Accommodations

Accommodation	ELA	Math	Social Studies
Directions Read in Native Language	✓	✓	
Oral Translation in Native Language		✓	✓
Spanish Booklet		✓	
Enlarged Print	✓	✓	✓
Multiple-Day Testing	✓	✓	✓
Audio CD			✓
English DVD			✓
Spanish DVD			✓
Arabic DVD			✓
Reader Script			✓
Alternate Response	✓	✓	
American Sign Language (ASL)	✓	✓	
Noise Buffers	✓	✓	
Read-Aloud (see Supports and Accommodations Guidance Document for specifics)	✓	✓	
Scribe	✓	✓	
Speech-to-Text	✓	✓	
Abacus		✓	
L1 Glossary		✓	
Other	✓	✓	✓
Nonstandard Accommodation/Support	✓	✓	✓

4.4 Online Test Platform

The secure web-based test engine DRC INSIGHT Online Learning System is loaded onto computers that students access for all online assessments. Test items and forms can only be accessed using a valid test ticket. INSIGHT automatic updates are suggested to be turned to "Enable" for the software to be automatically updated as needed. From the INSIGHT landing page, students have access to the test via the "Test Sign In" link and to the sample item sets via the "Online Tools Training" link.

DRC's client portal, the INSIGHT Portal, is used to manage the test setup functions of student assessments and provide the downloads available for installation. The INSIGHT secure browser software is downloaded from the INSIGHT Portal and installed on student testing devices. The secure browser can be installed on computers individually, or it can be downloaded to a central location, copied, and simultaneously distributed to multiple computers using common network distribution tools. Everything needed for testing is found within the secure browser, eliminating the need for districts to coordinate updates to third-party software.

Technology coordinators install local caching servers (Central Office Services (COS) Service Devices) to manage the content (test content and audio/video files) and regulate traffic between testing sites and DRC's servers. The System Readiness Check helps troubleshoot any issues that may have occurred during or since INSIGHT installation. This application is installed when INSIGHT is installed, and the System Readiness Check performs a series of tests that can be used to diagnose and prevent or correct most errors.

The Load Simulation Tool is also available for sites to use for pre-planning purposes. The software is used by technology coordinators to perform load simulation tests that help estimate the amount of time needed to download tests and upload responses based on the number of students testing at the same time, the current network traffic, the amount of available bandwidth, and other site-specific factors.

COS Service Devices feature Load Balancing, which automatically spreads workload across multiple servers and allows districts to quickly add or remove content servers without reconfiguring testing clients or the INSIGHT Portaling or reassigning addresses.

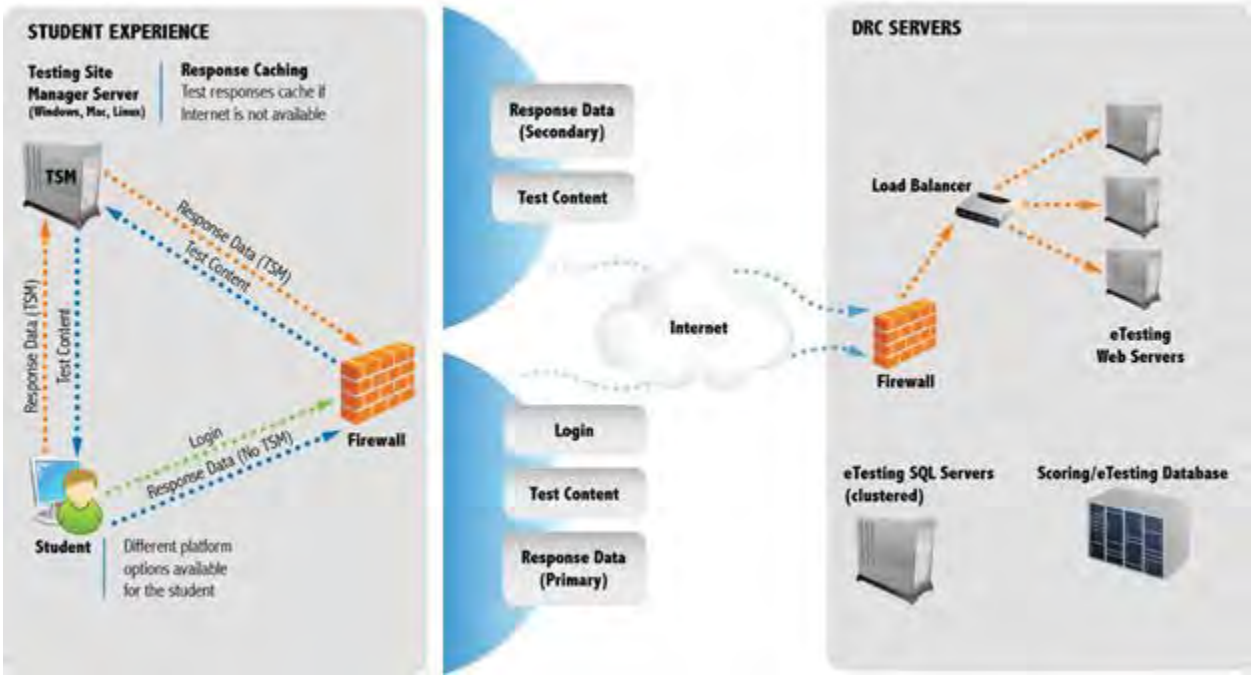
Prior to an assessment's operational use, DRC's quality assurance staff perform full system-level tests in an independent test environment that simulates the production configuration. Tests are run on all supported computer platforms and browsers and include a comprehensive review of system functionality, usability, reliability, security, and overall performance. Test content is also validated during this process.

Multiple methods are used to ensure secure data transfer, including encryption technologies and Secure Sockets Layer (SSL) protocol through Hypertext Transfer Protocol Secure (HTTPS). Test content is encrypted at the host server and remains encrypted throughout all network transmissions; content is decrypted only after the student login is validated. Decrypted test content on the student workstation is stored in memory only during each test session. After the session has ended (i.e., the test is completed, or the student logs out), computer memory is purged to ensure the security of test content.

During testing, responses are sent to a DRC server each time the student navigates away from an item or clicks the "Next" button to submit an answer. Responses are saved automatically every 45 seconds during testing, when the student navigates away from an item, or when the student answers a selected-response item, depending on whichever comes first. If an item takes the student longer than 45 seconds to answer, then the partial, incomplete response is submitted at 45-second intervals until the student completes the item. This autosave helps safeguard against students losing their work on longer items, such as Passage-Based Writing items. When the student returns to the test after a break or interruption, the student is returned to the point at which he or she left off without having to navigate through all previously answered questions.

Figure 4-2 illustrates the secure transfer of online test responses between the student and DRC.

Figure 4-2. Architecture of the Student Testing Experience



4.5 Test Administration Training

All staff involved in the administration of M-STEP are required to receive training based on the role they will serve during the test administration. Districts provide training for Building Assessment Coordinators, and districts or Building Assessment Coordinators provide training for Test Administrators and Proctors. MDE provides test administration training resources for District Assessment Coordinators, Building Assessment Coordinators, and Test Administrators.

DRC, in conjunction with MDE, held a WebEx training presentation on March 2, 2021, with the District and Building Coordinators and Test Administrators. The presentation included pertinent information for all M-STEP online testing. The presentation was recorded and posted to the INSIGHT Portal for Michigan users to reference throughout the testing window.

MDE held a New Assessment Coordinator Preconference Workshop for both paper/pencil and online M-STEP administrations at the 2021 Michigan School Testing Conference on February 16, 2021. This presentation provided detailed information for new assessment coordinators administering both the paper/pencil assessment and the online assessment. This training was structured into before-, during-, and after-testing activities and included the following:

- Before Testing
  - Universal Tools, Designated Supports, and Accommodations
  - Pre-identification of students
  - Materials ordering
  - Providing training to test administrators and proctors
  - Scratch paper and calculator policies
  - How to prepare students for testing (M-STEP tutorials, Online Tools Training (OTTs))
  - Off-Site testing requirements and requests
  - the INSIGHT Portal training
  - Test security and the Assessment Integrity Guide (AIG)
  - Test materials and handling of secure materials
  - Test schedules and test session setup
  - How to address a testing irregularity

- During Testing
  - Test directions
  - Testing irregularities
  - Active monitoring during testing
  - Materials allowed/not allowed in a test session

- After Testing
  - Materials return
  - Preliminary reports
  - Data files
  - Final reports

MDE also provided three webcasts with accompanying PowerPoint presentations organized into sections that discuss what administrators should do before, during, and after M-STEP administration. These webcasts followed the format used in the New Assessment Coordinator Workshop. These presentations are available on the MDE YouTube channel.[2]

Training materials are provided to districts to use for training purposes. These materials include the following:

- Guide to State Assessments
- M-STEP Test Administration Manual (TAM)
- Assessment Coordinator Training Guide
- Secure Site training and resource materials—provide training on pre-identification for testing, materials ordering, student scores and reporting, and using each function in the OEAA Secure Site (OEAA Secure Site Training)
- Test Directions—offered for each test mode (online and paper/pencil) and for each grade
- M-STEP List of Important Dates and Grade 8 List of Important Dates
- Supports and Accommodations Guidance Document
- the INSIGHT Portal mini-modules—provide training for all functions used in the INSIGHT Portal
- the INSIGHT Portal User Guide
- INSIGHT Tools poster—displays the tools available for students and describes how to use each tool
- Assessment Integrity Guide (AIG)
- Incident Reporting Guide (also included as an appendix to the Test Administration Manual)
- Scratch Paper Policy
- Calculator Policy

All these materials were available to schools during the 2020–2021 academic year on the M-STEP Home Page.

Additionally, OEAA publishes a weekly online newsletter called “Spotlight on Assessment and Accountability” throughout the year. The newsletter takes a two-week break in late December/early January, and no issues are published in July. The newsletter provides districts and schools with timely information regarding the M-STEP assessments and test administration, including training opportunities, document availability, and date reminders.

[2] https://www.youtube.com/channel/UC7cyZmw_5Q6_5bkfXDiIquA

4.6 Test Security

The primary goal of test security is to protect the integrity of the assessment and to ensure that results are accurate and meaningful. OEAA uses four test security goals to maintain the integrity of the State of Michigan assessment system. These goals are

1. to provide secure assessments that result in valid and reliable scores,
2. to adhere to high professional test administration standards,
3. to maintain consistency across all testing occasions and sites, and
4. to protect the investment of resources, time, and energy.

4.6.1 Prevention

Prevention of breaches in test security includes following standards and best practices for test integrity and ensuring security aspects of the design, development, operation, and administration of M-STEP are met to prevent irregularities from occurring. Operational and administrative security policies and procedures apply to both online and paper/pencil test administrations.

Online testing uses DRC's INSIGHT Online Learning System. This is a secure browser that locks the student into the testing environment, preventing access to other applications or websites. The software must be installed on each device used for testing. Test content is held securely in an encrypted local caching server. All students are assigned to test sessions and need an individual test ticket for every online test session. Each ticket has a username and a unique password. Access to test tickets is controlled through DRC's the INSIGHT Portal site, and the INSIGHT Portal access is controlled through locally administered permissions in the OEAA Secure Site.

For the paper/pencil test administration, OEAA and Measurement Incorporated design forms to assist the district and building assessment coordinators with the successful receipt and return of test materials. These forms provide security and accountability during fulfillment and distribution, test administration, and collection processes. Secure packaging and distribution of materials for M-STEP are provided to ensure prompt, accurate, and secure delivery of test materials to districts and schools. All materials that contain test questions or student responses are considered secure materials and must be handled in a way that maintains their security before, during, and after testing. Handling of secure materials for paper/pencil and online testing is discussed at length in Chapter 5. As part of professional test administration practices, OEAA provides test security resources for state, district, and school personnel to use in the prevention of testing irregularities. These include the Assessment Integrity Guide (AIG), TAM, online and paper/pencil administration directions, test security training modules, and incident reporting guides.

All school staff members involved in testing are required to be trained in test administration and security prior to the opening of the assessment window. Training resources are available on a statewide basis. Districts and schools can customize trainings by role and location, using state-

provided materials and including local plans. The AIG is intended to be used by districts and schools in the fair and appropriate administration of state assessments. It includes guidelines on the expected professional conduct of educators who administer state assessments to ensure proper test administration and academic integrity. Four assessment security training modules are available as a supplement to the AIG. The modules are intended to be used as an online training program for district and building assessment coordinators, test administrators, and test proctors. These modules explain why test security is important, describe different staff roles in test administration, and detail how to plan for and handle incidents that compromise test security. The M-STEP TAM helps staff administering the assessment understand the administration process, key dates for specific assessment activities, the roles of school personnel in the administration process, and the ways to use available Universal Tools, Designated Supports and Accommodations. Test administrators have online and paper/pencil test directions to follow when administering M-STEP. District assessment coordinators are required to file an incident report in the case of any testing irregularity. The incident reports are filed on the OEAA Secure Site. The test security specialist and other MDE assessment administrative staff review the incidents and determine what the required remediation will be through the use of internal and independent investigations.

4.6.2 Detection

Detection practices include guidelines for assessment monitoring, testing, and reporting irregularities. Detection resources and practices include the AIG, incident reporting, random/targeted test administration monitoring, administration observation, social media monitoring, data forensic analysis, and monitoring of Universal Tools, Designated Supports and Accommodations.

Districts are instructed to monitor test sessions for proper test administration and to enforce the policies and guidelines in the AIG to promote fair, approved, and standardized practices.

OEAA uses random and targeted assessment monitoring to ensure the security and confidentiality of state assessments and to ensure testing personnel adhere to proper procedures. Targeted assessment monitoring is used when schools have had a previous irregularity or show unusual results from previous state assessment data analyses. Random assessment monitoring uses a sample of schools that are randomly selected for quality and integrity checks. Specific requirements of assessment monitoring are documented in the *Assessment Observation Requirements Document* created with OEAA's vendor Measurement Incorporated. The AIG details the process for monitoring district and school personnel. In-person monitoring was suspended for spring 2021 in expectation of pandemic-related restrictions. OEAA instead conducted desk audits with the selected schools, verifying as many points as possible from the monitoring checklist.

Internet and media monitoring occurs during testing windows. The goal of this monitoring is to combat breaches and disclosure of secure assessment materials. These monitoring activities include monitoring comments on the internet for test items captured and shared either from testing computer screens or from paper/pencil test booklets. Social media sites are also monitored for posts discussing or exposing test material. Requirements for social media monitoring are documented in the *Social Media Monitoring Requirements Document* created with OEAA's vendor Measurement Incorporated. The AIG details the process for monitoring the

social media sites of district and school personnel.

DRC provides MDE with online forensic telemetry data via a secure table data load. The table below references the data that are captured and sent to MDE on a weekly basis during the testing windows.

Table 4-3. INSIGHT Forensic Data

Attribute of Forensic Data	Description
Test Interrupted Stopped Flag	Test was interrupted/stopped
Test Interrupted Stopped Count	Number of times the test was interrupted/stopped
Total Item Time	Total time spent on an item
Item Visit Count	Total number of times the item was visited
Wrong to Right	Item's response was changed from wrong to right (within or across item visits)
Wrong to Right Count	Total number of times the item's response was changed from wrong to right (within or across item visits)
Right to Wrong	Item's response was changed from right to wrong (within or across item visits).
Right to Wrong Count	Total number of times the item's response was changed from right to wrong (within or across item visits)
Wrong to Wrong	Item's response was changed from wrong to wrong (within or across item visits).
Wrong to Wrong Count	Total number of times the item's response was changed from wrong to wrong (within or across item visits)
Total Enters Net Total Exits	Records total enters are greater than or less than total exits.

During and after online and paper/pencil test administrations, OEAA conducts multiple analyses on student assessment results. These statistical analyses help in flagging potential testing irregularities. The types of data forensic analyses conducted in spring 2021 included online right-to-wrong changes and response time analysis. Most years include analysis of unusual score gains and losses as well as proficiency level gains, but these analyses were not possible with the lack of spring 2020 scores.

4.6.3 Investigation and Remediation

District assessment coordinators are required to notify OEAA as soon as they are made aware of an alleged or suspected violation or misadministration of M-STEP. Testing irregularities are reported to OEAA via an online incident report form. The M-STEP TAM and AIG provide an incident reporting guide for districts and schools. Each testing irregularity report is reviewed by MDE test administration staff, and corrective action is taken based on policies and procedures for test administration outlined in the M-STEP TAM and AIG.

OEAA also has a phone and online "tip line" to report unethical behavior. Reports can be made anonymously. This provides a means for school staff members to report test integrity issues within their chain of command when they do not feel comfortable reporting the issues to their superior.

All incident reports and supporting documentation are reviewed by MDE, and a determination is made regarding the disposition of each incident. If OEAA determines that the irregularity caused no consequences affecting security, validity, or fraud and that the school took appropriate actions to correct the situation, OEAA may consider the issue resolved and log or close the case. If OEAA determines that questions remain regarding the security, validity, or authenticity of the test administration, OEAA will request either a school self-investigation or, if the problem is considered potentially severe, an independent investigation.

After investigations have taken place, OEAA will create a summary report of the findings. Determination of the investigation is provided in the report.

Remediation of the incidents reported and investigated differ based on the severity of a confirmed allegation or misadministration. Minor mistakes receive recommendations of best practices. Isolated security incidents or negligence provide good candidates for targeted monitoring the next year. Individual student tests tainted by misadministration are typically invalidated. More serious incidents can lead to invalidating entire classes of tests, retraining staff, or barring staff from participating in statewide testing. When possible, remediation happens within the testing window so that students with invalidated tests can be retested if appropriate. Further information on remediation is available in the AIG.

4.7 Summary of M-STEP Administration Security Best Practices

The elements discussed in previous sections align with MDE's prevention practices that help maintain the integrity of the assessment and also adhere to the testing practices and AERA, APA, & NCME (2014) *Standards* relevant to test administration. The previous sections also demonstrate how information in the MDE trainings and manuals addresses *Standards* 4.15 and 6.1:

Standard 4.15 The directions for test administration should be presented with sufficient clarity so that it is possible for others to replicate the administration conditions under which the data on reliability, validity, and (where appropriate) norms were obtained. Allowable variations in administration procedures should be clearly described. The process for reviewing requests for additional testing variations should also be documented. (p. 90)

The M-STEP TAM, Test Directions, and AIG provide instructions for before-, during-, and after-testing activities with sufficient detail and clarity to support reliable test administrations by qualified test administrators. To ensure uniform administration conditions throughout the state, instructions in the TAM, Test Directions, and AIG describe the following: general rules of online and paper/pencil testing; pause and break rules; test scheduling; assessment duration, timing, and sequencing information and recommendations; handling of secure materials; and materials that the test administrator and students need for testing.

Standard 6.1 Test administrators should follow carefully the standardized procedures for administration and scoring specified by the test developer and any instructions from the test user. (p. 114)

To ensure the usefulness and interpretability of test scores and to minimize sources of construct-irrelevant variance, it is essential that M-STEP is administered according to the directions provided in the TAM, Test Directions, and AIG.

MDE's protocol, discussed in Section 4.6, stresses incident reporting and adheres to *Standards* 6.3, 6.6, and 6.7.

Standard 6.3 Changes or disruptions to standardized test administration procedures or scoring should be documented and reported to the test user. (p. 115)

Incident reporting by district assessment coordinators is required when there is any type of misadministration or problem with test administration. MDE provides an Incident Reporting Guide within the TAM that details incident categories and subcategories that are used in the Secure Site Reporting tool and provides sample scenarios for each category or subcategory. MDE staff review the incident reports and respond with corrective action when appropriate. MDE also documents local variations on standardized test administration procedures such as alternate testing hours (for schools that have regular hours of instruction outside the usual 7:00 AM to 4:00 PM window) and locations (for schools with virtual students, students who cannot reach the school building, or off-premises testing sites).

Standard 6.6 Reasonable efforts should be made to ensure the integrity of test scores by eliminating opportunities for test takers to attain scores by fraudulent or deceptive means. (p. 116)

MDE requires that the testing environment for both online and paper/pencil testing be conducive to a proper test environment. All information regarding the content being measured or test-taking strategies displayed in the testing room must be removed or covered. Students must be seated so there is enough space between them to minimize opportunities to view each other's work. Test administrators and Proctors are encouraged to frequently move through the testing room and monitor the students' work areas during testing. Only staff involved in administering the test and students taking the test can be in the testing room. Students are not permitted to access any electronic devices used for communication, for capturing images of the test or testing room, or for data storage during testing. Testing materials are required to be kept secure at all times before, during, and after the testing sessions. Certain secure materials are required to be returned to Measurement Incorporated or securely destroyed.

Standard 6.7 Test users have the responsibility of protecting the security of test materials at all times. (p. 117)

The AIG and TAM describe the ethical practices that testing staff and students must follow during test administration. Students are reminded at the start of the testing session that in order for their results to be valid, they must not talk to or help other students; look at or copy other students' answers; ask for or accept any help from other students; use their cell phones or any other electronic devices, including an eBook; take pictures or make copies of any test materials; cause a disturbance; remove a test booklet, test ticket, or answer document from the room; or post or chat about any part of the test through social media. All staff who participate in a state assessment or handle secure assessment materials must be fully trained and sign an Assessment Security Compliance Form. By signing the Assessment Security Compliance

Form, staff certify that they will follow test administration directions, maintain security and confidentiality of the tests, and report any suspected violations of test security.

Throughout the manuals, test coordinators and examiners are reminded of test security requirements and procedures to maintain test security. Specific actions that are direct violations of test security are so noted. Detailed information about test security procedures are presented in Section 4.6.

4.8 Test Materials

A list of available test materials can be found below in Table 4-4.

Table 4-4. M-STEP Paper Test Materials

Material Description	Product Type
Blank Labels	Ancillary
DVD Information Sheet	Ancillary
FedEx Return Air Bills	Ancillary
Instruction for Materials Return	Ancillary
OEAA Security Compliance Form	Ancillary
Outgoing Box Labels (M-STEP Materials Label)	Ancillary
Packing List Enclosed Label	Ancillary
PreID Labels	Ancillary
Return Kit Cover Sheet	Ancillary
Scorable Labels	Ancillary
Special Handling Envelopes	Ancillary
ELA Answer Document	Answer Document
ELA Emergency Answer Document	Answer Document
Mathematics Answer Document	Answer Document
Mathematics Emergency Answer Document	Answer Document
Social Studies Answer Document	Answer Document
ELA AABB	Braille
ELA Braille—Contracted Test Booklet	Braille
ELA Braille—Uncontracted Test Booklet	Braille
ELA Braille—Uncontracted Print to Braille Correspondence Document	Braille
Mathematics AABB	Braille
Mathematics Braille—Contracted Test Booklet	Braille
Mathematics Braille—Uncontracted Test Booklet	Braille
Mathematics Braille—Uncontracted Print to Braille Correspondence Document	Braille
Social Studies AABB	Braille
Social Studies-Contracted Braille Test Booklet	Braille
Social Studies-Uncontracted Braille Test Booklet	Braille
Social Studies-—Uncontracted Print to Braille Correspondence Document	Braille
ELA Listening Audio CD	CD

Material Description	Product Type
Social Studies Audio CD	CD
Social Studies Arabic DVD	DVD
Social Studies English DVD	DVD
Social Studies Spanish DVD	DVD
ELA Enlarged Print Test Booklet	Enlarged Print
Mathematics Enlarged Print Test Booklet	Enlarged Print
Social Studies Enlarged Print Test Booklet	Enlarged Print
Glossary Reference Sheets	Glossary
Graph Paper	Graph Paper
ELA Listening Script	Listening Script
ELA Listening Script, Emergency	Listening Script
M-STEP Test Administration Manual	Manual
M-STEP Paper/Pencil Test Directions	Manual
M-STEP Online Test Directions	Manual
M-STEP Emergency Test Administration Directions Addendum	Manual
Social Studies Emergency Reader Script (English)	Reader Script
Social Studies Reader Script (English)	Reader Script
ELA Emergency Test Booklet	Test Booklet
ELA Test Booklet	Test Booklet
Mathematics Emergency Test Booklet	Test Booklet
Mathematics Spanish Test Booklet	Test Booklet
Mathematics Test Booklet	Test Booklet
Social Studies Test Booklet	Test Booklet
Social Studies Emergency Test Booklet	Test Booklet
Math Test Booklet	Test Booklet
Social Studies Test Booklet	Test Booklet
Social Studies Emergency Test Booklet	Test Booklet

4.9 Summary

In summary, the overall purpose of the test administration documentation and training opportunities is to keep districts informed about policies and procedures related to testing in general and the M-STEP program. The information imparted is clearly related to maintaining the integrity of the administration of M-STEP, maintaining the security of the assessment, allowing access to the assessments for special populations by clearly delineating appropriate Universal Tools, Designated Supports or Accommodations, and providing guidance on appropriate interpretations of the test results. These communication and training efforts by MDE and its test vendors are in alignment with multiple best practices of the testing industry, particularly the following standards (AERA, APA, & NCME, 2014):

- Standard 4.15—The directions for test administration should be presented with sufficient clarity so that it is possible for others to replicate the administration conditions under which the data on reliability, validity, and (where appropriate) norms were obtained. Allowable variations in administration procedures should be clearly described. The process for reviewing requests for additional testing variations should also be documented.
- Standard 6.1—Test administrators should follow carefully the standardized procedures for administration and scoring specified by the test developer and any instructions from the test user.
- Standard 6.2—When formal procedures have been established for requesting and receiving accommodations, test takers should be informed of these procedures in advance of testing.
- Standard 6.3—Changes or disruptions to standardized test administration procedures or scoring should be documented and reported to the test user.
- Standard 6.6—Reasonable efforts should be made to ensure the integrity of test scores by eliminating opportunities for test takers to attain scores by fraudulent or deceptive means.
- Standard 6.7—Test users have the responsibility of protecting the security of test materials at all times.

Chapter 5: Test Delivery and Administration

5.1 Online Administration Details

MDE delivered 99.7% of M-STEP online via DRC's online testing platform, INSIGHT, in spring 2021. 854 Michigan school districts administered M-STEP online in 3,006 Michigan schools.

M-STEP ELA and mathematics were administered as computer adaptive tests (CATs). M-STEP science and social studies were administered as fixed-form assessments. Additionally, accommodated forms in all content areas were delivered as fixed-form assessments.

The spring 2021 M-STEP was administered to enrolled students in grades 3–8 and 11, along with grade 12 students who missed testing in 2020. Table 5-1 presents content areas tested by grade.

Table 5-1. Content Areas Tested by Grade

Grade Tested	Content Areas Tested
Grade 3	ELA and Mathematics
Grade 4	ELA and Mathematics
Grade 5	ELA, Mathematics, Science, and Social Studies
Grade 6	ELA and Mathematics
Grade 7	ELA and Mathematics
Grade 8	Science and Social Studies
Grade 11 & 12	Science and Social Studies

The number of students tested online for the spring 2021 M-STEP can be found in Table 5-2 below. Note that counts may vary across chapters due to differing definitions or inclusion rules. For example, a student could have an incomplete or invalid test, which might be included for some purposes but excluded for others.

Table 5-2. Number of Students Tested Online

Grade	Subject	Online Students Tested
3	ELA	72,260
4	ELA	72,586
5	ELA	72,476
6	ELA	69,449
7	ELA	69,334
3	Mathematics	72,085
4	Mathematics	72,440
5	Mathematics	71,804
6	Mathematics	69,589
7	Mathematics	69,481

Grade	Subject	Online Students Tested
5	Science	70,607
8	Science	72,325
11 & 12	Science	57,684
5	Social Studies	71, 151
8	Social Studies	72,976
11 & 12	Social Studies	57,332

5.1.1 Online Administration Reports

MDE and DRC defined requirements for all online administration reporting prior to administering the 2021 assessments. Administration reports were delivered to MDE daily or weekly based on the established requirements. Table 5-3 shows the types of administration reports that were delivered to MDE during the 2021 M-STEP testing windows.

Table 5-3. Online Administration Reports

Report Name	Delivery Frequency	Description of Report
Form Assignment Report	Weekly throughout the testing window	Shows fixed-form assignments for monitoring equal distribution of fixed forms per grade and content area
Cumulative Student Status	Daily throughout the testing window	Status of student testing by site; allows MDE to monitor how students are progressing with testing by grade and content area
Excessive Logins Report	Daily throughout the testing window	Shows online tests that have been logged into more than four times
Accommodations and Supports Report	Daily throughout the testing window	Shows number of students using each accommodation/support by grade and content area
Test Sessions - Content Area Compare	Daily starting in March through end of testing window	Shows number of students assigned to the same content area in both M-STEP and MI-Access administrations

5.1.2 Online User Manuals and Reference Documents

To help assist with the administration of the online M-STEP, numerous manuals and documents were created. Some of these include the test administration manuals, online test directions by grade and test mode, the Technology User Guide, and many additional reference documents.

The M-STEP Test Administration Manual (TAM) is available for all test modes, grades, and content areas of M-STEP tests. It provides an overview of the assessments; important testing dates; information on when and how to assign and use Universal Tools, Designated Supports, and Accommodations; guidelines on who must test; testing policies and procedures including scratch paper and calculator policies; and resources for assessment coordinators and administrators.

The TAM provides detailed information regarding the roles involved in administering a test and responsibilities for each role: District Assessment Coordinator, Building Assessment Coordinator, and Test Administrator.

Information provided in the M-STEP TAM includes the following:

- Testing Schedules
- Overview
  - M-STEP Assessments
  - What's New
  - Content Area- and Grade-Specific Sections
  - Scratch Paper Guidelines
  - Designated Supports and Accommodations
  - Resources for Students to Prepare for Testing
  - Call Center Contact Information
  - OEAA Communications with Schools and Districts
  - Standardized Testing
  - Assessment System Access

- Roles and Responsibilities
  - District Coordinators
  - Building Coordinators
  - Test Administrators
  - Technology Coordinators

- Supports and Accommodations
  - What Are Supports and Accommodations?
  - Supports and Accommodations Tracking Sheet
  - Ordering Accommodated Materials
  - Embedded and Non-embedded Supports and Accommodations
  - Turning on Designated Supports and Accommodations
  - Verifying Test Tickets
  - Where to Find More Information on Designated Supports and Accommodations
  - Nonstandard Accommodations
  - Filling Out Designated Supports and Accommodations Information on Answer Documents
  - Using Accommodated Versions of the Tests
  - Read-Aloud Guidelines
  - Scribing Protocol
  - English Learner Supports
  - Returning Accommodated Materials and Answer Documents

- Student Pre-ID and Test Eligibility
  - Students to be Tested
  - Student Grade Considerations
  - Students in Different Locations
  - Students in Unique Circumstances

  - Accountability Considerations
  - Unique Identification Codes
  - Test Administration Windows
  - Computer Adaptive Testing for ELA and Mathematics
  - INSIGHT Availability
  - Absences and Makeup Testing
  - Incident Reporting
  - Testing Irregularities

- Before Testing
  - Training Tools
  - Assessment Security
  - Materials Permitted or Required During Testing
  - Software and Testing Devices
  - Important Tasks Before testing

- During Testing
  - Important Tasks During Testing

- After Testing
  - Important Tasks After Testing

- Appendices
  - Calculator Policy
  - Scratch Paper Policy
  - Incident Reporting Guide
  - DRC INSIGHT Portal User Guide
  - List of Important Dates
  - Administration Resources
  - Checklists
  - Change Log

Online Test Directions documents are provided for each grade level. These documents provide information for testing including materials needed during testing, items permitted in testing rooms, test scratch paper and calculator policy information, and test directions for each content area test in the grade level.

Information provided in the Online Test Directions for each grade includes the following:

- Introduction
  - Online Assessments Covered
  - DRC INSIGHT Portal
  - Key
  - Online Tools Training (OTT) and Student Tutorials

- Overview
  - Introduction
  - M-STEP Assessments
  - What's New
  - Content Area-Specific Sections
  - Scratch Paper Guidelines
  - Designated Supports and Accommodations
  - Call Center Contact Information
  - OEAA Communications with Schools and Districts
  - Standardized Testing
  - Test Session Timings
  - Assessment Security
  - Training Requirements and Resources for Students

- Before Testing
  - Before Testing Checklist
  - Test Materials Needed for M-STEP

- During Testing
  - Important Tasks During Testing
  - Permitted Items in Testing Room
  - Providing Assistance
  - Procedures for Testing Breaks, Interruptions, or Pauses
  - Test Directions
    - Introduction
    - Test Sign-In
    - Welcome Screen
    - System Check and Test Security
    - Introduction
  - Test Directions by grade and content area, including directions for accommodated assessments
  - Monitoring During Testing
  - Testing Irregularities

- After Testing
  - Completing the Test Session
  - Exiting the Test Engine

- Appendices
  - M-STEP Calculator Policy
  - M-STEP Scratch Paper Policy
  - M-STEP Incident Reporting Guide

5.2 Paper/Pencil Administration Details

MDE delivered paper/pencil assessments to meet individual students' needs and for buildings that applied and were approved for a waiver of online testing.

Online testing waivers were available for the following reasons:

- Buildings were not technologically ready.
- Buildings were under construction or otherwise had a disrupted technological environment.
- Locations were testing in a center-based program.
- Locations were testing in a juvenile justice facility.
- Buildings had other instructional reasons.

Beyond the usual online testing waiver process, additional paper materials were printed and made available in spring 2021 for districts expecting technology issues arising from remote and hybrid testing during the first SARS-CoV-19 pandemic. Many schools had disassembled or altered their usual technology setups to support more remote instruction, and there was greater demand for paper alternatives and backups as some testing devices may not have been in school buildings in the months leading up to testing. Additional paper testing materials were ordered, but there was not an increase in the amount of paper testing completed.

The paper/pencil test was available in Enlarged Print and in both contracted and uncontracted braille versions. A Spanish language paper/pencil test was also available for mathematics in each grade.

There were three forms for each test, including the braille form. These forms are listed in the table below.

Table 5-4. Paper/Pencil Test Forms by Content Area

Content Area	Paper Pencil Forms Available
ELA	Form 1—administered to all students testing paper/pencil
ELA	Form 2—Emergency form
ELA	Form 88—Braille form
Mathematics	Form 1—administered to all students testing paper/pencil
Mathematics	Form 2—Emergency form
Mathematics	Form 88—Braille form
Social Studies	Form 1—administered to all students testing paper/pencil
Social Studies	Form 2—Emergency form
Social Studies	Form 88—Braille form

The paper/pencil test was provided for the same grades and content areas that had online counterparts (see Table 5-1).

The M-STEP Test Administration Manual (TAM) is common for all test modes, grades, and content area M-STEP tests. It provides an overview of the assessments, important testing dates, information on when and how to assign and use Universal Tools, Designated Supports and Accommodations, guidelines on who must test, testing policies and procedures including scratch paper and calculator policies, and resources for assessment coordinators and administrators. See Section 5.1.2 for information about the content included in the M-STEP TAM.

Paper/Pencil Test Directions documents are provided for each grade level. These documents provide information for testing including materials needed during testing, items permitted in testing rooms, test scratch paper and calculator policy information, and test directions for each content area test in the grade level.

Information provided in the Paper/Pencil Test Administrations Directions for each grade includes the following:

- Introduction
  - Assessments Covered
  - Key
- Overview
  - Introduction
  - M-STEP Assessments
  - What's New
  - Content Area-Specific Sections
  - Test Administrator's Directions and Manual
  - Scratch Paper Guidelines
  - Designated Supports and Accommodations
  - Resources for Students to Prepare for Testing
  - Call Center Contact Information
  - OEAA Communications with Schools and Districts
  - Standardized Testing
  - Testing Schedules
  - Test Session Timings
  - Assessment Security
  - Training Requirements and Resources for Students
- Before Testing
  - Before Testing Checklist
  - Test Materials Needed for M-STEP
- During Testing
  - Important Tasks During Testing
  - Permitted Items in Testing Room
  - Providing Assistance
  - Test Directions by grade and content area

- After Testing
  - Assemble Materials for Return
  - Checklist for Test Administrators

- Appendices
  - M-STEP Calculator Policy
  - M-STEP Scratch Paper Policy
  - M-STEP Incident Reporting Guide

The number of students tested using the spring 2021 paper/pencil M-STEP can be found in Table 5-5, below.

Table 5-5. Number of Students Tested with Paper/Pencil

Grade	Content Area	Number of Students Tested with Paper/Pencil
3	ELA	104
4	ELA	96
5	ELA	111
6	ELA	162
7	ELA	183
3	Mathematics	109
4	Mathematics	106
5	Mathematics	117
6	Mathematics	165
7	Mathematics	191
5	Science	128
8	Science	201
11 & 12	Science	698
5	Social Studies	129
8	Social Studies	204
11 & 12	Social Studies	695

5.3 OEAA Secure Site

The OEAA Secure Site is a web-based application used for state assessments and accountability. The functions of the Secure Site include pre-identification of students for both paper/pencil and online assessments; ordering paper/pencil materials (see Chapter 4.8), including accommodated versions of the assessments; incident reporting; review of accountable students and test verification; and retrieval of data score files and score reports.

The Secure Site is available to authorized district and school personnel only. The MDE Secure Site training page[1] includes a complete list of Secure Site functions and how to use them.

[1] https://www.michigan.gov/securesitetraining

The Secure Site takes student information from the Michigan Student Data System (MSDS) and provides a secure, centralized interface for using student information in testing. District-identified permissions for school staff carry through to vendor systems. To prepare for testing, students can be pre-identified for tests, moved between general and alternate assessments, arranged in online testing sessions, and have test materials ordered. During testing, the Secure Site provides tools for correcting issues missed during preparation and reporting incidents. After testing, the Secure Site provides access to student test score reports and data files, as well as providing tools for accountability and test verification.

5.4 DRC INSIGHT Portal

5.4.1 Michigan Users

DRC uses MDE's Secure Site to pull and load Michigan users to the DRC INSIGHT Portal based on Secure Site Test Cycle IDs. For the 2020–21 school year, the M-STEP *Test Cycle ID* was 212. Users were identified by their *Security Role ID* and pulled into the DRC INSIGHT Portal according to the established requirements. The mapping of users from the Secure Site to the DRC INSIGHT Portal can be found below in Table 5-6.

Table 5-6. Mapping of Building Users from Secure Site to DRC INSIGHT Portal

Security Role ID	DRC Role and Permission Set
17—Public School Administrator	School
20—District Administrator	School
40—Public Online Test Administrator	School
31—Nonpublic School Administrator	School
41—Private School Online Test Administrator	School
42—District Test Administrator	School
45—State	State
38—District Technology Coordinator	District Technology Coordinator
39—School Technology	District Technology Coordinator
43—Public School Technology	District Technology Coordinator
44—Private School Technology	District Technology Coordinator

All users were identified by the site code(s) they had access to within the DRC INSIGHT Portal. Users were only able to access student and test information based on their site permissions in the MDE Secure Site.

5.4.2 Administrative Functions

Online administration is managed through the DRC INSIGHT Portal that provides tiered, secure access to all required administrative functions. Within the DRC INSIGHT Portal, users manage student information and create test sessions.

Student information for M-STEP is imported into the DRC INSIGHT Portal via automatic loading of data. DRC utilizes the MDE Secure Site to pull new and updated student records for import into the DRC INSIGHT Portal. Student data is pulled three times a day so that any new student records or updated student records are loaded in a timely manner. Building users can view all the demographic information associated with the students from the Secure Site before placing them in test sessions for test tickets.

Once the student data is loaded into the Test Setup application within the DRC INSIGHT Portal, users organize students into test sessions. Test sessions can be created by content area, class, grade, or school. Through Test Setup, users can also update student Designated Supports and Accommodations, print test tickets, and monitor student testing status.

The student login ticket contains unique login credentials that students use to access the testing software. For a selected test session, assessment coordinators can download and print a PDF document containing instructions, a roster of student tickets, and the actual test tickets. Student test tickets are considered secure materials, and assessment coordinators keep printed tickets in a locked and secure location to be distributed to test administrators and collected daily for secure storage.

5.4.3 Online Testing Resources

The DRC INSIGHT Portal houses an assortment of testing resources available to the district and school users as well as the technology coordinators. The INSIGHT installables and requirements are maintained on the DRC INSIGHT Portal, as are all technology guides and information necessary for setting up schools' computers and servers.

Video tutorials containing mini-chapters on how to use the DRC INSIGHT Portal applications are available to help users familiarize themselves with the different administrative applications within the DRC INSIGHT Portal. A DRC INSIGHT Portal user guide is also available for reference.

Student-facing online testing resources include M-STEP tutorials for students and Online Tools Training (OTTs). OTTs are practice questions that demonstrate examples of each tool in the online system and each item format a student might encounter. OTTs are not complete practice tests.

For more information on M-STEP-specific online testing resources, visit the M-STEP website.[2]

5.5 Return Material Processing

Each box of materials shipped to schools contains a box list, which shows each item in the box. Each order contains a packing list, which shows a complete list of items, quantities, and box locations for the entire order. When an order contains secure materials, a security list is also included that shows a complete list of secure items and the associated shrink-wrapped pack barcodes.

[2] http://www.michigan.gov/mstep

All M-STEP scorable and non-scorable secure testing materials are to be returned via FedEx Express Saver to Measurement Incorporated to be processed.

When boxes of returned materials arrive at Measurement Incorporated, the warehouse team scans the boxes into the Measurement Incorporated tracking system database, where they are checked against the tracking numbers that are assigned to each school. FedEx also scans each of its tracking barcodes to record each box as it was delivered to Measurement Incorporated. This provides immediate information on the number of boxes received and points of origin of the boxes. Once this procedure is completed, the boxes are opened and all materials are sorted.

Scorable and non-scorable materials are securely scanned in using Measurement Incorporated's Security Barcode Check-In Application. This application allows IT Operations to scan the security identifier on individual secure materials or the security identifier located on the outside of an intact pack of shrink-wrapped documents using Measurement Incorporated's automated security scanning process. Scanning the security identifier on the shrink-wrapped pack is equivalent to scanning all the individual security identifiers included in the shrink-wrapped pack and is more efficient than scanning each individual test booklet in the shrink-wrapped pack.

As each security identifier is securely scanned, it is checked against the original list of identifiers that were entered into the Measurement Incorporated database. Any discrepancies are noted, and a security report is generated for MDE.

For scorable answer documents, the same scanning process that captured the security identifier information also captures information from the student pre-identification label, bubbled demographic information on the answer document cover, bubbled student responses, and images of constructed responses to be sent on to handscoring.

All loose (i.e., individual) test booklets are securely scanned into the Measurement Incorporated database by IT Operations using Measurement Incorporated's automated security scanners.

Warehouse personnel securely scan in all returned accommodated materials using a human-operated computer station equipped with a barcode reader and enter those materials into the ObjectTracker database.

The accommodated materials include CDs, DVDs, braille test booklets, Enlarged Print test booklets, and Reader Scripts. Although they are not accommodated materials, ELA Listening CDs and Reader Scripts for M-STEP are secure materials and are also scanned in.

After all returned secure materials are checked in, Measurement Incorporated's IT team prepares the initial security report data by comparing the security barcodes of checked-in materials with the barcodes of all secure materials.

The initial missing materials and security report data are provided to MDE in a spreadsheet. All schools that were sent materials by Measurement Incorporated are included in the summary, regardless of whether the schools are active or inactive entities.

For public school districts that are missing secure materials, district coordinators are shipped security reports to be further distributed to building coordinators.

For public school academies and nonpublic schools that are missing secure materials, each building coordinator is shipped a security report.

Missing materials reported as destroyed or never received are not included on the security report sent to the district or school. Missing materials reported as lost remain on the security report, and the comment "Reported Lost" is added to the comment section of the security report.

FedEx Ground Package Returns Program labels are provided in case any secure materials need to be returned. Schools that find no additional secure materials are directed to return the summaries of missing secure materials and any additional information.

The Measurement Incorporated IT team updates the security report data using the spreadsheet of issues reported to the Call Center, which includes materials that were lost, destroyed, or never received. This spreadsheet is maintained by the Measurement Incorporated management team. MDE staff forwards to the Measurement Incorporated management team any information collected via phone calls or incident reports regarding materials that were lost, destroyed, or never received.

If a summary of missing secure materials is accompanied by a corresponding explanation letter, the two are stapled together. All summaries of missing secure materials are checked in using the district/building code barcode and are filed in order by assessment, district code, and building code. Any returned secure materials are checked in by security barcode and are stored with the other secure materials.

After the initial response window ends and the returned letters and secure materials are processed, the IT team refreshes the security report data for each assessment, indicating schools that responded with newly returned secure materials and/or letters and schools that did not respond. Follow-up security reports are generated.

A second round of cover letters and security reports is sent to districts and schools that still have outstanding missing materials and have not returned a letter or a security report with comments. This procedure is the same as the ones used for the first round of security reports. Schools that return a letter, materials, or both in the first round are not included in the second round.

Measurement Incorporated checks in and files any returned summaries of missing secure materials, secure materials, and additional information received. When MDE determines that schools have had sufficient time to respond, Measurement Incorporated generates and provides to MDE a final missing materials report.

The final security report spreadsheet sent from Measurement Incorporated to MDE includes all schools and districts that were tested. The Excel filter feature is used to list those that still have outstanding missing materials. The "Returned Letter or Additional Items or Both" column reflects letters and items returned in response to both the initial round and the second round of security reports.

Tables 5-7 through 5-9 show shipped M-STEP material information. The amount of material shipped was and should be expected to be higher than the number of students testing on paper/pencil. Each student testing on paper needs at least two secure materials (booklet and answer document), plus additional secure materials for accommodated testing.

Table 5-7. Count of Secure M-STEP Materials Shipped

Grade	ELA	Mathematics	Science	Social Studies
3	1,113	909	N/A	N/A
4	1,093	886	N/A	N/A
5	1,527	1,146	1,429	1,415
6	1,126	931	N/A	N/A
7	1,099	895	N/A	N/A
8	N/A	N/A	1,488	1,419
11	N/A	N/A	3,722	3,545

Table 5-8. Count of Secure M-STEP Materials Returned

Grade	ELA	Mathematics	Science	Social Studies
3	1,096	899	N/A	N/A
4	1,064	872	N/A	N/A
5	1,517	1,141	1,422	1,410
6	1,115	918	N/A	N/A
7	1,060	870	N/A	N/A
8	N/A	N/A	1,450	1,394
11	N/A	N/A	3,602	3,496

Table 5-9. Count of Secure M-STEP Materials Not Returned

Grade	ELA	Mathematics	Science	Social Studies
3	17	10	N/A	N/A
4	29	14	N/A	N/A
5	10	5	7	5
6	11	13	N/A	N/A
7	39	25	N/A	N/A
8	N/A	N/A	38	25
11	N/A	N/A	120	49

5.6 Testing Window and Length of Assessment

Online testing was originally scheduled for four-week testing windows for each set of grades. Paper/pencil test administration was originally scheduled for particular days with makeup testing windows for each grade and content area. To accommodate school needs for flexibility during the first SARS-CoV-19 pandemic, two additional weeks were added to each testing window, and schools testing on paper/pencil were given flexibility to complete testing throughout the full testing window.[3] The six-week testing windows for the 2021 operational M-STEP were as follows:

- Grades 5 and 8 were administered the ELA, mathematics, and social studies assessments from April 12 through May 21, 2021, with paper testing starting on April 13 for grade 5 and April 14 for grade 8.
- Grade 11 was administered the science and social studies assessments from April 12 through May 21, 2021, with paper testing starting on April 15.
- Grades 3, 4, 6, and 7 were administered the ELA and mathematics assessments from April 26 through June 4, 2021, with paper testing starting on April 27.

All accommodated and standard assessments were administered in these time frames; there were no specific make-up windows for any assessments in spring 2021.

The spring 2021 M-STEP was not timed and was paced by students. Schools scheduled test sessions and determined the appropriate amount of time for students to spend testing in a single test session. Any students needing more time were able to complete the test in a later test session during the six-week grade-level testing windows. Further information on test session timing is provided on pages 4–9 of the Guide to State Assessments.

[3] A complete list of Spring 2021 Summative Assessment Flexibilities is available at https://www.michigan.gov/documents/mde/Spring_2021_Summative_Assessment_Flexibility_Options__722317_7.pdf along with an FAQ document at https://www.michigan.gov/documents/mde/Spring_2021_Summative_Assessments_FAQ_721789_7.pdf

Chapter 6: Operational CAT

This chapter mainly covers elements of the CAT algorithm, including entry point, ability estimation and standard error of measurement (SEM), passage selection, test navigation, test termination, and forced submission. M-STEP CAT configurations and simulations for ELA and mathematics are reported toward the end of this chapter. Information on the Smarter Balanced Summative CAT configurations can be found in the *Smarter Balanced 2017–2018 Technical Report* (2018), and the 2017 Smarter Balanced Summative CAT simulations can be found here.[1]

Before a CAT administration, the configurations and the item pool need to be loaded into the CAT engine. The configurations define the operational test blueprint with different content rules (e.g., Min and Max number of items in one or more content standards and/or item types), field-test blueprint (e.g., number of items in each claim and item position), scoring algorithm (e.g., theta estimation method, scaling constants, highest obtainable scale score [HOSS], and lowest obtainable scale score [LOSS]), and passage-selection criteria (e.g., Min and Max number of items in a passage, passage Min percentage, distinct passage Min for ranking, passage ranking criteria, passage randomization options, and options to fulfill rules). The details of the configurations for each grade and content are presented after the descriptions of the processes. Note that specific information related to the psychometric background can be found in the *Smarter Balanced 2017–2018 Technical Report* (2018).

6.1 Entry Point

The M-STEP CAT algorithm for ELA and mathematics is designed to administer items targeted for an individual student based on his or her performance. However, students' performance is unknown at the beginning of the test. With no prior information about a student, DRC has determined, based on simulation studies prior to operational administrations, that using a starting point one standard deviation (SD) below the average item difficulty of the M-STEP ELA and mathematics CAT pools provides students with a better test-taking experience at the beginning of the test, particularly for those who are at the lower end of the achievement continuum. Table 6-1 lists the initial values used in the 2020–21 M-STEP CAT.

The M-STEP CAT algorithm includes a randomization component when selecting items to control item exposure. That is, one item is selected from among a set of items that is near the targeted item difficulty. This is especially important at the beginning of the test when no prior information is available. Randomization of items and rules defined by the test blueprint ensure that students will not see the same set of items in the same order even when all the students are assumed to perform the same or have the same initial theta at the beginning of the test.

[1] https://portal.smarterbalanced.org/library/en/2016-17-summative-assessments-simulation-results.pdf

Table 6-1. Initial Thetas for the CAT

Content	Grade	Initial Theta
ELA	3	-1.629
ELA	4	-1.233
ELA	5	-0.887
ELA	6	-0.461
ELA	7	-0.218
Mathematics	3	-1.990
Mathematics	4	-1.199
Mathematics	5	-0.537
Mathematics	6	-0.311
Mathematics	7	0.617

6.2 Theta Estimates and Standard Error of Measurement

After each item response, the theta estimate and SEM are calculated via the maximum likelihood estimation (MLE) for the total test and each claim. Note that only responses to autoscored items are accounted for in the theta estimate used by the CAT algorithm. The items in the item bank are calibrated based on the Generalized Partial Credit Model (GPCM) (Muraki, 1992) (see Equation 6-1).

$$P_{im}(\theta_j) = \frac{\exp[\sum_{k=0}^{m} Da_i(\theta_j - b_{ik})]}{\sum_{v=0}^{M_i-1} \exp[\sum_{k=0}^{v} Da_i(\theta_j - b_{ik})]}, \quad (6\text{-}1)$$

where $a_i(\theta_j - b_{i0}) \equiv 0$; $P_{im}(\theta_j)$ is the probability of an examinee with ability θ_j getting score m on item i; M_i is the number of score categories of item i with possible scores as consecutive integers from 0 to $M_i - 1$; D is the scaling constant, 1.7; a_i is the discrimination parameter of item i; b_{ik} is the location parameter or threshold of category k. The GPCM is equivalent to the 2 Parameter Logistic (2PL) Model (Birnbaum, 1968) (see Equation 6-2) when the item is scored dichotomously.

$$P_i(\theta_j) = \frac{1}{1 + \exp[-Da_i(\theta_j - b_i)]}, \quad (6\text{-}2)$$

where $P_i(\theta_j)$ is the probability of an examinee with ability θ_j answering item i correctly; D is the scaling constant, 1.7; a_i and b_i are the discrimination and difficulty parameters of item i.

For a general MLE, the likelihood combines both dichotomously and polytomously scored items as shown below:

$$\mathrm{L}(\theta_j \mid \mathrm{U}) = \left(\prod_{i=1}^{n} P_i(\theta_j)^{u_i} Q_i(\theta_j)^{1-u_i} \right) \cdot \left(\prod_{i=n+1}^{N} \prod_{m=0}^{M_i-1} P_{im}(\theta_j)^{u_{im}} \right), \text{ (6-3)}$$

where $Q_i(\theta_j)$ is $1 - P_i(\theta_j)$ and the response matrix U contains the response of dichotomously scored items

$$u_i = \begin{cases} 1, if\ correct, \\ 0, otherwise, \end{cases}$$

for i = 1,…, n, and the responses of polytomously scored items

$$u_{im} = \begin{cases} 1, & if\ scored\ m, \\ 0, & otherwise, \end{cases}$$

for $i = n + 1$, …, N and m = 0, 1, …, $M_i - 1$.

The modified version of the Newton-Raphson equation used by DRC for estimating theta at iteration t is given as below:

$$[\hat{\theta}]_t = [\hat{\theta}]_{t-1} + \frac{L_1' + L_2'}{ABS(L_1'' + L_2'')}. \text{ (6-4)}$$

where *ABS* stands for the absolute value. L_1' and L_1'' are the first and second derivatives of the likelihood function of polytomously scored items:

$$L_1' = \sum_{i=1}^{m} Da_i(u_i - p_i) \text{ and (6-5)}$$

$$L_1'' = \sum_{i=1}^{m} \frac{D^2 a_i^{\,2}(-p_i^{\,2})(1-p_i)}{p_i}, \text{ (6-6)}$$

where is u_i is the score a student gets from a dichotomously scored item and the possible values are 1 or 0. L_2' and L_2'' are the first and second derivative of the likelihood function of polytomously scored items:

$$L_2' = \sum_{i=n+1}^{N} Da_i \sum_{m=0}^{M_i-1} u_{im} \left(m - \sum_{m=0}^{M_i-1} m P_{im}(\theta_j) \right) \text{ and (6-7)}$$

$$L_2'' = -\sum_{i=n+1}^{N} D^2 a_i^2 \left[\sum_{m=0}^{M_i-1} m^2 P_{im}(\theta_j) - \left(\sum_{m=0}^{M_i-1} m \cdot P_{im}(\theta_j) \right)^2 \right], \text{ (6-8)}$$

where u_{im} is the value 1 or 0.

During the M-STEP CAT administration process, in the case of scores that are zero (i.e., all items are incorrect) and perfect (i.e., all items are correct), a correction factor is applied before computing the relevant MLEs because the corresponding thetas cannot be estimated. The correction factor can be configured as any fractional value between 0 and 1 (e.g., 0.3). However, for the final scoring, the LOSS and the HOSS are assigned to the "all incorrect" and "all correct" cases according to the scoring specifications.

For each theta estimate, the corresponding SEM is calculated. SEM is the inverse of the square root of the test information function (TIF), which is the sum of the item information functions (IIFs). The IIF for dichotomously and polytomously scored items can be calculated by using the following equations, respectively:

$$IIF_i = D^2 {a_i}^2 (1 - P_i) P_i \quad (6\text{-}9)$$

and

$$IIF_i = D^2 {a_i}^2 \left[{}^{M_i - 1} \sum_{m=0}^{M_i - 1} m^2 P_{im} - \left({}^{M_i - 1} \sum_{m=0}^{M_i - 1} m P_{im} \right)^2 \right] \quad (6\text{-}10)$$

6.3 Item Selection

After the initial item set is administered, the M-STEP CAT algorithm is designed to administer items targeted at an individual student's current performance, given content coverage boundaries. Specifically, the M-STEP CAT algorithm makes selection decisions each time based on the interim theta estimates while also taking many other factors, including test blueprint, item information function, and/or passage-related factors, into consideration. The details related to these factors are discussed below.

6.3.1 Test Blueprint

The adaptive item selection algorithm is designed to cover a standards-based blueprint, which includes the content standards, DOKs, item types, and score-point constraints. The M-STEP CAT algorithm closely resembles a modified constrained CAT (MCCAT) design (Leung, Chang, & Hau, 2003). The general idea is that the CAT algorithm is configured with upper and lower bounds that specify the minimum and maximum numbers of items that will be administered to students at the total-test, claim, content-category, assessment-target, and/or item-type levels. For the set of items configured, further configurations can be set up so only items at the specified DOK level and/or score point will be selected. The configurations specified in the test blueprint can be prioritized to ensure that the blueprint is met for each administration.

6.3.2 Item Information Function

After a content rule, among the content rules with the same priority level, is selected randomly or by the highest need, the M-STEP CAT algorithm targets the top N-ranked items, which are configurable, with the higher information function at the theta estimate. In general, the most efficient way to run an M-STEP CAT is to select items with the highest information function, which contains the smallest standard error for any given number of items. However, the consequence is that the items with high discriminations tend to be used more frequently. At the beginning of the test, it may not be necessary to select an item with the highest information function because the theta estimate used for calculating the information function contains a large measurement error. To control the item exposure rate for the high-discriminating items in the bank, a randomization process is introduced. Instead of the item with the highest information function being selected, the item to be used next is randomly selected from the top N (e.g., N = 5) number of items ranked by the item information (given interim theta estimate) and content-related criteria (see the "Distinct Top-Ranked Passage #" column in Table 6-2). Table 6-3 provides the scaling constants (i.e., slope A and intercept B), LOSS, and HOSS. All are fixed for each grade and content, and all were finalized before the test administration. They are used to convert students' estimated scores to the scale scores. More information about the scale transformations can be found in Chapter 8.

Table 6-2. Passage Selection Criteria

Content Area	Grade	Item Range	Passage Min #	Passage Max #	Passage Min %	Distinct Top-Ranked Passage #	Percentage of Items Used (% of Weight)	Items Delivered (% of Weight)	Max Information (% of Weight)
ELA	3–7	1–4	1	1	100	10	100	0	0
ELA	3–7	5–6	2	3	60	5	0	100	0
ELA	3–7	7	1	1	100	4	100	0	0
ELA	3–7	8–9	3	4	100	5	0	50	50
ELA	3–7	>=10	1	4	50	5	0	40	60
Mathematics	3–6	1–3	1	1	100	15	0	100	0
Mathematics	3–6	>=4	1	1	66	10	0	0	100
Mathematics	7	1–2	1	1	100	15	0	100	0
Mathematics	7	>=3	1	1	66	10	0	0	100

Table 6-3. Scoring Algorithm

Content	Grade	Slope A	Intercept B	LOSS	HOSS
ELA	3	26.0061	1322.5934	1203	1357
ELA	4	24.6036	1409.5875	1301	1454
ELA	5	25.8718	1501.3628	1409	1560
ELA	6	24.5491	1592.9699	1508	1655
ELA	7	23.8151	1687.3543	1618	1753
Mathematics	3	26.3725	1325.7407	1217	1361
Mathematics	4	25.2608	1409.0233	1310	1455
Mathematics	5	23.3374	1495.6493	1409	1550
Mathematics	6	20.4573	1589.9260	1518	1650
Mathematics	7	19.6292	1686.6036	1621	1752

6.3.3 Passage Related Concerns

Each passage in the ELA test has one or more associated items. The M-STEP CAT algorithm does not require that all items associated with a passage be administered; instead, it evaluates all possible combinations of items within a passage. Item sequencing within a passage is preserved when items are presented to the student. For example, if a six-item passage is selected and items 1 and 4 are not administered, then the items administered in order will be 2, 3, 5, and 6.

The configurable elements of a passage-based M-STEP CAT include the following:

Passage Minimum Percentage—This element defines the minimum percentage of the items associated with a passage to be used.

> For example, if the distinct passage minimum percentage is set at 80, then the selection routine will consider passage combinations such as 1 of 1 (100%), 4 of 5 (80%), 5 of 6 (83%), and 6 of 6 (100%). It will not consider combinations such as 1 of 2 (50%), 3 of 4 (75%), 3 of 5 (60%), etc. Near the end of a test, the passage minimum percentage constraint may need to be loosened by a configurable reduction factor to meet content constraints such as the number of items per assessment target.

Passage Minimum and Maximum Number—This element defines the minimum and maximum numbers of items in a passage combination.

> In the example above, 6 of 6 (100%) meets the passage minimum percentage (i.e., >=80%); however, this passage combination may not be selected if the maximum number of items in a passage is specified as 5.

Passage Evaluation Criteria—Multiple factors are considered when evaluating and ranking each passage combination to determine the best combination to administer to a student. Passage combinations with higher criteria rankings are more likely to be administered. The criteria used in M-STEP CAT were as follows:

- Percentage of items used—the percentage of items associated with the passage selected for consideration
- Items delivered—the total number of items associated with a passage relative to the number of items selected to be delivered per passage
- Max information of passage combination—the higher the item information, the higher the combination is ranked

Different weights may be assigned to each of the factors mentioned above. For example, if 100% of the weight is assigned to the number of items delivered, then the algorithm will select the passages with the highest number of associated items and administer all those items until the maximum number of items is reached. Based on the simulation results, the criteria shown in Table 6-2 provided a better result that balanced the psychometric and test blueprint specifications.

6.4 Test Navigation

Due to a variety of reasons, many versions of CAT engines do not allow students to skip items in a test or return to previously answered items to change answers. Currently, all mathematics tests do not allow students to skip items or return to items to change answers. However, in the ELA tests, students are allowed to skip items within a passage. For example, when presented with a passage and five associated items, a student does not have to answer questions 1–5 in that order. However, if the student tries to navigate to the next passage without answering all items associated with the previous passage, the test engine will prompt the student to answer all items and will not move to the next passage until all are answered.

6.5 Termination

The CAT algorithm allows for both a fixed- and a variable-length test. With a fixed-length test, the test ends when a student has taken a predefined fixed number of items. With a variable-length test, in some cases, the algorithm stops administering items when the threshold of SEM or the maximum number of items is reached. Following the criteria set by Smarter Balanced, which MDE adopted for M-STEP, the algorithm stops administering items when a student has taken a predefined minimum number of items and the test blueprint specifications have been met.

6.6 Forced Submission

Tests are considered "complete" when students respond to the minimum number of operational items specified in the blueprint. Otherwise, the tests are "incomplete." MLE is used to score the incomplete tests, counting unanswered items as incorrect.

When tests are adaptive, the specific unanswered items are unknown; thus, simulated items are used in place of administered items. Simulated items are generated with the following rules:

- Minimum operational test length is used to determine the test length of the incomplete tests.
- It is assumed that all unanswered operational items are dichotomously scored items. The item parameters of all unanswered operational items are equal to the average values of all the dichotomously scored operational items in the bank for discrimination and difficulty parameters.
- All unanswered operational items are scored as "incorrect."

Table 6-4 lists the average discrimination and difficulty item parameter estimates and the minimum number of items needed to calculate the scores of the forced submitted students.

Table 6-4. Key Values Used for the 2020–21 Forced Submission

Content	Grade	Mean Discrimination	Mean Difficulty	Minimum Number of Items
ELA	3	0.659	-0.504	44
ELA	4	0.582	0.070	44
ELA	5	0.597	0.418	44
ELA	6	0.538	0.886	44
ELA	7	0.524	1.203	44
Mathematics	3	0.840	-0.815	36
Mathematics	4	0.822	-0.092	36
Mathematics	5	0.762	0.515	36
Mathematics	6	0.687	1.163	36
Mathematics	7	0.707	1.881	36

6.7 Summary of Simulation Results Evaluating the CAT Algorithm

This section summarizes the CAT simulation results with regard to the evaluation of the operational 2018–19 CAT algorithm. It is described in two subsections: (1) adherence to the test blueprint and (2) control of item exposure. Overall, the results are as expected and meet the acceptable psychometric requirements given the available item pool. For comparisons, the Smarter Balanced 2017 Simulation Document[2] can be used.

6.7.1 Adherence to the Test Blueprint

During the M-STEP CAT simulations, blueprint constraints were used to ensure that the test blueprint was adhered to for all grades and content areas (see Figures 6-1 to 6-6). Note that for all the ELA tests, given the available items in the item pool and the fact that all the items are passage based in Claim 1, the number of items in Claim 1 can be met only at the content-category level. The simulation results show that every student received the number of items configured.

Tables 6-5 and 6-7 summarize the minimum and maximum numbers of items and points by claim and total for ELA and mathematics. The minimum and maximum numbers of passages and the number of items per passage per claim and per content category in Claim 1 are also summarized for ELA in Table 6.6. The results indicate that the CAT engine offered students the expected number of items and points, the expected number of passages, and a reasonable number of items delivered per passage.

[2] https://portal.smarterbalanced.org/library/en/2016-17-summative-assessments-simulation-results.pdf

Figure 6-1. Blueprint Target Sampling, Grade 3 through Grade 7 ELA

Claim (Goal1)	Content Category (Goal3)	Assessment Targets (Goal 4)	DOK	# of CAT Items Needed		# of CAT Items Configured		# PBW Items
				Min	Max	Min	Max	
1	LT	2	2,3	1	2	7	8	0
		4	3	1	2			
		1	1,2	3	6			
		3	1,2					
		5	3,4					
		6	2,3					
		7	2,3					
	IT	9	2,3	1	2	7	8	
		11	3	1	2			
		8	1,2	3	6			
		10	1,2					
		12	3,4					
		13	2,3					
		14	2,3					
2	O	1b/3b/6b	3	2	3	2	3	1
	E	1b/3b/6b	3	2	3	2	3	
	E	8	1,2	2	2	2	2	
	C	9	1,2	5	5	5	5	
3	L	4	1,2,3	8	9	8	9	0
4	CR	2	2	8	9	8	9	0
		3	2					
		4	2					

Figure 6-2. Blueprint Target Sampling, Grade 3 Mathematics

Claim (Goal1)	Content Category (Goal3)	Assessment Targets (Goal 4)	DOK	# of CAT Items Needed		# of CAT Items Configured		# of Multi-points Items
				Min	Max	Min	Max	
1	P	B	1	5	6	6	6	0-3
		C	1					
		I	1,2					
		G	1,2					
		D	2	5	6	6	6	
		F	1,2					
		A	1,2	2	3	3	3	
	S	E	1	3	4	4	4	
		J	1					
		K	1,2					
		H	2,3	1	1	1	1	
2	OA,NBT,NF,MD,G	A	2,3	2	2	2	2	
		B	1,2,3	2	2	2	2	
		C	1,2,3					
		D	1,2,3					
4	OA,NBT,NF,MD,G	A	2,3	2	2	2	2	
		D	2,3					
		B	2,3,4	1	1	1	1	
		E	2,3,4					
		C	1,2,3	1	1	1	1	
		F	1,2,3					
		G	3,4	0	0	0	0	
3	OA,NBT,NF,MD,G	A	2,3	3	3	3	3	
		D	2,3					
		B	2,3,4	3	3	3	3	
		E	2,3,4					
		C	2,3	2	2	2	2	
		F	2,3					

Figure 6-3. Blueprint Target Sampling, Grade 4 Mathematics

Claim (Goal1)	Content Category (Goal3)	Assessment Targets (Goal 4)	DOK	# of CAT Items Needed		# of CAT Items Configured		# of Multi-points Items
				Min	Max	Min	Max	
1	P	A	1,2	8	9	9	9	0-3
		E	1,2					
		F	1,2					
		G	1,2	2	3	3	3	
		D	1,2	1	2	2	2	
		H	1,2	1	1	1	1	
	S	I	1,2	2	3	3	3	
		K	1,2					
		B	1,2	1	1	1	1	
		C	2,3					
		J	1,2					
		L	1,2	1	1	1	1	
2	OA,NBT,NF,MD,G	A	2,3	2	2	2	2	
		B	1,2,3	2	2	2	2	
		C	1,2,3					
		D	1,2,3					
4	OA,NBT,NF,MD,G	A	2,3	2	2	2	2	
		D	2,3					
		B	2,3,4	1	1	1	1	
		E	2,3,4					
		C	1,2,3	1	1	1	1	
		F	1,2,3					
		G	3,4	0	0	0	0	
3	OA,NBT,NF,MD,G	A	2,3	3	3	3	3	
		D	2,3					
		B	2,3,4	3	3	3	3	
		E	2,3,4					
		C	2,3	2	2	2	2	
		F	2,3					

Figure 6-4. Blueprint Target Sampling, Grade 5 Mathematics

Claim (Goal1)	Content Category (Goal3)	Assessment Targets (Goal 4)	DOK	# of CAT Items Needed		# of CAT Items Configured		# of Multi-points Items
				Min	Max	Min	Max	
1	P	E	1,2	5	6	6	6	0-3
		I	1,2					
		F	1,2	4	5	5	5	
		D	1,2	3	4	4	4	
		C	1,2					
	S	J	1	2	3	3	3	
		K	2					
		A	1	2	2	2	2	
		B	2					
		G	1					
		H	1,2					
2	OA,NBT,NF,MD,G	A	2,3	2	2	2	2	
		B	1,2,3	2	2	2	2	
		C	1,2,3					
		D	1,2,3					
4	OA,NBT,NF,MD,G	A	2,3	2	2	2	2	
		D	2,3					
		B	2,3,4	1	1	1	1	
		E	2,3,4					
		C	1,2,3	1	1	1	1	
		F	1,2,3					
		G	3,4	0	0	0	0	
3	OA,NBT,NF,MD,G	A	2,3	3	3	3	3	
		D	2,3					
		B	2,3,4	3	3	3	3	
		E	2,3,4					
		C	2,3	2	2	2	2	
		F	2,3					

Figure 6-5. Blueprint Target Sampling, Grade 6 Mathematics

Claim (Goal1)	Content Category (Goal3)	Assessment Targets (Goal 4)	DOK	# of CAT Items Needed		# of CAT Items Configured		# of Multi-points Items Needed
				Min	Max	Min	Max	
1	P	E	1	5	6	6	6	0-3
		F	1,2					
		A	1,2	3	4	4	4	
		G	2	3	3	3	3	
		B	1,2					
		D	1,2	2	2	2	2	
	S	C	1,2	4	5	5	5	
		H	1,2					
		I	2					
		J	1,2					
2	RP,NS,EE,G,SP	A	2,3	2	2	2	2	
		B	1,2,3	2	2	2	2	
		C	1,2,3					
		D	1,2,3					
4	RP,NS,EE,G,SP	A	2,3	2	2	2	2	
		D	2,3					
		B	2,3,4	1	1	1	1	
		E	2,3,4					
		C	1,2,3	1	1	1	1	
		F	1,2,3					
		G	3,4	0	0	0	0	
3	RP,NS,EE,G,SP	A	2,3	3	3	3	3	
		D	2,3					
		B	2,3,4	3	3	3	3	
		E	2,3,4					
		C	2,3	2	2	2	2	
		F	2,3					
		G	2,3					

Figure 6-6. Blueprint Target Sampling, Grade 7 Mathematics

Claim (Goal1)	Content Category (Goal3)	Assessment Targets (Goal 4)	DOK	# of CAT Items Needed		# of CAT Items Configured		# of Multi-points Items
				Min	Max	Min	Max	
1	P	A	2	8	9	9	9	0-2
		D	1,2					
		B	1,2	5	6	6	6	
		C	1,2					
	S	E	1,2	2	3	3	3	
		F	1,2					
		G	1,2	1	2	2	2	
		H	2					
		I	1,2					
2	RP,NS,EE,G,SP	A	2,3	2	2	2	2	
		B	1,2,3	2	2	2	2	
		C	1,2,3					
		D	1,2,3					
4	RP,NS,EE,G,SP	A	2,3	2	2	2	2	
		D	2,3					
		B	2,3,4	1	1	1	1	
		E	2,3,4					
		C	1,2,3	1	1	1	1	
		F	1,2,3					
		G	3,4	0	0	0	0	
3	RP,NS,EE,G,SP	A	2,3	3	3	3	3	
		D	2,3					
		B	2,3,4	3	3	3	3	
		E	2,3,4					
		C	2,3	2	2	2	2	
		F	2,3					
		G	2,3					

Table 6-5. Summary of Items and Points for ELA

Grade	Level	Min # of Items	Max # of Items	Min # of Points	Max # of Points
3	Total	45	46	48	49
3	Claim 1	16	16	16	16
3	Claim 2	13	13	16	16
3	Claim 3	8	9	8	9
3	Claim 4	8	8	8	8
3	Claim 1_LT	8	8	8	8
3	Claim 1_IT	8	8	8	8
4	Total	45	46	48	49
4	Claim 1	16	16	16	16
4	Claim 2	13	13	16	16
4	Claim 3	8	9	8	9
4	Claim 4	8	8	8	8
4	Claim 1_LT	8	8	8	8
4	Claim 1_IT	8	8	8	8
5	Total	44	46	47	49
5	Claim 1	15	16	15	16
5	Claim 2	13	13	16	16
5	Claim 3	8	9	8	9
5	Claim 4	8	8	8	8
5	Claim 1_LT	8	8	8	8
5	Claim 1_IT	7	8	7	8
6	Total	44	46	47	49
6	Claim 1	15	16	15	16
6	Claim 2	13	13	16	16
6	Claim 3	8	9	8	9
6	Claim 4	8	8	8	8
6	Claim 1_LT	7	8	7	8
6	Claim 1_IT	8	8	8	8
7	Total	45	46	48	49
7	Claim 1	16	16	16	16
7	Claim 2	13	13	16	16
7	Claim 3	8	9	8	9
7	Claim 4	8	8	8	8
7	Claim 1_LT	8	8	8	8
7	Claim 1_IT	8	8	8	8

Table 6-6. Summary of Passages and Items per Passage for ELA

Grade	Level	Min # of Passages	Max # of Passages	Min # of Items per Passage	Max # of Items per Passage
3	Total	7	8	2	4
3	Claim 1	4	4	4	4
3	Claim 3	3	4	2	3
3	Claim 1_LT	2	2	4	4
3	Claim 1_IT	2	2	4	4
4	Total	7	8	2	4
4	Claim 1	4	4	4	4
4	Claim 3	3	4	2	3
4	Claim 1_LT	2	2	4	4
4	Claim 1_IT	2	2	4	4
5	Total	7	8	2	4
5	Claim 1	4	4	3	4
5	Claim 3	3	4	2	3
5	Claim 1_LT	2	2	4	4
5	Claim 1_IT	2	2	3	4
6	Total	7	8	2	4
6	Claim 1	4	4	3	4
6	Claim 3	3	4	2	3
6	Claim 1_LT	2	2	3	4
6	Claim 1_IT	2	2	4	4
7	Total	7	8	2	4
7	Claim 1	4	4	4	4
7	Claim 3	3	4	2	3
7	Claim 1_LT	2	2	4	4
7	Claim 1_IT	2	2	4	4

Table 6-7. Summary of Items and Points for Mathematics

Grade	Level	Min # of Items	Max # of Items	Min # of Points	Max # of Points
3	Total	36	36	36	40
3	Claim 1	20	20	20	22
3	Claim 2	4	4	4	5
3	Claim 3	8	8	8	11
3	Claim 4	4	4	4	8
3	Claims 2 & 4	8	8	8	12
4	Total	36	36	36	40
4	Claim 1	20	20	20	23
4	Claim 2	4	4	4	4
4	Claim 3	8	8	8	10
4	Claim 4	4	4	4	6
4	Claims 2 & 4	8	8	8	10
5	Total	36	36	36	40
5	Claim 1	20	20	20	20
5	Claim 2	4	4	4	5
5	Claim 3	8	8	8	11
5	Claim 4	4	4	4	7
5	Claims 2 & 4	8	8	8	11
6	Total	36	36	36	40
6	Claim 1	20	20	20	22
6	Claim 2	4	4	4	6
6	Claim 3	8	8	8	11
6	Claim 4	4	4	4	7
6	Claims 2 & 4	8	8	8	11
7	Total	36	36	36	39
7	Claim 1	20	20	20	20
7	Claim 2	4	4	4	5
7	Claim 3	8	8	8	11
7	Claim 4	4	4	4	6
7	Claims 2 & 4	8	8	8	10

6.7.2 Controlling for Item Exposure

A common concern when implementing a CAT is the exposure rate of the items. It is important to control the item exposure rate while balancing the other constraints of the CAT. Tables 6-8 and 6-9 show the item exposure rates for ELA and mathematics, respectively. Each table provides the number and proportion of items for each of the six exposure rate categories, including no exposure. For example, an exposure rate of (0.0, 0.1] means that between 0% (excluding 0, as it forms its own category) and 10% of the students took that item. For grade 3 ELA, 579 items, or 70% of the items in the pool, had an exposure rate between 0% and 10%. For both ELA and mathematics, most items had a low exposure rate and were categorized with an exposure rate between 0% and 10%.

Table 6-8. Summary of Item Exposure Rate by Grade and Level for ELA

Grade	Level	Number Items	Proportion of Items
3	0	103	0.12
3	(0.0, 0.1]	579	0.7
3	(0.1, 0.2]	96	0.12
3	(0.2, 0.3]	28	0.03
3	(0.3, 0.4]	17	0.02
3	> 0.4	10	0.01
4	0	73	0.09
4	(0.0, 0.1]	582	0.73
4	(0.1, 0.2]	65	0.08
4	(0.2, 0.3]	48	0.06
4	(0.3, 0.4]	24	0.03
4	> 0.4	5	0.01
5	0	93	0.12
5	(0.0, 0.1]	505	0.67
5	(0.1, 0.2]	95	0.13
5	(0.2, 0.3]	27	0.04
5	(0.3, 0.4]	23	0.03
5	> 0.4	8	0.01
6	0	68	0.1
6	(0.0, 0.1]	495	0.7
6	(0.1, 0.2]	59	0.08
6	(0.2, 0.3]	41	0.06
6	(0.3, 0.4]	28	0.04
6	> 0.4	15	0.02
7	0	74	0.11
7	(0.0, 0.1]	429	0.67
7	(0.1, 0.2]	62	0.1

Grade	Level	Number Items	Proportion of Items
7	(0.2, 0.3]	33	0.05
7	(0.3, 0.4]	32	0.05
7	> 0.4	15	0.02

Table 6-9. Summary of Item Exposure Rate by Grade and Level for Mathematics

Grade	Level	Number Items	Proportion of Items
3	0	166	0.14
3	(0.0, 0.1]	880	0.75
3	(0.1, 0.2]	120	0.1
3	(0.2, 0.3]	3	0
3	(0.3, 0.4]	0	0
3	> 0.4	0	0
4	0	154	0.12
4	(0.0, 0.1]	977	0.79
4	(0.1, 0.2]	101	0.08
4	(0.2, 0.3]	5	0
4	(0.3, 0.4]	0	0
4	> 0.4	0	0
5	0	129	0.11
5	(0.0, 0.1]	893	0.78
5	(0.1, 0.2]	126	0.11
5	(0.2, 0.3]	1	0
5	(0.3, 0.4]	0	0
5	> 0.4	0	0
6	0	123	0.12
6	(0.0, 0.1]	804	0.76
6	(0.1, 0.2]	116	0.11
6	(0.2, 0.3]	9	0.01
6	(0.3, 0.4]	0	0
6	> 0.4	0	0
7	0	66	0.07
7	(0.0, 0.1]	748	0.79
7	(0.1, 0.2]	99	0.1
7	(0.2, 0.3]	30	0.03
7	(0.3, 0.4]	0	0
7	> 0.4	0	0

6.8 Summary of Simulation Results for the Student Ability Estimates

For Smarter Balanced tests with an adaptive component, test reliability is estimated through simulations conducted using the operational summative item pool. For fixed-form tests, reliability and SEM are calculated using the items on the forms and their psychometric properties relative to the population. DRC conducted simulation studies for the 2017–18 tests using the 2016–17 M-STEP ability estimates, which had the means and SDs shown in Table 6-10. These results have remained stable with the consistent M-STEP design, with no difference shown when updating the ability distributions.

Table 6-10. Mean and Standard Deviation of the Sample Used in the Simulation Study

Content	Grade	Mean	SD
ELA	3	-1.07	1.01
ELA	4	-0.62	1.05
ELA	5	-0.07	1.02
ELA	6	0.06	1.09
ELA	7	0.30	1.12
Mathematics	3	-1.10	0.98
Mathematics	4	-0.63	1.02
Mathematics	5	-0.28	1.08
Mathematics	6	-0.10	1.23
Mathematics	7	0.08	1.35

6.8.1 Ability Estimates at the Extremes

The examinee ability in the simulation study was estimated using MLE. To provide a limit to the score range for extreme values, the test scoring algorithm used the HOSS and LOSS that were derived during the Smarter Balanced 2014 achievement level setting. Scores above HOSS or below LOSS are assigned HOSS and LOSS values respectively. Table 6-11 presents the LOSS and HOSS values that were used in the simulation and the percentage of the affected scores at those values.

Table 6-11. HOSS/LOSS and Percentages of Affected Scores from Simulation Results

Content	Grade	LOSS	HOSS	Percentage of Scores at LOSS	Percentage of Scores at HOSS
ELA	3	-4.59	1.34	0.07	0.60
ELA	4	-4.40	1.80	0.07	1.17
ELA	5	-3.58	2.25	0.07	0.83
ELA	6	-3.48	2.51	0.17	1.00
ELA	7	-2.91	2.75	0.40	1.00
Mathematics	3	-4.11	1.33	0.53	0.37
Mathematics	4	-3.92	1.82	0.23	0.57
Mathematics	5	-3.73	2.33	0.27	0.43
Mathematics	6	-3.53	2.95	0.70	0.30
Mathematics	7	-3.34	3.32	1.63	0.33

6.8.2 Standard Error of Measurement

The SEM, in the theta metric, is calculated for each reportable claim score and the total score. Note that for mathematics, the combined score for Claims 2 and 4 is reported, so the SEM for the combined score is calculated. Tables 6-12 and 6-13 provide statistical summaries (including the minimum, maximum, mean, median, and SD values) of the SEMs for claim scores and total scores. For all the tests, the average SEMs for claim scores are larger than the SEMs for the total scores. This is expected because the number of items in each claim is smaller than the number of items in the total test. As the grade increases, the average SEM increases. This is possibly due to the mismatch between the item difficulty distributions and student ability distributions in higher grades. The 3,000 simulated students' abilities or scores were randomly selected from the previous year's operational results on M-STEP. It was found that the items in the higher grades were relatively harder for the students. The SEMs are reasonable given the length of the total test and the claim level of the test.

Table 6-12. Summary of Standard Error of Measurement by Grade and Level for ELA

Grade	Level	Mean	SD	Min	Max	Median
3	Total	0.24	0.04	0.20	1.31	0.23
3	Claim 1	0.41	0.17	0.31	3.35	0.37
3	Claim 2	0.47	0.11	0.37	2.23	0.44
3	Claim 3	0.83	0.31	0.53	2.95	0.74
3	Claim 4	0.55	0.21	0.39	2.81	0.48
4	Total	0.26	0.04	0.23	1.24	0.25
4	Claim 1	0.45	0.15	0.36	3.56	0.42
4	Claim 2	0.51	0.12	0.36	2.21	0.49
4	Claim 3	0.82	0.30	0.52	4.68	0.74
4	Claim 4	0.65	0.24	0.47	3.43	0.58
5	Total	0.26	0.03	0.22	0.64	0.25
5	Claim 1	0.46	0.13	0.37	2.83	0.44
5	Claim 2	0.53	0.11	0.38	2.74	0.52
5	Claim 3	0.80	0.23	0.61	3.57	0.74
5	Claim 4	0.54	0.15	0.42	2.24	0.49
6	Total	0.28	0.04	0.24	0.86	0.27
6	Claim 1	0.49	0.15	0.40	2.29	0.46
6	Claim 2	0.56	0.15	0.44	2.39	0.53
6	Claim 3	0.82	0.34	0.53	5.10	0.72
6	Claim 4	0.66	0.25	0.47	4.09	0.59
7	Total	0.30	0.06	0.25	1.63	0.29
7	Claim 1	0.52	0.18	0.37	3.07	0.49
7	Claim 2	0.62	0.13	0.50	3.25	0.59
7	Claim 3	0.86	0.35	0.55	3.79	0.75
7	Claim 4	0.73	0.29	0.51	4.55	0.66

Table 6-13. Summary of Standard Error of Measurement by Grade and Level for Mathematics

Grade	Level	Mean	SD	Min	Max	Median
3	Total	0.21	0.06	0.18	2.76	0.20
3	Claim 1	0.27	0.06	0.24	2.53	0.26
3	Claim 3	0.59	0.30	0.33	3.39	0.50
3	Claims 2 & 4	0.56	0.30	0.33	2.56	0.46
4	Total	0.21	0.06	0.17	1.78	0.20
4	Claim 1	0.27	0.07	0.22	2.49	0.25
4	Claim 3	0.57	0.30	0.34	2.93	0.47
4	Claims 2 & 4	0.58	0.26	0.34	2.42	0.50
5	Total	0.25	0.09	0.17	1.43	0.22
5	Claim 1	0.33	0.12	0.22	2.18	0.29
5	Claim 3	0.64	0.33	0.37	3.18	0.52
5	Claims 2 & 4	0.71	0.45	0.34	3.96	0.54
6	Total	0.28	0.09	0.20	1.30	0.26
6	Claim 1	0.35	0.11	0.26	2.99	0.32
6	Claim 3	0.82	0.45	0.41	3.72	0.66
6	Claims 2 & 4	0.86	0.61	0.38	6.76	0.64
7	Total	0.33	0.21	0.19	4.27	0.29
7	Claim 1	0.40	0.25	0.24	4.31	0.34
7	Claim 3	1.06	0.68	0.42	7.24	0.81
7	Claims 2 & 4	1.04	0.71	0.36	5.23	0.77

6.8.3 Statistical Measures of Bias

This section presents the statistics calculated for the annual Michigan simulation investigation. Note that these statistics are the same as those reported in the *Smarter Balanced 2017–2018 Technical Report* (2018). Therefore, a direct quote from this Smarter Balanced report is used here for describing these statistics.

- Bias: [T]he statistical bias of the estimated theta parameter. This is a test of the assumption that error is randomly distributed around true ability. It is a measure of whether scores systematically underestimate or overestimate ability.
- Mean squared error (MSE): This is a measure of the magnitude of difference between true and estimated theta.
- Significance of bias ["Bias Sig" in Tables 6-14 and 6-15]: [A]n indicator of the statistical significance of bias.
- Average standard error of the estimated theta: This is the average of the simulated standard error of measurement [SEM] over all examinees. It is the marginal reliability for the simulated population.
- Standard error of estimates of theta at the 5th, 25th, 75th, and 95th percentiles
- Percentage of students' estimated theta falling outside the 95% and 99% confidence intervals [Miss Rate]. (p. 2–3)

For detailed mathematical formulas in computing these statistics, please refer to pages 2–4 of the *Smarter Balanced 2017–2018 Technical Report* (2018).

Tables 6-14 and 6-15 present the bias of the estimated abilities for ELA and mathematics, respectively. As was found in the Smarter Balanced simulation study (Smarter Balanced, 2016), the bias in the overall scores is both small and insignificant. It should also be noted that claim scores do have some systematic bias. This is likely caused by the application of HOSS and LOSS values.

Table 6-14. Bias of the Estimated Theta from Simulation Results: ELA

Level	Grade	Mean Bias	SE of Mean Bias	Bias Sig	MSE	95% CI Miss Rate	99% CI Miss Rate
Overall	3	0.00	0.02	0.79	0.06	5.23	1.23
Overall	4	0.00	0.02	0.84	0.07	4.63	0.77
Overall	5	0.00	0.02	0.98	0.07	4.50	0.73
Overall	6	0.00	0.02	0.96	0.08	5.00	1.13
Overall	7	-0.01	0.02	0.75	0.10	5.17	1.17
Claim 1	3	-0.01	0.02	0.45	0.21	4.33	0.73
Claim 1	4	-0.02	0.02	0.26	0.24	4.20	0.77
Claim 1	5	-0.01	0.02	0.47	0.23	4.07	0.43
Claim 1	6	-0.01	0.02	0.49	0.29	4.20	0.93
Claim 1	7	-0.01	0.02	0.64	0.31	4.00	0.67
Claim 2	3	-0.01	0.02	0.77	0.24	3.57	0.40
Claim 2	4	0.02	0.02	0.37	0.28	2.93	0.40
Claim 2	5	0.03	0.02	0.11	0.33	3.93	0.43
Claim 2	6	0.00	0.02	0.99	0.34	2.67	0.10
Claim 2	7	-0.03	0.02	0.12	0.41	3.10	0.20
Claim 3	3	-0.06	0.02	0.00	0.77	1.93	0.10
Claim 3	4	-0.04	0.02	0.05	0.76	1.63	0.07
Claim 3	5	-0.02	0.02	0.27	0.70	2.23	0.13
Claim 3	6	0.00	0.02	0.82	0.77	1.83	0.20
Claim 3	7	-0.01	0.02	0.73	0.86	2.13	0.17
Claim 4	3	-0.04	0.02	0.02	0.33	2.03	0.10
Claim 4	4	-0.06	0.02	0.00	0.46	2.37	0.17
Claim 4	5	0.00	0.02	0.94	0.30	2.17	0.10
Claim 4	6	-0.06	0.02	0.00	0.49	2.43	0.07
Claim 4	7	-0.07	0.02	0.00	0.59	2.13	0.07

Table 6-15. Bias of the Estimated Theta from Simulation Results: Mathematics

Level	Grade	Mean Bias	SE of Mean Bias	Bias Sig	MSE	95% CI Miss Rate	99% CI Miss Rate
Overall	3	-0.01	0.02	0.71	0.06	5.73	0.80
Overall	4	-0.01	0.02	0.67	0.05	4.63	1.20
Overall	5	-0.03	0.02	0.18	0.08	4.60	0.83
Overall	6	-0.02	0.02	0.39	0.09	4.37	0.87
Overall	7	-0.04	0.02	0.07	0.18	4.67	1.03
Claim 1	3	0.00	0.02	0.85	0.08	4.87	0.80
Claim 1	4	-0.01	0.02	0.61	0.08	4.67	1.00
Claim 1	5	-0.03	0.02	0.08	0.13	3.87	0.73
Claim 1	6	-0.02	0.02	0.36	0.13	4.40	0.53
Claim 1	7	-0.06	0.02	0.02	0.24	4.00	0.77
Claim 3	3	-0.08	0.02	0.00	0.38	2.57	0.43
Claim 3	4	-0.07	0.02	0.00	0.34	2.67	0.27
Claim 3	5	-0.10	0.02	0.00	0.45	2.63	0.37
Claim 3	6	-0.11	0.02	0.00	0.66	2.47	0.40
Claim 3	7	-0.23	0.03	0.00	1.12	3.13	0.70
Claims 2 & 4	3	-0.05	0.02	0.00	0.29	2.63	0.40
Claims 2 & 4	4	-0.06	0.02	0.00	0.36	2.93	0.20
Claims 2 & 4	5	-0.12	0.02	0.00	0.49	2.50	0.47
Claims 2 & 4	6	-0.13	0.02	0.00	0.61	2.97	0.63
Claims 2 & 4	7	-0.15	0.02	0.00	0.76	3.13	0.67

Tables 6-16 and 6-17 below present marginal reliability coefficients and precisions for the overall tests and for reported claims. As expected, estimated reliability coefficients for the overall tests are high and are in the acceptable range for a large-scale, high-stakes test. Reliability estimates at the claim level are lower, and corresponding errors are higher. Claims with smaller numbers of items and fewer points from the adaptive section of the test exhibit the lowest reliability. This shows the importance of incorporating error data in claim-level reports.

Table 6-16. Overall Score and Claim Score Precision/Reliability of Simulation Results: ELA

Level	Grade	Mean # Items	Mean SEM	Reliability	RMSE	SD theta
Overall	3	45.17	0.24	0.95	0.24	1.05
Overall	4	45.04	0.26	0.94	0.27	1.10
Overall	5	45.50	0.26	0.94	0.26	1.05
Overall	6	45.16	0.28	0.94	0.28	1.13
Overall	7	45.11	0.30	0.93	0.32	1.18
Claim 1	3	16.00	0.41	0.85	0.46	1.16
Claim 1	4	16.00	0.45	0.84	0.49	1.21
Claim 1	5	15.98	0.46	0.83	0.48	1.16
Claim 1	6	16.00	0.49	0.83	0.54	1.25
Claim 1	7	16.00	0.52	0.82	0.56	1.30
Claim 2	3	13.00	0.47	0.82	0.49	1.15
Claim 2	4	13.00	0.51	0.82	0.53	1.22
Claim 2	5	13.00	0.53	0.79	0.57	1.18
Claim 2	6	13.00	0.56	0.80	0.58	1.28
Claim 2	7	13.00	0.62	0.77	0.64	1.32
Claim 3	3	8.17	0.83	0.62	0.88	1.42
Claim 3	4	8.04	0.82	0.63	0.87	1.44
Claim 3	5	8.52	0.80	0.63	0.84	1.37
Claim 3	6	8.16	0.82	0.64	0.88	1.49
Claim 3	7	8.11	0.86	0.65	0.93	1.56
Claim 4	3	8.00	0.55	0.76	0.57	1.21
Claim 4	4	8.00	0.65	0.72	0.68	1.30
Claim 4	5	8.00	0.54	0.79	0.55	1.21
Claim 4	6	8.00	0.66	0.72	0.70	1.34
Claim 4	7	8.00	0.73	0.69	0.77	1.42

Table 6-17. Overall Score and Claim Score Precision/Reliability of Simulation Results: Mathematics

Level	Grade	Mean # Items	Mean SEM	Reliability	RMSE	SD theta
Overall	3	36	0.21	0.95	0.23	1.02
Overall	4	36	0.21	0.96	0.23	1.05
Overall	5	36	0.25	0.94	0.28	1.14
Overall	6	36	0.28	0.95	0.29	1.29
Overall	7	36	0.33	0.93	0.43	1.46
Claim 1	3	20	0.27	0.93	0.29	1.03
Claim 1	4	20	0.27	0.93	0.28	1.07
Claim 1	5	20	0.33	0.91	0.36	1.18
Claim 1	6	20	0.35	0.92	0.36	1.31
Claim 1	7	20	0.40	0.90	0.49	1.50
Claim 3	3	8	0.59	0.71	0.61	1.22
Claim 3	4	8	0.57	0.72	0.58	1.21
Claim 3	5	8	0.64	0.71	0.67	1.33
Claim 3	6	8	0.82	0.62	0.81	1.53
Claim 3	7	8	1.06	0.49	1.06	1.76
Claims 2 & 4	3	8	0.56	0.70	0.54	1.17
Claims 2 & 4	4	8	0.58	0.73	0.60	1.22
Claims 2 & 4	5	8	0.71	0.62	0.70	1.36
Claims 2 & 4	6	8	0.86	0.51	0.78	1.50
Claims 2 & 4	7	8	1.04	0.40	0.87	1.63

One of the advantages of adaptive tests is that SEM can be controlled for all ability levels. Ideally, the SEM should be similar throughout the ability distribution. Table 6-18 presents average error by decile of the true thetas, which were generated based on the Michigan population. For both ELA and mathematics, the results show that the error at the lower end of the test tends to be the highest, indicating that there is more error associated with the ability estimation at the lower end of the ability distribution, which is caused by the relative difficulty of the item pools.

Table 6-18. Average Standard Errors by Grade and by Deciles of True Proficiency Scores of Simulation Results

Subject	Grade	Decile 1	Decile 2	Decile 3	Decile 4	Decile 5	Decile 6	Decile 7	Decile 8	Decile 9	Decile 10
ELA	3	7.85	6.52	6.08	5.94	5.81	5.74	5.77	5.86	6.01	6.69
ELA	4	7.84	6.48	6.10	6.04	6.01	6.01	6.00	6.02	6.16	6.96
ELA	5	7.28	6.15	6.04	6.03	6.11	6.32	6.65	6.85	7.00	7.44
ELA	6	8.85	7.20	6.74	6.44	6.35	6.24	6.15	6.17	6.42	7.19
ELA	7	9.51	7.54	7.06	6.85	6.75	6.75	6.77	6.80	6.95	7.35
Math	3	8.10	6.01	5.64	5.25	5.15	5.05	5.03	5.01	5.01	5.50
Math	4	8.26	6.04	5.53	5.21	5.04	5.01	4.92	4.80	4.75	5.13
Math	5	10.13	7.71	6.78	6.09	5.42	4.99	4.50	4.20	4.26	4.77
Math	6	9.73	7.01	6.30	5.85	5.42	5.11	4.93	4.61	4.24	4.29
Math	7	13.92	8.87	7.32	6.52	6.01	5.35	4.90	4.32	4.04	4.04

6.9 Summary

In summary, Chapter 6 of this report demonstrates M-STEP's adherence to AERA, APA, & NCME (2014) *Standards* regarding construct-related validity and reliability. The analyses described above are related to the following standards:

- Standard 2.0— Appropriate evidence of reliability/precision should be provided for the interpretation for each intended score use.
- Standard 2.1—The range of replications over which reliability/precision is being evaluated should be clearly stated, along with a rationale for the choice of this definition, given the testing situation.
- Standard 4.3—Test developers should document the rationale and supporting evidence for the administration, scoring, and reporting rules used in computer-adaptive, multistage-adaptive, or other tests delivered using computer algorithms to select items. This documentation should include procedures used in selecting items or sets of items for administration, in determining the starting point and termination conditions for the test, in scoring the test, and in controlling item exposure.

Chapter 7: Scoring

Chapter 7 shows how M-STEP scoring adhered to the AERA, APA, & NCME *Standards*. Standard 4.18 provides some general guidance for Chapter 7:

> Procedures for scoring and, if relevant, scoring criteria, should be presented by the test developer with sufficient detail and clarity to maximize the accuracy of scoring. Instructions for using rating scales or for deriving scores obtained by coding, scaling, or classifying constructed responses should be clear. This is especially critical for extended-response items such as performance tasks, portfolios, and essays. (p. 91)

Chapter 7 explains the procedures used for autoscoring and handscoring, with the latter applicable to the Passage-Based Writing items. There was no AI scoring of student writing in 2021. The scoring criteria used for each item are not presented in this chapter to preserve the integrity of the items for future use.

7.1 Online Scoring

7.1.1 Autoscoring

All content areas of M-STEP contain items that required autoscoring. Autoscoring was used for Technology Enhanced items which could involve combining many components to form a single correct answer. Scoring rules for each item were set up prior to the start of testing. These rules listed all the different correct components per item. DRC ensured that all rubrics and scoring rules were verified for accuracy before scoring began. Quality checks were run against all autoscored items using the autoscoring simulator tool to ensure the item was scored as designed. The autoscoring simulator tool allowed specialists to respond to items with expected responses. In some cases, the simulator generated all possible responses and expected values. Once student responses were entered, the scoring engine was run against the student response and the expected value. The tool alerted the specialist of any mismatches, which could then be updated. Quality checks occurred before the start of the testing window. During the testing window, the autoscoring process ran continuously for CAT items and daily for fixed forms. All available, completed items were scored. After testing was complete, a secondary check was completed by the psychometrics team. Any items that did not perform as expected were communicated back to the autoscoring specialists, who reran the simulations to assure the autoscoring was set up as requested. If an autoscoring setup issue was found at this point, the items are updated and rescored. This occurred before reporting.

DRC provided MDE with complete item frequency reports, which includes the following information for each response pattern/combination: (1) the number/percentage of students gave that response pattern/combination, and (2) the score provided by the scoring system.

7.1.2 Multiple Choice Scoring

The online scoring process includes the scoring of multiple-choice items, in which students chose only one correct answer from choices A–D. The items were scored against a scoring key that was prepared and validated before the start of each testing window. Responses to multiple-choice items were captured during the online test administration, and items were scored as "right," "wrong," or "blank" (i.e., not answered). Additional answer key checks were conducted during the testing windows to ensure that the items were scored based on the provided key.

7.2 Handscoring

Measurement Incorporated performed all required scoring of paper/pencil and of online items needing handscoring. For M-STEP ELA, these were Passage-Based Writing (PBW) items for grades 3–7. For M-STEP mathematics, these included short-text and short-text fill-in table items for grades 3–7.

M-STEP items were scored by readers working remotely through MIRA, an application that allows users to access Measurement Incorporated's Virtual Scoring Center (VSC Score) (i.e., distributive scoring). In a non-pandemic year, readers work primarily in-person at Measurement Incorporated scoring centers.

AERA, APA, & NCME (2014) Standard 4.20 specifies the following:

> The process for selecting, training, qualifying, and monitoring scorers should be specified by the test developer. The training materials, such as the scoring rubrics and examples of test takers' responses that illustrate the levels on the rubric score scale, and the procedures for training scorers should result in a degree of accuracy and agreement among scorers that allows the scores to be interpreted as originally intended by the test developer. Specifications should also describe processes for assessing scorer consistency and potential drift over time in raters' scoring. (p. 92)

Sections 7.2.1 through 7.2.5 explain how scorers are selected and trained for the M-STEP handscoring process. Sections 7.2.6 and 7.2.7 describes how the scorers are monitored throughout the M-STEP handscoring process.

7.2.1 Security

All Measurement Incorporated scoring rooms, when applicable, are designated secure areas with stringent security regulations that are vigorously enforced. Measurement Incorporated routinely implements a number of measures to help safeguard the security of student responses while they are in Measurement Incorporated's possession and to maintain the confidentiality of student identity.

All buildings that house student responses, including Measurement Incorporated headquarters, scoring centers, and warehouses, utilize an electronic security system during nonbusiness hours.

All readers scoring remotely are required to work from a private, password-protected environment. No free or public Wi-Fi can be used. Readers can access a project website only from a secure, password-protected network. Readers are prohibited from accessing VSC Score from a public computer or a public network, such as a wireless network at a hotel or restaurant. While in VSC Score, readers are prohibited from taking screenshots. Maintaining a secure workstation is a condition for employment for all remote employees.

Before receiving any training materials, all scoring project staff are required to sign a confidentiality and proprietary agreement, which indicates that no participant in training and/or scoring may reveal any specific information about the test or about the criteria and methods for scoring to any person as part of his or her contractual obligation to score student responses.

At scoring centers, all training materials remain on the premises during a project and are collected at the end of each workday to be secured. All materials are collected and accounted for at the end of the scoring project.

Readers who score remotely access training materials from an online resource library. The software does not allow readers to print or download data.

No identifying student information is provided on the images sent to readers via VSC Score software.

Readers are prohibited from accessing training materials or student responses unless they and their team leader are logged on to the system.

Violation of any portion of the Measurement Incorporated security policy results in termination.

7.2.2 Measurement Incorporated Reader and Team Leader Hiring

Measurement Incorporated recruits, interviews, and hires a pool of readers to ensure sufficient staff for scoring projects.

All readers must have a minimum of a bachelor's degree. MDE has the right to review the names, demographics, educational backgrounds, and experience (including scoring experience) of all readers. Reader degrees are verified before the applicants are interviewed. Applicants must provide either an official transcript with a seal (no copies accepted), an official letter from a registrar's office (which would be mailed to the Site Manager), or access to a third-party company such as Parchment or Student Clearing House. Reader applicants can also bring their original diploma with a seal when they come for an interview.

Team leaders are selected and recruited from experienced reader staff. Each team leader supervises a group of 10–12 readers during live scoring.

7.2.3 Preparation of Training Materials for M-STEP

Three sets of student responses were used in training readers and team leaders:

- Anchor sets consisted of typical student responses at each score point, with examples of what would barely earn that point, a median answer for that point, and a high response within that point without quite reaching the next point. These sets were used to show readers and team leaders how the rubric was applied to each response.
- Training sets consisted of atypical student responses and were used to further demonstrate application of the rubric to actual student responses.
- Qualifying sets consisted of student responses similar to those in the anchor and training sets. These sets were used for readers to demonstrate their understanding of the application of the rubric to student responses.

Measurement Incorporated scoring directors used MDE-approved training materials. Anchor sets consisted of three responses at each score point. Each response was annotated to explain how the rubric criteria were applied. Training sets contained 5–10 papers. There was a training set for each trait for analytic scoring and a training set that combined the traits. The responses in each of these sets were arranged in random score-point order, and all score points were represented.

7.2.4 Training and Qualifying Readers and Team Leaders

AERA, APA, & NCME (2014) Standard 6.9 specifies the following:

> Those responsible for test scoring should establish and document quality control processes and criteria. Adequate training should be provided. The quality of scoring should be monitored and documented. Any systematic source of scoring errors should be documented and corrected. (p. 118)

Readers and team leaders were trained by the scoring director on the scoring criteria approved by MDE and were required to achieve qualifying standards set by MDE.

Readers were divided into teams consisting of one team leader and 10–15 readers.

For ELA and mathematics scoring, readers logged into VSC Training with their secure credentials to access VSC Training Lessons for each item that they were assigned. The training set consisted of an anchor set, practice sets, and qualifying sets. Following the video presentation of the anchor sets, readers and team leaders scored a training set and then one or two qualifying sets.

Readers and team leaders were required to refer to the anchor sets when taking training sets and qualifying sets.

Readers and team leaders scored the qualifying set and submitted their scores. The percentage of correct scores was recorded. After the set was completed, the readers and team leaders reviewed an explanation of the qualifying set that provided additional instruction on how to score the item.

If a particular response or type of response generated numerous questions across teams, the scoring director posted a note to chat to ensure that everyone was provided the same explanation.

Once the group had finished discussing the first qualifying set, the readers and team leaders scored the next set. Training continued until all training sets and qualifying sets were scored and reviewed.

Readers were required to demonstrate their ability to score accurately by attaining the qualifying agreement percentage approved by MDE before they gained access to actual student responses.

Any reader or team leader unable to meet the qualifying standards set by MDE was released.

Reference Tables 7-1 and 7-2 for additional information.

Table 7-1. Qualifying Sets

Content	Number of Qualifying Sets per Item
Math	1 or 2
Full Write	2 for each trait

Table 7-2. Qualifying Standards

Score Point Range	Qualifying Standard (Exact Agreement)
0–1	90%; no nonadjacent scores
1–4	70%; no nonadjacent scores

7.2.5 Virtual Scoring Center

Measurement Incorporated used its VSC Score system for the image-based scoring of paper/pencil responses and for the scoring of online responses transferred to Measurement Incorporated from DRC.

Readers and team leaders accessed the VSC Score system through a secure web-based interface with the use of a unique user ID and password. Each team leader and reader was assigned a unique number for easy identification of his or her scoring work throughout the scoring session. VSC Score enabled readers and team leaders to score only those items that they were trained and qualified to score.

Each ELA PBW and mathematics response was randomly assigned to be read by one reader. A random sample of all student responses (i.e., 10% of responses) was then randomly assigned to a second reader. VSC Score managed readers' individual workloads and allowed readers to review and submit their scores.

Readers were trained on how to use the VSC Score performance assessment scoring system—how to assign scores, how to adjust the image for legibility, how to "flag" responses that were atypical from the anchor sets, training sets, and qualifying sets for review by the team lead and

scoring director, etc.

Readers logged in and "checked out" a scoring set of student responses. This scoring set was generated by randomly selecting student responses from the pool of unscored student responses. The reader evaluated the first response, entered the score by clicking the appropriate value on the scoring toolbar, and clicked the "Submit" button. The next response in the scoring set then appeared for the reader to score and submit. This process continued until all responses in the set had been scored. After scoring all responses in a set, the reader had the option to review any of the responses and modify the scores before submitting them to the system.

Once the scores had been submitted, the set was "checked in" and responses were routed to other qualified readers as necessary. The requirements for subsequent readings were defined in the system during setup, and student responses were not marked as complete until the requisite number of independent readers had scored the response.

When a reader had a question about a response, he or she could transfer the image (along with the question and/or comments) from the current scoring set to a review set, which was assigned to a team leader. The team leader could forward the question to the scoring director, submit the appropriate score, or return the response to the reader with comments. This procedure was used whenever a reader had scoring concerns or encountered apparent non-scorable responses. Readers could mark completely blank responses as non-scorable, but otherwise only scoring directors or the project director could assign a non-scorable condition code to a student response.

7.2.6 Quality Control and Reliability of Scoring

AERA, APA, & NCME (2014) Standard 6.8 states the following:

> Those responsible for test scoring should establish scoring protocols. Test scoring that involves human judgment should include rubrics, procedures, and criteria for scoring. When scoring of complex responses is done by computer, the accuracy of the algorithm and processes should be documented. (p. 118)

Section 7.2.6 explains the monitoring procedures that Measurement Incorporated uses to ensure that handscoring evaluators follow established scoring criteria while items are being scored. Detailed scoring rubrics are available for all PBW prompts, which specify the criteria for scoring those PBW prompts. These rubrics will not be presented in this report in order to preserve the integrity of the items for use in future assessments.

MDE reader production and reliability statistics, including reader training results, were available to MDE via a suite of VSC reports, which could be accessed online using secure credentials supplied to MDE staff.

Detailed Reader Status Reports were generated for each scoring project, utilizing a comprehensive system for collecting and analyzing score data. Daily analyses of the Reader Status Reports alerted management personnel to individual or group retraining needs.

After the readers' scores were submitted in the VSC Score system, the data was uploaded into the primary Scoring Resource Center servers. The scores were then validated and processed.

Updated real-time reports that showed both daily and cumulative data (i.e., project-to-date data) were available 24 hours a day via a secure website. Reports included data on the number of responses scored by each reader, the percentage of responses scored that day in exact agreement or adjacent agreement with a second reader, and the total number of responses scored at each score point.

For M-STEP performance assessment scoring, a random sample of 10% of all student responses are scored a second time to generate agreement data.

Readers were required to demonstrate the ability to assign scores consistently according to the rubric and anchor papers that were introduced during training. Their scoring accuracy is under scrutiny using validity responses that were included daily with the actual student responses (for details, see Section 7.2.7).

If questionable reader reliability indications were found, the affected responses were scored again.

The monitoring and retraining process was sustained throughout the project to promote strict adherence to MDE-approved scoring criteria and consistency throughout the scoring effort.

Scoring directors and team leaders provided consistent monitoring of the scoring patterns of each reader throughout the project, responded to questions, spot-checked (i.e., read behind) reader scoring, provided feedback, and counseled readers who were having difficulty with the criteria.

Scoring directors continued to look for atypical types of responses that were not covered in the initial training and presented further instruction about handling these types of responses when necessary.

The inter-rater reliability information for the handscored ELA and mathematics items is presented in Table 7-3.

Table 7-3. Human-to-Human Inter-rater Reliability

Content	Grade	Item ID	Maturity	% Perfect Plus	N Perfect	% Perfect	N Adjacent	% Adjacent	N Nonadjacent	% Nonadjacent
ELA	3	945969	OP	99.4	1,145	82.0	243	17.4	8	0.6
ELA	3	945975	OP	99.1	1,079	80.6	248	18.5	12	0.9
ELA	3	945976	OP	98.4	1,101	77.5	297	20.9	23	1.6
ELA	4	945962	OP	99.8	1,609	83.3	318	16.5	4	0.2
ELA	4	945980	OP	99.7	1,509	77.5	432	22.2	6	0.3
ELA	4	945981	OP	99.5	1,564	80.5	371	19.1	9	0.5
ELA	5	945968	OP	98.9	1,555	73.6	534	25.3	24	1.1
ELA	5	945974	OP	99.0	1,566	75.2	497	23.9	20	1.0
ELA	5	945983	OP	99.3	1,635	77.9	450	21.4	15	0.7
ELA	6	945965	OP	99.1	1,551	79.2	390	19.9	17	0.9
ELA	6	945972	OP	98.8	1,481	74.3	489	24.5	23	1.2
ELA	6	945984	OP	98.9	1,537	76.9	440	22.0	22	1.1
ELA	7	945966	OP	98.7	1,524	73.9	511	24.8	27	1.3
ELA	7	945970	OP	99.2	1,619	78.3	432	20.9	16	0.8
ELA	7	945985	OP	98.6	1,535	75.3	474	23.3	29	1.4
Math	3	1906	OP	100.0	13	100.0	-	-	-	-
Math	3	1928	OP	100.0	12	92.3	1	7.7	-	-
Math	3	76505	OP	100.0	13	100.0	-	-	-	-
Math	3	76529	OP	100.0	13	100.0	-	-	-	-
Math	4	2620	OP	100.0	12	100.0	-	-	-	-
Math	4	2666	OP	100.0	12	100.0	-	-	-	-
Math	4	78588	OP	100.0	12	100.0	-	-	-	-
Math	5	2228	OP	100.0	12	92.3	1	7.7	-	-
Math	5	5545	OP	100.0	12	92.3	1	7.7	-	-
Math	5	78500	OP	100.0	13	100.0	-	-	-	-
Math	6	10839	OP	100.0	17	100.0	-	-	-	-
Math	6	684	OP	100.0	17	100.0	-	-	-	-
Math	6	77674	OP	100.0	17	100.0	-	-	-	-
Math	7	12069	OP	100.0	18	90.0	2	10.0	-	-
Math	7	25989	OP	100.0	20	100.0	-	-	-	-
Math	7	5577	OP	100.0	17	89.5	2	10.5	-	-
Math	7	7180	OP	100.0	20	100.0	-	-	-	-
Math	7	9499	OP	100.0	18	94.7	1	5.3	-	-

7.2.7 Validity

Measurement Incorporated used validity responses, similar to the student responses found in the qualifying sets, during live scoring to monitor readers' accuracy in scoring. Preselected validity responses were approved by MDE. Scoring directors also had the ability to select live responses as validity responses, which were also subject to MDE approval. The true scores for these responses were entered into a validity database.

Validity responses were randomly incorporated into readers' sets each day of the project. Team leaders reviewed the validity results and provided feedback to the readers.

A validity report was generated that included the response identification number, the scores assigned by the readers, and the "true" scores. Measurement Incorporated provided MDE with daily and project-to-date summaries of what percentages of papers scored by readers matched the validity checks or were high or low at each score point. Five percent of the responses that a reader scored were validity papers. These responses appeared to the reader daily throughout the entire scoring project. The validity standards can be found in Table 7-4.

Table 7-4. Validity Standards

Score Point Range	Validity Standard (Exact Agreement)
0–1	85%
1–4	70%

7.2.8 Alerts

Measurement Incorporated implemented a formal process for notifying MDE when student responses reflected a possibly dangerous situation for the student, which may include responses indicating endangerment, abuse, or psychological and/or emotional difficulties.

Measurement Incorporated also alerted MDE if there appeared to be possible instances of teacher or proctor interference or student collusion with other students.

Measurement Incorporated always takes immediate action following a scoring alert.

7.3 Summary

The information presented in this chapter summarizes the scoring procedures for different types of items and the steps taken by DRC and Measurement Incorporated to ensure accuracy in the technology-enhanced item scoring and handscoring processes. The reliability statistics presented in Sections 7.2.6 and 7.2.7 demonstrate that the items are scored reliably. These efforts follow multiple best practices of the testing industry, particularly AERA, APA, & NCME (2014) *Standards* 4.18 4.20, 6.8, and 6.9:

- Standard 4.18—Procedures for scoring and, if relevant, scoring criteria, should be presented by the test developer with sufficient detail and clarity to maximize the accuracy of scoring. Instructions for using rating scales or for deriving scores obtained by coding, scaling, or classifying constructed responses should be clear. This is especially critical for extended-response items such as performance tasks, portfolios, and essays.
- Standard 4.20—The process for selecting, training, qualifying, and monitoring scorers should be specified by the test developer. The training materials, such as the scoring rubrics and examples of test takers' responses that illustrate the levels on the rubric score scale, and the procedures for training scorers should result in a degree of accuracy and agreement among scorers that allows the scores to be interpreted as originally intended by the test developer. Specifications should also describe processes for assessing scorer consistency and potential drift over time in raters' scoring.
- Standard 6.8—Those responsible for test scoring should establish scoring protocols. Test scoring that involves human judgment should include rubrics, procedures, and criteria for scoring. When scoring of complex responses is done by computer, the accuracy of the algorithm and processes should be documented.
- Standard 6.9—Those responsible for test scoring should establish and document quality control processes and criteria. Adequate training should be provided. The quality of scoring should be monitored and documented. Any systematic source of scoring errors should be documented and corrected.

Chapter 8: Operational Data Analyses

This chapter describes the analyses conducted with the operational (OP) data. Item/test analyses from both the Classical Test Theory (CTT) and the item response theory (IRT) frameworks are used (when appropriate) and reported here.

This chapter demonstrates adherence of M-STEP to AERA, APA, & NCME (2014) *Standards* 1.8, 5.2, 5.13, and 5.15. Each standard will be explicated within the appropriate section of this chapter. Standard 7.2 provides general guidance that is relevant to this chapter:

> The population for whom a test is intended and specifications for the test should be documented. (p. 126)

Chapter 3 presents the test specifications. Information regarding reported data is discussed in detail in Chapter 9.

8.1 Operational Analysis of ELA and Mathematics

The *Smarter Balanced 2016–2017 Technical Report* (2017) states that part of the Smarter Balanced Theory of Action is to leverage appropriate technology and innovation. The use of CAT methodologies helps ensure that students across the range of proficiency levels have an assessment experience with items well targeted to their skill level. Adaptive testing allows average-, low-, and high-performing students to stay engaged in the assessment because they respond to items specifically targeted to their skill level. CATs are also efficient because they provide a higher level of score precision than fixed-form tests with the same number of items. For the CAT component, there are both content constraints (e.g., a long reading passage in ELA must be administered) and psychometric criteria that must be optimized for each student.

8.1.1 CAT Item Pool Characteristics

8.1.1.1 CAT Item Types

This section presents different item types used by Smarter Balanced (*Smarter Balanced 2017–2018 Technical Report*, 2018, p. 4–28) to compose the summative item pools. These different item types are listed in Table 8-1.

Table 8-1. Item Types Found in the Summative Item Pools

Item Types	ELA	Mathematics
Multiple Choice (MC)	X	X
Multi-Select (MS)	X	X
Evidence-Based Selected Response (EBSR)	X	
Match Interaction (MI)	X	X
Hot Text (HTQ)	X	
Passage Based Writing (PBW)	X	
Equation Response (EQ)		X
Grid-Item Response (GI)		X
Table Interaction (TI)		X
Table Interaction (TI)		X
Constructed Response (CR)		X

The Smarter Balanced item/task type characteristics are defined as sufficient to ensure that the content measured the intent of the Common Core State *Standards* (CCSS) and that there was consistency across item/task writers and editors. This included item types such as selected-response, constructed-response, and technology-enhanced.

As shown in Table 8-1, the common item types for both ELA and mathematics are MC, MS, and MI. In addition, ELA also included the following item types: EBSR, HTQ, and PBW. Mathematics also included the following item types: EQ, GI, and TI.

For ELA, PBW prompts are included in the pool. For more information on PBW prompts, please see Chapter 3. Additionally, it should be noted that the following sections provide information about the ELA and mathematics item pools that were administered in Michigan.

8.1.1.2 CAT Item Pool Specification

“An item pool refers to a collection of test questions (known as items) that support the test blueprint for a particular content area and grade. The Consortium takes multiple steps to ensure the quality of the items in the Smarter Balanced item pool. Building on the continuing process of developing item/task specifications and test blueprints, the Consortium uses an iterative process for creating and revising each item as well as the collection of items” (*Smarter Balanced 2017–2018 Technical Report*, 2018, p. 4–17).

8.1.1.3 CAT Distribution of Item Types

The M-STEP distribution of item types is shown in Tables 8-2 and 8-3.

Table 8-2. Distribution of ELA Item Types by Grade and Claim

Grade	Claim	MC	MS	EBSR	MI	HTQ	PBW	Total
3	1	166	48	47		54		315
3	2	114	54			47	3	218
3	3	76	39	45	20			180
3	4	58	38		4	20		120
3	Total	414	179	92	24	121	3	833
4	1	106	49	48		51		254
4	2	125	48			50	3	226
4	3	87	37	44	19			187
4	4	55	47		2	19		123
4	Total	373	181	92	21	120	3	790
5	1	113	60	52		46		271
5	2	114	61			41	3	219
5	3	64	26	35	15			140
5	4	52	43			24		119
5	Total	343	190	87	15	111	3	749
6	1	76	46	33		56		211
6	2	87	66			50	3	206
6	3	75	24	40	18			157
6	4	66	49			10		125
6	Total	304	185	73	18	116	3	699
7	1	85	45	36		44		210
7	2	82	59			47	3	191
7	3	65	31	40	12			148
7	4	29	27		3	31		90
7	Total	261	162	76	15	122	3	639

Table 8-3. Distribution of Mathematics Item Types by Grade and Claim

Grade	Claim	MC	MS	MI	EQ	GI	TI	Total
3	**1**	116	4	67	479	68	33	767
3	**2**	14	5	6	51	16		92
3	**3**	84	32	22	12	47		197
3	**4**	32	11	8	47	16		114
3	**Total**	246	52	103	589	147	33	1170
4	**1**	109		181	437	58	14	799
4	**2**	29	4	7	56	5	2	103
4	**3**	62	32	19	21	74		208
4	**4**	59	10	4	32	13	5	123
4	**Total**	259	46	211	546	150	21	1233
5	**1**	219	1	88	410	45		763
5	**2**	8	2	2	63	11	2	88
5	**3**	83	24	19	13	53	2	194
5	**4**	27	6	6	31	29	4	103
5	**Total**	337	33	115	517	138	8	1148
6	**1**	62	131	99	342	66	11	711
6	**2**	7	11	3	48	12	1	82
6	**3**	45	40	30	18	46		179
6	**4**	8	12	3	48	11	4	86
6	**Total**	122	194	135	456	135	16	1058
7	**1**	53	126	71	370	32		640
7	**2**	7	11	6	53	7	2	83
7	**3**	32	31	17	15	40		135
7	**4**	14	10	2	46	15	1	88
7	**Total**	106	178	96	484	94	3	946

8.1.1.4 Item Pool Calibration and Model Fit Evaluation

Item parameters contained in ELA and mathematics tests were estimated using a marginal maximum-likelihood procedure with either the 2-parameter logistic (2PL) model for MC items or the generalized partial credit model (Muraki, 1992) for technology-enhanced (TE) items administered after the 2013–14 Smarter Balanced field-test administration. Additionally, for model fit, the evaluation of goodness-of-fit used the likelihood ratio test in PARSCALE (Muraki & Bock, 2003).

For details on item calibration and model fit for ELA and mathematics, please refer to Chapter 9 of the Smarter Balanced 2013–2014 Technical Report (2015), which was published on the Smarter Balanced website.[1]

With the exception of the PBW prompts, Smarter Balanced ELA and mathematics operational item parameters were used to score Michigan students who took ELA and mathematics assessments.

To place the PBW prompts on the same scale as the Smarter Balanced item pool that is used for M-STEP ELA, DRC used a common-item, non-equivalent groups design to link the PBW prompts to the established scale. After the initial IRT item calibration, item parameters were linked to the existing M-STEP scale using the Stocking & Lord (1983) equating procedure, where all other items in the pool were used as anchor items.

8.1.2 Item Pool IRT Statistics

The distributions of item parameters by grade and claim are shown in Tables 8-4 and 8-5. Item difficulty is represented by the b-parameter, and discrimination is represented by the a-parameter. Note that there is a wide range of difficulty in each category.

[1] http://www.smarterbalanced.org/wp-content/uploads/2015/08/Chapter-9-Field-Test-IRT.pdf

Table 8-4. Distribution of Item Difficulty (b-parameter) and Discrimination (a-parameter) for ELA

Grade	Claim	*N* Items	Difficulty Mean	Difficulty Min	Difficulty Max	Discrimination Mean
3	**1**	315	-0.53	-2.60	4.69	0.71
3	**2**	218	-0.80	-2.90	4.12	0.68
3	**3**	180	-0.17	-2.92	3.82	0.54
3	**4**	120	-0.32	-2.22	1.70	0.68
3	**Total**	833	-0.49	-2.92	4.69	0.66
4	**1**	254	0.29	-2.53	6.23	0.62
4	**2**	226	-0.39	-3.25	2.94	0.58
4	**3**	187	0.05	-2.82	4.25	0.55
4	**4**	123	0.53	-1.94	3.73	0.55
4	**Total**	790	0.08	-3.25	6.23	0.58
5	**1**	271	0.67	-1.78	5.65	0.61
5	**2**	219	0.02	-2.28	3.29	0.59
5	**3**	140	0.51	-2.40	3.48	0.53
5	**4**	119	0.48	-1.49	3.83	0.66
5	**Total**	749	0.42	-2.40	5.65	0.60
6	**1**	211	0.94	-1.64	4.78	0.58
6	**2**	206	0.84	-2.72	5.54	0.53
6	**3**	157	0.83	-1.50	7.38	0.50
6	**4**	125	0.96	-1.30	3.61	0.54
6	**Total**	699	0.89	-2.72	7.38	0.54
7	**1**	210	1.23	-1.84	6.63	0.55
7	**2**	191	1.12	-2.02	5.31	0.51
7	**3**	148	0.93	-1.71	5.88	0.50
7	**4**	90	1.78	-0.82	5.61	0.52
7	**Total**	639	1.20	-2.02	6.63	0.52

Table 8-5. Distribution of Item Difficulty (b-parameter) and Discrimination (a-parameter) for Mathematics

Grade	Claim	*N* Items	Difficulty Mean	Difficulty Min	Difficulty Max	Discrimination Mean
3	**1**	767	-1.13	-4.34	4.16	0.84
3	**2**	92	-0.30	-2.54	1.38	0.99
3	**3**	197	-0.12	-2.42	5.12	0.72
3	**4**	114	-0.10	-2.68	3.20	0.80
3	**Total**	1170	-0.80	-4.34	5.12	0.83
4	**1**	799	-0.29	-3.26	4.48	0.84
4	**2**	103	0.21	-2.25	2.57	0.89
4	**3**	208	0.25	-2.08	5.18	0.74
4	**4**	123	0.27	-2.15	3.28	0.68
4	**Total**	1233	-0.10	-3.26	5.18	0.81
5	**1**	763	0.31	-2.79	3.61	0.78
5	**2**	88	1.07	-1.27	3.94	0.95
5	**3**	194	0.79	-1.90	5.28	0.65
5	**4**	103	1.16	-1.23	4.63	0.68
5	**Total**	1148	0.53	-2.79	5.28	0.76
6	**1**	711	0.85	-2.85	9.16	0.69
6	**2**	82	1.55	-2.98	5.50	0.78
6	**3**	179	1.86	-2.16	8.75	0.58
6	**4**	86	1.88	-0.71	6.44	0.79
6	**Total**	1058	1.16	-2.98	9.16	0.68
7	**1**	640	1.74	-1.79	7.80	0.72
7	**2**	83	2.08	-1.09	5.07	0.82
7	**3**	135	2.26	-1.65	6.59	0.57
7	**4**	88	2.18	-0.79	4.78	0.71
7	**Total**	946	1.89	-1.79	7.80	0.70

It is also beneficial to examine the distribution of item difficulty compared to the distribution of abilities across the student population. This can be used to ensure that the item pool is deep enough to measure the abilities of the student population without item exposure rates being too high. Figures 8-1 and 8-2 show the comparison of item difficulty, student scores, and cut scores for ELA and mathematics, respectively. For most grades, the item pool has good alignment with the student ability distribution. However, in grades 6 to 8 for mathematics, the item pool appears to be more difficult when compared to the corresponding student ability distribution.

Figure 8-1. ELA Item Pool Difficulty in Comparison to the Student Ability Distribution

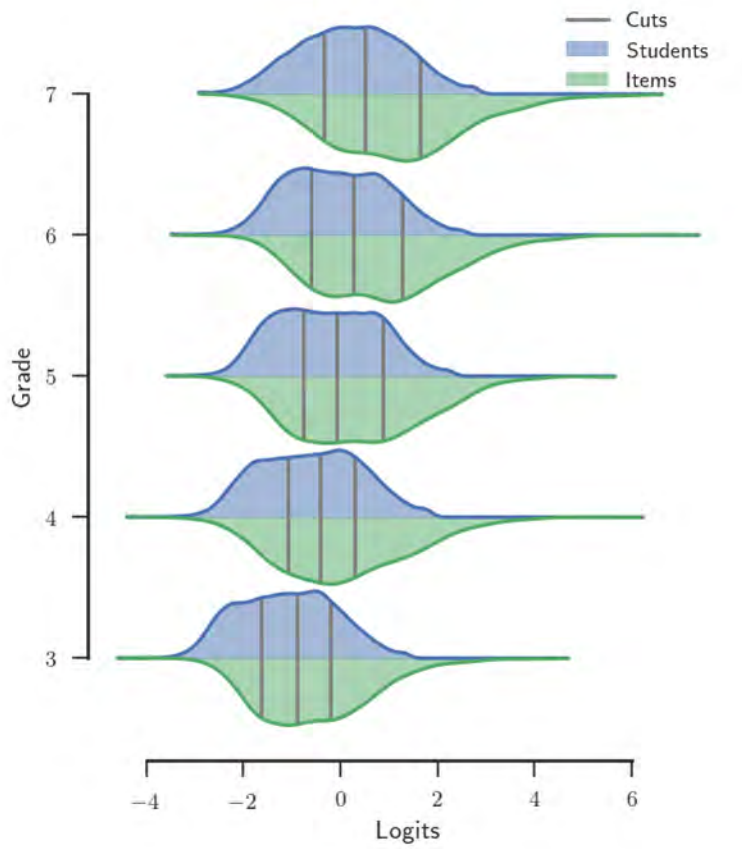
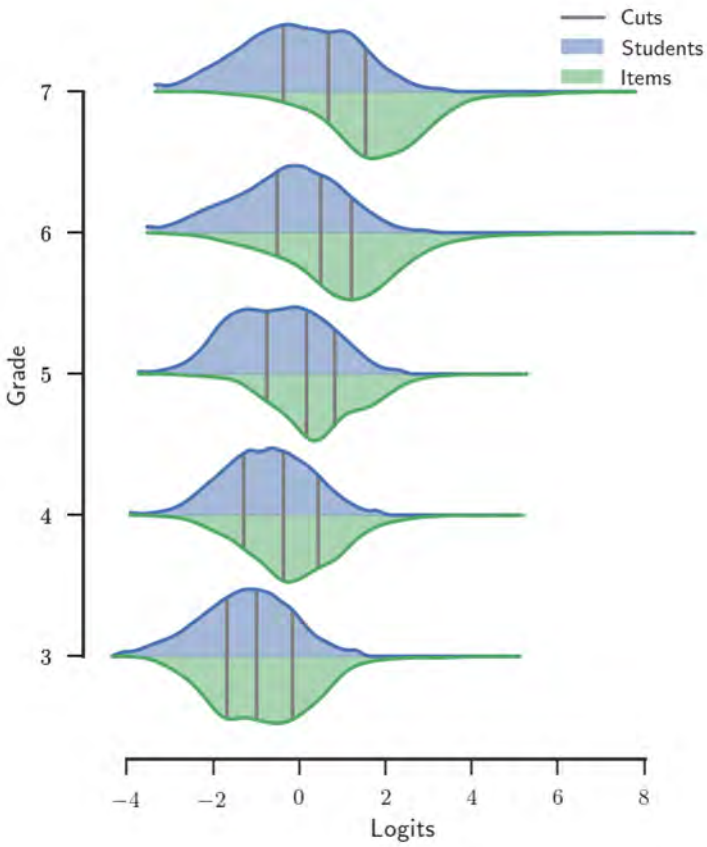


Figure 8-2. Mathematics Item Pool Difficulty in Comparison to the Student Ability Distribution



8.2 Operational CAT ELA and Mathematics Implementation

8.2.1 The Scale

The scales on which M-STEP ELA and mathematics scale scores are reported were established by Smarter Balanced after the 2014 field test. The underlying scales are not unique to Michigan but have been adapted by several states that were members of the Smarter Balanced Assessment Consortium. Michigan has used the underlying scale to create state-specific M-STEP scales used solely by Michigan.

The Smarter Balanced ELA and mathematics scores are reported on vertical scales, sometimes referred to as growth scales, showing student progress from grade to grade. For details on ELA and mathematics vertical scale development, refer to Chapter 9 of the *Smarter Balanced 2013–2014 Technical Report* (2015), which is posted on the Smarter Balanced website.[2] However, the scale scores reported by Michigan should not be considered vertical scale scores.

Additional information regarding M-STEP scale scores can be found in Chapter 10.

8.2.2 Lowest and Highest Obtainable Scale Scores (LOSS and HOSS)

A maximum likelihood procedure cannot produce scale-score estimates for students with perfect scores or scores below the level expected by guessing. In addition, although maximum likelihood estimates are available for students with extreme scores other than zero or perfect, occasionally these estimates have standard errors of measurement that are very large and differences between these extreme values have little meaning. Therefore, scores are established for these students based on a rational but necessarily non-maximum likelihood procedure. These values, which are set separately by grade, are called the lowest obtainable theta (LOT) and the highest obtainable theta (HOT). For reporting purposes, the LOT and HOT are transformed, using a linear transformation, to the LOSS and the HOSS. For more information on the LOSS and HOSS, see Chapter 10 and Table 10-1.

8.2.3 Item-Pattern Scoring

M-STEP scale scores are derived using item-pattern scoring; thus, these scale scores are based on the student's responses to all items on a given test and account for the characteristics of the test items, such as item difficulty. A scale score can be interpreted as a highly probable estimate of a student's ability in a given content area.

Using item-pattern scoring, a student's scale score is based on the student's response to each item (i.e., his or her item-response vector). Each item uses optimal item weights in terms of item information, meaning that items do not contribute equally to the overall scale score. Students with the same raw score may be assigned to different scale scores, depending on which items they answered correctly.

[2] http://www.smarterbalanced.org/wp-content/uploads/2015/08/Chapter-9-Field-Test-IRT.pdf

8.2.4 Blueprint Fidelity Summary

The *Smarter Balanced 2017–2018 Technical Report* notes that "A key design document of the summative assessments is the test blueprint, which specifies the number and nature of items to be administered" (p. 6–9).Chapter 6 of that same report states that "The analyses showed that the operational tests delivered in the 2016–2017 administration fulfilled the blueprint requirements very well" (p. 6–9).

For M-STEP ELA and mathematics implementation, a review of the blueprint fulfillment was completed for both the simulation (see Chapter 6 of this report) and the OP tests.

8.3 Operational Analysis of Science and Social Studies

This section describes analyses conducted for science and social studies and reports corresponding results. Due to the impact of the first SARS-CoV-2 pandemic and its disruptive effect on K-12 education, the testing population in 2021 and their performance were significantly different from those of a typical school year. Therefore, a decision was made to only analyze operational items from online administrations, as more than 99% of the grade 5 and grade 8 students took the test online, and more than 98% of the grade 11 students took the test online. For both science and social studies, there were three online forms per grade for grades 5, 8, and 11.

For both science and social studies, item/test analyses from the CTT framework have been carried out. The item/test analyses from the IRT framework were not performed for spring 2021 due to the above-mentioned abnormalities.

8.3.1 CTT Statistics – Science and Social Studies

This section presents test-level summary statistics for each form and grade of science and social studies. In addition to the number of students taking the form (N), Tables 8-6 and 8-7 provide the following raw score descriptive statistics for a given grade and form: mean, standard deviation (SD), minimum (Min), and maximum (Max).

Table 8-6. Test-Level Descriptive Statistics by Form: Science Raw Score Distribution

Grade	N OP Items	Form	N	Mean	SD	Min	Max
5	38	1	23,457	15.98	7.19	0	38
5	39	2	23,512	15.12	7.33	0	39
5	39	3	23,515	15.75	7.49	0	38
8	40	1	23,991	15.16	7.78	0	39
8	37	2	24,113	15.71	7.13	0	36
8	38	3	24,105	15.15	7.41	0	37
11	42	1	18,949	17.67	9.65	0	42
11	43	2	18,942	15.99	8.75	0	42
11	42	3	18,939	16.75	9.22	0	42

Table 8-7. Test-Level Descriptive Statistics by Form: Social Studies Raw Score Distribution

Grade	N OP Items	Form	N	Mean	SD	Min	Max
5	45	1	23,643	21.41	8.08	0	45
5	45	2	23,692	21.39	8.07	0	45
5	45	3	23,709	21.40	7.98	0	45
8	44	1	24,211	21.38	8.31	0	44
8	44	2	24,251	21.96	8.52	0	44
8	44	3	24,418	21.41	8.40	0	44
11	38	1	18,920	20.25	7.93	0	38
11	38	2	18,769	20.32	7.86	0	38
11	38	3	18,807	20.30	7.89	0	38

8.3.1.1 Item-Level Analysis

This section presents various item-level statistics for all OP items[3] on the spring 2021 M-STEP science and social studies tests. Specifically, item difficulty and adjusted item-total correlations defined by the CTT are reported here.

Since all items on the spring 2021 M-STEP science and social studies tests are dichotomously scored, the *p*-value is computed as an indicator for item difficulty. The *p*-value equals the proportion of students who answer an item correctly. A high *p*-value means that an item is easy, and a low *p*-value means that an item is difficult.

The adjusted item-total correlation is an index of the association between students' performance on an item and their performance on the test as a whole; however, the item of interest is excluded from the total raw score. A high adjusted item-total correlation is desired, as high correlations indicate that students with high scores on all other test items (i.e., students with high ability) tend to get a correct answer on the item under consideration and that the students with low scores on all other test items (i.e., students with low ability) tend to get this specific item incorrect. Since all items are dichotomously scored, the adjusted point biserial correlation is computed.

The item-level descriptive statistics (by grade and form) for all OP items are presented in Tables 8-8 through 8-11 for science and social studies. Each science form per grade has a slightly different set of OP items due to the matrix sampling of content standards for a subset of OP items. However, all online forms for social studies have the same set of OP items; therefore, forms 1 through 3 are reported together per grade in Tables 8-10 and 8-11. As shown in Tables 8-8 through 8-11, for both item difficulty (*p*-value) and adjusted item-total correlation (adjusted point biserial), the following descriptive statistics are reported: number of OP items (N OP Items), mean, SD, minimum (Min), and maximum (Max), for a given grade by form.

[3] All statistics for field-test items are excluded from this report. Also, all OP items included are from the online forms only.

Table 8-8. Item-Level Descriptive Statistics by Form: Science *P*-Value

Grade	N OP Items	Form	Mean	SD	Min	Max
5	38	1	0.42	0.21	0.08	0.85
5	39	2	0.39	0.20	0.08	0.85
5	39	3	0.41	0.20	0.02	0.85
8	40	1	0.38	0.20	0.06	0.81
8	37	2	0.42	0.21	0.08	0.89
8	38	3	0.40	0.21	0.06	0.81
11	42	1	0.42	0.17	0.07	0.76
11	43	2	0.38	0.19	0.01	0.85
11	42	3	0.40	0.18	0.07	0.85

Table 8-9. Item-Level Descriptive Statistics by Form: Science Adjusted Point Biserial

Grade	N OP Items	Form	Mean	SD	Min	Max
5	38	1	0.37	0.13	0.09	0.56
5	39	2	0.37	0.11	0.07	0.56
5	39	3	0.37	0.12	0.15	0.56
8	40	1	0.39	0.10	0.14	0.59
8	37	2	0.37	0.12	0.08	0.59
8	38	3	0.39	0.12	0.02	0.59
11	42	1	0.45	0.12	0.09	0.63
11	43	2	0.41	0.15	0.03	0.63
11	42	3	0.44	0.12	0.09	0.63

Table 8-10. Item-Level Descriptive Statistics by Form: Social Studies *P*-Value

Grade	N OP Items	Form	Mean	SD	Min	Max
5	45	1-3	0.48	0.13	0.26	0.85
8	44	1-3	0.49	0.11	0.26	0.73
11	38	1-3	0.53	0.11	0.29	0.75

Table 8-11. Item-Level Descriptive Statistics by Form: Social Studies Adjusted Point Biserial

Grade	N OP Items	Form	Mean	SD	Min	Max
5	45	1-3	0.32	0.08	0.15	0.49
8	44	1-3	0.34	0.07	0.19	0.49
11	38	1-3	0.38	0.09	0.19	0.57

8.3.2 IRT Statistics: Science and Social Studies

The unidimensional 2PL model was used for M-STEP science and social studies at each grade level, as all items are dichotomously scored. For this model, the probability that person j answers item i correctly is defined as follows (adapted from Embretson & Reise, 2000, p. 70):

$$P(X_{ij} = 1|\theta_j, b_i, a_i) = \frac{\exp(a_i(\theta_j - b_i))}{1+\exp(a_i(\theta_j - b_i))}, \quad (8.1)$$

where θ_j, b_i, and a_i represent person j's ability, item i's difficulty, and item i's discrimination, respectively. Note that $P(X_{ij} = 1|\theta_j, b_i, a_i)$ is referred to as $P_i(\theta)$ for simplicity hereafter.

8.3.3 Item Calibration for Science and Social Studies

8.3.4 Anchor Item Evaluation for Science and Social Studies

8.3.5 Evidence of Model Fit for Science and Social Studies

Sections 8.3.3 to 8.3.5 (and 8.3.7 below) are omitted for spring 2021, but the numbering and headers are retained for consistency between years.

For science, since it was the first operational administration, a concurrent calibration was used per grade level for establishing the reporting scale. All science items will be re-calibrated after the 2022 administration, in expectation of a more typical administration.

For social studies, all conversion tables were made based on pre-equating procedures, using item parameters $\bar{a}_{free} = \overline{b}_{free}$ = stored in the Michigan Item Bank System.

8.3.6 Test Characteristic Curves (TCCs) and Conversion Tables

The TCC is the graphical representation of the test characteristic function (TCF), and TCF is the expected raw total score given θ. Since all items are dichotomously scored, the expression of TCF is as follows (adapted from Yen & Fitzpatrick, 2006, p. 125):

$$E(X.|\theta) = \sum_{i=1}^{n} E(X_i|\theta) = \sum_{i=1}^{n} P_i(\theta) \quad (8.2)$$

Due to data abnormalities mentioned above and atypical approaches used for reporting (i.e., pre-equating procedures for social studies), TCC graphs are skipped for this administration.

Tables 8-12 to 8-15 present the summed scores to EAP conversion tables by grade and form for science, and by grade for social studies. These are used for operational reporting. Note that when conversion tables were made, no paper/pencil data were available for calibration; thus, an operational decision was made to apply the conversion tables from the online forms to the corresponding paper/pencil forms.[4]

[4] There are very few students taking science and social studies paper/pencil forms at each grade level (i.e., <2%) in 2021, and the number is expected to keep decreasing in the future years to come. Since all past investigations concluded such decision (i.e., apply the conversion tables from the online forms to the paper/pencil forms at each grade) as reasonable (e.g., see mode comparison studies in the 2017 and 2018 M-STEP technical reports), mode comparison related investigations will be skipped starting from the 2019 administration.

Table 8-12. Science Grade 5 Summed Score to EAP Conversion Tables by Form

Raw Score	Form 1 Theta	Form 1 SE	Form 2 Theta	Form 2 SE	Form 3 Theta	Form 3 SE
0	-2.5640	0.5370	-2.4750	0.5530	-2.5130	0.5380
1	-2.3290	0.5220	-2.2250	0.5340	-2.2570	0.5170
2	-2.0980	0.4970	-1.9820	0.5060	-2.0150	0.4880
3	-1.8790	0.4690	-1.7550	0.4760	-1.7920	0.4580
4	-1.6750	0.4430	-1.5460	0.4480	-1.5900	0.4320
5	-1.4870	0.4200	-1.3550	0.4240	-1.4060	0.4090
6	-1.3130	0.4000	-1.1790	0.4030	-1.2360	0.3900
7	-1.1500	0.3840	-1.0160	0.3850	-1.0790	0.3740
8	-0.9970	0.3700	-0.8640	0.3710	-0.9320	0.3610
9	-0.8520	0.3590	-0.7210	0.3580	-0.7930	0.3500
10	-0.7130	0.3510	-0.5840	0.3480	-0.6610	0.3410
11	-0.5800	0.3440	-0.4540	0.3400	-0.5350	0.3330
12	-0.4510	0.3380	-0.3280	0.3340	-0.4130	0.3280
13	-0.3260	0.3340	-0.2070	0.3290	-0.2940	0.3230
14	-0.2030	0.3310	-0.0880	0.3250	-0.1780	0.3200
15	-0.0820	0.3290	0.0290	0.3230	-0.0640	0.3180
16	0.0370	0.3280	0.1440	0.3220	0.0480	0.3160
17	0.1560	0.3280	0.2590	0.3220	0.1600	0.3160
18	0.2750	0.3290	0.3730	0.3230	0.2710	0.3170
19	0.3950	0.3310	0.4870	0.3250	0.3820	0.3190
20	0.5150	0.3340	0.6020	0.3270	0.4940	0.3210
21	0.6360	0.3380	0.7170	0.3310	0.6070	0.3250
22	0.7600	0.3430	0.8350	0.3350	0.7220	0.3290
23	0.8850	0.3480	0.9540	0.3390	0.8390	0.3340
24	1.0130	0.3550	1.0750	0.3450	0.9590	0.3400
25	1.1450	0.3620	1.1980	0.3500	1.0820	0.3470
26	1.2800	0.3710	1.3250	0.3570	1.2080	0.3550
27	1.4200	0.3800	1.4550	0.3640	1.3390	0.3640
28	1.5660	0.3910	1.5890	0.3710	1.4740	0.3740
29	1.7170	0.4030	1.7280	0.3800	1.6150	0.3840
30	1.8750	0.4170	1.8720	0.3890	1.7630	0.3970
31	2.0400	0.4320	2.0220	0.4000	1.9180	0.4100
32	2.2120	0.4480	2.1790	0.4110	2.0800	0.4240
33	2.3900	0.4650	2.3430	0.4240	2.2510	0.4390
34	2.5710	0.4780	2.5140	0.4370	2.4310	0.4550
35	2.7490	0.4850	2.6920	0.4480	2.6170	0.4680
36	2.9170	0.4830	2.8730	0.4540	2.8070	0.4740
37	3.0690	0.4720	3.0480	0.4500	2.9950	0.4710
38	3.1990	0.4530	3.2070	0.4340	3.1720	0.4540
39			3.3400	0.4090	3.3330	0.4220

Note. The maximum possible total raw score is 38 for form 1, 39 for form2, and 39 for form 3.

Table 8-13. Science Grade 8 Summed Score to EAP Conversion Tables by Form

Raw Score	Form 1 Theta	Form 1 SE	Form 2 Theta	Form 2 SE	Form 3 Theta	Form 3 SE
0	-2.4220	0.5340	-2.5660	0.5350	-2.4210	0.5380
1	-2.1520	0.5060	-2.3130	0.5190	-2.1910	0.5200
2	-1.8970	0.4680	-2.0690	0.4910	-1.9540	0.4900
3	-1.6700	0.4340	-1.8420	0.4610	-1.7290	0.4550
4	-1.4690	0.4060	-1.6350	0.4340	-1.5230	0.4230
5	-1.2880	0.3840	-1.4450	0.4110	-1.3360	0.3970
6	-1.1230	0.3670	-1.2690	0.3910	-1.1660	0.3760
7	-0.9710	0.3530	-1.1060	0.3750	-1.0090	0.3590
8	-0.8280	0.3420	-0.9530	0.3620	-0.8630	0.3450
9	-0.6920	0.3330	-0.8090	0.3520	-0.7250	0.3340
10	-0.5630	0.3270	-0.6700	0.3440	-0.5940	0.3260
11	-0.4390	0.3210	-0.5370	0.3380	-0.4680	0.3190
12	-0.3190	0.3170	-0.4090	0.3330	-0.3460	0.3150
13	-0.2030	0.3140	-0.2830	0.3300	-0.2270	0.3110
14	-0.0880	0.3120	-0.1600	0.3280	-0.1110	0.3090
15	0.0240	0.3110	-0.0390	0.3270	0.0040	0.3080
16	0.1340	0.3100	0.0810	0.3270	0.1170	0.3080
17	0.2440	0.3100	0.2010	0.3280	0.2300	0.3090
18	0.3520	0.3100	0.3200	0.3300	0.3430	0.3100
19	0.4610	0.3100	0.4400	0.3320	0.4570	0.3130
20	0.5690	0.3110	0.5610	0.3350	0.5710	0.3160
21	0.6770	0.3130	0.6830	0.3390	0.6870	0.3190
22	0.7870	0.3150	0.8070	0.3440	0.8040	0.3240
23	0.8970	0.3170	0.9340	0.3500	0.9240	0.3290
24	1.0080	0.3200	1.0640	0.3570	1.0450	0.3340
25	1.1210	0.3240	1.1980	0.3640	1.1700	0.3410
26	1.2360	0.3290	1.3350	0.3730	1.2990	0.3480
27	1.3540	0.3340	1.4780	0.3840	1.4320	0.3560
28	1.4760	0.3410	1.6270	0.3960	1.5690	0.3650
29	1.6010	0.3490	1.7830	0.4100	1.7130	0.3750
30	1.7310	0.3580	1.9460	0.4250	1.8640	0.3870
31	1.8660	0.3680	2.1170	0.4430	2.0220	0.4000
32	2.0070	0.3800	2.2970	0.4610	2.1900	0.4160
33	2.1560	0.3940	2.4830	0.4780	2.3670	0.4330
34	2.3120	0.4090	2.6730	0.4910	2.5540	0.4500
35	2.4780	0.4250	2.8570	0.4940	2.7450	0.4630
36	2.6510	0.4400	3.0250	0.4860	2.9320	0.4660
37	2.8300	0.4510	3.1540	0.4690	3.0960	0.4580
38	3.0080	0.4510			3.1850	0.4430
39	3.1780	0.4390				
40	3.3290	0.4150				

Note. The maximum possible total raw score is 40 for form 1, 37 for form 2, and 38 for form 3.

Table 8-14. Science Grade 11 Summed Score to EAP Conversion Tables by Form

Raw Score	Form 1 Theta	Form 1 SE	Form 2 Theta	Form 2 SE	Form 3 Theta	Form 3 SE
0	-2.3640	0.5350	-2.4070	0.5500	-2.3910	0.5410
1	-2.0880	0.4990	-2.1480	0.5270	-2.1010	0.5060
2	-1.8410	0.4570	-1.9020	0.4940	-1.8440	0.4670
3	-1.6240	0.4190	-1.6780	0.4590	-1.6190	0.4310
4	-1.4330	0.3870	-1.4760	0.4280	-1.4210	0.4000
5	-1.2640	0.3600	-1.2940	0.3990	-1.2450	0.3730
6	-1.1130	0.3370	-1.1290	0.3750	-1.0870	0.3510
7	-0.9760	0.3190	-0.9780	0.3540	-0.9430	0.3310
8	-0.8510	0.3030	-0.8390	0.3360	-0.8110	0.3150
9	-0.7350	0.2900	-0.7100	0.3210	-0.6890	0.3010
10	-0.6260	0.2800	-0.5890	0.3080	-0.5750	0.2900
11	-0.5240	0.2710	-0.4760	0.2970	-0.4680	0.2800
12	-0.4260	0.2640	-0.3680	0.2880	-0.3660	0.2720
13	-0.3330	0.2580	-0.2650	0.2810	-0.2680	0.2660
14	-0.2430	0.2530	-0.1650	0.2760	-0.1740	0.2610
15	-0.1550	0.2500	-0.0690	0.2720	-0.0830	0.2570
16	-0.0690	0.2470	0.0250	0.2690	0.0050	0.2540
17	0.0150	0.2460	0.1180	0.2680	0.0920	0.2520
18	0.0980	0.2450	0.2100	0.2670	0.1780	0.2510
19	0.1810	0.2450	0.3010	0.2680	0.2640	0.2500
20	0.2630	0.2450	0.3920	0.2690	0.3490	0.2510
21	0.3460	0.2470	0.4840	0.2710	0.4340	0.2520
22	0.4300	0.2480	0.5770	0.2740	0.5200	0.2540
23	0.5140	0.2510	0.6710	0.2780	0.6060	0.2560
24	0.6000	0.2540	0.7670	0.2820	0.6950	0.2600
25	0.6880	0.2580	0.8650	0.2870	0.7850	0.2640
26	0.7780	0.2630	0.9660	0.2930	0.8770	0.2680
27	0.8700	0.2690	1.0700	0.3000	0.9720	0.2740
28	0.9670	0.2750	1.1780	0.3080	1.0710	0.2810
29	1.0660	0.2830	1.2890	0.3160	1.1730	0.2880
30	1.1710	0.2910	1.4050	0.3260	1.2800	0.2970
31	1.2800	0.3010	1.5270	0.3360	1.3920	0.3070
32	1.3960	0.3120	1.6540	0.3480	1.5100	0.3180
33	1.5190	0.3250	1.7880	0.3610	1.6350	0.3310
34	1.6490	0.3400	1.9290	0.3760	1.7690	0.3450
35	1.7890	0.3560	2.0790	0.3920	1.9110	0.3620
36	1.9410	0.3750	2.2370	0.4100	2.0650	0.3810
37	2.1050	0.3970	2.4050	0.4280	2.2300	0.4030
38	2.2840	0.4220	2.5810	0.4460	2.4090	0.4260
39	2.4760	0.4470	2.7590	0.4580	2.5970	0.4480

Raw Score	Form 1 Theta	Form 1 SE	Form 2 Theta	Form 2 SE	Form 3 Theta	Form 3 SE
40	2.6760	0.4670	2.9330	0.4610	2.7880	0.4620
41	2.8670	0.4740	3.0900	0.4520	2.9660	0.4630
42	3.0240	0.4660	3.2220	0.4350	3.1160	0.4520
43			3.3020	0.4220		

Note. The maximum possible total raw score is 42 for form 1, 43 for form 2, and 42 for form 3.

Table 8-15. Social Studies Summed Score to EAP Conversion Tables by Grade

Raw Score	Grade 5 Theta	Grade 5 SE	Grade 8 Theta	Grade 8 SE	Grade 11 Theta	Grade 11 SE
0	-3.0280	0.4890	-2.9720	0.5010	-2.7860	0.5190
1	-2.8470	0.4960	-2.7820	0.5060	-2.5670	0.5090
2	-2.6600	0.4910	-2.5880	0.4980	-2.3540	0.4880
3	-2.4770	0.4780	-2.4000	0.4830	-2.1540	0.4630
4	-2.3020	0.4610	-2.2210	0.4650	-1.9700	0.4380
5	-2.1360	0.4440	-2.0530	0.4460	-1.7990	0.4150
6	-1.9790	0.4280	-1.8950	0.4300	-1.6420	0.3960
7	-1.8300	0.4130	-1.7470	0.4150	-1.4960	0.3780
8	-1.6900	0.4010	-1.6070	0.4010	-1.3590	0.3640
9	-1.5560	0.3900	-1.4740	0.3900	-1.2300	0.3510
10	-1.4280	0.3800	-1.3470	0.3800	-1.1070	0.3400
11	-1.3050	0.3720	-1.2250	0.3710	-0.9910	0.3310
12	-1.1860	0.3650	-1.1080	0.3640	-0.8780	0.3240
13	-1.0710	0.3600	-0.9940	0.3580	-0.7700	0.3180
14	-0.9600	0.3550	-0.8840	0.3530	-0.6640	0.3140
15	-0.8510	0.3510	-0.7760	0.3490	-0.5600	0.3110
16	-0.7440	0.3490	-0.6700	0.3460	-0.4580	0.3090
17	-0.6400	0.3460	-0.5660	0.3430	-0.3570	0.3090
18	-0.5360	0.3450	-0.4630	0.3420	-0.2560	0.3090
19	-0.4340	0.3440	-0.3610	0.3420	-0.1550	0.3110
20	-0.3320	0.3440	-0.2590	0.3420	-0.0540	0.3130
21	-0.2300	0.3440	-0.1580	0.3430	0.0490	0.3170
22	-0.1290	0.3450	-0.0560	0.3450	0.1540	0.3210
23	-0.0270	0.3470	0.0460	0.3470	0.2600	0.3270
24	0.0750	0.3490	0.1500	0.3500	0.3700	0.3330
25	0.1780	0.3510	0.2540	0.3540	0.4830	0.3410
26	0.2820	0.3550	0.3610	0.3580	0.6000	0.3500
27	0.3870	0.3580	0.4690	0.3630	0.7210	0.3600
28	0.4950	0.3630	0.5790	0.3690	0.8480	0.3710
29	0.6040	0.3680	0.6920	0.3750	0.9810	0.3830
30	0.7160	0.3730	0.8080	0.3830	1.1220	0.3970
31	0.8310	0.3800	0.9280	0.3910	1.2710	0.4120
32	0.9490	0.3870	1.0510	0.3990	1.4300	0.4300

Raw Score	Grade 5 Theta	Grade 5 SE	Grade 8 Theta	Grade 8 SE	Grade 11 Theta	Grade 11 SE
33	1.0700	0.3950	1.1790	0.4090	1.6000	0.4490
34	1.1970	0.4040	1.3110	0.4190	1.7840	0.4710
35	1.3280	0.4140	1.4500	0.4310	1.9820	0.4940
36	1.4640	0.4260	1.5940	0.4430	2.1970	0.5190
37	1.6070	0.4380	1.7460	0.4570	2.4280	0.5400
38	1.7560	0.4520	1.9050	0.4720	2.6690	0.5510
39	1.9140	0.4670	2.0720	0.4870		
40	2.0790	0.4820	2.2490	0.5030		
41	2.2540	0.4990	2.4340	0.5170		
42	2.4370	0.5130	2.6250	0.5270		
43	2.6250	0.5230	2.8170	0.5270		
44	2.8150	0.5250	3.0020	0.5150		
45	2.9980	0.5140				

Note. The maximum possible total raw score is 45 for grade 5, 44 for grade 8, and 38 for grade 11.

8.3.7 IRT Statistics

As described under section 8.3.5, this section is omitted for spring 2021, but the numbering and headers are retained for consistency between years.

8.4 Summary

In summary, due to the abnormalities observed for the 2021 administration, atypical procedures were used. Specifically, pre-equating procedures were used for social studies to help maintain the test scale across years. However, due to the observed abnormalities, any comparisons across years were strongly discouraged.

Given the limitations, the data analyses undertaken by Smarter Balanced, DRC, and the Michigan Department of Education are in alignment with multiple best practices of the assessment industry, particularly the following *Standards for Educational and Psychological Testing* (AERA, APA, & NCME, 2014):

- Standard 5.2—The procedures for constructing scales used for reporting scores and the rationale for these procedures should be described clearly.
- Standard 5.13—When claims of form-to-form score equivalence are based on equating procedures, detailed technical information should be provided on the method by which equating functions were established and on the accuracy of the equating functions.

Chapter 9: Test Results

This chapter of the Technical Report contains information on the results of the spring 2021 administration of M-STEP along with descriptions of the score reports, data structure, and interpretive guide. The AERA, APA, and NCME (2014) *Standards* addressed in Chapter 9 include 5.1, 6.10, and 7.0. Each standard will be presented in the pertinent section of this chapter.

9.1 Test Completion

The spring 2021 M-STEP was administered to Michigan students in four content areas: ELA, mathematics, science, and social studies. For the purposes of this technical report, "percent valid" is the percentage of students who received a valid scale score given the total number of students who took the online or paper/pencil test. These test completion rates are summarized in Tables 9-1a through 9-4g.

Test completion information is reported for all students and the following demographic subgroups:

- Gender: Female and Male
- Race/Ethnicity: American Indian or Alaska Native, Asian, Black or African American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander, Two or More Races, and White
- Economically Disadvantaged: Yes, No
- English Language Learners: Yes, No
- Students with Disabilities: Yes, No
- Students Used Standard Accommodations: Yes, No

9.2 Current Administration Data Scale Score Summaries

Summaries of the scale-score (SS) descriptive statistics for the spring 2021 administration of the ELA, mathematics, science, and social studies assessments are reported in Tables 9-5a through 9-8g, by grade, content area, and demographic subgroup.

Additionally, Tables 9-9a through 9-12b present the scale-score descriptive statistics and the performance level percentages by grade for the 2021 M-STEP ELA, mathematics, science, and social studies tests. These tables provide the scale-score descriptive statistics (i.e., Mean, SD, Min, Max values) and the percentages of students in each performance level: Not Proficient, Partially Proficient, Proficient, and Advanced.

9.3 Description of Reports

Score reports are the primary means of communicating test scores to relevant district and school administrators, teachers, parents, and students. AERA, APA, and NCME (2014) Standard 6.10 states the following:

> When test score information is released, those responsible for testing programs should provide interpretations appropriate to the audience. The interpretations should describe in simple language what the test covers, what scores represent, the precision/reliability of the scores, and how scores are intended to be used. (p. 119)

Standard 5.1 is also addressed:

> Test users should be provided with clear explanations of the characteristics, meaning, and intended interpretation of scale scores, as well as their limitations. (p. 102)

Interpretations related to the test scores are provided in the *Spring 2021 Interpretive Guide to M-STEP Reports* (M-STEP IGTR) for grades 3 through 7, the *Spring 2021 Michigan Grade 8 Testing Interpretive Guide to Reports* (Grade 8 IGTR), and in the *Spring 2021 Interpretive Guide to MME Reports* (MME IGTR) for grade 11. The interpretive guides are provided in Appendix B.1 through Appendix B.3 respectively.

In addition to providing interpretation, it is important that the information is understandable by the target audience. Standard 7.0 of the AERA, APA, & NCME (2014) *Standards* states the following:

> Information relating to tests should be clearly documented so that those who use tests can make informed decisions regarding which test to use for a specific purpose, how to administer the chosen test, and how to interpret test scores. (p. 125)

In support of Standard 7.0, the three Interpretive Guides to Reports (presented in Appendices B.1 through B.3) are accessible to parents, teachers, and laypeople alike.

M-STEP score reports comprise student-level reports and data files and aggregate reports and data files. Depending on the audience, reports and data files are available in several systems.

1. The OEAA Secure Site allows authorized school and district users to download student-level and state, district, and building level aggregate data files. It also provides access to the online Dynamic Score Reporting Site.

2. The Dynamic Score Reporting Site (DSRS) provides authorized school and district users access to interactive online student-level and aggregate reports. Reports are available by grade and content area and can be filtered by reporting group (gender, ethnicity, economically disadvantaged, English Learner, former English Learner, foster care, homeless, migrant, military connected, students with disabilities, homeschooled).

3. The Michigan Linked Educational Assessment Reporting Network (MiLearn) provides teachers, parents, and students direct access to student level data through the district's Student Information System. The reports presented are a subset of those available in the DSRS.

4. MiSchoolData is Michigan's public portal to education-related data. It contains assessment data for public consumption.

This technical report will address the data files and reports available through the OEAA Secure Site and the Dynamic Score Reporting Site.

Brief descriptions of the reports and data files are provided below. More extensive descriptions with samples are included in the M-STEP IGTR for grades 3 through 7, the Grade 8 IGTR, and in the MME IGTR for grade 11. The interpretive guides also include information on how to use the data, limitations of the data, and the online functionality associated with each report.

9.3.1 Student-Level Data Reports and Data Files

- The Student Record Labels provide a summary of student performance levels for individual students. The labels include district and school information, student demographic information, M-STEP administration cycle information, and overall student performance level for tested content areas.

  Student Record Labels are provided for inclusion in the student's Cumulative Student Record (CA60) folder. They are printed and shipped to the school in which the student tested in late summer and are available through the Secure Site if the school needs to print additional copies.

  Additional information can be found starting on page 20 of the M-STEP IGTR, page 22 of the Grade 8 IGTR, and page 22 of the MME IGTR.

- The Individual Student Report (ISR) provides information about student performance by content area. Each student will have a separate ISR for each content area assessed. The report is divided into three main sections:
  - Student demographic information
  - Overall content performance and detailed claim data for ELA and mathematics
  - Discipline and content expectation data for social studies
  - Additional information can be found starting on page 21 of the M-STEP IGTR, page 23 of the Grade 8 IGTR, and page 23 of the MME IGTR. Individual Student Reports are also available to educators, parents, and students in MI-Learn where they are referred to as the M-STEP Student Detail Report.

- Parent Reports are printed and shipped to schools for distribution to parents. The parent report provides information for parents about student performance in tested content areas. This report includes five main sections:
  - Superintendent letter
  - Overall performance level and scale score
  - Detailed claim data for ELA and mathematics and discipline data for social studies
  - Definitions for parents
  - Performance-level descriptors

  Additional information can be found starting on page 25 of the M-STEP IGTR, page 29 of the Grade 8 IGTR, and page 31 of the MME IGTR. Parent Reports are also available in the Dynamic Score Reporting Site for schools to access and print copies.

- Student Roster allows users to view student scale scores and claim performance data for ELA and mathematics or discipline data for social studies by content area and grade. The report is divided into five main sections:
  - Overall proficiency summary of the rostered students in graphic format
  - An alphabetical listing of the selected students
  - Overall content performance, which includes growth data where available and Passage-Based Writing raw score (for ELA tests) in a table format
  - Overall content performance in a graphical format
  - Claim data for ELA and mathematics or discipline data for social studies

  Additional information can be found starting on page 29 of the M-STEP IGTR, page 34 of the Grade 8 IGTR, and page 36 of the MME IGTR. The Student Roster report is also available to educators in MiLearn.

- The Student Overview provides summary information about student performance in all tested content areas in the selected grade. For each selected student, the following data are displayed for each tested content area in both graphical and table format:
  - scale score
  - standard error
  - performance level
  - claim or discipline performance

  Additional information can be found starting on page 35 of the M-STEP IGTR, page 44 of the Grade 8 IGTR, and page 46 of the MME IGTR. The Student Overview is also available to educators in MiLearn.

- The Student Growth and Proficiency Report provides information about student growth by content area. Each student in grades containing reportable growth data will have a separate Student Growth and Proficiency Report for each content area test taken. The report is divided into three main sections:
  - Student Demographic Information
  - Overall Content Performance
  - Student Growth Data Graph

- Additional information can be found starting on page 38 of the M-STEP IGTR, page 48 of the Grade 8 IGTR, and page 51 of the MME IGTR.

- The Student Data File (SDF) contains student level demographics, test scores, and performance data for each tested content area. The Downloadable SDF contains detailed individual student data in an Excel file. This data includes school information, student demographic data, test administration data, and student performance data. The SDF is provided for schools to use as a data resource for school- or district-level data reviews. Schools or districts can use the SDF to manipulate and evaluate data in ways that support school improvement goals or for other data-based decision-making purposes.

  Additional information can be found starting on page 53 of the M-STEP IGTR, page 61 of the Grade 8 IGTR, and page 63 of the MME IGTR. The SDF can be downloaded from the OEAA Secure Site. The file layout is in Appendix B.4.

9.3.2 Aggregate Data Reports and Data Files

- The Target Analysis Report is available at the school, district, and state levels for M-STEP ELA and mathematics. The report is intended to provide an overview of relative strengths and weaknesses in ELA and mathematics by assessment target as compared to student performance on the test as a whole.

- Additional information can be found starting on page 41 of the M-STEP IGTR.

- The Expectation Analysis Report provides the percentage of points earned by grade, the content area expectations in each social studies discipline, and the number of students scoring in each of the four scoring categories. The report provides an overview of performance by content expectation. The report displays the number of students assessed in each expectation (not all students were assessed on every expectation), the average percentage of points earned, and the number of students scoring in one of four bands or scoring categories: 0%–25%, 26%–50%, 51%–75%, and 76%–100% of all possible points.

  Additional information can be found starting on page 43 of the M-STEP IGTR, page 52 of the Grade 8 IGTR, and page 55 of the MME IGTR. The Expectation Analysis Report is also available in MiLearn for educators.

- The Demographic Subscore Report provides a comparison of students by grade and content in English language arts (ELA) and mathematics, aggregated across selected demographic groups, showing percentages of students at each claim performance indicator (below standard, at/near standard, and above standard). The demographic subscore report is available at the school, district, and state levels. The report is divided into four main sections:
  - Overall Claims Summary Data Table
  - Overall Claim Performance Indicator Percentages Graphic
  - Demographic Subgroups Claim Performance Indicator Data Table
  - Demographic Subgroup Claim Performance Indicator Percentages Graphic

- Additional information can be found starting on page 45 of the M-STEP IGTR.

- The Demographic Report provides a comparison of students by grade and content area, aggregated across selected demographic groups, showing the percentages proficient at each level (i.e., advanced, proficient, partially proficient, and not proficient). The demographic report is available at the school, district, and state levels. Users can select different populations of students to be displayed. The following student populations may be selected:
  - All Students—this is the default
  - All Except Students with Disabilities—students who are not marked Special Education in the Michigan Student Data System (MSDS) at the time of testing
  - Students with Disabilities—students who are marked Special Education in MSDS at the time of testing

  Additional information can be found starting on page 48 of the M-STEP IGTR, page 54 of the Grade 8 IGTR, and page 57 of the MME IGTR.

- The Comprehensive Report provides a comparison of students by grade and content area, aggregated across schools and districts, showing the percentages proficient at each level (i.e., advanced, proficient, partially proficient, and not proficient). The Comprehensive Report is available at the district level. After the user selects a grade to view, all tested content areas for that grade are displayed sequentially in alphabetical order.

  Additional information can be found starting on page 51 of the M-STEP IGTR, page 58 of the Grade 8 IGTR, and page 61 of the MME IGTR.

- The Aggregate Data File contains student performance data aggregated for all students and by select demographic subgroups across buildings, districts, and the state. This data includes school information, student population, demographic group, and student performance data.

  The Aggregate Data File is provided for schools and districts to use as a data resource for school- or district-level data reviews. Schools or districts can use the Aggregate Data Files to evaluate data in ways that support school improvement goals or other data-based decision-making purposes.

  Additional information can be found starting on page 54 of the M-STEP IGTR, page 62 of the Grade 8 IGTR, and page 64 of the MME IGTR. The Aggregated Data Files can be downloaded from the OEAA Secure Site. The file layout is in Appendix B.4.

9.4 Interpretive Guides

For the spring 2021 M-STEP, MDE produced individual and aggregate reports for students, schools, districts, and the state. The information provided in these reports can be interpreted and used in a variety of ways. In addition to providing interpretation, it is important that the information is understandable by the target audience. Standard 7.0 of the AERA, APA, and NCME (2014) *Standards* states the following:

> Information relating to tests should be clearly documented so that those who use tests can make informed decisions regarding which test to use for a specific purpose, how to administer the chosen test, and how to interpret test scores. (p. 125)

To aid in interpretation, MDE prepared the *Spring 2021 Interpretive Guide to M-STEP Reports* for grades 3 through 7, the *Spring 2021 Michigan Grade 8 Testing Interpretive Guide to Reports*, and the *Spring 2021 Interpretive Guide to MME Reports* for grade 11.

The *Spring 2021 Interpretive Guide to M-STEP Reports* can be found in Appendix B.1 of this technical report. The *Spring 2021 Michigan Grade 8 Testing Interpretive Guide to Reports* can be found in Appendix B.2. The *Spring 2021 Interpretive Guide to MME Reports* can be found in Appendix B.3.

9.5 Summary

In summary, the overall purpose of reporting test results is to communicate information on student performance to stakeholders. These results are presented in the context of score reports that aid the user in understanding the meaning of the test scores. The reports and ancillary information developed by MDE are in alignment with multiple best practices of the testing industry, particularly the following *Standards for Educational and Psychological Testing* (AERA, APA, & NCME, 2014):

- Standard 5.1—Test users should be provided with clear explanations of the characteristics, meaning, and intended interpretation of scale scores, as well as their limitations.
- Standard 6.10—When test score information is released, those responsible for testing programs should provide interpretations appropriate to the audience. The interpretations should describe in simple language what the test covers, what scores represent, the precision/reliability of the scores, and how scores are intended to be used.
- Standard 7.0—Information relating to tests should be clearly documented so that those who use tests can make informed decisions regarding which test to use for a specific purpose, how to administer the chosen test, and how to interpret test scores.

Table 9-1a. M-STEP Test Completion Rates by Grade: English Language Arts—All Students

		Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
All Students	Total Tested	72,619	73,050	72,475	70,665	70,800
All Students	Number Valid	72,529	72,941	72,388	70,566	70,716
All Students	Percent Valid	99.88%	99.85%	99.88%	99.86%	99.88%

Table 9-1b. M-STEP Test Completion Rates by Grade: English Language Arts—Gender

		Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
Female	Total Tested	35,588	35,494	35,584	34,628	34,469
Female	Number Valid	35,546	35,441	35,542	34,578	34,432
Female	Percent Valid	99.88%	99.85%	99.88%	99.86%	99.89%
Male	Total Tested	37,031	37,556	36,891	36,037	36,331
Male	Number Valid	36,983	37,500	36,846	35,988	36,284
Male	Percent Valid	99.87%	99.85%	99.88%	99.86%	99.87%

Table 9-1c. M-STEP Test Completion Rates by Grade: English Language Arts—Race/Ethnicity

		Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
American Indian or Alaska Native	Total Tested	432	456	465	453	497	736
American Indian or Alaska Native	Number Valid	432	454	464	451	497	66,182
American Indian or Alaska Native	Percent Valid	100%	99.56%	99.78%	99.56%	100%	100.00%
Asian	Total Tested	2,478	2,486	2,475	2,316	2,303	3,798
Asian	Number Valid	2,475	2,483	2,474	2,314	2,300	3,798
Asian	Percent Valid	99.88%	99.88%	99.96%	99.91%	99.87%	100.00%
Black or African American	Total Tested	8,314	8,456	8,547	8,087	7,825	
Black or African American	Number Valid	8,305	8,439	8,535	8,072	7,813	18,313
Black or African American	Percent Valid	99.89%	99.80%	99.86%	99.81%	99.85%	99.85%
Hispanic or Latino	Total Tested	5,458	5,635	5,678	5,399	5,423	99.88%
Hispanic or Latino	Number Valid	5,447	5,625	5,669	5,384	5,411	8,338
Hispanic or Latino	Percent Valid	99.80%	99.82%	99.84%	99.72%	99.78%	99.93%
Native Hawaiian or Other Pacific Islander	Total Tested	61	54	73	62	61	3,722
Native Hawaiian or Other Pacific Islander	Number Valid	60	53	73	61	61	3,617
Native Hawaiian or Other Pacific Islander	Percent Valid	98.36%	98.15%	100%	98.39%	100%	100.00%
Two or More Races	Total Tested	3,693	3,521	3,468	3,184	3,045	3,918
Two or More Races	Number Valid	3,691	3,519	3,467	3,179	3,040	3,914
Two or More Races	Percent Valid	99.95%	99.94%	99.97%	99.84%	99.84%	99.90%
White	Total Tested	52,183	52,442	51,769	51,164	51,646	75,216
White	Number Valid	52,119	52,368	51,706	51,105	51,594	75,180
White	Percent Valid	99.88%	99.86%	99.88%	99.88%	99.90%	99.95%

Table 9-1d. M-STEP Test Completion Rates by Grade: English Language Arts—Economically Disadvantaged

		Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
Yes	Total Tested	37,138	36,791	36,299	34,165	33,011
Yes	Number Valid	37,127	36,767	36,273	34,136	32,989
Yes	Percent Valid	99.97%	99.93%	99.93%	99.92%	99.93%
No	Total Tested	35,481	36,259	36,176	36,500	37,789
No	Number Valid	35,402	36,174	36,115	36,430	37,727
No	Percent Valid	99.78%	99.77%	99.83%	99.81%	99.84%

Table 9-1e M-STEP Test Completion Rates by Grade: English Language Arts—English Language Learners

		Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
Yes	Total Tested	6,105	5,730	4,330	3,125	3,555
Yes	Number Valid	6,103	5,729	4,328	3,122	3,553
Yes	Percent Valid	99.97%	99.98%	99.95%	99.90%	99.94%
No	Total Tested	66,514	67,320	68,145	67,540	67,245
No	Number Valid	66,426	67,212	68,060	67,444	67,163
No	Percent Valid	99.87%	99.84%	99.88%	99.86%	99.88%

Table 9-1f. M-STEP Test Completion Rates by Grade: English Language Arts—Students with Disabilities

		Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
Yes	Total Tested	9,003	9,139	8,741	8,020	7,881
Yes	Number Valid	8,998	9,129	8,730	8,015	7,874
Yes	Percent Valid	99.94%	99.89%	99.87%	99.94%	99.91%
No	Total Tested	63,616	63,911	63,734	62,645	62,919
No	Number Valid	63,531	63,812	63,658	62,551	62,842
No	Percent Valid	99.87%	99.85%	99.88%	99.85%	99.88%

Table 9-1g. M-STEP Test Completion Rates by Grade: English Language Arts—Students Used Standard Accommodations

		Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
Yes	Total Tested	197	206	271	3,207	3,501
Yes	Number Valid	197	206	270	3,203	3,500
Yes	Percent Valid	100%	100%	99.63%	99.88%	99.97%
No	Total Tested	72,422	72,844	72,204	67,458	67,299
No	Number Valid	72,332	72,735	72,118	67,363	67,216
No	Percent Valid	99.88%	99.85%	99.88%	99.86%	99.88%

Table 9-2a. M-STEP Test Completion Rates by Grade: Mathematics—All Students

		Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
All Students	Total Tested	72,334	72,740	72,015	70,357	70,608
All Students	Number Valid	72,232	72,621	71,921	70,255	70,506
All Students	Percent Valid	99.86%	99.84%	99.87%	99.86%	99.86%

Table 9-2b. M-STEP Test Completion Rates by Grade: Mathematics—Gender

		Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
Female	Total Tested	35,453	35,358	35,353	34,453	34,393
Female	Number Valid	35,395	35,303	35,305	34,402	34,347
Female	Percent Valid	99.84%	99.84%	99.86%	99.85%	99.87%
Male	Total Tested	36,881	37,382	36,662	35,904	36,215
Male	Number Valid	36,837	37,318	36,616	35,853	36,159
Male	Percent Valid	99.88%	99.83%	99.87%	99.86%	99.85%

Table 9-2c. M-STEP Test Completion Rates by Grade: Mathematics—Race/Ethnicity

		Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
American Indian or Alaska Native	Total Tested	429	453	460	453	492	429
American Indian or Alaska Native	Number Valid	429	450	459	452	492	429
American Indian or Alaska Native	Percent Valid	100%	99.34%	99.78%	99.78%	100%	100%
Asian	Total Tested	2,506	2,504	2,485	2,322	2,314	2,506
Asian	Number Valid	2,500	2,500	2,483	2,319	2,309	2,500
Asian	Percent Valid	99.76%	99.84%	99.92%	99.87%	99.78%	99.76%
Black or African American	Total Tested	8,164	8,307	8,457	8,048	7,785	8,164
Black or African American	Number Valid	8,150	8,293	8,438	8,024	7,770	8,150
Black or African American	Percent Valid	99.83%	99.83%	99.78%	99.70%	99.81%	99.83%
Hispanic or Latino	Total Tested	5,445	5,617	5,603	5,367	5,403	5,445
Hispanic or Latino	Number Valid	5,434	5,602	5,591	5,353	5,386	5,434
Hispanic or Latino	Percent Valid	99.80%	99.73%	99.79%	99.74%	99.69%	99.80%
Native Hawaiian or Other Pacific Islander	Total Tested	59	54	71	62	61	59
Native Hawaiian or Other Pacific Islander	Number Valid	59	53	71	61	61	59
Native Hawaiian or Other Pacific Islander	Percent Valid	100%	98.15%	100%	98.39%	100%	100%
Two or More Races	Total Tested	3,662	3,498	3,426	3,148	3,031	3,662
Two or More Races	Number Valid	3,661	3,494	3,424	3,144	3,026	3,661
Two or More Races	Percent Valid	99.97%	99.89%	99.94%	99.87%	99.84%	99.97%
White	Total Tested	52,069	52,307	51,513	50,957	51,522	52,069
White	Number Valid	51,999	52,229	51,455	50,902	51,462	51,999
White	Percent Valid	99.87%	99.85%	99.89%	99.89%	99.88%	99.87%

Table 9-2d. M-STEP Test Completion Rates by Grade: Mathematics—Economically Disadvantaged

		Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
Yes	Total Tested	36,868	36,505	35,909	33,947	32,844
Yes	Number Valid	36,847	36,476	35,880	33,925	32,809
Yes	Percent Valid	99.94%	99.92%	99.92%	99.94%	99.89%
No	Total Tested	35,466	36,235	36,106	36,410	37,764
No	Number Valid	35,385	36,145	36,041	36,330	37,697
No	Percent Valid	99.77%	99.75%	99.82%	99.78%	99.82%

Table 9-2e. M-STEP Test Completion Rates by Grade: Mathematics—English Language Learners

		Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
Yes	Total Tested	6,152	5,749	4,330	3,124	3,541	6,152
Yes	Number Valid	6,149	5,745	4,327	3,119	3,539	6,149
Yes	Percent Valid	99.95%	99.93%	99.93%	99.84%	99.94%	99.95%
No	Total Tested	66,182	66,991	67,685	67,233	67,067	66,182
No	Number Valid	66,083	66,876	67,594	67,136	66,967	66,083
No	Percent Valid	99.85%	99.83%	99.87%	99.86%	99.85%	99.85%

Table 9- 2f. M-STEP Test Completion Rates by Grade: Mathematics—Students with Disabilities

		Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
Yes	Total Tested	8,941	9,063	8,679	8,000	7,839
Yes	Number Valid	8,937	9,053	8,671	7,989	7,826
Yes	Percent Valid	99.96%	99.89%	99.91%	99.86%	99.83%
No	Total Tested	63,393	63,677	63,336	62,357	62,769
No	Number Valid	63,295	63,568	63,250	62,266	62,680
No	Percent Valid	99.85%	99.83%	99.86%	99.85%	99.86%

Table 9-2g. M-STEP Test Completion Rates by Grade: Mathematics—Students Used Standard Accommodations

		Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
Yes	Total Tested	77	1,467	1,938	2,034	2,051
Yes	Number Valid	77	1,466	1,935	2,028	2,049
Yes	Percent Valid	100%	99.93%	99.85%	99.71%	99.90%
No	Total Tested	72,257	71,273	70,077	68,323	68,557
No	Number Valid	72,155	71,155	69,986	68,227	68,457
No	Percent Valid	99.86%	99.83%	99.87%	99.86%	99.85%

Table 9-3a. M-STEP Test Completion Rates by Grade: Science—All Students

		Grade 5	Grade 8	Grade 11
All Students	Total Tested	71,335	73,401	57,065
All Students	Number Valid	70,512	72,128	56,964
All Students	Percent Valid	98.85%	98.27%	99.82%

Table 9-3b. M-STEP Test Completion Rates by Grade: Science—Gender

		Grade 5	Grade 8	Grade 11
Female	Total Tested	34,960	35,606	28,122
Female	Number Valid	34,579	35,004	28,076
Female	Percent Valid	98.91%	98.31%	99.84%
Male	Total Tested	36,375	37,795	28,943
Male	Number Valid	35,933	37,124	28,888
Male	Percent Valid	98.78%	98.22%	99.81%

Table 9-3c. M-STEP Test Completion Rates by Grade: Science—Race/Ethnicity

		Grade 5	Grade 8	Grade 11
American Indian or Alaska Native	Total Tested	457	545	421
American Indian or Alaska Native	Number Valid	444	516	420
American Indian or Alaska Native	Percent Valid	97.16%	94.68%	99.76%
Asian	Total Tested	2,466	2,513	1,936
Asian	Number Valid	2,451	2,483	1,935
Asian	Percent Valid	99.39%	98.81%	99.95%
Black or African American	Total Tested	8,202	8,185	4,533
Black or African American	Number Valid	7,974	7,919	4,518
Black or African American	Percent Valid	97.22%	96.75%	99.67%
Hispanic or Latino	Total Tested	5,549	5,527	3,825
Hispanic or Latino	Number Valid	5,474	5,430	3,818
Hispanic or Latino	Percent Valid	98.65%	98.24%	99.82%
Native Hawaiian or Other Pacific Islander	Total Tested	71	69	45
Native Hawaiian or Other Pacific Islander	Number Valid	71	68	45
Native Hawaiian or Other Pacific Islander	Percent Valid	100%	98.55%	100%
Two or More Races	Total Tested	3,408	2,928	1,805
Two or More Races	Number Valid	3,366	2,872	1,800
Two or More Races	Percent Valid	98.77%	98.09%	99.72%
White	Total Tested	51,182	53,634	44,500
White	Number Valid	50,732	52,840	44,428
White	Percent Valid	99.12%	98.52%	99.84%

Table 9-3d. M-STEP Test Completion Rates by Grade: Science—Economically Disadvantaged

		Grade 5	Grade 8	Grade 11
Yes	Total Tested	35,501	32,932	20,762
Yes	Number Valid	34,959	32,186	20,718
Yes	Percent Valid	98.47%	97.73%	99.79%
No	Total Tested	35,834	40,469	36,303
No	Number Valid	35,553	39,942	36,246
No	Percent Valid	99.22%	98.70%	99.84%

Table 9-3e. M-STEP Test Completion Rates by Grade: Science—English Learners

		Grade 5	Grade 8	Grade 11
Yes	Total Tested	4,284	3,380	1,896
Yes	Number Valid	4,236	3,324	1,892
Yes	Percent Valid	98.88%	98.34%	99.79%
No	Total Tested	67,051	70,021	55,169
No	Number Valid	66,276	68,804	55,072
No	Percent Valid	98.84%	98.26%	99.82%

Table 9-3f. M-STEP Test Completion Rates by Grade: Science—Students with Disabilities

		Grade 5	Grade 8	Grade 11
Yes	Total Tested	8,603	7,715	4,708
Yes	Number Valid	8,452	7,522	4,692
Yes	Percent Valid	98.24%	97.50%	99.66%
No	Total Tested	62,732	65,686	52,357
No	Number Valid	62,060	64,606	52,272
No	Percent Valid	98.93%	98.36%	99.84%

Table 9-3g. M-STEP Test Completion Rates by Grade: Science—Students Used Standard Accommodations

		Grade 5	Grade 8	Grade 11
Yes	Total Tested	165	844	281
Yes	Number Valid	159	827	280
Yes	Percent Valid	96.36%	97.99%	99.64%
No	Total Tested	71,170	72,557	56,784
No	Number Valid	70,353	71,301	56,684
No	Percent Valid	98.85%	98.27%	99.82%

Table 9-4a. M-STEP Test Completion Rates by Grade: Social Studies—All Students

		Grade 5	Grade 8	Grade 11
All Students	Total Tested	71,158	72,894	56,712
All Students	Number Valid	71,073	72,802	56,631
All Students	Percent Valid	99.88%	99.87%	99.86%

Table 9-4b. M-STEP Test Completion Rates by Grade: Social Studies—Gender

		Grade 5	Grade 8	Grade 11
Female	Total Tested	34,902	35,388	27,952
Female	Number Valid	34,858	35,343	27,915
Female	Percent Valid	99.87%	99.87%	99.87%
Male	Total Tested	36,256	37,506	28,760
Male	Number Valid	36,215	37,459	28,716
Male	Percent Valid	99.89%	99.87%	99.85%

Table 9-4c. M-STEP Test Completion Rates by Grade: Social Studies—Race/Ethnicity

		Grade 5	Grade 8	Grade 11
American Indian or Alaska Native	Total Tested	459	520	415
American Indian or Alaska Native	Number Valid	458	518	414
American Indian or Alaska Native	Percent Valid	99.78%	99.62%	99.76%
Asian	Total Tested	2,455	2,501	1,915
Asian	Number Valid	2,453	2,496	1,915
Asian	Percent Valid	99.92%	99.80%	100%
Black or African American	Total Tested	8,185	8,061	4,470
Black or African American	Number Valid	8,169	8,041	4,461
Black or African American	Percent Valid	99.80%	99.75%	99.80%
Hispanic or Latino	Total Tested	5,519	5,464	3,796
Hispanic or Latino	Number Valid	5,508	5,458	3,788
Hispanic or Latino	Percent Valid	99.80%	99.89%	99.79%
Native Hawaiian or Other Pacific Islander	Total Tested	70	68	44
Native Hawaiian or Other Pacific Islander	Number Valid	70	68	44
Native Hawaiian or Other Pacific Islander	Percent Valid	100%	100%	100%
Two or More Races	Total Tested	3,400	2,911	1,780
Two or More Races	Number Valid	3,396	2,909	1,778
Two or More Races	Percent Valid	99.88%	99.93%	99.89%
White	Total Tested	51,070	53,369	44,292
White	Number Valid	51,019	53,312	44,231
White	Percent Valid	99.90%	99.89%	99.86%

Table 9-4d. M-STEP Test Completion Rates by Grade: Social Studies—Economically Disadvantaged

		Grade 5	Grade 8	Grade 11
Yes	Total Tested	35,373	32,639	20,594
Yes	Number Valid	35,348	32,616	20,556
Yes	Percent Valid	99.93%	99.93%	99.82%
No	Total Tested	35,785	40,255	36,118
No	Number Valid	35,725	40,186	36,075
No	Percent Valid	99.83%	99.83%	99.88%

Table 9-4e. M-STEP Test Completion Rates by Grade: Social Studies—English Language Learners

		Grade 5	Grade 8	Grade 11
Yes	Total Tested	4,264	3,329	1,875
Yes	Number Valid	4,260	3,327	1,872
Yes	Percent Valid	99.91%	99.94%	99.84%
No	Total Tested	66,894	69,565	54,837
No	Number Valid	66,813	69,475	54,759
No	Percent Valid	99.88%	99.87%	99.86%

Table 9-4f. M-STEP Test Completion Rates by Grade: Social Studies—Students with Disabilities

		Grade 5	Grade 8	Grade 11
Yes	Total Tested	8,564	7,649	4,683
Yes	Number Valid	8,559	7,639	4,670
Yes	Percent Valid	99.94%	99.87%	99.72%
No	Total Tested	62,594	65,245	52,029
No	Number Valid	62,514	65,163	51,961
No	Percent Valid	99.87%	99.87%	99.87%

Table 9-4g. M-STEP Test Completion Rates by Grade: Social Studies—Students Used Standard Accommodations

		Grade 5	Grade 8	Grade 11
Yes	Total Tested	159	697	226
Yes	Number Valid	155	697	225
Yes	Percent Valid	97.48%	100%	99.56%
No	Total Tested	70,999	72,197	56,486
No	Number Valid	70,918	72,105	56,406
No	Percent Valid	99.89%	99.87%	99.86%

Table 9-5a. Scale-Score Descriptive Statistics by Grade: English Language Arts—All Students

		Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
All Students	N	72,529	72,941	72,388	70,566	70,716
All Students	Mean SS	1293.7	1394.5	1494.4	1591.0	1692.3
All Students	SD SS	26.2	25.9	27.2	25.8	25.9

Table 9-5b. Scale-Score Descriptive Statistics by Grade: English Language Arts—Gender

		Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
Female	35,546	35,441	35,542	34,578	34,432	35,546
Female	1295.4	1395.9	1496.7	1593.5	1695.2	1295.4
Female	26.2	25.4	26.9	25.5	25.2	26.2
Male	36,983	37,500	36,846	35,988	36,284	36,983
Male	1292	1393.2	1492.2	1588.7	1689.7	1292.0
Male	26.1	26.2	27.4	25.8	26.2	26.1

Table 9-5c. Scale-Score Descriptive Statistics by Grade: English Language Arts—Race/Ethnicity

		Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
American Indian or Alaska Native	N	432	454	464	451	497
American Indian or Alaska Native	Mean SS	1287.4	1386.8	1485.0	1584.3	1682.2
American Indian or Alaska Native	SD SS	24.5	23.3	24.1	23.7	24.7
Asian	N	2,475	2,483	2,474	2,314	2,300
Asian	Mean SS	1303.5	1406.6	1509.9	1606.5	1707.3
Asian	SD SS	26.0	26.1	27.4	25.1	26.2
Black or African American	N	8,305	8,439	8,535	8,072	7,813
Black or African American	Mean SS	1274.9	1376.6	1476.6	1575.7	1677.8
Black or African American	SD SS	22.5	22.8	23.4	22.7	23.7
Hispanic or Latino	N	5,447	5,625	5,669	5,384	5,411
Hispanic or Latino	Mean SS	1286.4	1388.0	1487.8	1584.4	1685.6
Hispanic or Latino	SD SS	24.6	24.1	25.7	23.9	24.4
Native Hawaiian or Other Pacific Islander	N	60	53	73	61	61
Native Hawaiian or Other Pacific Islander	Mean SS	1292.1	1395.2	1500.7	1584.2	1695.1
Native Hawaiian or Other Pacific Islander	SD SS	28.4	26.5	27.7	26.7	24.5
Two or More Races	N	3,691	3,519	3,467	3,179	3,040
Two or More Races	Mean SS	1290.7	1391.5	1492.2	1587.9	1689.7
Two or More Races	SD SS	25.9	26.0	27.4	26.0	26.2
White	N	52,119	52,368	51,706	51,105	51,594
White	Mean SS	1297.2	1397.7	1497.6	1593.7	1694.8
White	SD SS	25.4	25.1	26.5	25.3	25.3

Table 9-5d. Scale-Score Descriptive Statistics by Grade: English Language Arts—Economically Disadvantaged

		Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
Yes	N	37,127	36,767	36,273	34,136	32,989
Yes	Mean SS	1284.1	1385.0	1484.5	1581.7	1682.8
Yes	SD SS	24.2	24.1	25.3	23.9	24.3
No	N	35,402	36,174	36,115	36,430	37,727
No	Mean SS	1303.7	1404.1	1504.3	1599.8	1700.6
No	SD SS	24.4	24.0	25.5	24.4	24.3

Table 9-5e. Scale-Score Descriptive Statistics by Grade: English Language Arts—English Language Learners

		Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
Yes	N	6,103	5,729	4,328	3,122	3,553
Yes	Mean SS	1284.1	1382.1	1475.2	1569.5	1671.8
Yes	SD SS	23.9	22.2	21.0	18.1	19.8
No	N	66,426	67,212	68,060	67,444	67,163
No	Mean SS	1294.5	1395.5	1495.6	1592.0	1693.4
No	SD SS	26.2	25.9	27.1	25.6	25.7

Table 9-5f. Scale-Score Descriptive Statistics by Grade: English Language Arts—Students with Disabilities

		Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
Yes	N	8,998	9,129	8,730	8,015	7,874
Yes	Mean SS	1277.9	1376.3	1473.0	1570.0	1669.8
Yes	SD SS	22.6	22.4	22.3	20.7	21.4
No	N	63,531	63,812	63,658	62,551	62,842
No	Mean SS	1295.9	1397.1	1497.3	1593.7	1695.2
No	SD SS	25.9	25.3	26.5	25.1	25.0

Table 9-5g. Scale-Score Descriptive Statistics by Grade: English Language Arts—Students Used Standard Accommodations

		Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
Yes	N	197	206	270	3,203	3,500
Yes	Mean SS	1279.9	1374.8	1474.0	1567.6	1667.9
Yes	SD SS	23.7	21.0	23.5	18.1	19.5
No	N	72,332	72,735	72,118	67,363	67,216
No	Mean SS	1293.7	1394.5	1494.5	1592.1	1693.6
No	SD SS	26.2	25.9	27.2	25.5	25.5

Table 9-6a. Scale-Score Descriptive Statistics by Grade: Mathematics—All Students

		Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
All Students	N	72,232	72,621	71,921	70,255	70,506
All Students	Mean SS	1292.8	1389.8	1483.5	1583.9	1685.7
All Students	SD SS	28.3	26.0	26.5	25.6	25.9

Table 9-6b. Scale-Score Descriptive Statistics by Grade: Mathematics—Gender

		Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
Female	N	35,395	35,303	35,305	34,402	34,347
Female	Mean SS	1290.8	1387.5	1481.6	1582.8	1684.5
Female	SD SS	27.7	24.9	25.1	24.7	24.8
Male	N	36,837	37,318	36,616	35,853	36,159
Female	Mean SS	1294.8	1391.9	1485.5	1584.9	1686.8
Female	SD SS	28.8	26.8	27.6	26.3	26.8

Table 9-6c. Scale-Score Descriptive Statistics by Grade: Mathematics—Race/Ethnicity

		Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
American Indian or Alaska Native	N	429	450	459	452	492
American Indian or Alaska Native	Mean SS	1286.4	1382.5	1475.3	1577.8	1678.1
American Indian or Alaska Native	SD SS	26.4	22.7	24.2	23.8	23.9
Asian	N	2,500	2,500	2,483	2,319	2,309
Asian	Mean SS	1310.2	1406.8	1503.0	1603.9	1706.1
Asian	SD SS	27.8	26.5	27.6	26.1	28.0
Black or African American	N	8,150	8,293	8,438	8,024	7,770
Black or African American	Mean SS	1268.8	1368.1	1462.2	1564.0	1666.9
Black or African American	SD SS	25.6	23.0	21.6	23.2	22.7
Hispanic or Latino	N	5,434	5,602	5,591	5,353	5,386
Hispanic or Latino	Mean SS	1283.9	1382.0	1475.3	1576.1	1678.1
Hispanic or Latino	SD SS	26.6	24.4	24.4	23.5	24.3
Native Hawaiian or Other Pacific Islander	N	59	53	71	61	61
Native Hawaiian or Other Pacific Islander	Mean SS	1289.5	1385.2	1487.5	1576.4	1685.1
Native Hawaiian or Other Pacific Islander	SD SS	30.3	27.7	26.9	25.0	23.3
Two or More Races	N	3,661	3,494	3,424	3,144	3,026
Two or More Races	Mean SS	1288.6	1385.4	1479.9	1579.4	1681.5
Two or More Races	SD SS	28.2	25.9	26.3	26.1	26.3
White	N	51,999	52,229	51,455	50,902	51,462
White	Mean SS	1297.0	1393.6	1487.3	1587.3	1688.7
White	SD SS	26.6	24.4	25.2	24.1	24.7

Table 9-6d. Scale-Score Descriptive Statistics by Grade: Mathematics—Economically Disadvantaged

		Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
Yes	N	36,847	36,476	35,880	33,925	32,809
Yes	Mean SS	1281.5	1379.4	1473.1	1573.6	1675.1
Yes	SD SS	26.7	24.2	24.3	24.2	23.9
No	N	35,385	36,145	36,041	36,330	37,697
No	Mean SS	1304.6	1400.2	1494.0	1593.6	1694.9
No	SD SS	25.0	23.4	24.3	22.9	24.0

Table 9-6e. Scale-Score Descriptive Statistics by Grade: Mathematics—English Language Learners

		Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
Yes	N	6,149	5,745	4,327	3,119	3,539
Yes	Mean SS	1285.4	1379.1	1467.3	1564.2	1667.1
Yes	SD SS	27.5	24.0	22.7	22.4	22.3
No	N	66,083	66,876	67,594	67,136	66,967
No	Mean SS	1293.5	1390.7	1484.6	1584.8	1686.7
No	SD SS	28.3	25.9	26.3	25.4	25.7

Table 9-6f. Scale-Score Descriptive Statistics by Grade: Mathematics—Students with Disabilities

		Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
Yes	N	8,937	9,053	8,671	7,989	7,826
Yes	Mean SS	1273.4	1370.3	1461.7	1559.3	1660.8
Yes	SD SS	29.0	25.3	23.9	23.9	22.4
No	N	63,295	63,568	63,250	62,266	62,680
No	Mean SS	1295.6	1392.5	1486.5	1587.1	1688.8
No	SD SS	27.1	24.9	25.4	24.0	24.6

Table 9-6g. Scale-Score Descriptive Statistics by Grade: Mathematics—Students Used Standard Accommodations

		Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
Yes	N	77	1,466	1,935	2,028	2,049
Yes	Mean SS	1259.0	1359.4	1452.5	1550.7	1654.2
Yes	SD SS	28.0	19.5	18.1	18.6	17.9
No	N	72,155	71,155	69,986	68,227	68,457
No	Mean SS	1292.9	1390.4	1484.4	1584.9	1686.6
No	SD SS	28.3	25.7	26.1	25.1	25.5

Table 9-7a. Scale-Score Descriptive Statistics by Grade: Science—All Students

		Grade 5	Grade 8	Grade 11
All Students	N	70,512	72,128	56,964
All Students	Mean SS	1484.2	1780.1	2074.0
All Students	SD SS	25.0	25.0	25.0

Table 9-7b. Scale-Score Descriptive Statistics by Grade: Science—Gender

		Grade 5	Grade 8	Grade 11
Female	N	34,579	35,004	28,076
Female	Mean SS	1484.0	1780.1	2073.3
Female	SD SS	24.2	24.0	23.3
Male	N	35,933	37,124	28,888
Male	Mean SS	1484.4	1780.1	2074.7
Male	SD SS	25.7	25.9	26.5

Table 9-7c. Scale-Score Descriptive Statistics by Grade: Science—Race/Ethnicity

		Grade 5	Grade 8	Grade 11
American Indian or Alaska Native	N	444	516	420
American Indian or Alaska Native	Mean SS	1476.5	1774.5	2067.2
American Indian or Alaska Native	SD SS	23.0	23.2	22.6
Asian	N	2,451	2,483	1,935
Asian	Mean SS	1495.4	1794.2	2083.6
Asian	SD SS	26.0	25.8	27.0
Black or African American	N	7,974	7,919	4,518
Black or African American	Mean SS	1465.6	1762.9	2058.1
Black or African American	SD SS	20.8	21.2	20.6
Hispanic or Latino	N	5,474	5,430	3,818
Hispanic or Latino	Mean SS	1476.9	1773.2	2066.2
Hispanic or Latino	SD SS	22.8	22.9	22.8
Native Hawaiian or Other Pacific Islander	N	71	68	45
Native Hawaiian or Other Pacific Islander	Mean SS	1484.9	1776.8	2077.3
Native Hawaiian or Other Pacific Islander	SD SS	23.7	27.3	23.6
Two or More Races	N	3,366	2,872	1,800
Two or More Races	Mean SS	1482.1	1777.4	2072.4
Two or More Races	SD SS	24.9	25.4	24.8
White	N	50,732	52,840	44,428
White	Mean SS	1487.6	1782.9	2076
White	SD SS	24.2	24.3	24.7

Table 9-7d. Scale-Score Descriptive Statistics by Grade: Science—Economically Disadvantaged

		Grade 5	Grade 8	Grade 11
Yes	N	34,959	32,186	20,718
Yes	Mean SS	1475.4	1771.1	2065.6
Yes	SD SS	23.1	23.3	23.0
No	N	35,553	39,942	36,246
No	Mean SS	1492.9	1787.3	2078.8
No	SD SS	23.6	24.0	24.9

Table 9-7e. Scale-Score Descriptive Statistics by Grade: Science—English Language Learners

		Grade 5	Grade 8	Grade 11
Yes	N	4,236	3,324	1,892
Yes	Mean SS	1465.4	1758.7	2049.1
Yes	SD SS	19.3	18.0	16.0
No	N	66,276	68,804	55,072
No	Mean SS	1485.4	1781.1	2074.8
No	SD SS	24.8	24.8	24.8

Table 9-7f. Scale-Score Descriptive Statistics by Grade: Science—Students with Disabilities

		Grade 5	Grade 8	Grade 11
Yes	N	8,452	7,522	4,692
Yes	Mean SS	1466.2	1758.9	2053.7
Yes	SD SS	22.1	20.7	19.8
No	N	62,060	64,606	52,272
No	Mean SS	1486.7	1782.6	2075.8
No	SD SS	24.3	24.3	24.6

Table 9-7g. Scale-Score Descriptive Statistics by Grade: Science—Students Used Standard Accommodations

		Grade 5	Grade 8	Grade 11
Yes	N	159	827	280
Yes	Mean SS	1456.7	1754.5	2051.7
Yes	SD SS	18.4	16.9	18.4
No	N	70,353	71,301	56,684
No	Mean SS	1484.3	1780.4	2074.1
No	SD SS	24.9	24.9	25.0

Table 9-8a. Scale-Score Descriptive Statistics by Grade: Social Studies—All Students

		Grade 5	Grade 8	Grade 11
All Students	N	71,073	72,802	56,631
All Students	Mean SS	1473.5	1784.0	2096.6
All Students	SD SS	24.2	25.7	24.7

Table 9-8b. Scale-Score Descriptive Statistics by Grade: Social Studies—Gender

		Grade 5	Grade 8	Grade 11
Female	N	34,858	35,343	27,915
Female	Mean SS	1472.3	1782.2	2094.9
Female	SD SS	23.0	24.2	23.1
Male	N	36,215	37,459	28,716
Male	Mean SS	1474.5	1785.7	2098.1
Male	SD SS	25.3	26.9	26.1

Table 9-8c. Scale-Score Descriptive Statistics by Grade: Social Studies—Race/Ethnicity

		Grade 5	Grade 8	Grade 11
American Indian or Alaska Native	N	458	518	414
American Indian or Alaska Native	Mean SS	1464.8	1778.8	2090.8
American Indian or Alaska Native	SD SS	20.3	22.6	21.7
Asian	N	2,453	2,496	1,915
Asian	Mean SS	1484.5	1799.5	2106.9
Asian	SD SS	26.3	27.6	25.6
Black or African American	N	8,169	8,041	4,461
Black or African American	Mean SS	1457.1	1767.8	2081.9
Black or African American	SD SS	18.0	19.1	19.6
Hispanic or Latino	N	5,508	5,458	3,788
Hispanic or Latino	Mean SS	1466.6	1776.8	2090.2
Hispanic or Latino	SD SS	21.6	22.7	22.1
Native Hawaiian or Other Pacific Islander	N	70	68	44
Native Hawaiian or Other Pacific Islander	Mean SS	1476.2	1779.5	2098.6
Native Hawaiian or Other Pacific Islander	SD SS	25.6	27.1	23.6
Two or More Races	N	3,396	2,909	1,778
Two or More Races	Mean SS	1470.9	1780.5	2095.5
Two or More Races	SD SS	23.5	24.7	24.7
White	N	51,019	53,312	44,231
White	Mean SS	1476.5	1786.7	2098.2
White	SD SS	24.0	25.5	24.7

Table 9-8d. Scale-Score Descriptive Statistics by Grade: Social Studies—Economically Disadvantaged

		Grade 5	Grade 8	Grade 11
Yes	N	35,348	32,616	20,556
Yes	Mean SS	1464.8	1774.6	2088.2
Yes	SD SS	20.8	22.3	22.1
No	N	35,725	40,186	36,075
No	Mean SS	1482.1	1791.7	2101.3
No	SD SS	24.2	25.7	24.9

Table 9-8e. Scale-Score Descriptive Statistics by Grade: Social Studies—English Language Learners

		Grade 5	Grade 8	Grade 11
Yes	N	4,260	3,327	1,872
Yes	Mean SS	1457.1	1764.2	2075.6
Yes	SD SS	16.7	15.6	14.7
No	N	66,813	69,475	54,759
No	Mean SS	1474.5	1785.0	2097.3
No	SD SS	24.2	25.7	24.7

Table 9-8f. Scale-Score Descriptive Statistics by Grade: Social Studies—Students with Disabilities

		Grade 5	Grade 8	Grade 11
Yes	N	8,559	7,639	4,670
Yes	Mean SS	1458.3	1765.6	2078.2
Yes	SD SS	19.3	18.9	19.0
No	N	62,514	65,163	51,961
No	Mean SS	1475.5	1786.2	2098.2
No	SD SS	24.1	25.5	24.5

Table 9-8g. Scale-Score Descriptive Statistics by Grade: Social Studies—Students Used Standard Accommodations

		Grade 5	Grade 8	Grade 11
Yes	N	155	697	225
Yes	Mean SS	1451.8	1762.1	2078.7
Yes	SD SS	13.4	15.3	17.5
No	N	70,918	72,105	56,406
No	Mean SS	1473.5	1784.2	2096.6
No	SD SS	24.2	25.6	24.7

Table 9-9a. Scale-Score Descriptive Statistics: English Language Arts

Grade	*N*	Mean	SD	Min	Max
3	72,529	1293.7	26.2	1203	1357
4	72,941	1394.5	25.9	1301	1454
5	72,388	1494.4	27.2	1409	1560
6	70,566	1591.0	25.8	1508	1655
7	70,716	1692.3	25.9	1618	1753

Table 9-9b. Performance-Level Percentages: English Language Arts

Grade	*N*	Not Proficient	Partially Proficient	Proficient	Advanced
3	72,529	32.40%	24.77%	21.84%	20.99%
4	72,941	34.94%	20.82%	22.23%	22.02%
5	72,388	34.59%	21.67%	27.24%	16.51%
6	70,566	33.86%	27.57%	27.17%	11.40%
7	70,716	31.09%	28.24%	30.31%	10.36%

Table 9-10a. Scale-Score Descriptive Statistics: Mathematics

Grade	*N*	Mean	SD	Min	Max
3	72,232	1292.8	28.3	1217	1361
4	72,621	1389.8	26.0	1310	1455
5	71,921	1483.5	26.5	1409	1550
6	70,255	1583.9	25.6	1518	1650
7	70,506	1685.7	25.9	1621	1752

Table 9-10b. Performance-Level Percentages: Mathematics

Grade	*N*	Not Proficient	Partially Proficient	Proficient	Advanced
3	72,232	32.32%	25.33%	25.83%	16.52%
4	72,621	29.77%	33.71%	23.51%	13.01%
5	71,921	42.46%	27.96%	16.40%	13.18%
6	70,255	39.09%	32.30%	16.69%	11.92%
7	70,506	39.48%	28.18%	19.57%	12.77%

Table 9-11a. Scale-Score Descriptive Statistics: Science

Grade	*N*	Mean	SD	Min	Max
5	70,512	1484.2	25.0	1416	1573
8	72,128	1780.1	25.0	1712	1865
11	56,964	2074.0	25.0	2011	2158

Table 9-11b. Performance-Level Percentages: Science

Grade	*N*	Not Proficient	Partially Proficient	Proficient	Advanced
5	70,512	26.03%	45.44%	26.86%	1.67%
8	72,128	39.16%	38.28%	20.75%	1.81%
11	56,964	46.95%	37.59%	14.39%	1.08%

Table 9-12a. Scale-Score Descriptive Statistics: Social Studies

Grade	*N*	Mean	SD	Min	Max
5	71,073	1473.5	24.2	1396	1560
8	72,802	1784.0	25.7	1706	1867
11	56,631	2096.6	24.7	2021	2168

Table 9-12b. Performance-Level Percentages: Social Studies

Grade	*N*	Not Proficient	Partially Proficient	Proficient	Advanced
5	71,073	27.51%	56.85%	13.42%	2.22%
8	72,802	33.37%	40.74%	20.56%	5.33%
11	56,631	11.61%	44.73%	34.07%	9.59%

Chapter 10: Performance-Level Setting

This chapter briefly describes the M-STEP performance level setting and presents the cut scores established and the performance level descriptors derived from the performance level setting. This begins with the consortium-based ELA and mathematics assessments and proceeds to the entirely Michigan-written science and social studies assessments.

M-STEP is administered to assess Michigan students' mastery of the Michigan state standards. The assessments began as an implementation of the Smarter Balanced ELA and mathematics tests. The current cut scores for the tests are taken from the SBAC tests. A brief overview of the Smarter Balanced standard-setting procedures during which the cut scores for ELA and mathematics were derived can be found in the report about performance level setting, *Smarter Balanced Assessment Consortium: Achievement Level Setting Final Report* (2015d), which is posted on the Smarter Balanced library web page.[1]

Over the course of several years, important changes have been made to the assessments to make them more meaningful to Michigan educators. These include the alignment of the test items to the Michigan Academic *Standards*, the implementation of a Michigan-specific test blueprint, and a reduction and then elimination of performance tasks to reduce overall test time. These changes were made cautiously and deliberately with the active involvement of Michigan educators and stakeholders.

In school year 2017–18, the tests in grades 3–8 were shortened to a legislatively mandated median time of three hours to reduce the time burden on students and schools. To do so, all performance tasks in ELA were replaced with Passage-based Writing (PBW) items, a form of constructed response (CR) item. The ELA test blueprints were adjusted to accommodate the new item type and the reduction in test length. In grades 3–8 mathematics, the test was also shortened to reduce overall testing time, but this change did not involve adding new item types or significantly altering the test blueprint. Content-rich technology enhanced items were substituted to fulfill the blueprint. In spring 2019, grade 8 ELA and mathematics were changed to the PSAT 8/9 assessment.

As a result of these changes, MDE partnered with DRC and Michigan educators to evaluate the validity of the cut scores derived by Smarter Balanced for ELA and mathematics with a cut score validation meeting in July 2018. There have been no significant changes to the grade 3-7 blueprints since then.

For science, Michigan conducted a standard setting in the summer of 2021, which will be verified after the spring 2022 assessment. For social studies, a statistical articulation was used to establish cut scores.

The AERA, APA, & NCME (2014) *Standards* addressed in this chapter are 5.21 and 5.22, which will be presented in the pertinent sections of the chapter.

[1] https://portal.smarterbalanced.org/library/en/achievement-level-setting-final-report-with-appendix.pdf

The AERA, APA, and NCME Standard 5.21 states that:

> When proposed score interpretations involve one or more cut scores, the rationale and procedures used for establishing cut scores should be documented clearly. (p. 107)

To evaluate the validity of M-STEP score interpretations, it is essential to understand that descriptors and cut scores are established in a collaborative and participatory process. The descriptors clearly establish, in plain language, the proper frame of reference for understanding how to interpret test scores, particularly cut scores.

10.1 Cut Score Validation for English Language Arts and Mathematics

Cut scores were validated after the spring 2018 M-STEP administration. The purpose of the standards validation was to determine whether the existing M-STEP cut scores for grades 3–8 (now 3-7) ELA and mathematics were still valid for continued use, given the 2018 updates to the tests.

A total of 54 Michigan educators engaged in a modification of the Bookmark Standard Setting Procedure (Lewis, Mitzel, & Green, 1996; Lewis, Mitzel, Mercado, & Schulz, 2012) to validate the cut scores. This method has been used on large-scale assessments in Michigan and across the nation, including by Smarter Balanced.

Participants studied the existing Michigan performance level descriptors (PLDs) and Michigan state standards to review the knowledge, skills, and abilities expected of students in each performance level. The four performance levels on M-STEP are Not Proficient, Partially Proficient, Proficient, and Advanced. Each performance level is associated with a level of mastery of the Michigan Learning *Standards*. Participants then discussed the content-based expectations for students at the threshold of each performance level (e.g., a student who is "just" Proficient). To support their discussions of these threshold students, participants were provided with the Smarter Balanced achievement level descriptors (ALDs). These Smarter Balanced ALDs were used at the original standard setting where the cut scores were established.

Participants studied collections of test items that were ordered in terms of difficulty. The existing cut scores were presented as benchmarks for participants' consideration: participants were asked to consider the knowledge and skills that students would need to demonstrate on the updated ELA and mathematics tests, as based on the benchmarked (existing) cut scores. Then, participants compared these expectations against the content-based expectations for students at the thresholds of each performance level. Participants were instructed to recommend retaining the existing cut scores if there was good correspondence between the benchmarks and these content-based expectations or to recommend alternative cut scores that reflect better correspondence. Participants engaged in two rounds of individual judgments and group discussion. (The grade 5 mathematics committee engaged in three rounds of judgments to accommodate additional discussion.) The committees' median judgments were taken as their final recommendations.

The available validity evidence suggests that there were no significant differences between the updated ELA and mathematics assessments and the content assessed by the prior assessments and that the differences between the judgments made at the 2018 standards validation workshop and the existing cut scores were not statistically different. That is, the recommendations made by Michigan educators during the standards validation were consistent with the existing cut scores, and the validity evidence collected during this process supports the continued use of the cut scores. More information can be found in the full *M-STEP Standards Validation 2018 Technical Report* (2019) in Appendix E.

10.2 Standard Setting for Science

MDE partnered with DRC to conduct a standard-setting workshop for M-STEP science in grades 5, 8, and 11 in August 2021. During the workshop, 18 educators discussed the content-based expectations for students in each performance level (i.e., *Not Proficient*, *Partially Proficient*, *Proficient*, and *Advanced*); and engaged in the modified Angoff procedure to recommend *cut scores* for each test that aligned to these content-based expectations.

Participants engaged in three rounds of individual judgments and group discussion. At the end of the workshop, all participants were shown the impact data associated with the cut score recommendations. Participants were asked to consider the impact data, and whether they would recommend any adjustments to the cut scores to promote consistency across grades (i.e., vertical articulation) while still recommending cut scores which were closely aligned with the content standards and tested content. The committees' final recommendations were taken to the state superintendent for final approval.

A complete description of the standard setting can be found in Appendix H.2.

10.3 Statistical Articulation for Social Studies

MDE partnered with DRC to conduct a standard-setting workshop for M-STEP social studies in grades 5, 8, and 11 in June 2015. During the workshop, participants considered the test items, performance level descriptors, and test data. Following the workshop, MDE considered participants' recommendations and discussed with the state superintendent. MDE found that the participants' recommended proficiency cuts were much lower than in the past and thus determined that such recommendations were not consistent with the high expectations of career and college readiness. As a result, in consultation with members of Michigan Technical Advisory Committee, MDE used statistically articulated cut scores and considered such approach to be more appropriate.

10.4 Scale Scores

This section describes the slopes and intercepts for transforming thetas to scale scores, as well as the LOSS and the HOSS for various M-STEP content areas. The values for ELA and mathematics were derived by MDE and DRC using the work done by Smarter Balanced.

For a detailed description of the methods used in calibration and scaling *Smarter Balanced 2017–2018 Technical Report* (Smarter Balanced, 2017). After calibration, results were in the theta metric. MDE transformed the theta metric results onto a four-digit scale, which is more meaningful for stakeholders. The equation for this linear transformation is

$$Scale\ score = (theta * slope) + intercept$$

Table 10-1 presents the information of slopes and intercepts for all four content areas, along with the LOSS and HOSS values which give the effective range of M-STEP scales for each grade and content area.

Table 10-1. Scale Transformation Slopes and Intercepts for M-STEP Summative Assessments with LOSS and HOSS Values

Content Area	Grade	Slope A	Intercept B	LOSS	HOSS
ELA	3	26.0061	1322.5934	1203	1357
ELA	4	24.6036	1409.5875	1301	1454
ELA	5	25.8718	1501.3628	1409	1560
ELA	6	24.5491	1592.9699	1508	1655
ELA	7	23.8151	1687.3543	1618	1753
Math	3	26.3725	1325.7407	1217	1361
Math	4	25.2608	1409.0233	1310	1455
Math	5	23.3374	1495.6493	1409	1550
Math	6	20.4573	1589.9260	1518	1650
Math	7	19.6292	1686.6036	1621	1752
Science	5	26.6919	1484.2251	1416	1573
Science	8	26.5957	1780.2261	1712	1869
Science	11	26.1870	2073.9702	2011	2160
Social Studies	5	27.2005	1478.3212	1395	1568
Social Studies	8	26.9339	1785.9405	1703	1868
Social Studies	11	26.8528	2095.9989	2016	2166

10.5 Cut Scores

This section presents the cut scores for each grade/content area of M-STEP. Table 10-2 shows the cut scores for ELA and mathematics in grades 3–7 and for social studies in grades 5, 8, and 11. It should be noted that for ELA and mathematics, the Smarter Balanced established cut scores on the theta matric were transformed to the (Michigan specific) M-STEP scales using a linear transformation.

Table 10-2. Cut Scores for M-STEP Summative Assessments

Content Area	Grade	SS Cut between Levels 1 and 2	SS Cut between Levels 2 and 3	SS Cut between Levels 3 and 4
ELA	3	1280	1299.5	1317
ELA	4	1383	1399.5	1417
ELA	5	1481	1499.5	1524
ELA	6	1578	1599.5	1624
ELA	7	1679	1699.5	1726
Math	3	1281	1299.5	1321
Math	4	1376	1399.5	1420
Math	5	1478	1499.5	1515
Math	6	1579	1599.5	1614
Math	7	1679	1699.5	1716
Science	5	1467	1500	1539
Science	8	1773	1800	1833
Science	11	2071	2100	2133
Social Studies	5	1458	1500	1530
Social Studies	8	1771	1800	1831
Social Studies	11	2069	2100	2131

10.6 Claim Cut Scores

As stated in Section 2.3, student performance on ELA and mathematics claims was classified into one of the three performance levels: *Adequate progress, Attention may be needed*, and *Most at risk of falling behind*. Detailed rules for calculating performance levels for ELA and mathematics claims can be found in Appendix D of the *Smarter Balanced Scoring Specifications, 2014–2015 Administration Summative and Interim Assessments: ELA/Literacy Grades 3–8, 11* and *Mathematics Grades 3–8, 11, V.7* (AIR, 2016).

10.7 Performance Level Descriptors

The performance level descriptors that were adopted by MDE for reporting purposes can be found in Tables 10-3 and 10-4.

Table 10-3. Performance-Level Descriptors for M-STEP, Grades 3–7

Performance Level	Descriptor
Advanced—PL 4	The student's performance exceeds grade-level content standards and indicates substantial understanding and application of key concepts defined for Michigan students. The student needs support to continue to excel.
Proficient—PL 3	The student's performance indicates understanding and application of key grade-level content standards defined for Michigan students. The student needs continued support to maintain and improve proficiency.
Partially Proficient—PL 2	The student needs assistance to improve achievement. The student's performance is not yet proficient, indicating a partial understanding and application of the grade-level content standards defined for Michigan students.
Not Proficient—PL 1	The student needs intensive intervention and support to improve achievement. The student's performance is not yet proficient and indicates minimal understanding and application of the grade level content standards defined for Michigan students.

Table 10-4. Performance-Level Descriptors for M-STEP, Grade 11

Performance Level	Descriptor
Advanced—PL 4	The student's performance exceeds the high school content standards and indicates substantial understanding and application of key concepts defined for Michigan students. The student needs support to continue to excel and to be college- and career-ready.
Proficient—PL 3	The student's performance indicates understanding and application of key high school content standards defined for Michigan students. The student needs continued support to maintain and improve proficiency and to be college- and career-ready.
Partially Proficient—PL 2	The student needs assistance to improve achievement and to become career and college ready. The student's performance is not yet proficient, indicating a partial understanding and application of the high school content standards defined for Michigan students.
Not Proficient—PL 1	The student needs intensive intervention and support to improve achievement and to become career and college ready. The student's performance is not yet proficient and indicates minimal understanding and application of the high school content standards defined for Michigan students.

10.8 Summary

This chapter presented a brief overview of the process for performance level setting used by Smarter Balanced for derivation of the ELA and mathematics cut scores. It also presents an overview of the procedure used for social studies. These procedures are addressed in more detail in Sections 10.1 and 10.2.

The standard settings undertaken by Smarter Balanced support the following *Standards for Educational and Psychological Testing* (AERA, APA, & NCME, 2014):

- Standard 5.21—When proposed score interpretations involve one or more cut scores, the rationale and procedures used for establishing cut scores should be documented clearly.[2]
- Standard 5.22—When cut scores defining pass-fail or proficiency levels are based on direct judgments about the adequacy of item or test performances, the judgmental process should be designed so that the participants providing the judgments can bring their knowledge and experience to bear in a reasonable way.

[2] For ELA and mathematics

Chapter 11: Fairness

As noted in the *Standards* (AERA, APA, & NCME, 2014), there are varying definitions of fairness. This chapter examines fairness as it relates to minimizing bias on a test and looks at test performance among varying subgroups assessed by M-STEP. It should be noted that differences in test performance among subgroups do not mean that a test is unfair—they simply mean that groups perform differently on the test. Even when a test is carefully and properly constructed, differences may exist among subgroups as a result of differences in curriculum or learning by the students in the subgroup.

This chapter is particularly relevant to AERA, APA, & NCME (2014) *Standards* 3.1 through 3.6. These standards are from Chapter 3 of the AERA, APA, & NCME (2014) *Standards*, "Fairness in Testing." Each of these standards will be presented below. Standard 3.6 states the following:

> **Standard 3.6** Where credible evidence indicates that test scores may differ in meaning for relevant subgroups in the intended examinee population, test developers and/or users are responsible for examining the evidence for validity of score interpretations for intended uses for individuals from those subgroups. What constitutes a significant difference in subgroup scores and what actions are taken in response to such differences may be defined by applicable laws. (p. 65)

There is no specific research on M-STEP showing that the test scores of examinee subgroups differ in meaning; however, this is an ongoing concern in any large-scale testing program. To lessen the possibility of differences in test score meaning, DRC, MDE, and Smarter Balanced follow several steps in the item development and selection processes as explained in Section 11.1 of this chapter. In addition, DRC, MDE, and Smarter Balanced have conducted content and bias reviews on items, as explained in Chapter 3. These practices adhere to Standard 3.3:

> **Standard 3.3** Those responsible for test development should include relevant subgroups in validity, reliability/precision, and other preliminary studies used when constructing the test. (p. 64)

MDE and DRC have conducted differential item functioning (DIF) studies following the operational administration of M-STEP. Typically, items are evaluated for possible DIF in the field-test phase of test development, and items flagged for DIF are further examined for possible bias. During test development, Smarter Balanced follows procedures to minimize the inclusion of items that may potentially favor one demographic group over another. MDE and DRC staff do the same for science and social studies. Section 11.2 of this chapter explains the steps taken to evaluate M-STEP items through the use of DIF to adhere with this standard.

In addition, standardized test administration and training of test administrators for M-STEP comply with *Standards* 3.4 and 3.5:

> **Standard 3.4** Test takers should receive comparable treatment during the test administration and scoring process. (p. 65)

> **Standard 3.5** Test developers should specify and document provisions that have been made to test administration and scoring procedures to remove construct-irrelevant barriers for all relevant subgroups in the test-taker population. (p. 65)

Section 11.1 of this chapter is also directly relevant to *Standards* 3.1 and 3.2:

> **Standard 3.1** Those responsible for test development, revision, and administration should design all steps of the testing process to promote valid score interpretations for intended score uses for the widest possible range of individuals and relevant subgroups in the intended population. (p. 63)

> **Standard 3.2** Test developers are responsible for developing tests that measure the intended construct and for minimizing the potential for tests' being affected by construct-irrelevant characteristics, such as linguistic, communicative, cognitive, cultural, physical, or other characteristics. (p. 64)

Section 11.1 explains the steps taken by MDE and DRC to minimize words, phrases, and content that may be regarded as offensive by members of particular demographic subgroups. Chapter 3 discusses item content considerations during item development and item bias reviews for items included in M-STEP. These reviews are also critical in fulfilling *Standards* 3.1 and 3.2.

11.1 Minimizing Bias through Careful Test Development

The development of a test that is fair for all examinees begins in the early stages of planning and development. The item and test development processes that are used to minimize bias are summarized below.

First, careful attention is paid to content validity during the item development and item selection processes. Bias can occur only if the test is measuring different things for different groups. By eliminating irrelevant skills or knowledge from the items, the possibility of bias is reduced. Second, item writers and test developers follow several published guidelines for reducing or eliminating bias.

11.1.1 ELA and Mathematics

Smarter Balanced developed *Bias and Sensitivity Guidelines* (ETS, 2012) to help ensure that the assessments are fair for all groups of test takers, despite differences in characteristics that include, but are not limited to, disability status, ethnic group, gender, regional background, native language, race, religion, sexual orientation, and socioeconomic status. Unnecessary barriers can be reduced by following some fundamental rules:

- Measuring only knowledge or skills that are relevant to the intended construct
- Not angering, offending, upsetting, or otherwise distracting test takers
- Treating all groups of people with appropriate respect in test materials

These rules help ensure that the test content is fair for test takers as well as acceptable to the many stakeholders and constituent groups within Smarter Balanced member organizations. The more typical view is that bias and sensitivity guidelines apply primarily to the review of test items. However, fairness must be considered in all phases of test development and use. Smarter Balanced strongly rely on the *Bias and Sensitivity Guidelines* (ETS, 2012) in the development of the Smarter Balanced assessments, particularly in item writing and review. Items must comply with the Bias and Sensitivity Guidelines in order to be included in the Smarter Balanced assessments.

Smarter Balanced assessments are developed using the principles of evidence-centered design (ECD). ECD requires a chain of evidence-based reasoning that links test performance to the claims made about test takers. Fair assessments are essential to the implementation of ECD. If test items are not fair, then the evidence they provide means different things for different groups of students. Under those circumstances, the claims cannot be equally supported for all test takers, which is a threat to validity. As part of the validation process, all items are reviewed for issues of bias and sensitivity using the *Bias and Sensitivity Guidelines* (ETS, 2012) prior to being presented to students. This helps ensure that item responses reflect only knowledge of the intended content domain, are free of offensive or distracting material, and portray all groups in a respectful manner. When the guidelines are followed, item responses provide evidence that supports assessment claims.

11.1.2 Science and Social Studies

MDE and DRC item writers and test developers follow documented bias and sensitivity guidelines to ensure that the items are fair for all groups of test takers, despite differences in characteristics that include, but are not limited to, disability status, ethnic group, gender, regional background, native language, race, religion, sexual orientation, and socioeconomic status. Test developers review all items included in M-STEP and other testing materials with these guidelines in mind.

Careful attention is given to item statistics (if available) throughout the test development process. As part of the test assembly process, attempts are made to avoid using or reusing items with poor statistics. Additional steps to reduce bias, including the use of content and bias committees comprised of Michigan educators, are described in more detail in Chapter 3 of this report.

The goal of fairness in assessment is to ensure that test materials are as free as possible from unnecessary barriers to the success of diverse groups of students.

11.2 Evaluating Bias through Differential Item Functioning (DIF)

An empirical approach known as DIF is used to examine items after they have been administered. The DIF statistics indicate the degree to which members of a particular subgroup perform better or worse than expected on each item as compared to the members of the reference group. Therefore, DIF flags do not necessarily indicate that an item is biased; rather, DIF flags indicate that the item functions differently for equally able members of different groups (Camilli & Shepard, 1994). The DIF procedures and results are described in this section. Note that items are not necessarily suppressed from operational scoring if they are flagged for DIF.

The position of DRC concerning test bias is based on two general propositions. First, students may differ in their background knowledge, cognitive and academic skills, language, attitudes, and values. To the degree that these differences are large, no one curriculum and no one set of instructional materials will be equally suitable for all. Therefore, no one test will be equally appropriate for all. Furthermore, it is difficult to specify what amount of difference can be called large and to determine how these differences will affect the outcome of a particular test. Second, schools have been assigned the tasks of developing certain basic cognitive skills and supporting the development of these skills equitably among all students. Therefore, there is a need for tests that measure the common skills and bodies of knowledge that are common to all learners. The test developers' task is to create assessments that measure these key cognitive skills without introducing extraneous or construct-irrelevant elements into the performances on which the measurement is based. If these tests require that students have culturally specific knowledge and skills not taught in school, differences in performance among students can occur because of differences in student background and out-of-school learning. Such tests are measuring different things for different groups and can be called biased (Camilli & Shepard, 1994; Green, 1975).

To lessen such biases, MDE and DRC strive to minimize the role of extraneous elements, thereby increasing the number of students for whom the test is appropriate. As discussed above and in Chapter 3 of this report, careful attention is given during the test development and form construction processes to lessen the influence of these elements for large numbers of students (including the use of content and bias review committees). Unfortunately, in some cases, extraneous elements may continue to play a substantial role. To assess the extent to which items may be performing differently for various subgroups of interest, DIF analyses are conducted during field testing and after each operational test administration. DIF statistics are used to quantify differences in item performance between two groups after controlling for examinees' overall achievement level. For M-STEP, DIF is conducted for ELA, mathematics, and social studies using very similar procedures. Details in Sections 11.3.1 and 11.3.2 provide DIF results for the following subgroups:

- ***Gender:*** The focal group is female; the reference group is male.
- ***Race/Ethnicity:*** The focal groups are students whose race/ethnicity is reported as African American or Black, Hispanic or Latino, or Asian; the reference group is students whose race/ethnicity is reported as White.

- ***Disability status:*** The focal group is students who are identified as students with disabilities (SWD); the reference group is all others.
- ***English Proficiency status:*** The focal group is students who are identified as Limited English Proficiency (LEP); the reference group is all others.
- ***Socio-economic status:*** The focal group is students who are identified as economically disadvantaged (EconDis); the reference group is all others.

11.3 DIF Statistics

Two commonly used DIF statistics were applied to M-STEP items and are described here. They are (1) the Mantel-Haenszel (MH) statistic (Mantel & Haenszel, 1959) for dichotomously scored items and an extension of the $MH\chi^2$ (Mantel, 1963) for polytomously scored items, and (2) the standardized mean difference (SMD) effect size (ES) for polytomously scored items (Dorans & Schmitt, 1991).

For dichotomously scored items (e.g., MC items), the MH statistic is computed as follows (Camilli & Shepard, 1994):

$$MH\chi^2 = \frac{\left\{\left|\sum_{j=1}^{S}[A_j - E(A_j)]\right| - 1/2\right\}^2}{\sum_{j=1}^{S} VAR(A_j)} \quad (11.1)$$

where $VAR(A_j) = \frac{n_{Rj} n_{Fj} m_{1j} m_{0j}}{T_j^2 (T_j - 1)}$ and $E(A_j) = \frac{n_{Rj} m_{1j}}{T_j}$.

In Equation 11.1, $A_j - E(A_j)$ represents the difference between the observed number and the expected number of correct responses on the item by the reference group members who have the jth score on the matching variable;[1] n_{Rj} and n_{Fj} represent the number of examinees in the reference and focal groups, respectively, for the jth score on the matching variable; m_{1j} represents the total number of examinees (both reference and focal) with the jth score on the matching variable and with a correct response on the current item; m_{0j} represents the total number of examinees with the jth score on the matching variable and with an incorrect response on the current item. The $MH\chi^2$ is evaluated against the standard χ^2 critical with one degree of freedom.

The $MH\chi^2$ does not indicate the strength of association of the relationship between item performance and group membership. The MH odds ratio can be computed to estimate the strength of this association. The resulting estimate represents the relative likelihood of success on a particular item for members of two different groups of examinees (Camilli, 2006). This odds ratio thus provides an estimate of effect size (ES) with a value of 1.0, indicating no DIF. A value greater than 1.0 indicates that, on average, the reference group members performed better than comparable focal group members did. A value less than 1.0 indicates that, on average, the reference group members performed worse than comparable focal group members did.

[1] Total observed score is used as the matching variable for DIF analysis here.

The odds of a correct response (i.e., proportion passing divided by proportion failing) is *P/Q* (i.e., *P/[1-P]*). The MH odds ratio is simply the odds of a correct response of the reference group divided by the odds of a correct response of the focal group. The formula for its estimation is as follows (Camilli & Shepard, 1994, p. 116):

$$\hat{\alpha}_{MH} = \frac{\sum_{j=1}^{S} A_j D_j / T_j}{\sum_{j=1}^{S} B_j C_j / T_j} \quad (11.2)$$

where $S = K - 1$ and represents the actual number of 2×2 contingency tables (assuming the tables have at least 1 person in each cell); K represents the number of items on the test; j signifies the jth score on the matching variable and runs from 0 to K.[2] For jth score category, A_j represents the number of reference group members with a correct response, B_j represents the number of reference group members with an incorrect response, C_j represents the number of focal group members with a correct response, and D_j represents the number of focal group members with an incorrect response. T_j represents the total number of examinees who have the jth score on the matching variable.

The corresponding null hypothesis is that the odds of getting the item correct are equal for the two groups (i.e., the odds ratio is equal to 1):

$$H_0: \alpha_{MH} = 1 \quad (11.3)$$

To make the odds ratio symmetrical around zero with its range located in the interval $-\infty$ to $+\infty$, the odds ratio is transformed into a log-odds ratio as follows (Camilli & Shepard, 1994, p.116):

$$\hat{\lambda}_{MH} = \log(\alpha_{MH}) \quad (11.4)$$

The natural logarithm transformation of this odds ratio is symmetrical around zero (where 0 indicates no DIF). This DIF measure is a signed index, where a positive value represents DIF in favor of the reference group and a negative value indicates DIF in favor of the focal group.

The variance of the log-odds ratio estimate V_λ is computed as follows (Camilli & Shepard, 1994, p. 121):

$$V_\lambda = \frac{\sum_{j=1}^{S} T_j^{-2} (A_j D_j + \alpha_{MH} B_j C_j)[A_j + D_j + \alpha_{MH}(B_j + C_j)]}{2(\sum_{j=1}^{S} A_j D_j / T_j)^2}, \quad (11.5)$$

The terms included in Equation 11.5 correspond to those presented for Equation 11.2. In practice, a standardized MH log-odds ratio is computed by dividing the estimate $\hat{\lambda}_{MH}$ by the estimated standard error. According to Penfield (2007, p.16), "A value greater than 2.0 or less than -2.0 may be considered evidence of the presence of DIF."

[2] Although the value of the matching variable runs from 0 to K, the all correct (i.e., K) and all incorrect (i.e., 0) score categories are not included in the DIF analysis in order to avoid having a denominator equal to 0.

In addition, once $\hat{\lambda}_{MH}$ is obtained using Equation 11.4, the delta statistic (MH D-DIF, used by SBAC in flagging criteria) can be computed as

$$\text{MH D-DIF} = -2.35 \times \hat{\lambda}_{MH} \quad (11.6)$$

For polytomously scored items, an extension of the MHχ^2 procedure was computed (Mantel, 1963). The statistic is computed as follows (Zwick, Donaghue, & Grima, 1993, p. 239):

$$Mantel\ \chi^2 = \frac{(\sum_k F_k - \sum_k E(F_k))^2}{\sum_k VAR(F_k)} \quad (11.7)$$

where F_k is the sum of scores for the focal group at the kth level of the matching variable and is defined as

$$F_k = \sum_t y_t n_{Ftk}, \quad (11.8)$$

and the expectation of F_k under the hypothesis of no association is

$$E(F_k) = \frac{n_{F+k}}{n_{++k}} \sum_t y_t n_{+tk}, \quad (11.9)$$

and the variance of F_k under the assumption of no association is

$$\text{Var}(F_k) = \frac{n_{R+k} n_{F+k}}{n_{++k}^2 (n_{++k} - 1)} \left\{ \left(n_{++k} \sum_t y_t^2 n_{+tk} \right) - \left(\sum_t y_t n_{+tk} \right)^2 \right\}, \quad (11.10)$$

Using the Mantel approach for ordered categories, the data are organized into a $2 \times T \times K$ contingency table, where T is the number of response categories and K is the number of levels of the matching variable. $y_1, y_2, \ldots, y_T$ represent the T scores that can be obtained on the item; n_{Rtk} and n_{Ftk} represent the number of examinees in the reference and focal groups, respectively, who are at the kth level of the matching variable and received an item score of y_t. The "+" denotes summation over a particular index (e.g., n_{R+k} denotes the total number of reference group members at the kth level of the matching variable). Under the null hypothesis of no association, the Mantel statistic has a chi-square distribution with one degree of freedom. For dichotomous items, the Mantel statistic reduces to the MH statistic (without the continuity correction).

In addition to the MH statistic, an ES was calculated by dividing the SMD statistics by the overall (i.e., focal and reference groups combined) standard deviation (SD) of the item scores: ES = SMDSD . The SMD compares the mean of the reference and focal groups, adjusting for the distribution of reference and focal group members on the matching variable (Zwick et al., 1993), which for these analyses is the M-STEP raw score. SMD is computed as follows (Zwick et al., 1993):

$$SMD = \sum_k p_{Fk} (m_{Fk} - m_{Rk}) \quad (11.11)$$

where p_{Fk} is the proportion of the focal group members at the kth level of the matching variable m_{Fk} and m_{Rk} indicate mean item score for the focal group and the reference group at the kth level of the matching variable, respectively.

A negative SMD value implies that the focal group has a lower mean item score than the reference group, whereas a positive value implies that the focal group has a higher mean item score than the reference group, conditioned on the matching test score.

11.3.1 Flagging Criteria and Results for ELA and Mathematics

For ELA and mathematics, according to Smarter Balanced (for more information, see the *Smarter Balanced 2017–2018 Technical Report* [2018]), the minimum case count for each of the two groups (i.e., the focal group and the reference group) was set at 100 and the minimum case count for the combined group was set to 400.

The following flagging criteria were used for dichotomously scored items (e.g., MC items):

- Moderate DIF: significant MH chi-square statistic ($p < 0.05$) and $1.0 \leq |\text{MH D-DIF}| < 1.5$
- Large DIF: significant MH chi-square statistic ($p < 0.05$) and $|\text{MH D-DIF}| \geq 1.5$

The following flagging criteria were used for polytomously scored items:

- Moderate DIF: if the extension of the MH statistic is significant ($p < .05$) and $|ES|$ is > 0.17 and ≤ 0.25.
- Large DIF: if the extension of the MH statistic is significant ($p < .05$) and $|ES| > 0.25$.

A positive MH D-DIF or ES value indicates that the item favors the focal group, while a negative value indicates that the item favors the reference group instead.

Table 11-1 shows the item counts for ELA and mathematics DIF analyses based on the 2021 M-STEP administration. Tables 11-2 and 11-3 summarize the number of items having moderate or large DIF flags (i.e., B or C) by grade for each focal/reference group that included at least 100 students for ELA and mathematics, respectively. For example, consider grade 3 ELA. There were 19 items (or 2.68% of all eligible items) flagged for moderate DIF when comparing the performance of academically similar males and females. Specifically, there were two items favoring males and 17 items favoring females.

Again, any items included on the M-STEP ELA and mathematics assessments (including those items flagged for DIF) have been thoroughly reviewed by MDE staff, DRC test development staff, and Smarter Balanced staff.

Table 11-1. Item Counts Used in Differential Item Functioning Analyses: ELA and Mathematics

Content Area	Grade	*N* Items	Female/ Male	Asian/ White	Black or African American/ White	Hispanic or Latino/ White	SWD/ Non-SWD	LEP/ Non-LEP	EconDis/ Non-EconDis
ELA	3	755	672	590	620	595	647	647	668
ELA	4	759	678	599	621	604	666	656	679
ELA	5	702	612	576	584	580	589	585	606
ELA	6	664	599	564	578	576	585	581	604
ELA	7	585	538	522	527	523	530	525	538
Math	3	1040	911	568	598	577	645	638	908
Math	4	1156	828	650	673	652	686	675	853
Math	5	1079	929	498	516	504	641	634	932
Math	6	983	840	500	523	503	716	705	841
Math	7	918	791	421	424	419	452	440	764

Table 11-2. Number of Differential Item Functioning Flagged Items: ELA

Grade	DIF Category	Female/ Male	Asian/White	Black or African American/ White	Hispanic or Latino/ White	Disabilities/ Without Disabilities	LEP/ Non-LEP	EconDis/ Non-EconDis
3	b+	12	14	7	1	6	7	1
3	b-	14	17	18	15	28	23	9
3	c+	0	9	0	0	0	2	1
3	c-	0	5	0	1	1	2	0
4	b+	16	14	12	4	12	9	3
4	b-	12	15	14	11	32	15	6
4	c+	0	5	3	0	0	0	0
4	c-	0	0	4	0	8	5	1
5	b+	8	20	6	1	10	2	4
5	b-	25	11	18	12	41	26	11
5	c+	2	2	2	0	0	0	0
5	c-	3	3	1	1	7	5	1
6	b+	10	10	4	4	9	4	2
6	b-	15	9	20	12	27	20	1
6	c+	2	4	2	1	1	2	0
6	c-	2	1	3	2	7	3	0
7	b+	17	22	9	3	11	9	1
7	b-	27	8	14	9	30	10	5
7	c+	1	2	1	0	0	3	0
7	c-	2	1	2	0	4	3	0

Table 11-3. Number of Differential Item Functioning Flagged Items: Mathematics

Grade	DIF Category	Female/ Male	Asian/White	Black or African American/ White	Hispanic or Latino/ White	Disabilities/ Without Disabilities	LEP/ Non-LEP	EconDis/ Non-EconDis
3	b+	38	25	8	1	1	12	9
3	b-	35	9	24	16	11	20	25
3	c+	3	4	2	2	4	1	0
3	c-	8	0	1	0	3	2	0
4	b+	25	29	10	6	3	10	4
4	b-	50	10	36	12	15	19	16
4	c+	3	6	0	1	1	1	0
4	c-	7	2	10	0	3	2	2
5	b+	50	47	12	5	6	15	3
5	b-	48	16	31	6	15	17	21
5	c+	3	10	3	1	4	3	1
5	c-	10	1	3	0	3	9	3
6	b+	47	44	9	3	7	12	7
6	b-	35	13	18	6	18	22	15
6	c+	4	14	1	0	1	8	0
6	c-	17	1	3	0	5	6	0
7	b+	17	44	7	5	6	8	5
7	b-	26	12	18	7	11	12	14
7	c+	3	32	0	0	1	1	0
7	c-	5	2	8	1	2	7	3

11.3.2 Flagging Criteria and Results for Science and Social Studies

For science and social studies, the minimum case count was 30 for each of the two groups (i.e., the reference group and the focal group). The following flagging criteria, adapted from Penfield (2007), were used:

- Negligible DIF (a): if either MH common log-odds ratio ($\hat{\lambda}_{MH}$) is not significantly different from zero or $|\hat{\lambda}_{MH}| < 0.426$
- Moderate DIF (b): if $\hat{\lambda}_{MH}$ is significantly different from zero and $|\hat{\lambda}_{MH}| \geq 0.426$ and either (a) $|\hat{\lambda}_{MH}| \leq 0.638$, or (b) $|\hat{\lambda}_{MH}|$ is not significantly greater than 0.426
- Large DIF (C): if $|\hat{\lambda}_{MH}|$ is significantly greater than 0.426 and $|\hat{\lambda}_{MH}| > 0.638$.

Tables 11-4 and 11-6 show the item counts for science and social studies DIF analyses respectively. Tables 11-5 and 11-7 summarize the number of items having moderate and large DIF flags (i.e., b or c) for science and social studies respectively. To be consistent with the reporting for ELA and math, a positive symbol after b or c indicates that the item favors the focal group (i.e., Female, Asian, Black or African American, Hispanic or Latino, SWD, LEP, or EconDis), while a negative symbol indicates that the item favors the reference group (i.e., Male, White, Non-SWD, Non-LEP, or Non-EconDis) instead. For example, consider grade 11 science.

There were 2 items (or 3.5% of all items) flagged for large Asian vs. White DIF, favoring Asian.

Again, any items included on the M-STEP science and social studies assessments (including those items flagged for DIF) have been thoroughly reviewed by MDE staff, DRC test development staff, and Michigan content/bias committee members. Some items that tested normally in previous years had DIF flags in the 2021 administration, likely due to abnormalities in the testing population and/or environment. The statistics must be viewed with caution.

Table 11-4. Item Counts used in Differential Item Functioning Analyses: Science[3]

Content Area	Grade	*N* Items	Female/ Male	Asian/ White	Black or African American/ White	Hispanic or Latino/ White	SWD/ Non-SWD	LEP/ Non-LEP	EconDis/ Non-EconDis
Science	5	78	78	78	78	78	78	78	78
Science	8	79	79	79	79	79	79	79	79
Science	11	57	57	57	57	57	57	57	57

Table 11-5. Number of Differential Item Functioning Flagged Items: Science

Grade	DIF Category	Female/ Male	Asian/White	Black or African American/ White	Hispanic or Latino/ White	Disabilities/ Without Disabilities	LEP/ Non-LEP	EconDis/ Non-EconDis
5	b-	2	1	2	0	3	2	0
5	b+	2	1	0	0	0	0	0
5	c-	0	0	0	0	0	0	0
5	c+	0	0	0	0	0	0	0
8	b-	2	1	2	0	1	2	0
8	b+	0	1	0	0	1	0	0
8	c-	0	1	1	0	0	1	0
8	c+	0	0	0	0	0	0	0
11	b-	1	1	2	0	2	2	0
11	b+	2	2	0	0	0	2	0
11	c-	0	0	0	0	1	2	0
11	c+	0	2	0	0	0	0	0

[3] For the 2021 administration, DIF analyses were conducted with OP items that appeared on online forms only.

Table 11-6. Item Counts used in Differential Item Functioning Analyses: Social Studies

Content Area	Grade	*N* Items	Female/ Male	Asian/ White	Black or African American/ White	Hispanic or Latino/ White	SWD/ Non-SWD	LEP/ Non-LEP	EconDis/ Non-EconDis
Social Studies	5	45	45	45	45	45	45	45	45
Social Studies	8	44	44	44	44	44	44	44	44
Social Studies	11	38	38	38	38	38	38	38	38

Table 11-7. Number of Differential Item Functioning Flagged Items: Social Studies

Grade	DIF Category	Female/ Male	Asian/White	Black or African American/ White	Hispanic or Latino/ White	Disabilities/ Without Disabilities	LEP/ Non-LEP	EconDis/ Non-EconDis
5	b-	1	0	0	0	2	0	0
5	b+	0	0	0	0	0	0	0
5	c-	0	0	0	0	0	0	0
5	c+	0	0	0	0	0	0	0
8	b-	0	1	1	0	0	0	0
8	b+	2	1	1	0	0	1	0
8	c-	0	0	0	0	0	0	0
8	c+	0	0	0	0	0	0	0
11	b-	1	1	1	0	0	0	0
11	b+	0	0	0	0	0	0	0
11	c-	0	0	0	0	0	0	0
11	c+	0	0	0	0	0	0	0

11.4 Summary

In summary, the overall purpose of this chapter is to address fairness concerns that are relevant to the administration of M-STEP. The information in this chapter supports multiple best practices of the testing industry and particularly the following AERA, APA, & NCME (2014) standards:

- Standard 3.1—Those responsible for test development, revision, and administration should design all steps of the testing process to promote valid score interpretations for intended score uses for the widest possible range of individuals and relevant subgroups in the intended population.
- Standard 3.2—Test developers are responsible for developing tests that measure the intended construct and for minimizing the potential for tests' being affected by construct-irrelevant characteristics, such as linguistic, communicative, cognitive, cultural, physical, or other characteristics.
- Standard 3.3—Those responsible for test development should include relevant subgroups in validity, reliability/precision, and other preliminary studies used when constructing the test.
- Standard 3.4—Test takers should receive comparable treatment during the test administration and scoring process.
- Standard 3.5—Test developers should specify and document provisions that have been made to test administration and scoring procedures to remove construct-irrelevant barriers for all relevant subgroups in the test-taker population.
- Standard 3.6—Where credible evidence indicates that test scores may differ in meaning for relevant subgroups in the intended examinee population, test developers and/or users are responsible for examining the evidence for validity of score interpretations for intended uses for individuals from those subgroups. What constitutes a significant difference in subgroup scores and what actions are taken in response to such differences may be defined by applicable laws.

Chapter 12: Reliability and Evidence of Construct-Related Validity

This chapter presents evidence supporting construct-related validity. Part of the test validity argument is that scores must be consistent and precise enough to be useful for the intended purposes. The concepts of reliability and precision are examined through analysis of measurement error in simulated and operational (OP) conditions.

This chapter demonstrates M-STEP's adherence to AERA, APA, & NCME (2014) *Standards* 2.0, 2.1, 2.3, 2.13, 2.14, 2.16, 2.19, and 4.3. Each standard will be discussed in the pertinent section of this chapter.

12.1 Reliability

Reliability refers to the consistency of the students' test scores on parallel forms of a test. A reliable test is one that produces scores that are expected to be relatively stable if the test is administered repeatedly under similar conditions. Often, however, it is impractical to administer multiple forms of the test, and reliability is estimated on a single administration of the test. This type of reliability, known as internal consistency, provides an estimate of how consistently examinees perform across items within a test during a single test administration (Crocker & Algina, 1986). Reliability is a necessary but insufficient condition of validity.

The AERA, APA, & NCME (2014) *Standards* indicates the following:

> The term reliability has been used in two ways in the measurement literature. First, the term has been used to refer to the reliability coefficients of classical test theory, defined as the correlation between scores on two equivalent forms of the test, presuming that taking one form has no effect on performance on the second form. Second, the term has been used in a more general sense, to refer to the consistency of scores across replications of a testing procedure, regardless of how this consistency is estimated or reported (e.g., in terms of standard errors, reliability coefficients per se, generalizability coefficients, error/tolerance ratios, item response theory [IRT] information functions, or various indices of classification consistency). (p. 33)

In accordance with the AERA, APA, & NCME (2014) *Standards* and in developing and maintaining tests of the highest quality, the reliability of each M-STEP test has been calculated.

There are several specific AERA, APA, & NCME (2014) standards that this chapter addresses. These include *Standards* 2.0, 2.3, 2.13, and 2.19. Each standard is articulated below.

Standard 2.0 Appropriate evidence of reliability/precision should be provided for the interpretation for each intended score use. (p. 42)

Standard 2.3 For each total score, subscore, or combination of scores that is to be interpreted, estimates of relevant indices of reliability/precision should be reported. (p. 43)

The total score reliabilities are reported below in Sections 12.1.5 through 12.1.7 of this chapter. The overall standard errors of measurement (SEMs) and conditional standard errors of measurement (CSEMs) by decile are presented in Section 12.1.5.

Standard 2.13 The standard error of measurement, both overall and conditional (if reported), should be provided in units of each reported score. (p. 45)

The SEM based on scale scores and the CSEM based on scale scores are discussed below in Section 12.1.5.

Standard 2.19 Each method of quantifying the reliability/precision of scores should be described clearly and expressed in terms of statistics appropriate to the method. The sampling procedures used to select test takers for reliability/precision analyses and the descriptive statistics on these samples, subject to privacy obligations where applicable, should be reported. (p. 47)

12.1.1 Reliability and Standard Error of Measurement

According to the classical true score theory, which is a fundamental component of the CTT, an observed score is a sum of two parts—a random component of true score (T) and a random component of error score (E), or mathematically, $X = T + E$ (McDonald, 1999). This model has the following properties: (1) the expected error score is zero, (2) the correlation between the true score and the error score is zero, and (3) the correlation between the error scores on different but parallel forms is zero (Lord & Novick, 1968).

Based on this model, a student's observed test score is an imprecise estimate of his or her actual ability because a portion of that score is attributable to random error. A fundamental theoretical quantity in test theory, the *reliability coefficient* of observed scores is defined as the ratio of the variance of true scores to the variance of observed scores. Tests are therefore most reliable when the proportion of observed score variance that may be attributed to error variance is minimized. According to McDonald (1999), test-retest methods, parallel or alternate-form methods, and internal analysis are the three recognized methods for estimating the reliability coefficient.

Due to practical difficulties in applying the first two above-mentioned methods, only the internal consistency reliability approach is described here. Estimates of internal consistency reliability involve "dividing the test into two or more constituent parts and in some way estimating reliability from the consistency of performance across these part-tests" (Haertel, 2006, p. 71).

12.1.2 Cronbach's Coefficient Alpha

Historically, various internal consistency reliability estimates have been proposed, but the most widely used, for fixed forms, is Cronbach's (1951) coefficient alpha (Haertel, 2006). Using sample statistics, it is computed as follows (adapted from Haertel, 2006):

$$\alpha = \frac{I}{I-1}\left(1 - \frac{\sum_{i=1}^{I} S_i^2}{S_X^2}\right) \quad (12.1)$$

where I represents the number of items on the test, S_i^2 represents the sample variance of item i, and S_X^2 represents the sample variance of the total raw score.

The use of coefficient alpha has several theoretical advantages (Haertel, 2006). First, since it equals the mean of all possible split-half reliability coefficients, which is another estimate of internal consistency reliability that involves the division of the total test into two "parallel" subtests, the use of coefficient alpha avoids the arbitrary choice of a split or division. Second, it is mathematically equivalent to one of the lower bounds of the theoretical reliability coefficient. The implication of this is that the theoretical reliability coefficient is higher than the observed coefficient alpha.

12.1.3 Standard Error of Measurement

SEM is related to reliability and is calculated with sample statistics as follows (Hays, 1994, p. 617):

$$\mathrm{SEM}(X) = S_X\sqrt{1 - r_{XX'}} \quad (12.2)$$

where $\mathrm{SEM}(X)$ represents the estimated SEM of the observed test score X, S_X denotes the estimated standard deviation (i.e., sample standard deviation) of the observed score, and $r_{XX'}$ represents the estimated reliability coefficient of a test. In this report, the observed coefficient alpha is used as the estimated reliability coefficient for science and social studies.

According to Equation 12.2, the SEM is inversely related to the reliability of a test: For any standard deviation of the observed score, the SEM decreases when the reliability coefficient increases. Thus, when an SEM is small, one has more confidence in the accuracy, or precision, of the observed test scores.

12.1.4 Marginal Reliability for ELA and Mathematics

In a CAT administration, each student receives a different test form; therefore, the calculation of coefficient alpha is not applicable. An observed reliability can be derived from SEMs, which are computed from the test form each student took. The method of standard error calculation for both total and score reporting category scores, as described in the Smarter Balanced Scoring Specifications for 2014–2015 (AIR, 2014), is displayed below:

The standard error (SE) for student i is

$$SE(\theta_i) = \frac{1}{\sqrt{I(\theta_i)}} \quad (12.3)$$

where $I(\theta_i)$ is the test information function for student i, calculated as

$$I(\theta_i) = \sum_{j=1}^{I} D^2 a_j^2 \left(\frac{\sum_{l=1}^{m_j} l^2 Exp(\sum_{k=1}^{l} Da_j(\theta_i - b_{jk}))}{1 + \sum_{l=1}^{m_j} Exp(\sum_{k=1}^{l} Da_j(\theta_i - b_{jk}))} - \left(\frac{\sum_{l=1}^{m_j} l Exp(\sum_{k=1}^{l} Da_j(\theta_i - b_{jk}))}{1 + \sum_{l=1}^{m_j} Exp(\sum_{k=1}^{l} Da_j(\theta_i - b_{jk}))} \right)^2 \right) \quad (12.4)$$

where m_j is the maximum possible score point (starting from 0) for the jth item, D is the scale factor, 1.7. Values of a_j and b_{jk} are item parameters for item j and score level k.

SE is calculated based only on the answered items. The upper bound of the SE is set to 2.5 on the theta metric. Any value larger than 2.5 is truncated at 2.5 on the theta metric.

12.1.5 Observed Reliability, SEM, and CSEM for ELA and Mathematics

The marginal reliability for ELA and mathematics was calculated using the 2021 Michigan administration data. The results are presented in Table 12-1.

Table 12-1. ELA and Mathematics Summative Scale-Score Marginal Reliability Estimates

Content Area	Grade	*N*	Mean # Items	SD(SS)	Mean SEM	Marginal Reliability
ELA	3	70,359	1293.83	26.03	6.19	0.94
ELA	4	70,798	1394.70	25.69	6.31	0.94
ELA	5	70,210	1494.68	27.08	6.58	0.94
ELA	6	68,080	1591.46	25.47	6.75	0.93
ELA	7	68,063	1692.86	25.55	7.15	0.92
Mathematics	3	70,228	1292.93	28.25	5.71	0.96
Mathematics	4	70,681	1389.86	25.87	5.54	0.95
Mathematics	5	70,087	1483.66	26.39	6.20	0.94
Mathematics	6	68,345	1584.09	25.50	5.92	0.94
Mathematics	7	68,364	1685.87	25.85	6.41	0.93

SD(SS) = standard deviation of scale score

Table 12-2 shows that the marginal reliability varies by overall score levels. All students take a similar number of items, but the information delivered by the items differs. The most information occurs where the pool item difficulty and students' ability match the best with abundant items for selection. As shown in Figures 8-1 and 8-2, Smarter Balanced pools, used by Michigan, are difficult relative to the student ability levels of the state population. Consistently, as shown in Table 12-2, students with lower scores (e.g., deciles 1 and 2) have lower reliability than those with higher scores (e.g., deciles 8 and 9).

Table 12-2. Marginal Reliability Overall and by Decile for ELA and Mathematics

Content Area	Grade	*N*	Var	Overall	Decile 1	Decile 2	Decile 3	Decile 4	Decile 5	Decile 6	Decile 7	Decile 8	Decile 9	Decile 10
ELA	3	70,359	667.75	0.94	0.91	0.94	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.94
ELA	4	70,798	659.69	0.94	0.91	0.94	0.94	0.94	0.94	0.95	0.95	0.95	0.94	0.93
ELA	5	70,210	735.80	0.94	0.92	0.94	0.95	0.95	0.95	0.95	0.94	0.94	0.93	0.93
ELA	6	68,080	654.79	0.93	0.89	0.92	0.93	0.93	0.94	0.94	0.94	0.94	0.94	0.92
ELA	7	68,063	662.58	0.92	0.88	0.92	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.92
Mathematics	3	70,106	800.71	0.96	0.91	0.95	0.96	0.96	0.97	0.97	0.97	0.97	0.97	0.96
Mathematics	4	70,575	670.27	0.95	0.89	0.94	0.95	0.96	0.96	0.96	0.96	0.96	0.97	0.96
Mathematics	5	69,948	698.27	0.94	0.83	0.90	0.93	0.94	0.95	0.96	0.97	0.97	0.97	0.97
Mathematics	6	68,173	652.62	0.94	0.85	0.92	0.94	0.94	0.95	0.96	0.96	0.96	0.97	0.97
Mathematics	7	68,157	668.91	0.93	0.76	0.89	0.92	0.93	0.95	0.96	0.96	0.97	0.98	0.98

Because of the CSEM differences by score level, demographic groups with lower average scores tend to have lower reliability than the population as a whole. Due to the small sample sizes of some of the subgroups (e.g., American Indian or Alaska Native and Native Hawaiian or Other Pacific Islander), corresponding results should be interpreted with caution. Tables 12-3 to 12-6 show marginal reliability by demographic group and the MSE.

Table 12-3. Marginal Reliability of Total Summative Scores by Ethnic Group—ELA

Grade	Group	*N*	Var	MSE	Marginal Reliability
3	All	70,359	667.75	6.19	0.94
3	American Indian or Alaska Native	419	587.49	6.25	0.93
3	Asian	2,294	644.85	6.13	0.94
3	Black or African American	8,036	483.45	6.51	0.91
3	Hispanic or Latino	5,189	583.42	6.23	0.93
3	Native Hawaiian or Other Pacific Islander	53	779.58	6.21	0.95
3	Two or More Races	3,566	647.10	6.21	0.94
3	White	50,802	631.61	6.13	0.94
4	All	70,798	659.69	6.31	0.94
4	American Indian or Alaska Native	436	515.55	6.32	0.92
4	Asian	2,313	653.38	6.32	0.94
4	Black or African American	8,146	499.93	6.55	0.91
4	Hispanic or Latino	5,364	570.69	6.33	0.93
4	Native Hawaiian or Other Pacific Islander	50	681.41	6.22	0.94
4	Two or More Races	3,405	670.21	6.35	0.94
4	White	51,084	622.84	6.27	0.94
5	All	70,210	735.80	6.58	0.94
5	American Indian or Alaska Native	454	580.84	6.50	0.93
5	Asian	2,318	712.44	6.75	0.94
5	Black or African American	8,255	541.38	6.59	0.92
5	Hispanic or Latino	5,338	648.65	6.50	0.93
5	Native Hawaiian or Other Pacific Islander	66	761.14	6.59	0.94
5	Two or More Races	3,376	744.68	6.59	0.94
5	White	50,403	700.38	6.58	0.94
6	All	68,080	654.79	6.75	0.93
6	American Indian or Alaska Native	429	565.29	6.89	0.91
6	Asian	2,147	616.38	6.61	0.93
6	Black or African American	7,728	495.31	7.08	0.90
6	Hispanic or Latino	5,063	563.22	6.83	0.92
6	Native Hawaiian or Other Pacific Islander	54	723.63	6.87	0.93
6	Two or More Races	3,035	657.33	6.82	0.93
6	White	49,624	632.01	6.70	0.93
7	All	68,063	662.58	7.15	0.92
7	American Indian or Alaska Native	474	601.14	7.34	0.91
7	Asian	2,153	653.10	7.07	0.92
7	Black or African American	7,474	550.99	7.43	0.90
7	Hispanic or Latino	5,128	589.95	7.23	0.91
7	Native Hawaiian or Other Pacific Islander	58	599.39	7.09	0.92
7	Two or More Races	2,931	682.72	7.21	0.92
7	White	49,845	632.14	7.10	0.92

Table 12-4. Marginal Reliability of Total Summative Scores by Ethnic Group—Mathematics

Grade	Group	*N*	Var	MSE	Marginal Reliability
3	All	70,106	800.71	5.71	0.96
3	American Indian or Alaska Native	417	691.82	5.80	0.95
3	Asian	2,294	771.90	5.47	0.96
3	Black or African American	7,923	654.89	6.61	0.93
3	Hispanic or Latino	5,158	701.15	5.89	0.95
3	Native Hawaiian or Other Pacific Islander	51	917.25	5.80	0.96
3	Two or More Races	3,541	793.64	5.83	0.96
3	White	50,722	705.12	5.55	0.95
4	All	70,575	670.27	5.54	0.95
4	American Indian or Alaska Native	436	512.89	5.66	0.93
4	Asian	2,301	686.42	5.23	0.96
4	Black or African American	8,063	527.96	6.52	0.91
4	Hispanic or Latino	5,333	592.16	5.74	0.94
4	Native Hawaiian or Other Pacific Islander	50	793.24	5.82	0.95
4	Two or More Races	3,380	664.97	5.69	0.95
4	White	51,012	591.23	5.37	0.95
5	All	69,948	698.27	6.20	0.94
5	American Indian or Alaska Native	449	583.45	6.77	0.91
5	Asian	2,314	749.58	5.32	0.96
5	Black or African American	8,207	466.20	7.97	0.85
5	Hispanic or Latino	5,316	592.43	6.72	0.92
5	Native Hawaiian or Other Pacific Islander	65	709.88	5.97	0.95
5	Two or More Races	3,348	687.33	6.47	0.93
5	White	50,249	630.69	5.88	0.94
6	All	68,173	652.62	5.92	0.94
6	American Indian or Alaska Native	434	557.28	6.19	0.93
6	Asian	2,161	679.46	5.11	0.96
6	Black or African American	7,770	540.88	7.25	0.89
6	Hispanic or Latino	5,057	552.54	6.32	0.92
6	Native Hawaiian or Other	54	645.50	6.13	0.94
6	Two or More Races	3,040	677.37	6.21	0.94
6	White	49,657	579.02	5.69	0.94
7	All	68,157	668.91	6.41	0.93
7	American Indian or Alaska Native	472	578.80	7.05	0.90
7	Asian	2,152	771.32	5.19	0.96
7	Black or African American	7,473	512.73	8.25	0.85
7	Hispanic or Latino	5,102	585.91	7.02	0.90
7	Native Hawaiian or Other Pacific Islander	57	540.10	6.21	0.92
7	Two or More Races	2,928	687.60	6.82	0.92
7	White	49,973	607.12	6.10	0.93

Table 12-5. Marginal Reliability of Total Summative Scores by Group—ELA

Grade	Group	*N*	Var	MSE	Marginal Reliability
3	Economically Disadvantaged	35,923	572.31	6.29	0.93
3	LEP	5,657	545.75	6.26	0.93
3	Disabilities	8,759	499.03	6.41	0.92
3	All	70,359	667.75	6.19	0.94
4	Economically Disadvantaged	35,557	566.28	6.38	0.93
4	LEP	5,261	470.55	6.38	0.91
4	Disabilities	8,874	491.04	6.55	0.91
4	All	70,798	659.69	6.31	0.94
5	Economically Disadvantaged	34,983	631.00	6.53	0.93
5	LEP	3,831	416.87	6.49	0.90
5	Disabilities	8,493	490.81	6.62	0.91
5	All	70,210	735.80	6.58	0.94
6	Economically Disadvantaged	32,662	557.75	6.92	0.91
6	LEP	2,785	298.46	7.22	0.82
6	Disabilities	7,717	417.90	7.29	0.87
6	All	68,080	654.79	6.75	0.93
7	Economically Disadvantaged	31,558	581.15	7.29	0.91
7	LEP	3,165	371.98	7.55	0.84
7	Disabilities	7,526	449.88	7.69	0.87
7	All	68,063	662.58	7.15	0.92

Table 12-6. Marginal Reliability of Total Summative Scores by Group—Mathematics

Grade	Group	N	Var	MSE	Marginal Reliability
3	Economically Disadvantaged	35,701	714.95	6.01	0.95
3	LEP	5,637	740.77	5.87	0.95
3	Disabilities	8,725	842.72	6.52	0.95
3	All	70,106	800.71	5.71	0.96
4	Economically Disadvantaged	35,378	579.82	5.89	0.94
4	LEP	5,230	554.23	5.85	0.93
4	Disabilities	8,843	638.88	6.48	0.93
4	All	70,575	670.27	5.54	0.95
5	Economically Disadvantaged	34,775	589.55	6.95	0.91
5	LEP	3,814	486.75	7.45	0.87
5	Disabilities	8,459	572.63	8.16	0.87
5	All	69,948	698.27	6.20	0.94
6	Economically Disadvantaged	32,701	584.86	6.53	0.92
6	LEP	2,762	473.72	7.20	0.88
6	Disabilities	7,727	569.90	7.72	0.89
6	All	68,173	652.62	5.92	0.94
7	Economically Disadvantaged	31,479	568.44	7.33	0.89
7	LEP	3,127	473.70	8.21	0.84
7	Disabilities	7,556	499.65	9.12	0.81
7	All	68,157	668.91	6.41	0.93

In addition to the SEM, the CSEM expresses the degree of measurement error in scale-score units and are conditioned on the ability of the student. The CSEM is reported in support of AERA, APA, & NCME (2014) Standard 2.14, which states the following:

> When possible and appropriate, conditional standard errors of measurement should be reported at several score levels unless there is evidence that the standard error is constant across score levels. Where cut scores are specified for selection or classification, the standard errors of measurement should be reported in the vicinity of each cut score. (p. 46)

The CSEMs are defined as the reciprocal of the square root of the test information function and can be estimated across all points of the ability continuum (Hambleton & Swaminathan, 1985); therefore, Equations 12.3 and 12.4 are used to calculate the CSEM.

In further compliance with Standard 2.14, Table 12-7 shows the median CSEM near the achievement level cut scores for ELA and mathematics.

Table 12-7. Conditional Standard Errors of Measurement near (±10 Points) Achievement Level Cut Scores, ELA and Mathematics

Content Area	Level—Cut Score	Grade	*N*	Median	Standard Deviation
ELA	1—2	3	9,217	6.00	0.16
ELA	2—3	3	9,022	5.73	0.45
ELA	3—4	3	8,752	5.95	0.23
ELA	1—2	4	9,367	6.06	0.24
ELA	2—3	4	8,870	6.01	0.11
ELA	3—4	4	9,235	6.01	0.11
ELA	1—2	5	9,151	6.07	0.27
ELA	2—3	5	7,923	6.22	0.42
ELA	3—4	5	8,040	6.97	0.18
ELA	1—2	6	9,862	6.66	0.48
ELA	2—3	6	8,098	6.27	0.44
ELA	3—4	6	6,137	6.36	0.48
ELA	1—2	7	9,342	6.93	0.35
ELA	2—3	7	9,187	6.75	0.43
ELA	3—4	7	5,932	6.97	0.17
Mathematics	1—2	3	9,300	5.63	0.49
Mathematics	2—3	3	9,664	5.07	0.25
Mathematics	3—4	3	7,498	5.01	0.11
Mathematics	1—2	4	10,326	5.48	0.51
Mathematics	2—3	4	9,831	5.00	0.11
Mathematics	3—4	4	6,763	4.74	0.44
Mathematics	1—2	5	9,456	5.94	0.40
Mathematics	2—3	5	8,748	4.63	0.48
Mathematics	3—4	5	6,736	4.21	0.41
Mathematics	1—2	6	10,781	5.92	0.32
Mathematics	2—3	6	9,558	4.97	0.18
Mathematics	3—4	6	6,706	4.25	0.43
Mathematics	1—2	7	10,429	6.31	0.48
Mathematics	2—3	7	8,549	4.94	0.27
Mathematics	3—4	7	7,309	4.03	0.18

When using a CAT, the CSEM will vary for the same scale score; therefore, it is necessary to report averages. Table 12-8 presents the overall average CSEM and the average CSEM by scale-score decile for ELA and mathematics.

Table 12-8. Overall Average CSEM and Average CSEM by Decile, ELA and Mathematics

Content Area	Grade	Overall SEM	Decile 1	Decile 2	Decile 3	Decile 4	Decile 5	Decile 6	Decile 7	Decile 8	Decile 9	Decile 10
ELA	3	6.19	7.61	6.44	6.04	5.99	5.87	5.74	5.74	5.90	5.99	6.47
ELA	4	6.31	7.54	6.43	6.10	6.06	6.03	6.01	6.01	6.01	6.04	6.89
ELA	5	6.58	7.40	6.35	6.09	6.07	6.11	6.20	6.43	6.84	6.98	7.27
ELA	6	6.75	8.38	7.10	6.90	6.61	6.46	6.35	6.22	6.14	6.24	6.99
ELA	7	7.15	8.84	7.43	7.03	6.86	6.77	6.75	6.75	6.79	6.92	7.23
Mathematics	3	5.71	8.46	6.24	5.89	5.51	5.22	5.08	5.03	5.01	5.01	5.55
Mathematics	4	5.54	8.44	6.22	5.74	5.23	5.05	5.01	4.99	4.85	4.74	5.04
Mathematics	5	6.20	10.80	8.26	7.21	6.40	5.76	5.04	4.89	4.30	4.18	4.70
Mathematics	6	5.92	9.80	7.28	6.47	6.03	5.71	5.11	5.01	4.88	4.35	4.25
Mathematics	7	6.41	12.29	8.63	7.32	6.58	6.04	5.42	4.99	4.43	4.04	4.05

Figures 12-1 through 12-10 display the CSEM curves by grade and content area. The dashed vertical lines represent the cut scores. The CSEM tends to be higher at the ends of the scale-score range. The measurement error increases when there are few items at a particular ability level. The figures show that the CSEM tends to be at its minimum around cut scores between Levels 2 and 3 and Levels 3 and 4.

Figure 12-1. Conditional Standard Errors of Measurement for Overall Scale Scores, Grade 3 English Language Arts

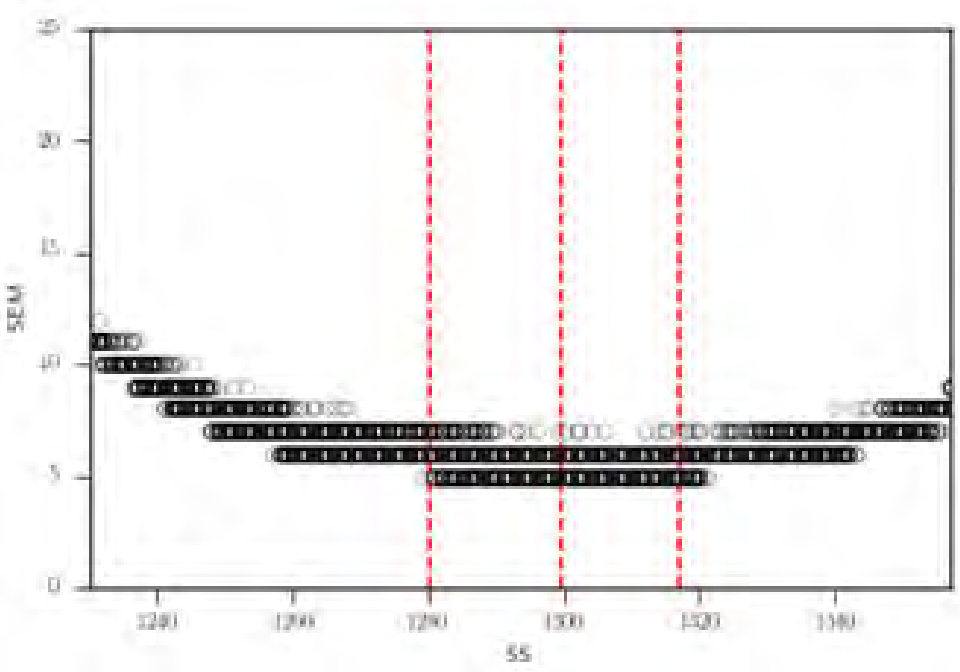


Figure 12-2. Conditional Standard Errors of Measurement for Overall Scale Scores, Grade 4 English Language Arts

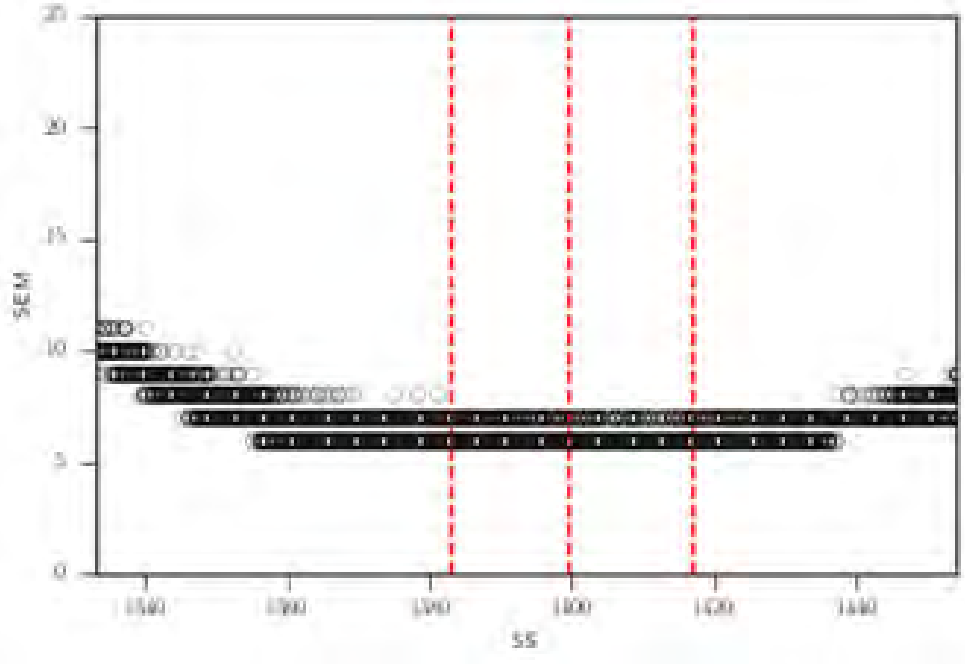


Figure 12-3. Conditional Standard Errors of Measurement for Overall Scale Scores, Grade 5 English Language Arts

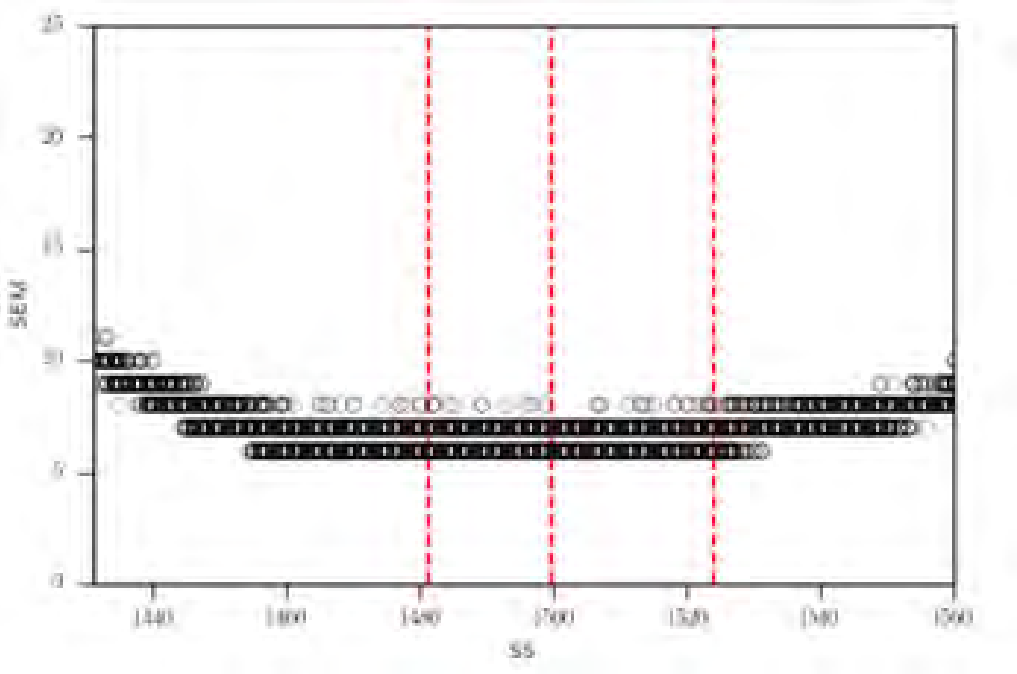


Figure 12-4. Conditional Standard Errors of Measurement for Overall Scale Scores, Grade 6 English Language Arts

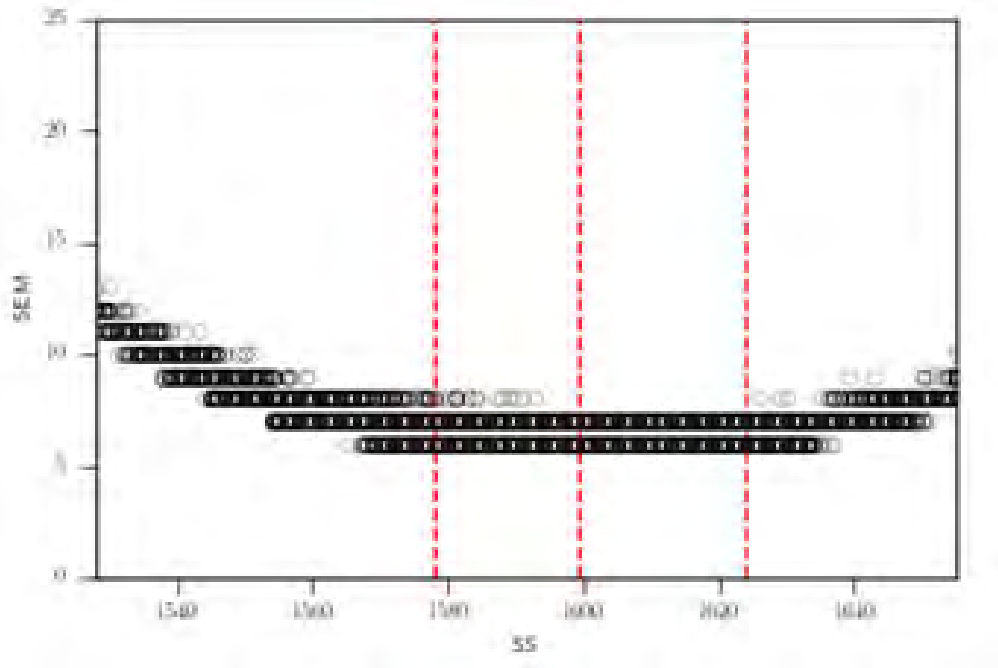


Figure 12-5. Conditional Standard Errors of Measurement for Overall Scale Scores, Grade 7 English Language Arts

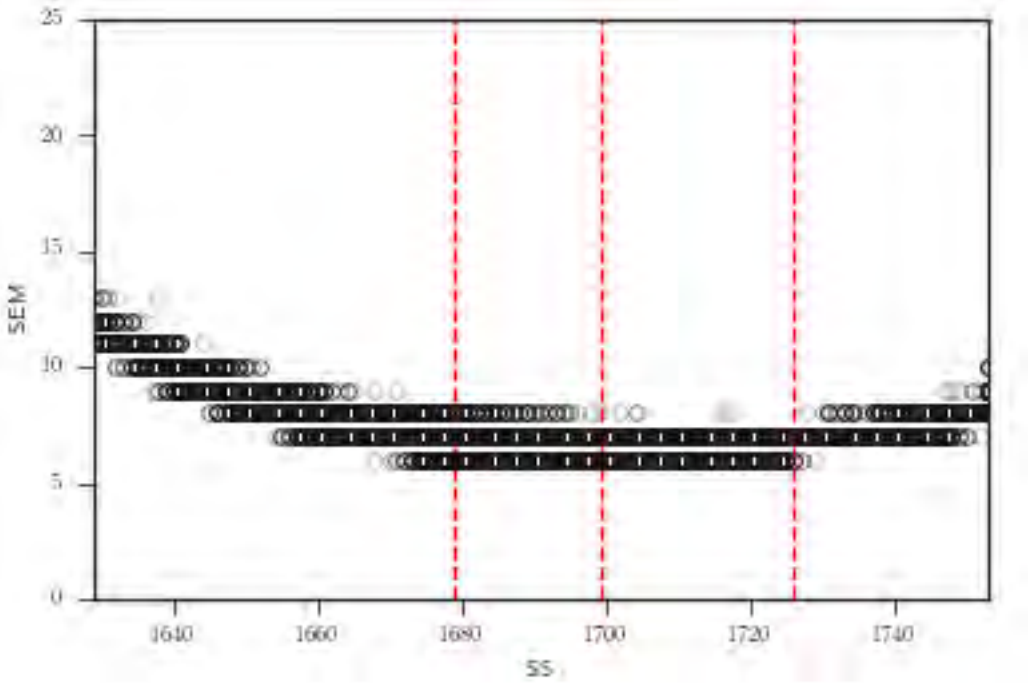


Figure 12-6. Conditional Standard Errors of Measurement for Overall Scale Scores, Grade 3 Mathematics

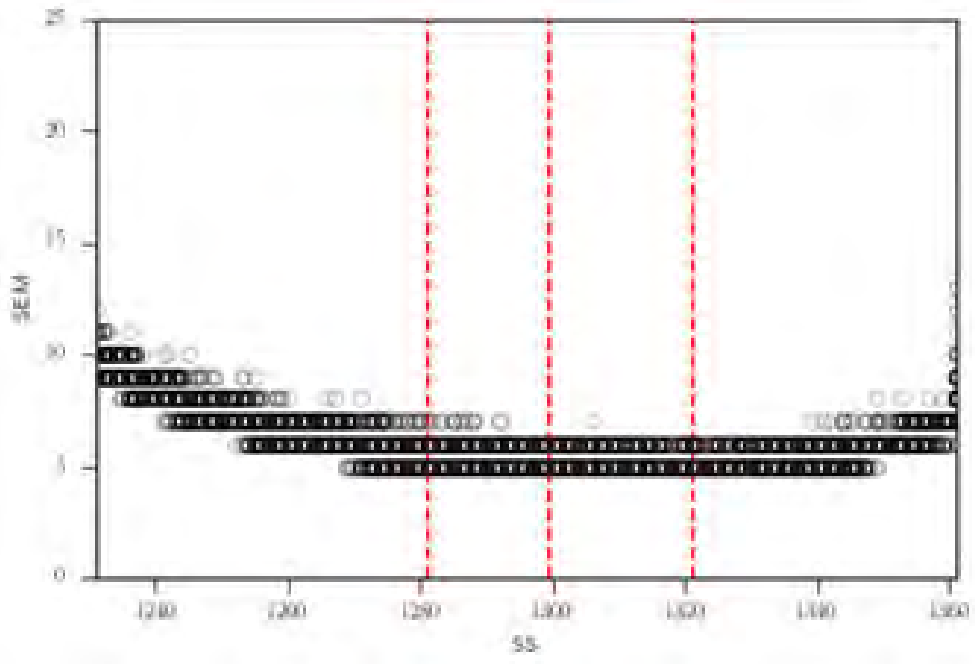


Figure 12-7. Conditional Standard Errors of Measurement for Overall Scale Scores, Grade 4 Mathematics

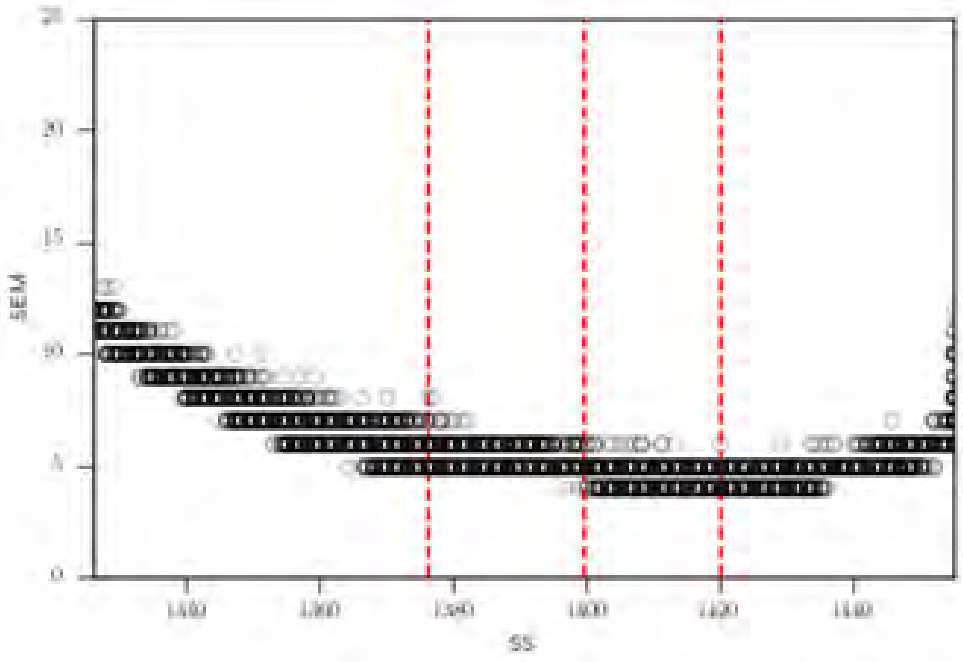


Figure 12-8. Conditional Standard Errors of Measurement for Overall Scale Scores, Grade 5 Mathematics

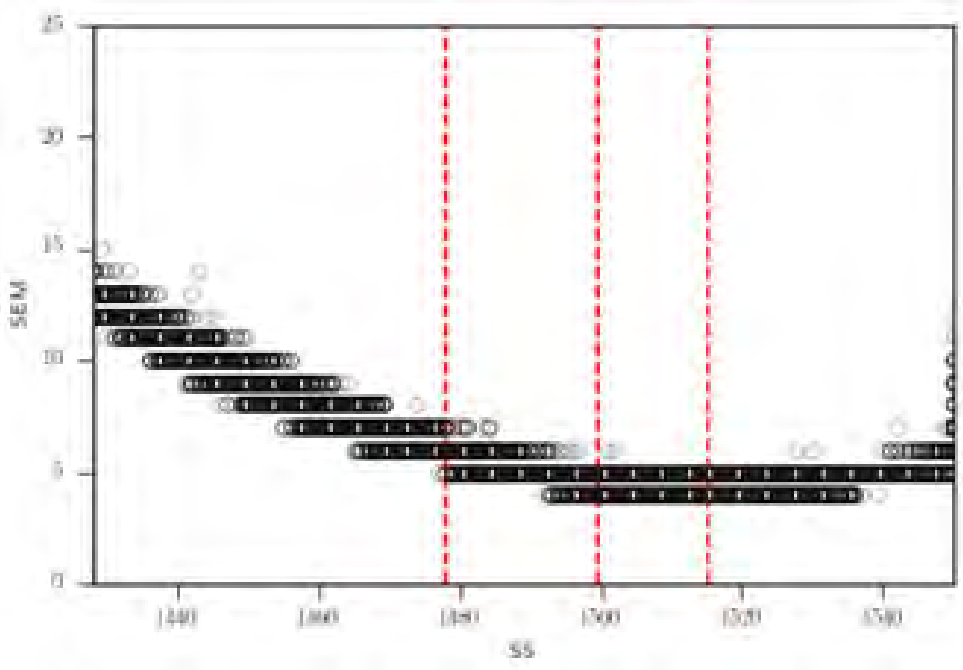


Figure 12-9. Conditional Standard Errors of Measurement for Overall Scale Scores, Grade 6 Mathematics

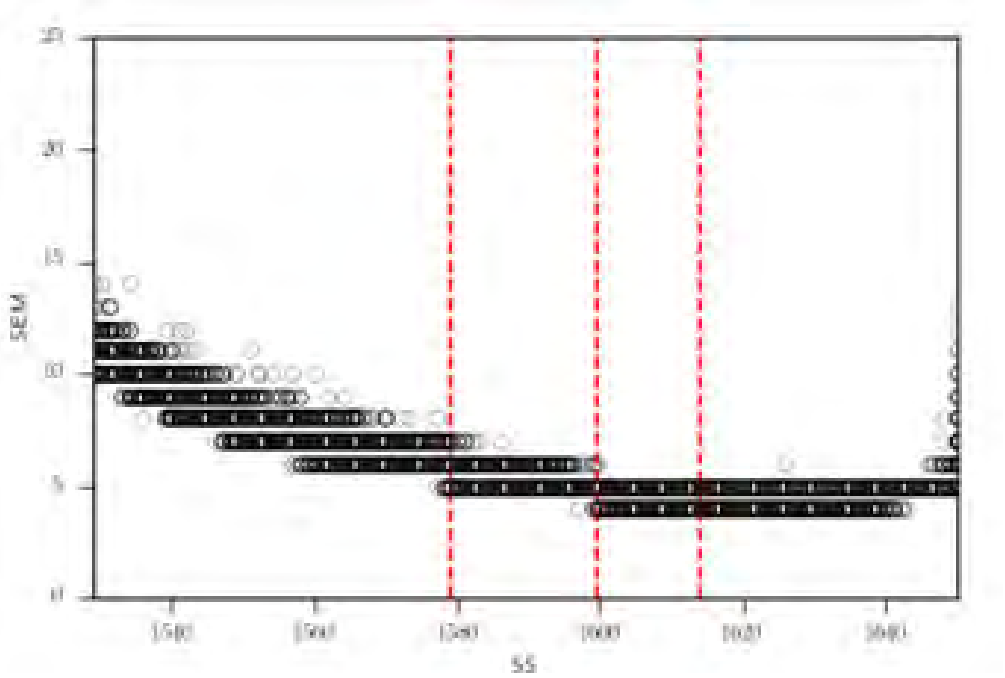
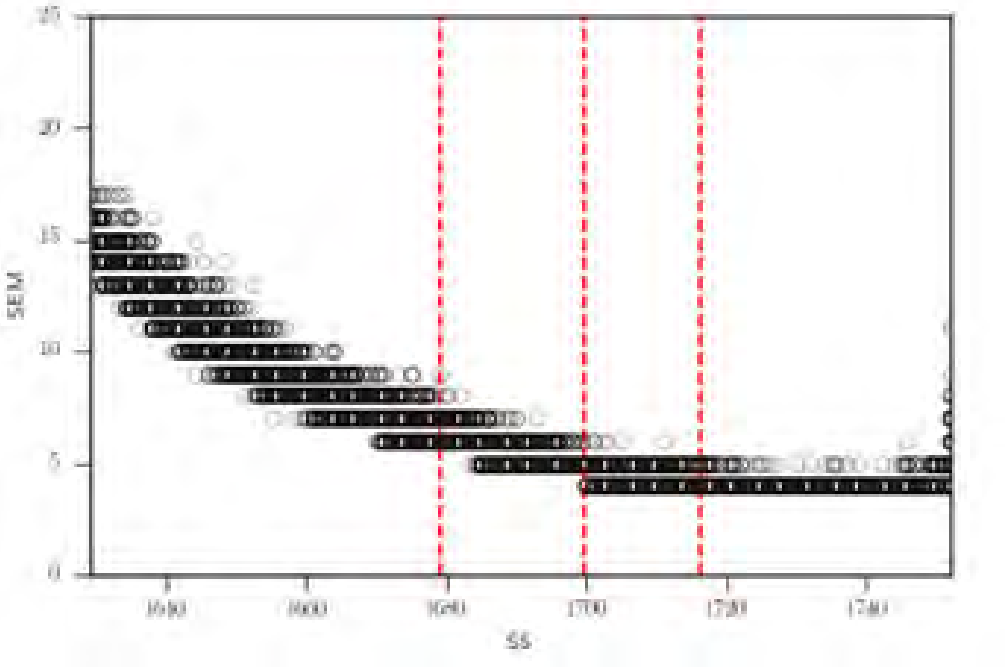


Figure 12-10. Conditional Standard Errors of Measurement for Overall Scale Scores, Grade 7 Mathematics



Smarter Balanced supports using fixed-form paper/pencil tests in schools that lack computer capacity or administering them to address potential religious concerns associated with using technology for assessments. Since the paper/pencil tests for ELA and mathematics consist of Smarter Balanced items, and there are few students who take the paper/pencil forms, DRC has chosen to be consistent with ELA and mathematics online counterparts by calculating the marginal reliability for those forms using Equation 12.6.

Table 12-9 shows the marginal reliability for the paper/pencil forms. As expected, overall estimated reliability coefficients are high and in the acceptable range for a large-scale, high-stakes test.

Table 12-9. Fixed-Form Marginal Reliability: ELA and Mathematics

Content Area	Grade	Number of Items per Form	Reliability	SEM
ELA	3	42	0.92	8.31
ELA	4	42	0.90	8.23
ELA	5	45	0.89	8.60
ELA	6	42	0.86	9.46
ELA	7	42	0.87	8.54
Mathematics	3	66	0.86	8.89
Mathematics	4	66	0.87	8.41
Mathematics	5	65	0.82	8.92
Mathematics	6	67	0.81	10.01
Mathematics	7	66	0.85	9.35

12.1.6 Reliability of Claims for ELA and Mathematics

Scale-score summary statistics (i.e., mean and standard deviation), marginal reliability coefficients, and mean CSEM were computed for each of the claims by grade and content area using M-STEP data. These statistics are presented in Tables 12-10 and 12-11 for ELA and mathematics, respectively. Reliability indices are a function of the number of test items. As expected, reliability coefficients are lower for a claim assessed by a small number of items compared to a claim assessed by a larger number of items. Consequently, the reliability for claims with larger CSEMs is lower than those with smaller CSEMs. These CSEMs are reported in the scale-score metric.

Table 12-10. Reliability, Mean, Standard Deviation, and Conditional Standard Error of Measurement (CSEM) of ELA Claims

Grade	Claim No.	Claim	Student *N* Count	Number of Items	Mean	Std. Dev.	Reliability	Mean CSEM
3	1	Reading	70,354	15-16	1294.74	27.46	0.84	10.91
3	2	Writing	70,354	13	1288.65	28.71	0.82	12.20
3	3	Listening	70,354	8-9	1296.65	36.39	0.61	22.72
3	4	Research	70,354	8	1289.29	33.77	0.75	17.00
4	1	Reading	70,795	15-16	1394.20	28.01	0.82	11.77
4	2	Writing	70,795	13	1391.13	28.54	0.83	11.65
4	3	Listening	70,795	8-9	1397.77	34.47	0.62	21.14
4	4	Research	70,795	8	1389.87	33.71	0.73	17.62
5	1	Reading	69,735	15-16	1495.82	29.13	0.82	12.28
5	2	Writing	69,735	13	1490.66	30.43	0.83	12.65
5	3	Listening	69,735	8-9	1497.81	35.46	0.64	21.37
5	4	Research	69,735	8	1492.10	32.47	0.77	15.44
6	1	Reading	68,066	15-16	1590.36	28.30	0.80	12.72
6	2	Writing	68,066	13	1588.02	28.87	0.79	13.38
6	3	Listening	68,066	8-9	1596.11	33.90	0.62	20.85
6	4	Research	68,066	8	1588.52	32.88	0.70	17.87
7	1	Reading	68,051	15-16	1694.91	27.08	0.79	12.33
7	2	Writing	68,051	13	1686.83	30.24	0.78	14.28
7	3	Listening	68,051	8-9	1696.30	33.15	0.62	20.37
7	4	Research	68,051	8	1689.24	33.37	0.69	18.43

Table 12-11. Reliability, Mean, Standard Deviation, and Conditional Standard Error of Measurement (CSEM) of Mathematics Claims

Grade	Claim No.	Claim	Student *N* Count	Number of Items	Mean	Std. Dev.	Reliability	CSEM
3	1	Concepts and Procedures	70,106	20	30.53	0.94	7.64	30.53
3	3	Communicating Reasoning	70,106	8	32.23	0.69	17.92	32.23
3	2 & 4	Problem Solving and Modeling and Data Analysis	70,106	8	32.68	0.62	20.02	32.68
4	1	Concepts and Procedures	70,575	20	27.47	0.93	7.10	27.47
4	3	Communicating Reasoning	70,575	8	31.59	0.67	18.22	31.59
4	2 & 4	Problem Solving and Modeling and Data Analysis	70,575	8	31.37	0.67	18.02	31.37
5	1	Concepts and Procedures	69,948	20	28.42	0.90	8.84	28.42
5	3	Communicating Reasoning	69,948	8	31.93	0.68	18.13	31.93
5	2 & 4	Problem Solving and Modeling and Data Analysis	69,948	8	34.45	0.49	24.64	34.45
6	1	Concepts and Procedures	68,173	20	26.69	0.92	7.46	26.69
6	3	Communicating Reasoning	68,173	8	30.19	0.56	19.99	30.19
6	2 & 4	Problem Solving and Modeling and Data Analysis	68,173	8	35.30	0.41	27.05	35.30
7	1	Concepts and Procedures	68,157	20	27.28	0.91	8.40	27.28
7	3	Communicating Reasoning	68,157	8	32.13	0.47	23.40	32.13
7	2 & 4	Problem Solving and Modeling and Data Analysis	68,157	8	35.72	0.41	27.36	35.72

12.1.7 Reliability, SEM, and CSEM for Science and Social Studies

Due to statistical abnormalities observed in the 2021 administration, results from online forms only are reported here. For both science and social studies, there are three online forms per grade. Tables 12-12 and 12-13 provide information on reliability (coefficient alpha) (see Equation 12.1) and SEM (see Equation 12.2) from the classical true score theory for science and social studies respectively by grade and form. For science, OP items differ slightly across the three online forms. For social studies, all OP items are the same across the three forms per grade. However, results for social studies are still reported by form per grade for two reasons: (1) conceptually, it makes more sense to report test-level results by form because each form represents one test, and (2) it shows variations of statistics across forms (if there are any) to inform related decisions (i.e., whether to combine online forms per grade for social studies) when computing classification accuracy and consistency.

As shown in Tables 12-12 and 12-13, the values of coefficient alpha across forms and grades for science range from 0.87 to 0.92, and those for social studies range from 0.85 to 0.88. Therefore, in general, based on coefficient alpha, M-STEP science and social studies tests have an acceptable degree of internal consistency. Moreover, very similar statistics across the three online forms per grade for social studies are observed. This supports the later decision to combine all three online forms per grade when examining classification accuracy and

consistency for social studies.

Table 12-12. Test-Level Descriptive Statistics by Form: Science Reliability and Standard Error of Measurement

Grade	*N* OP Items	Form	*N*	Reliability	SEM
5	38	1	23,457	0.87	2.55
5	39	2	23,512	0.88	2.58
5	39	3	23,515	0.88	2.60
8	40	1	23,991	0.89	2.58
8	37	2	24,113	0.87	2.53
8	38	3	24,105	0.88	2.52
11	42	1	18,949	0.92	2.68
11	43	2	18,942	0.90	2.71
11	42	3	18,939	0.92	2.66
11	3.04	2	23,709	0.86	3.02
11	38	3	34,240	0.89	2.75
11	38	2.75	621	0.89	2.76

Table 12-13. Test-Level Descriptive Statistics by Form: Social Studies Reliability and Standard Error of Measurement

Grade	*N* OP Items	Form	*N*	Reliability	SEM
5	45	1	23,643	0.86	38.04
5	45	2	23,692	0.896	3.04
5	45	3	23,709	0.85	3.05
8	44	1	24,211	0.87	3.03
8	44	2	24,251	0.88	3.00
8	44	3	24,418	0.87	2.713.02
11	38	1	18,920	0.88	2.715
11	38	2	18,769	0.88	2.74
11	38	3	18,807	0.88	42.75

Additionally, the CSEM was calculated for science and social studies. Related numerical information can be found in corresponding conversion tables reported in Chapter 8 (i.e., Tables 8-12 to 8-15). Graphical representations can be found in Figures 12-11 to 12-13 for science and in Figures 12-14 to 12-16 for social studies. According to these graphs, the CSEMs are not the lowest at the proficient cut scores (i.e., the vertical line, which indicates the cut between Level 2 and Level 3). However, the ability ranges from -2 to 2 in all graphs appear to have low SE. Note, however, that the graphs for science are made using the post-administration estimated item parameters, while those for social studies are made using the item parameters stored in the item bank.

Figure 12-11. Test (Conditional) Standard Error for Science Grade 5 by Form

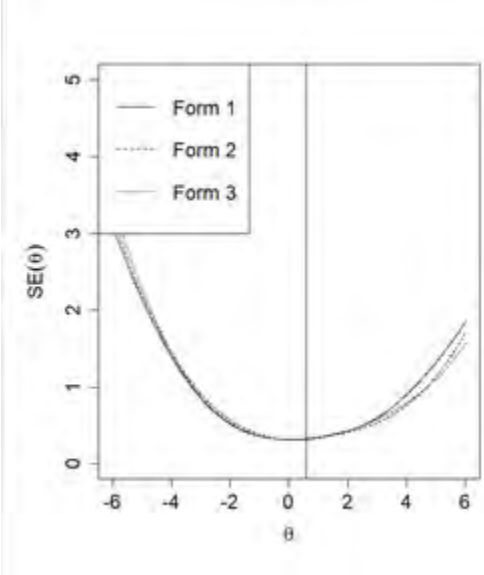


Figure 12-12. Test (Conditional) Standard Error for Science Grade 8 by Form

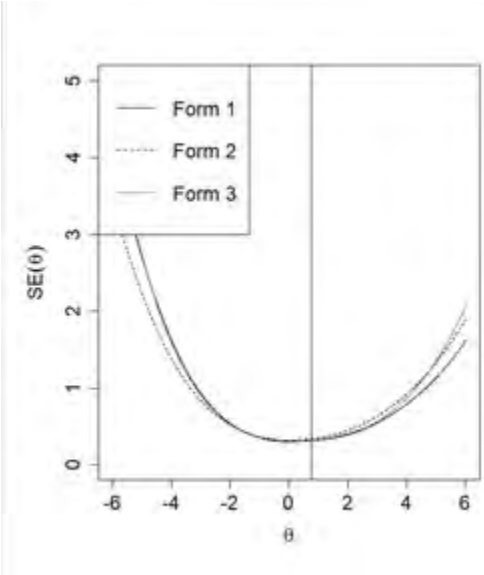


Figure 12-13. Test (Conditional) Standard Error for Science Grade 11 by Form

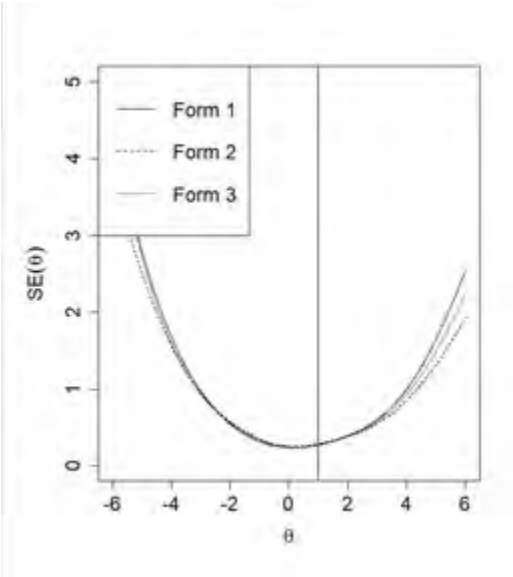


Figure 12-14. Test (Conditional) Standard Error for Social Studies Grade 5

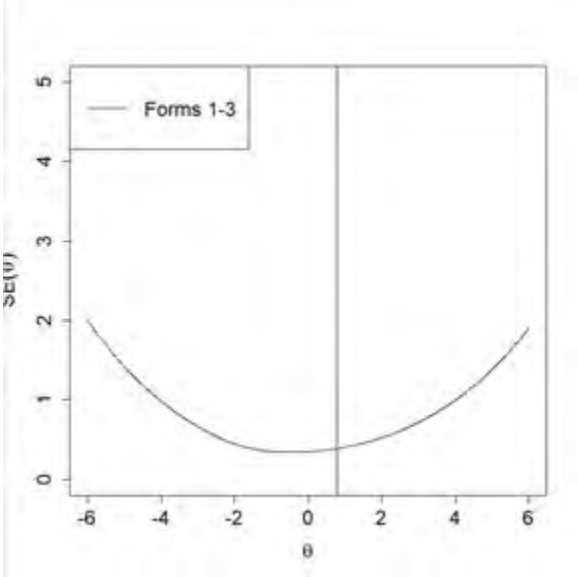


Figure 12-15. Test (Conditional) Standard Error for Social Studies Grade 8

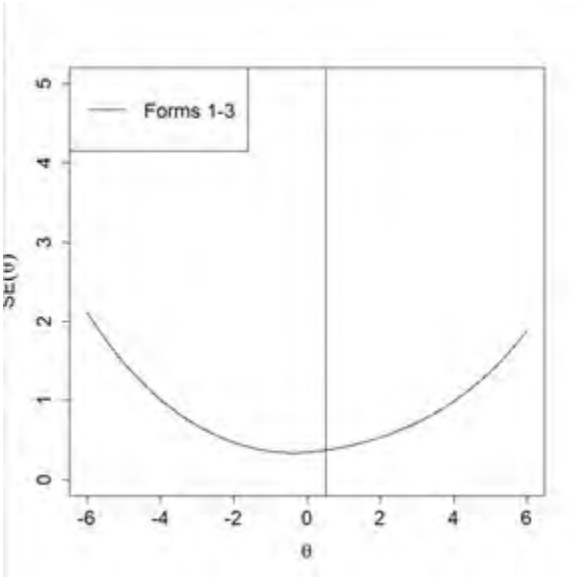
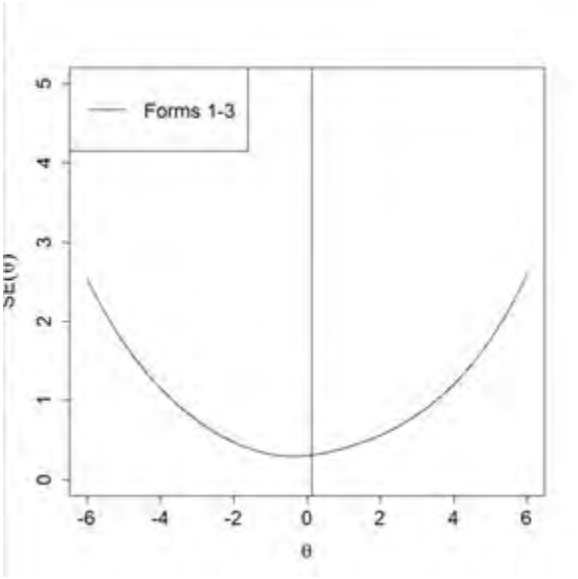


Figure 12-16. Test (Conditional) Standard Error for Social Studies Grade 11



12.2 Classification Accuracy and Consistency

Based on M-STEP scale scores, student performance in corresponding content areas is classified into one of the four performance levels (i.e., Advanced, Proficient, Partially Proficient, and Not Proficient). Among these, the most important classification is between the Proficient and Partially Proficient categories (i.e., the proficient or not cut). While it is always important to know the reliability of student scores in any examination, it is also important to assess the quality of the decisions, especially regarding the proficient or "not cut" categories. Such evaluation was performed through estimation of the probabilities of accurate and consistent classification of student performance.

Classification accuracy is defined as the extent to which the actual classifications of examinees agree with classifications that would be made on the basis of their true scores (Livingston & Lewis, 1995). It is common to estimate classification accuracy by utilizing a psychometric model to find true scores corresponding to observed scores. The magnitude of classification accuracy measures is influenced by key features of the test design, including the number of items, the number of cut scores, reliability, and associated SEM or CSEM.

12.2.1 ELA and Mathematics

To calculate classification accuracy for each student in ELA and mathematics, the calculations used by Smarter Balanced (see the *Smarter Balanced 2017-18 Technical Report*, 2018). For each student, the likelihood of scoring in each performance level is calculated. The student likelihoods are used to calculate the accuracy by level and the overall accuracy.

Tables 12-14 through 12-16 provide the classification accuracy for ELA and mathematics. The overall classification accuracy ranges from 0.82 to 0.86, and the accuracy by performance level ranges from 0.70 to 0.92. These results suggest that accurate performance level classifications for ELA and mathematics are being made for students in Michigan based on M-STEP. Note that any inconsistencies between the expected values and accuracy by level or overall accuracy are due to computation rounding error.

Table 12-14. Overall Classification Accuracy: ELA and Mathematics

Content Area	Grade	*N*	Overall Accuracy
ELA	3	70,817	0.83
ELA	4	71,348	0.82
ELA	5	70,924	0.83
ELA	6	69,395	0.83
ELA	7	69,587	0.82
Mathematics	3	70,467	0.85
Mathematics	4	70,946	0.85
Mathematics	5	70,417	0.86
Mathematics	6	69,051	0.85
Mathematics	7	69,364	0.85

Table 12-15. Classification Accuracy: ELA

Grade	Assigned Level	*N*	Observed Proportion	Expected Level 1	Expected Level 2	Expected Level 3	Expected Level 4	Accuracy by Level
3	1	22,901	0.32	0.30	0.02	0.00	0.00	0.92
3	2	17,559	0.25	0.03	0.19	0.03	0.00	0.76
3	3	15,520	0.22	0.00	0.03	0.16	0.03	0.75
3	4	14,837	0.21	0.00	0.00	0.03	0.18	0.87
4	1	24,908	0.35	0.32	0.03	0.00	0.00	0.93
4	2	14,866	0.21	0.03	0.15	0.03	0.00	0.70
4	3	15,894	0.22	0.00	0.03	0.16	0.03	0.74
4	4	15,680	0.22	0.00	0.00	0.03	0.19	0.87
5	1	24,482	0.35	0.32	0.03	0.00	0.00	0.92
5	2	15,413	0.22	0.03	0.16	0.03	0.00	0.73
5	3	19,323	0.27	0.00	0.03	0.22	0.03	0.80
5	4	11,706	0.17	0.00	0.00	0.03	0.14	0.83
6	1	23,460	0.34	0.30	0.03	0.00	0.00	0.90
6	2	19,178	0.28	0.04	0.21	0.03	0.00	0.76
6	3	18,847	0.27	0.00	0.03	0.22	0.02	0.82
6	4	7,910	0.11	0.00	0.00	0.02	0.09	0.83
7	1	21,565	0.31	0.28	0.03	0.00	0.00	0.90
7	2	19,683	0.28	0.04	0.21	0.04	0.00	0.74
7	3	21,138	0.30	0.00	0.04	0.25	0.02	0.81
7	4	7,211	0.10	0.00	0.00	0.02	0.08	0.82

Table 12-16. Classification Accuracy: Mathematics

Grade	Assigned Level	N	Observed Proportion	Expected Level 1	Expected Level 2	Expected Level 3	Expected Level 4	Accuracy by Level
3	1	22,743	0.32	0.30	0.02	0.00	0.00	0.93
3	2	17,853	0.25	0.03	0.19	0.03	0.00	0.77
3	3	18,252	0.26	0.00	0.03	0.21	0.02	0.82
3	4	11,619	0.16	0.00	0.00	0.02	0.14	0.88
4	1	21,076	0.30	0.27	0.03	0.00	0.00	0.91
4	2	23,984	0.34	0.03	0.28	0.03	0.00	0.82
4	3	16,694	0.24	0.00	0.03	0.19	0.02	0.82
4	4	9,210	0.13	0.00	0.00	0.02	0.11	0.87
5	1	29,879	0.42	0.39	0.03	0.00	0.00	0.93
5	2	19,697	0.28	0.03	0.22	0.03	0.00	0.80
5	3	11,578	0.16	0.00	0.02	0.13	0.01	0.79
5	4	9,263	0.13	0.00	0.00	0.02	0.12	0.88
6	1	26,954	0.39	0.36	0.03	0.00	0.00	0.93
6	2	22,346	0.32	0.04	0.26	0.03	0.00	0.79
6	3	11,525	0.17	0.00	0.03	0.13	0.02	0.76
6	4	8,226	0.12	0.00	0.00	0.01	0.10	0.87
7	1	27,338	0.39	0.36	0.04	0.00	0.00	0.91
7	2	19,568	0.28	0.04	0.22	0.03	0.00	0.78
7	3	13,587	0.20	0.00	0.02	0.16	0.02	0.80
7	4	8,871	0.13	0.00	0.00	0.02	0.11	0.88

12.2.2 Social Studies

For science and social studies, each test under consideration consists of equally weighted and dichotomously scored items only, and procedures from Hanson and Brennan (1990) were applied to derive classification accuracy and classification consistency measures. Moreover, the definitions for accuracy and consistency of decisions presented in Young and Yoon (1998) were adopted. Specifically, the *accuracy* of decisions is the extent to which decisions would agree with those made if each student could somehow be tested with all possible forms of an examination; and the *consistency* of decisions is the extent to which decisions would agree with those made if each student had taken a parallel form of the examination, equal in difficulty and covering the same content as the form the student actually took (Young & Yoon, 1998). These ideas are shown schematically in Figures 12-14 and 12-15 using M-STEP social studies as an example. In both figures, "Achieves Proficient Status" refers to the proficient and above category on the total raw score, and "Does Not Achieve Proficient Status" refers to all categories below the proficient cut.

Figure 12-14. Classification Accuracy

		Decision made on a form actually taken	**Decision made on a form actually taken**
		Does Not Achieve Proficient Status	Achieves Proficient Status
"True status" based on all-forms average	Does Not Achieve Proficient Status	Correct Classification	Misclassification
	Achieves Proficient Status	Misclassification	Correct Classification

Note. Adapted from Young and Yoon (1998).

Figure 12-15. Classification Consistency

		Decision made on the 2nd form taken	**Decision made on the 2nd form taken**
		Does Not Achieve Proficient Status	Achieves Proficient Status
Decision made on the 1st form taken	Does Not Achieve Proficient Status	Consistent Classification	Inconsistent Classification
	Achieves Proficient Status	Inconsistent Classification	Consistent Classification

Note. Adapted from Young and Yoon (1998).

In Figure 12-14, accurate classification occurs when the decision made on the basis of the form actually taken agrees with the decision made on the basis of the theoretical "all-forms" average. Misclassification occurs, for example, when a student who "Does Not Achieve Proficient Status" based on his or her "all-forms" average is classified incorrectly as "Achieves Proficient Status."

Consistent classification occurs (see Figure 12-15) when two possible alternate forms agree on the classification of a student as either "Achieves Proficient Status" or "Does Not Achieve Proficient Status," whereas inconsistent classification occurs when the decisions made by the forms differ.

The analyses made use of the techniques outlined and implemented by Hanson and Brennan (1990) and Brennan (2004). Specifically, a four-parameter beta distribution was used to model the true score, and Lord's (1965) two-term approximation to the compound binomial distribution was used to model the conditional error. The BB-CLASS software (Version 1.1) was used to complete these analyses (Brennan, 2004).

Tables 12-17 and 12-18 present the analysis results of decision accuracy and consistency for classifying students at each grade level per test form as "Achieves Proficient Status" or "Does Not Achieve Proficient Status" based on their M-STEP science and social studies total raw scores, respectively. As mentioned above, the three online forms for social studies were combined (see Table 12-18) due to the fact that all OP items are exactly the same across these forms and the raw score statistics are very similar across forms (see Table 8-7).

In addition to classification accuracy and consistency, Tables 12-17 and 12-18 provide information on the proportion of false positives and false negatives (i.e., the two types of misclassifications). The false positive is the type of misclassification in which students should be classified in the "Does Not Achieve Proficient Status" category based on their "all-forms" average but end up in the "Achieves Proficient Status" category based on the actual form. The false negative is just the opposite: students who should be in the "Achieves Proficient Status" category based on their "all-forms" average end up in the "Does Not Achieve Proficient Status" category based on the actual form. The sum of the proportion values for accuracy, false positives, and false negatives should be equal to 1.00. Due to rounding, however, the sum of these values in the table may not be equal to 1.00.

As shown in Tables 12-17 and 12-18, the proportion of false positives (i.e., labeling a student as proficient when he or she should be categorized as not proficient) ranged from 0.04 to 0.06 for both science and social studies across grade levels. Moreover, the proportion of false negatives (i.e., labeling a student as not proficient when he or she should be categorized as proficient) ranged from 0.02 to 0.03 for both science and social studies across grade levels.

The last column in Tables 12-17 and 12-18 report the proportion of students predicted by the model that would be assigned to the same category (i.e., either proficient or not proficient) if an alternate form of M-STEP social studies assessments (with similar content coverage and item difficulty as the actual form) had been administered. These values range from 0.87 to 0.93 for science and 0.87 to 0.92 for social studies, across grade levels.

Table 12-17. Decision Accuracy and Consistency on M-STEP Science Total Raw Score by Grade and Form

Grade	Form	Accuracy	False Positive	False Negative	Consistency
5	1	0.91	0.06	0.03	0.87
5	2	0.91	0.06	0.03	0.88
5	3	0.91	0.06	0.03	0.88
8	1	0.93	0.05	0.02	0.90
8	2	0.91	0.06	0.03	0.88
8	3	0.92	0.05	0.03	0.89
11	1	0.94	0.04	0.02	0.92
11	2	0.95	0.04	0.02	0.93
11	3	0.95	0.04	0.02	0.93

Table 12-18. Decision Accuracy and Consistency on M-STEP Social Studies Total Raw Score by Grade and Form

Grade	Form	Accuracy	False Positive	False Negative	Consistency
5	1-3	0.94	0.04	0.02	0.92
8	1-3	0.92	0.05	0.02	0.89
11	1-3	0.91	0.06	0.03	0.87

12.3 Assumption of Unidimensionality

Another measure of construct validity is unidimensionality. One of the underlying assumptions of the IRT models used to scale M-STEP content area tests is that the items being calibrated are unidimensional; that is, items comprising M-STEP in each grade/content area measure a single construct. For example, mathematics items should measure mathematics ability and not reading skills. Standard 1.13 of the AERA, APA, & NCME (2014) *Standards* states the following:

> If the rationale for a test score interpretation for a given use depends on premises about the relationships among test items or among parts of the test, evidence concerning the internal structure of the test should be provided. (p. 26–27)

12.3.1 ELA and Mathematics

Smarter Balanced examined the unidimensionality for the Smarter Balanced/M-STEP ELA and mathematics assessments. Based on the findings of the dimensionality study, Smarter Balanced found that the use of the unidimensional item response theory (IRT) model and test design was appropriate. A detailed discussion and the results of the dimensionality study can be found in the online Smarter Balanced 2013–2014 Technical Report (2016).[1]

[1] https://portal.smarterbalanced.org/library/en/2013-14-technical-report.pdf

12.3.2 Science and Social Studies

For M-STEP science and social studies, MDE used two sets of information to evaluate the unidimensionality assumption with OP items only. The first set was an exploratory factor analysis (EFA) using the Mplus software with the WLSMV[2] estimator. Barendse, Oort, and Timmerman (2015) found that WLSMV is the preferred estimation method and is recommended to rely on the Root Mean Squared Error of Approximation (RMSEA) index (in which values less than 0.05 are desired) if the primary interest is in major factors. The second set of information is the eigenvalues provided by Mplus based on the sample tetrachoric correlation matrix (i.e., same as a PCA analysis using that matrix). For PCA results, the magnitude of the first and second eigenvalues are examined. Both the eigenvalues-greater-than-one rule and the scree plot approach are considered. The RMSEA values for one-factor EFA models and the first two eigenvalues from each PCA model are reported in Table 12-19.

As shown in Table 12-19, the dimensionality assessment for science and social studies is evaluated by form at each grade level.[3] Both the EFA and PCA results failed to reject the unidimensionality assumption, which is a supporting piece of evidence for the use of unidimensional IRT models at each grade for science and social studies.

Table 12-19. RMSEA from 1-Factor EFA and the First Two Eigenvalues from PCA

Content Area	Grade	Form	RMSEA (1-Factor EFA)	PCA First Eigenvalue	PCA Second Eigenvalue
Science	5	1	0.025	12.221	1.724
Science	5	2	0.024	12.132	1.638
Science	5	3	0.023	12.434	1.539
Science	8	1	0.019	13.226	1.374
Science	8	2	0.017	11.843	1.337
Science	8	3	0.018	13.016	1.361
Science	11	1	0.026	17.035	1.854
Science	11	2	0.025	15.377	1.887
Science	11	3	0.027	16.332	1.906
Social Studies	5	1-3	0.017	9.876	1.589
Social Studies	8	1–3	0.019	10.502	1.660
Social Studies	11	1-3	0.019	10.911	1.463

[2] "WLSMV-weighted least square parameter estimates using a diagonal weight matrix with standard errors and mean- and variance-adjusted chi-square test statistic that use a full weight matrix" (Muthén and Muthén, 2012, p. 603)

[3] Note that for social studies, all OP items are the same across forms 1–3 at each grade. However, OP items differ across forms for science.

12.4 Validity Evidence

The *Standards for Educational and Psychological Testing* defines validity as "the degree to which evidence and theory support the interpretations of test scores for proposed uses of tests. Validity is, therefore, the most fundamental consideration in developing tests and evaluating tests" (AERA, APA, & NCME, 2014, p. 11). The purpose of test score validation is not to validate the test itself but to validate interpretations of the test scores for particular purposes or uses. Test score validation is not a quantifiable property but an ongoing process, beginning at initial conceptualization and continuing throughout the entire assessment process. Every aspect of an assessment provides evidence that either supports or challenges its validity, including design, content specifications, item development, psychometric quality, and inferences made from the results.

The validity of score interpretations for M-STEP is supported by multiple sources of evidence. Chapter 1 of the *Standards for Educational and Psychological Testing* (AERA, APA, & NCME, 2014) specifies the following sources of validity evidence that are important to gather and document in order to support validity claims for an assessment:

- Test content
- Response processes
- Internal test structure
- Relation to other variables
- Consequences of test use

It is important to note that these categories are not mutually exclusive. One source of validity evidence often falls into more than one category, as discussed in more detail in this section. The process of gathering evidence of the validity of score interpretations is best characterized as ongoing throughout test development, administration, scoring, reporting, and beyond. As the technical report has progressed, it has covered the different phases of the testing cycle. Each part of the technical report has detailed the procedures and processes applied in Michigan and the corresponding results. Each part has also highlighted the meaning and significance of the procedures, processes, and results in terms of validity and their relationship to specific sections of the *Standards*. The current section now addresses these final issues in validity: test content, response processes, internal test structure, relation to other variables, and consequences of test use.

12.4.1 Minimization of Construct-Irrelevant Variance and Construct Underrepresentation

Minimization of construct-irrelevant variance and construct underrepresentation is addressed in the following steps of the test development process: 1) specification, 2) item writing, 3) review, 4) field-testing, 5) test construction, and 6) item calibration. See Chapter 3 for more information on steps 1 through 5 and Chapter 8 for more information on calibration.

Construct-irrelevant variance refers to error variance that is caused by factors unrelated to the constructs measured by the test. For example, when tests are not administered under standardized conditions (e.g., one administration may be timed, but another administration may not be timed), differences in student performance may be partially associated with the different

administration conditions. Careful specification of content and review of the items representing that content are the first steps in minimizing construct-irrelevant variance. Then, empirical evidence, especially item-level data, is used to infer construct irrelevance. For additional details with respect to ELA and mathematics, please see the *Smarter Balanced 2017–2018 Technical Report* (2018).

Construct underrepresentation occurs when the content of the assessment does not reflect the full range of content that the assessment is expected to cover. Specification and review, in which test blueprints are developed and reviewed, are primary steps in the development process and are designed to ensure that content is appropriately represented.

12.4.2 Evidence Based on Test Content

According to the *Standards*, evidence based on test content "can include logical or empirical analyses of the adequacy with which the test content represents the content domain and of the relevance of the content domain to the proposed interpretation of test scores" (AERA, APA, & NCME, 2014, p. 14). Documentation of the content domains, how the content is sampled and represented, and alignment of items to the content were discussed in Chapter 3. The documentation showed how test specification documents derived from earlier developmental activities guided the final phases of test development and ultimately yielded the test forms that were administered to students.

Chapter 3 also showed that the participation of Michigan educators in that process provided a solid rationale for having confidence in the content and design of Michigan M-STEP as a tool from which to derive valid inferences about Michigan student performance. Particularly for social studies, use of classroom teachers brought into the process the enacted curriculum perspective and the written curriculum perspective. The test development process and the involvement of Michigan educators in that process formed an important part of the validity of the entire Michigan M-STEP assessment.

12.4.3 Evidence Based on Response Processes

According to the *Standards*, evidence based on response processes "generally comes from analyses of individual responses" (AERA, APA, & NCME, 2014, p. 15). Hence, the best opportunity for detecting and eliminating potential sources of invalidity occurs during the test development process (U.S. Department of Education, 2015). As indicated in Chapter 3, all items for M-STEP were carefully reviewed through multiple cycles of the item development process for issues related to ambiguity, bias, sensitivity, irrelevance, and inaccuracy to ensure a fit between the construct and the nature of the actual performance.

12.4.4 Evidence Based on Internal Test Structure

According to the *Standards*, evidence based on internal structure reflects "the degree to which the relationships among test items and test components conform to the construct on which the proposed test score interpretations are based" (AERA, APA, & NCME, 2014, p. 16). Three important sources of internal structure evidence have been addressed within this technical document: measurement invariance, dimensionality, and reliability. Evidence of measurement invariance is provided in Chapter 11 by using DIF. Additional support for measurement invariance can be found in Section 12.2.5, which reports the subgroup reliability estimates. The

dimensionality investigation mentioned in Section 12.3 also provides supporting evidence of the internal test structure.

12.4.5 Evidence Based on Relations to Other Variables

Convergent validity is a subtype of construct validity that can be estimated by the extent to which measures of constructs that theoretically should be related to each other are, in fact, observed as related to each other. Analyses of the internal structure of a test can indicate the extent to which the relationships among test items conform to the construct the test purports to measure. For example, M-STEP mathematics test is designed to measure a single overall construct—mathematics achievement. Therefore, the items comprising the M-STEP mathematics test should measure only mathematics.

For M-STEP assessments,[4] this technical report summarizes additional statistics that contribute to construct validity, reliability—as reported previously in this chapter and Chapter 8—and item fit. The internal consistency coefficient reported above is a measure of item homogeneity. For a group of items to be homogeneous, they must measure the same construct (construct validity) or represent the same content domain (content validity). Because IRT models were used to calibrate test items and to report student scores, item fit is also relevant to construct validity. The extent to which test items function as the IRT model prescribes is relevant to the validation of test scores. Additional evidence to support construct validity is examined by the correlations between the claim scores for ELA and mathematics in the next section.

12.4.6 Correlations among Claims as Evidence of Convergent Validity

In this section, the strength of the interrelationships among the claims are reported by computing the correlations between them. Two types of correlations are reported here: the uncorrected Pearson product-moment (PPM) correlation coefficients and the PPM corrected for attenuation (CAPPM).

AERA, APA, & NCME (2014) Standard 1.21 states the following:

> When statistical adjustments, such as those for restriction of range or attenuation, are made, both adjusted and unadjusted coefficients, as well as the specific procedure used, and all statistics used in the adjustment, should be reported. Estimates of the construct-criterion relationship that remove the effects of measurement error on the test should be clearly reported as adjusted estimates. (p. 29)

We can correct for the attenuation of the PPM statistically using Spearman's formula:

$$CAPPM = \frac{r_{xy}}{\sqrt{r_{xx} r_{yy}}} \quad (12.9)$$

where r_{xy} is the PPM between two claims, r_{xx} is the reliability of one of those claims, and r_{yy} is the reliability for the other claim.

[4] For ELA and mathematics, not all psychometric characteristics are provided in this report. Additional details can be found in the Smarter Balanced Technical Reports (2016 - 2018).

Tables 12-20 and 12-29 report the PPM and CAPPM described above. The PPM among the claim scores is presented below the diagonal portion of the matrix, and the CAPPM is presented above the diagonal portion of the matrix in each table.

The uncorrected PPM in Tables 12-20 and 12-21 should be interpreted in the context of the reliability coefficient. In general, it is expected to see lower PPM coefficients between variables that are less reliable. In most cases, the PPM coefficients show that performance on one claim is moderately related to performance on another claim within the same grade and content area. In cases where there is a limited number of items per claim, caution should be used when comparing the PPM coefficients measuring the relationships between claims to those measuring the relationships between content areas.). We expect to see a more modest relationship (smaller correlation coefficients) reported between the claims as a consequence of the lower number of items measuring each of the reporting categories. The PPM between two claim scores may be artificially low because of measurement error.

Across all tables, the CAPPM indicates strong relationships between the claims. In some cases, the CAPPM is greater than 1.00. “Disattenuated values greater than 1.00 indicate that measurement error is not randomly distributed” (Schumacker, 1996). The strong relationships suggested by the CAPPM in Tables 12-20 and 12-21 are further evidence of the validity of the test construct. Since the overall content area is composed of the claim scores, and the content area is expected to measure a single dimension, it is expected that these claim scores are also highly related.

Table 12-20. Uncorrected Correlation Coefficient (below Diagonal) and Corrected Correlation Coefficient (above Diagonal) among Claims: English Language Arts

Grade	Claim No.	Claim	Number of Items	1	2	3	4
3	1	Reading	15-16		0.94	0.96	0.90
3	2	Writing	13	0.78		0.92	0.91
3	3	Listening	8-9	0.69	0.65		0.90
3	4	Research	8	0.72	0.71	0.61	
4	1	Reading	15-16		0.93	0.93	0.89
4	2	Writing	13	0.77		0.89	0.86
4	3	Listening	8-9	0.67	0.64		0.86
4	4	Research	8	0.69	0.67	0.58	
5	1	Reading	15-16		0.93	0.95	0.92
5	2	Writing	13	0.77		0.91	0.90
5	3	Listening	8-9	0.68	0.66		0.90
5	4	Research	8	0.73	0.72	0.63	
6	1	Reading	15-16		0.94	0.96	0.92
6	2	Writing	13	0.74		0.93	0.91
6	3	Listening	8-9	0.67	0.65		0.91
6	4	Research	8	0.69	0.67	0.60	
7	1	Reading	15-16		0.94	0.96	0.94
7	2	Writing	13	0.74		0.92	0.91
7	3	Listening	8-9	0.68	0.64		0.92
7	4	Research	8	0.70	0.67	0.61	

Table 12-21. Uncorrected Correlation Coefficient (below Diagonal) and Corrected Correlation Coefficient (above Diagonal) among Claims: Mathematics

Grade	Claim No.	Claim	Number of Items	1	3	2 & 4
3	1	Concepts and Procedures	20			0.91
3	3	Communicating Reasoning	8	0.73		
3	2 & 4	Problem Solving and Modeling and Data Analysis	8	0.73		0.63
4	1	Concepts and Procedures	20			0.92
4	3	Communicating Reasoning	8	0.73		
4	2 & 4	Problem Solving and Modeling and Data Analysis	8	0.73		0.63
5	1	Concepts and Procedures	20			0.94
5	3	Communicating Reasoning	8	0.74		
5	2 & 4	Problem Solving and Modeling and Data Analysis	8	0.68		0.61
6	1	Concepts and Procedures	20			0.94
6	3	Communicating Reasoning	8	0.68		
6	2 & 4	Problem Solving and Modeling and Data Analysis	8	0.71		0.55
7	1	Concepts and Procedures	20			0.98
7	3	Communicating Reasoning	8	0.64		
7	2 & 4	Problem Solving and Modeling and Data Analysis	8	0.65		0.50

12.4.7 Divergent (Discriminant) Validity

Measures of different constructs should not be highly correlated with each other. Divergent validity is a subtype of construct validity that can be assessed by the extent to which measures of constructs that theoretically should not be related to each other are, in fact, observed as not related to each other. Typically, correlation coefficients among measures of unrelated or distantly related constructs are examined in support of divergent validity.

To assess the divergent validity of M-STEP, correlations were computed between the ELA and mathematics scale scores for students who took both assessments. These correlation results are shown in Table 12-22. The correlation coefficients ranged from 0.77 (between ELA and mathematics in grade 5) to 0.79 (between ELA and mathematics in grades 6 and 7). The correlation coefficients suggest that individual student scores for ELA and mathematics are highly related. Despite high correlations, the tests are not perfectly related to each other, suggesting that different constructs are being tapped; however, the test scores do appear as highly related to one another, suggesting they may be tapping into a similar knowledge base or general underlying ability.

Table 12-22. Inter-correlation of ELA and Mathematics Scale Scores

Grade	Inter-Correlation
3	0.78
4	0.78
5	0.76
6	0.78
7	0.77

12.4.8 Evaluation of Item Exposure for CAT ELA and Mathematics

Controlling item exposure is of concern with CAT administrations, which impacts the validity of the interpretation of the text scores. Overexposed items could be a threat to validity because students may become familiar with the items over time and, thus, decrease the difficulty of the item, which would impact the ability estimate (Georgiadou, Triantafillou, & Economides, 2007). Item exposure rates were obtained using all completed, online, adaptive tests for which item data were available. The exposure rate for a given item is the proportion of tests (in the grade and content area) on which the item appeared.

Table 12-23 presents a summary of the item exposure results for ELA and mathematics. Within each grade, the table presents the number of items in the OP pool (N) and various descriptive statistics, including the mean, standard deviation (SD), range (Min, Max), and median of the observed exposure rates. Table 12-23 shows that, on average, the same item appeared in 5% of the grade 3 tests; in other words, 5% of grade 3 examinees saw the same item. As a rule of thumb, Smarter Balanced attempts to maintain a maximum exposure rate of 25% (meaning that 25% of examinees will see the same item). Table 12-23 shows that the mean and median exposure rates for ELA and mathematics CAT items are well below 25%.

Table 12-23. Summary of ELA Item Exposure Rates by Grade and Component

Content Area	Grade	*N*	Mean	SD	Min	Max	Median
ELA	3	832	0.05	0.09	0.00	0.48	0.01
ELA	4	787	0.06	0.09	0.00	0.54	0.01
ELA	5	745	0.06	0.09	0.00	0.50	0.02
ELA	6	698	0.06	0.11	0.00	0.69	0.02
ELA	7	639	0.07	0.11	0.00	0.61	0.02
Mathematics	3	1,168	0.03	0.04	0.00	0.20	0.01
Mathematics	4	1,233	0.03	0.04	0.00	0.23	0.01
Mathematics	5	1,146	0.03	0.05	0.00	0.22	0.01
Mathematics	6	1,051	0.03	0.05	0.00	0.23	0.01
Mathematics	7	942	0.04	0.06	0.00	0.29	0.01

Table 12-24 provides further information about the exposure rates by showing the number of items in the OP pool (N) and proportion of items with exposure rates falling into certain ranges (bins with a width of 20%), including those that were completely unexposed (Unused). The majority of CAT items, for both ELA and mathematics, had item exposure rates between 0% and 20%.

There were a handful of items in ELA with higher-than-desirable exposure rates. This occurred when there were few items measuring elements in the blueprint. There were also items in both content areas that were unused. There is a trade-off between blueprint fidelity and exposure, with the adaptive CAT engine weighting blueprint fidelity more heavily. In addition, for ELA, it was requested to use all or almost all items with a passage so students were not given numerous passages to read to meet the blueprint.

Table 12-24. Percentage of CAT Items by Exposure Rate

Content Area	Grade	Total Number of Items	Unused*	0%–20%	21%–40%	41%–60%	61%–80%	81%–100%
ELA	3	832	9.50	92.43	6.49	1.08	0.00	0.00
ELA	4	787	3.56	90.47	8.77	0.76	0.00	0.00
ELA	5	745	6.71	91.81	7.25	0.94	0.00	0.00
ELA	6	698	5.73	88.68	9.17	1.86	0.29	0.00
ELA	7	639	8.45	87.79	9.86	2.35	0.00	0.00
Mathematics	3	1,168	11.30	100.00	0.00	0.00	0.00	0.00
Mathematics	4	1,233	6.49	99.59	0.41	0.00	0.00	0.00
Mathematics	5	1,146	6.46	99.91	0.09	0.00	0.00	0.00
Mathematics	6	1,051	7.23	98.86	1.14	0.00	0.00	0.00
Mathematics	7	942	2.87	96.71	3.29	0.00	0.00	0.00

*Note: "Unused" is also included in the 0% to 20% range.

12.4.9 Evidence Based on Consequences of Test Use

The *Standards* incorporate the intended and unintended consequences of test use into the concept of validity. It indicates that information about the consequences of testing does not in and of itself detract from the validity of intended test interpretations (AERA, APA, & NCME, 2014, p. 19). Rather, according to the *Standards*, a more searching inquiry into the sources of those consequences given the intended purposes of an assessment is a basis for evaluating the quality of the validity evidence. The test data alone do not provide sufficient verification of this type of evidence. For this reason, it is not straightforward to measure and collect evidence on the consequential aspects of validity.

To address the intended consequences of M-STEP, the purposes of M-STEP must be specified. MDE has carefully articulated the intended purposes of M STEP as driving features of the selection of Smarter Balanced items, the development of science and social studies tests, and the implementation of the testing program. The specific purposes associated with M-STEP include the following:

- M-STEP accurately describes both student achievement (i.e., how much students know at the end of the year) and student growth (i.e., how much students have improved since the previous year) to inform program evaluation and school-, district-, and state-accountability systems and to provide valid, reliable, and fair measures of students' progress toward, and attainment of, the knowledge and skills required to be college- and career-ready.
- M-STEP informs state and federal accountability.
- M-STEP assessments are fair for all students, including those with disabilities or limited English proficiency, at all levels of achievement.

12.5 Summary

In summary, Chapter 12 of this report demonstrates M-STEP's adherence to the AERA, APA, & NCME (2014) *Standards* regarding reliability and construct-related validity. The analyses described above address multiple best practices of the testing industry, particularly the following standards:

- Standard 2.0—Appropriate evidence of reliability/precision should be provided for the interpretation for each intended score use.
- Standard 2.1—The range of replications over which reliability/precision is being evaluated should be clearly stated, along with a rationale for the choice of this definition, given the testing situation.
- Standard 2.3—For each total score, subscore, or combination of scores that is to be interpreted, estimates of relevant indices of reliability/precision should be reported.
- Standard 2.13—The standard error of measurement, both overall and conditional (if reported), should be provided in units of each reported score.
- Standard 2.14—When possible and appropriate, conditional standard errors of measurement should be reported at several score levels unless there is evidence that the standard error is constant across score levels. Where cut scores are specified for selection or classification, the standard errors of measurement should be reported in the vicinity of each cut score.
- Standard 2.16—When a test or combination of measures is used to make classification decisions, estimates should be provided of the percentage of test takers who would be classified in the same way on two replications of the procedure.
- Standard 2.19—Each method of quantifying the reliability/precision of scores should be described clearly and expressed in terms of statistics appropriate to the method. The sampling procedures used to select test takers for reliability/precision analyses and the descriptive statistics on these samples, subject to privacy obligations where applicable, should be reported.
- Standard 4.3—Test developers should document the rationale and supporting evidence for the administration, scoring, and reporting rules used in computer-adaptive, multistage-adaptive, or other tests delivered using computer algorithms to select items. This documentation should include procedures used in selecting items or sets of items for administration, in determining the starting point and termination conditions for the test, in scoring the test, and in controlling item exposure.

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Appendix A: Test Administration Documents

Appendix A.1 Guide to State Assessments

2020-2021

Guide to State Assessments

MICHIGAN Department of Education

Updated: April 12, 2021

Testing dates/windows changes and additions (for Spring 2021 only):

- M-STEP and MI-Access Testing windows have been extended (refer to the Summative Testing Schedule on page 22).
- SAT and ACT have added contingency dates and flexibilities for the 2020-2021 year only (refer to the Summative Testing Schedule on page 22.

OVERVIEW

A memo was sent to local and intermediate school district superintendents and public school academy directors on March 31, 2021 providing guidance on state testing requirements pending the approval from the United States Department of Education of our assessment and accountability waivers. Included in this memo is the following:

If USED denies Michigan's request to waive the federal requirement for state summative assessments, local school districts will have to administer the state assessments as scheduled. These assessments include M-STEP for students in grades 3-8; PSAT 8/9 for students in 8th grade; MME, including SAT, for students in 11th grade; MI-ACCESS for students receiving special education services in grades 3-8 and 11; and WIDA for students in English learner programs in grades K-12.

During the COVID-19 pandemic, MDE does not support bringing otherwise remote or virtual students into school solely for the purpose of state assessment.

If USED denies Michigan's assessment waiver request, districts would have to offer remote or virtual students the opportunity to come into school to take the appropriate state summative assessments. However, those remote-only students would not be required to come into school for the sole purpose of taking the assessments.

The office of Educational Assessment and Accountability (OEAA) is preparing for an administration of the M-STEP and other statewide

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assessments this spring. At this time, we have not received a waiver removing the requirement to conduct state summative assessments in Spring 2021.

Michigan's assessment system will continue to set national standards for quality and rigor, while measuring how well our students are doing in preparing for careers and college.

Our foremost concern is for the continued safety of students, staff, and families around the state. Please don't hesitate to reach out to our office if you have any questions.

Subscribe to the weekly newsletter Spotlight on Student Assessment and Accountability (www.michigan.gov/mde-spotlight), for timely information on assessment and accountability topics during the 2020-2021 school year.

→ SPRING 2021 SUMMATIVE ASSESSMENTS

Changes to the **M-STEP** summative assessments for Spring 2021 include:

- The science test will be operational in 2021. This means the results from the 2021 M-STEP science test will provide data that educators can use to evaluate science curriculum and programming.
- The social studies tests (grades 5, 8, and 11) will have one part and one test ticket.

M-STEP summative tests for grades 3–8 include:

- English Language Arts (grades 3–7): computer-adaptive test (CAT) with Passage-based Writing prompt (essay) at every grade
- Mathematics (grades 3–7): computer-adaptive test (CAT)
- Science (grades 5 and 8): fixed-form online assessment
- Social Studies (grades 5 and 8): fixed-form online assessment

MME in grade 11 includes:

- SAT with Essay: paper/pencil assessment
- ACT WorkKeys: paper/pencil assessment
- M-STEP Science: fixed-form online assessment
- M-STEP Social Studies: fixed-form online assessment

Michigan Grade 8 Testing includes:

- PSAT 8/9 for grade 8: English Language Arts and Mathematics paper/pencil assessment
- M-STEP Science and Social Studies online fixed-form assessments

In addition to M-STEP science and social studies, results from the PSAT 8/9 for grade 8 and the SAT for grade 11 are part of Michigan's accountability system.

PSAT in grades 9 and 10 includes:

- PSAT 8/9 for grade 9: paper/pencil assessment
- PSAT 10 for grade 10: paper/pencil assessment

Assessment results from the PSAT 8/9 for grade 9 and the PSAT 10 are not part of Michigan's accountability system.

MI-Access Functional Independence (FI) in grades 3-8 and 11 includes:

- English Language Arts
  - » Expressing Ideas (grades 3–8 and 11): provided as **paper/pencil assessment only** for **all** students
  - » Accessing Print and Using Language (grades 3–8 and 11): fixed-form online assessment

- Mathematics (grades 3–8 and 11): fixed-form online assessment
- Science (grades 4, 7, and 11): fixed-form online assessment
- Social Studies (grades 5, 8, and 11): fixed-form online assessment

MI-Access Supported Independence (SI) & Participation (P) in grades 3–8 and 11 includes:

- English Language Arts and Mathematics combined administrator booklets with student facing picture cards (grades 3, 5, 6, and 8): paper/pencil test booklet with online answer document
- English Language Arts, Mathematics, and Science combined administrator booklets with student facing picture cards (grades 4, 7, and 11): paper/pencil test booklet with online answer document
- **Students taking the P/SI levels of MI-Access must assess social studies locally.** Individualized Education Program (IEP) teams must determine which locally determined social studies test will be administered for students in grades 5, 8, and 11. Schools are required to provide information on the locally determined social studies test during the OEAA Secure Site Answer Documents Received and Students Not Tested window.

Spring 2021 Testing Windows

Note: The testing windows have been extended for Spring 2021 (see the Summative Testing Schedule on page 22).

The Spring 2021 testing window for the M-STEP assessments will span eight weeks from **April 12 – June 4, 2021**.

- The M-STEP online window is divided into two overlapping 6-week grade level sub-windows:
  - » **Online testing for grades 5, 8, and 11:** April 12 – May 21, 2021
  - » **Online testing for grades 3, 4, 6, and 7:** April 26 – June 4, 2021

    This avoids as many spring breaks as possible, and provides maximum flexibility within two extended testing windows.
- For Spring 2021 only: M-STEP paper/pencil testing for grades 3–11 can be flexibly scheduled during the paper/pencil testing windows:
  - » **Paper/pencil testing for grade 5:** April 13 – May 21, 2021
  - » **Paper/pencil testing for grade 8:** April 14 – May 21, 2021
  - » **Paper/pencil testing for grade 11:** April 15 – May 21, 2021
  - » **Paper/pencil testing for grades 3, 4, 6, and 7:** April 27 – June 4, 2021

The 8-week testing window for MI-Access Alternate Assessment for **both online and paper/pencil** is **April 12 – June 4, 2021**.

The testing window for WIDA ACCESS for ELLs and WIDA Alternate ACCESS for ELLs for **both online and paper/pencil** has been extended. It is now **February 1 – April 9, 2021**.

M-STEP Statewide Science Assessment

The M-STEP science assessment will be operational in Spring 2021. The science assessment is structured using item clusters, which are a set of five to eight items with a common stimulus. For Spring 2021, each student will be administered 7 item clusters (covering Physical Science, Earth Science, and Life Science).

The operational test will be administered online, with a paper/pencil option for those few students for whom an online assessment may be inappropriate.

→ M-STEP TEST SESSION TIMING

Spring 2021 M-STEP tests are untimed and student-paced. Therefore, students **must** be given as much time as they need to complete each session or part of the test. The times listed on the following pages are **estimated** times and are provided for planning purposes. Some students will complete the test in less time than estimated, while others may require additional time. Be sure to plan for both contingencies.

Online tests will remain open and available for testing until the student ends or submits his or her test. This means that students will be able to pause and exit their test at the end of the test session and resume testing in another scheduled session during the 4-week grade-level testing window. A school can determine the appropriate amount of time for students to spend in a single test session.

For example, if the estimated time for a test session is 90 minutes, you may decide to schedule:

- one 2-hour session with a break
- two 60-minute sessions
- three 40-minute sessions
- one 60- and two 30-minute sessions

The net result for schools is the **freedom to schedule an appropriate amount of time for students to be in test sessions**. Students can exit the test without submitting, allowing them to finish the test in another scheduled session.

Online Test Sessions

When scheduling **online** test sessions, please keep in mind the following:

- testing windows cannot be extended, therefore schools should schedule sessions early enough in the testing window to ensure all students can complete testing within the allowable six-week window
- schools have flexibility to schedule test sessions any time normal instruction takes place during the school day (M-F 7 a.m. – 4 p.m.) within the six-week grade-level test window
- not all students need to be administered the same assessment at the same time, nor on the same day
- headphones are required for the M-STEP ELA (and all MI-Access FI test sessions)
- estimated test session times do **not** include the following:
  - » traveling to and from the testing room
  - » distributing and collecting test tickets and scratch paper
  - » signing into the test session
  - » reviewing online test directions with students

Paper/Pencil Test Days

- For Spring 2021 only, students being assessed in the paper/pencil mode may be flexibly scheduled on any day within the grade-level paper/pencil testing window. Test parts should be scheduled early enough in the school day to allow students to complete the entire test within the school day. ELA Day 1 should be scheduled for a single day and ELA Day 2 should be scheduled on a different day.

Estimated test session times do **not** include the following:

- » traveling to and from the testing room
- » distributing and collecting test materials - including test booklets and answer documents
- » completion of the answer document demographic page
- » reviewing test directions with students

→ TESTING IN GRADES 3 – 8

The tables below and on the following pages provide overall test session timing and information on online and paper/pencil assessments by grade and content area. For planning purposes, keep in mind that some students will need more time to test and some students will take less.

Spring 2021 Estimated Test Session Timings Grades 3–7

Subject	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
ELA Computer Adaptive	2:00	2:00	2:00	2:00	2:00
Mathematics Computer Adaptive	1:30	1:30	1:30	2:00	2:00
Science Part 1	NA	NA	0:45	NA	NA
Science Part 2	NA	NA	0:45	NA	NA
Social Studies	NA	NA	0:60	NA	NA
Estimated Total Hours	**3:30**	**3:30**	**6:00**	**4:00**	**4:00**

NOTE: Times are in **hours:minutes**. Example, **1:30** equals **1 hour 30 minutes**.

Spring 2021 Estimated Test Session Timings Grade 8

Subject	Grade 8
PSAT 8/9 (ELA and Mathematics)	2:35
M-STEP Science Part 1	:45
M-STEP Science Part 2	:45
M-STEP Social Studies	:60
Estimated Total Hours	**5:05**

Note: The science test is operational this year.

Office of Educational Assessment and Accountability (OEAA)
Phone: 877-560-8378 ■ OEAA web page (www.michigan.gov/oeaa) ■ **Email:** mde-oeaa@michigan.gov

2020-2021 Guide to State Assessments

English Language Arts (ELA)

Grade	Online	Paper/Pencil
3 – 7	• 6-week testing window • 1 session (1 test ticket) ♦ **Computer Adaptive Test (CAT) – 2 hours** • Breaks can be provided during the test session using the software's pause feature	• 6-week window (Spring 2021 only) • **Day 1: Parts 1 and 2 – 1 hour** Listening/Claim 3 Reading/Claim 1 • **Day 2: Part 3 – 1 hour** Writing/Claim 2 Research/Claim 4 • Breaks can be provided at STOP signs in test booklet

Mathematics

Grade	Online	Paper/Pencil
3 – 5	• 6-week testing window • 1 session (1 test ticket) ♦ **Computer Adaptive Test (CAT) – 1 hour, 30 minutes** • Calculators **not permitted** in grades 3 – 5 • Breaks can be provided during test sessions using the software's pause feature	• 6-week window (Spring 2021 only) » **Part 1 – 45 minutes** » **Part 2 – 45 minutes** • Calculators **not permitted** in grades 3 – 5 • Breaks can be provided at STOP signs in test booklet
6 – 7	• 6-week testing window • 1 session (1 test ticket) ♦ **Computer Adaptive Test (CAT) – 2 hours** • Grade 6 – embedded basic calculator * • Grade 7 – embedded scientific calculator * • Breaks can be provided during test sessions using the software's pause feature * on designated items	• 6-week window (Spring 2021 only) » **Part 1 – 1 hour** (no calculator) » **Part 2 – 1 hour** (with calculator) • Grade 6 – basic calculator • Grade 7 – scientific calculator • Breaks can be provided at STOP signs in test booklet

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Science

Grade	Online	Paper/Pencil
5 and 8	• 6-week testing window • 2 sessions (2 test tickets: Part 1, Part 2) ♦ **Part 1 – 45 minutes** ♦ **Part 2 – 45 minutes** • Grade 5 – four function calculator (optional) • Grade 8 – scientific calculator (optional) • Breaks can be provided during the test sessions using the software's pause feature	• 6-week window (Spring 2021 only) ♦ **Part 1 – 45 minutes** ♦ **Part 2 – 45 minutes** • Grade 5 – four function calculator (optional) • Grade 8 – scientific calculator (optional) • Breaks can be provided at STOP signs in test booklet.

Social Studies

Grade	Online	Paper/Pencil
5 and 8	• 6-week testing window • 1 sessions (1 test ticket) **– 60 minutes** • Breaks can be provided during test sessions using the software's pause feature	• 6-week window (Spring 2021 only) ♦ **1 Part – 60 minutes** • Breaks can be provided at STOP signs in test booklet

→ PSAT 8/9 and PSAT 10 TESTING TIMES

The PSAT 8/9 for grade 8 will count toward ELA and mathematics accountability measures. The PSAT 8/9 for students in grade 9 and the PSAT 10 for students in grade 10 will **not** count towards Spring 2021 accountability.

PSAT 8/9 for Grade 8 and Grade 9 and PSAT 10 for Grade 10

PSAT Sections	PSAT 8/9 (in minutes)	PSAT 10 (in minutes)
Reading	**55**	**60**
Break	**5**	**5**
Writing and Language	**30**	**35**
Math (no calculator)	**20**	**25**
Break	**5**	**5**
Math (with calculator)	**40**	**45**
Total (hours, minutes)	**2:35**	**2:55**

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Note: The PSAT Accommodations Testing window is four weeks for students with certain non-standard accommodations. Only students who are designated on the Non-standard Administration Report (NAR) are eligible to test within the 4-week window. Students approved for testing over two days must be tested on consecutive days.

→ TESTING IN GRADE 11 – Michigan Merit Examination (MME)

Students in 11th grade (and eligible 12th grade students) must be administered all three components of the MME:

- SAT with Essay
- ACT WorkKeys
- M-STEP Science and Social Studies

Testing times for the MME components are shown here and on the following page. For detailed information on online testing windows and paper/pencil testing dates, see the **Spring 2021 Testing Schedule for Online and Paper/Pencil Assessments** on pages 22–26 of this document.

Spring 2021 MME Component Test Session Timings

Science	
Social Studies	
College Entrance*	
Work Skills*	
Estimated Total Hours	

* Includes scheduled breaks

M-STEP Science and Social Studies

Grade	Online	Paper/Pencil

11	• 6-week testing window
	• **Science:** 1 session (1 test ticket) **– 90 minutes**
	  ▪ scientific calculator (optional)
	• **Social Studies:** 1 session (1 test ticket) **– 30 minutes**
	• Breaks can be provided during test sessions using the software's pause feature
		• 6-week window (Spring 2021 only)
		• **Science: 1 Part – 90 minutes**
		  ▪ scientific calculator (optional)
		• **Social Studies: 1 Part – 30 minutes**

SAT with Essay

SAT Sections	Time (in minutes)
Reading	**65**
Break	**10**
Writing and Language	**35**
Math (no calculator)	**25**
Break	**5**
Math (with calculator)	**55**
Break	**2**
Book collection/Essay distribution	**15**
Essay	**50**
Total (hours: minutes)*	**4:22**

*does not include preadministration time

Note: The SAT Accommodations Testing window is two weeks for students with certain non-standard accommodations. Only students who are designated on the Non-standard Administration Report (NAR) are eligible to test within the 2-week window. Students approved for testing over two days must be tested on consecutive days.

ACT WorkKeys

Tests	Time (in minutes)
Workplace Documents	**55**
Applied Math	**55**
Break*	**15**
Graphic Literacy	**55**
Total (hours: minutes)	**3:00**

*ACT requires that you allow a break of 15 minutes at the end of Applied Math (test 2) to allow examinees to relax or go to the restroom. No cell phones may be used during the break.

MI-ACCESS ALTERNATE ASSESSMENTS

MI-Access Alternate Assessments are administered at three levels:

MI-Access Functional Independence (FI) – For students who have, or function as if they have, a significant cognitive impairment, can access resources, strategies, and supports with limited assistance, and whose instruction is aligned closest to the "High" range of complexity for ELA and Mathematics Essential Elements.

MI-Access Supported Independence (SI) – For students who have, or function as if they have, a significant cognitive impairment, require ongoing support in major life roles, and whose instruction is aligned closest to the "Medium" range of complexity for ELA and Mathematics Essential Elements.

MI-Access Participation (P) – For students who have, or function as if they have, a significant cognitive impairment, require extensive ongoing support through adulthood, and whose instruction is aligned closest to the "Low" range of complexity for ELA and Mathematics Essential Elements.

MI-Access assessments are based on the Essential Elements with Michigan Range of Complexity for ELA and Mathematics, Extended Grade Level Content Expectations for Social Studies (FI only), and Extended Benchmarks for Science. The alternate content standards can be found on the MI-Access web page (www.michigan.gov/mi-access).

MI-Access Functional Independence (FI)

The MI-Access FI assessments will be administered online in Spring 2021. A paper/pencil format will be available for those students and schools that are not able to test online.

The FI assessments include:

- **English Language Arts** (grades 3–8 and 11) which consists of two parts – both parts **must** be completed:
  1. Accessing Print and Using Language – **online or paper/pencil**
  2. Expressing Ideas (constructed response) – Administered as **paper/pencil assessment only** to **all** students (including students taking the rest of the MI-Access FI assessments online)
- **Mathematics** (grades 3–8 and 11)
- **Science** (grades 4, 7, and 11)
- **Social Studies** (grades 5, 8, and 11)

MI-Access FI Online Assessments

Online tests in each content area will have two parts and are untimed. Students can complete one part in a single day with the flexibility to have multiple breaks during the day when needed, or test over multiple days. It is not recommended for students to take more than one part of a MI-Access section/subject on any particular day.

MI-Access Participation and Supported Independence (P/SI)

Students will continue to experience activity-based observation items as well as selected-response items using picture cards and/or instructional materials. The answer document is the only online component of the P/SI assessments. Primary Assessment Administrators will enter the student scores for both the Primary and Shadow Assessment Administrators into the online answer document.

It is strongly recommended that Primary and Shadow Assessment Administrators take the MI-Access Participation and Supported Independence Scoring Rubrics course. This video-enhanced presentation is an excellent tool for training all staff involved in this testing. This course is available from Michigan Virtual and participants can earn 2 SCHECHs upon completion. Access the course on the MI-Access web page (www.michigan.gov/mi-access) under the **Assessment Training and Resources for Educators** section.

The P/SI assessments include:

- **English language arts** (grades 3-8 and 11)
- **Mathematics** (grades 3-8 and 11)
- **Science** (grades 4, 7, and 11)

Note: Districts administer a locally determined social studies assessment for students who typically take MI-Access P/SI. Individualized Education Program (IEP) teams must determine which locally determined social studies test will be administered to students in grades 5, 8, and 11.

Grade 11 MI-Access FI: College Entrance and Work Skills Assessments

- Students taking the grade 11 MI-Access assessments may also take the ACT WorkKeys assessment if the Individualized Education Program (IEP) team determines it is an appropriate assessment.
- If the IEP team determines that the SAT with Essay is an appropriate assessment for the student, then the ELA and mathematics scores will be derived from the SAT with Essay and the student will not take the MI-Access FI ELA and mathematics tests.

→ WIDA

WIDA ACCESS for ELLs

Michigan's federally required summative assessment for students identified as English Learners (ELs) is the WIDA ACCESS for ELLs. This annual assessment is designed to measure K–12 ELs on their progress in learning the English language. The assessment provides a status of their development of Reading, Listening, Writing, and Speaking skills. WIDA ACCESS for ELLs is aligned to the WIDA English Language Development (ELD) standards that Michigan adopted in 2013.

This assessment can be administered online in grades 1–12. A paper/pencil form of the assessment is required for K and available in grades 1–12 for students who may not yet be technology-ready or have a disability that requires a paper/pencil test.

WIDA Alternate ACCESS for ELLs

Districts have the option to use the WIDA Alternate ACCESS for ELLs paper/pencil assessment. This assessment is designed for students who are ELs and are also students who have or function as if they have significant cognitive disabilities. This assessment is available in grades 1–12 only (grade level clusters: 1–2, 3–5, 6–8, and 9–12). Each section of this test (Listening, Reading, Speaking, and Writing) is estimated to take approximately 20 minutes.

Additional information about test administration can be found on the WIDA website (wida.wisc.edu) as well as within the WIDA Secure Portal.

Note: The testing window for WIDA ACCESS for ELLs and WIDA Alternate ACCESS for ELLs for both online and paper/pencil has been extended. The new window is **January 27 – April 9, 2021**.

WIDA Screener and W-APT

The WIDA Screener and the Kindergarten WIDA ACCESS Placement Test (W-APT) are screening assessments used to identify potential ELs upon enrollment. The WIDA Screener is available in both an online and paper/pencil format for students in grades 1-12. However, students should only take the paper/pencil form of the Screener if they have disabilities requiring use of a paper/pencil form or if they are considered recent arrivers (attended U.S. schools for 12 months or less). The WIDA Screener may take between 35 and 70 minutes depending on the grade level cluster and path administered.

The W-APT is the paper/pencil assessment given to Kindergarteners. The W-APT assesses the Listening, Reading, Writing, and Speaking domains. The W-APT is designed to take 10-15 minutes for Listening and Speaking and an additional 10-15 minutes for Reading and Writing. Refer to Michigan's Entrance and Exit Protocol for screening requirements.

Test Session Timing and Sequence for WIDA ACCESS

Scheduling online testing sessions:

- The Listening and Reading domains must be administered first in the testing window for students in grades 1-12. Because the assessment is staged-adaptive, scores from a student's performance in these two domains will determine his/her tier (A or B/C) for Writing.
- Students do not need to be separated by tier (A, B, C) during test administration. However, students must still be tested in the appropriate grade-level cluster.
- Breaks can be provided during the test sessions using the software's pause feature. A single domain test should not be broken into separate administrations.
- Each online domain requires a separate test ticket. Students in:
  - » grades 1–3 will have three tickets (Writing is administered in paper/pencil only):
    - » Listening
    - » Reading
    - » Speaking
  - » grades 4–12 will have four tickets:
    - » Listening
    - » Reading
    - » Speaking
    - » Writing
- Students must utilize a microphone for the Speaking domain.
- Students must utilize headphones for all domains.
- Although students may be group-administered the Speaking domain, WIDA recommends only 3–5 students per computer lab/test setting. This small group setting is necessary to ensure that student responses are not picked up by another student's microphone. It is possible that a student's score may be negatively impacted if a significant amount of background noise or interference is captured in their response.

Scheduling paper/pencil testing sessions:

- For students taking the paper version of the WIDA ACCESS for ELLs, the domains may be administered in any order.
- Breaks can be provided to students during the test sessions as long as materials are kept secure.

The table below outlines key differences between grades 1–12 online and paper/pencil. Note that all times listed are estimates.

	ACCESS for ELLs – Online (Grades 1-12)	ACCESS for ELLs – Paper/Pencil (Grades K*-12)
Grade Level Clusters	• 1, 2–3, 4–5, 6–8, and 9–12	• K*, 1, 2, 3, 4–5, 6–8, and 9–12
Listening	• test platform captures and scores student responses • up to 40 minutes	• **1-12:** 25–40 minutes
Reading	• up to 35 minutes	• 35–45 minutes
Speaking	• students listen to prompts and speak into headsets to record their answers • student responses are automatically sent to DRC for rating and scoring • up to 30 minutes • maximum of 5 students in the testing room	• test administrator plays pre-recorded speaking prompts on a CD • students speak their responses to test administrators • test administrators score student speech during administration • 15–35 minutes per student, administered individually
Writing	• **Grades 1–3:** students complete the entire writing test (prompts and responses) on paper • **Grades 4–12:** » students read prompts on the computer screen » students keyboard or handwrite responses based on Michigan's guidelines—keyboarding is the default setting • keyboarded responses are automatically sent to DRC; handwritten responses will need to be shipped • up to 65 minutes	• **Tier A, Grade 1:** up to 35 minutes » students read prompts on a paper test form • **Tier A, Grades 2-12:** up to 60 minutes • **Tier B/C:** up to 65 minutes • students handwrite responses on a paper test form • test booklets are returned to DRC and scored

***** Test administrators planning to administer the Kindergarten form of the assessment can plan on an average of **45 minutes per student**. The Kindergarten assessment is administered individually and is semi-adaptive, which may change the administration time depending on students' English proficiency levels (low proficiency = shorter administration time, high proficiency = longer administration time).

EARLY LITERACY AND MATHEMATICS BENCHMARK ASSESSMENTS (K–2)

The MDE-developed Early Literacy and Mathematics Benchmark assessments are available for students in grades K, 1, and 2. These benchmark assessments are aligned to Michigan's academic content standards and can be administered three times a year: fall, winter, and spring. The Early Literacy and Mathematics Benchmark assessments are only available online; there is no paper/pencil version.

Beginning in 2017-2018, the "Read by Grade 3" law requires students in grades K, 1, 2, and 3 be administered an English language arts (ELA) assessment within the first 30 days of school. The assessment must be from the MDE-approved list of initial assessments to assure students are on target to pass the third grade summative ELA assessment (M-STEP). Districts can choose to administer any assessment from the MDE-approved list of initial assessments located on the Early Literacy and Mathematics web page (www.michigan.gov/earlylitandmath) under **Early Literacy and Mathematics Resources** section. The MDE-developed Early Literacy Benchmark Assessments are on this approved list of initial assessments and fulfill the Read by Grade 3 initial assessment requirement.

In addition, in August, 2020, the "Return to School" legislation was passed for the 2020-2021 school year. This law requires districts to administer a benchmark assessment or assessments in reading and mathematics at the beginning and end of the school year to all students in Kindergarten through grade 8. It further directed MDE to provide a benchmark assessment at no cost to districts. Under OEAA's existing administration contract with Data Recognition Group (DRC), the MDE-developed Early Literacy and Mathematics Benchmarks assessments are being made available free of charge to districts to fulfill this requirement for students in grades K-2.

Under both laws, districts may choose different benchmark assessments or tools for literacy/reading and mathematics.

When considering which benchmark assessments and reading assessments a student should take, it is important to look at the needs of all students, including students with the most significant cognitive disabilities. The needs of students who are working toward Michigan's alternate content expectations (Essential Elements) should be considered carefully. For such students, if an IEP team determines that the benchmark or reading assessment the district is using is not appropriate for the student, then another method of assessing the student's progress must be chosen and implemented. This may include, but is not limited to, systems used to monitor ongoing academic progress, if these systems can show student growth and progress towards the appropriate state academic standards.

The above holds true for English learners for whom this or other benchmark assessments are not appropriate because of their current level of language skills. Consider the current monitoring tools or local assessments the district is using with this population of students for monitoring progress towards proficiency in ELA and mathematics.

Early Literacy and Mathematics Testing Windows	
Fall 2020	August 31 – October 30, 2020
Winter 2021	January 4 – February 5, 2021
Spring 2021	April 12 – June 30, 2021

The fall, winter, and spring online administration of the benchmark assessments use the same online test delivery engine as the M-STEP assessments. For grades K, 1, and 2, there is a 9-week testing window in the fall, followed by a 4-week testing window in the

winter. The spring testing window has been extended to allow for maximum scheduling flexibility. Schools participating in the Early Literacy and Mathematics Benchmark online assessments must pre-identify their students in the Secure Site using the Pre-ID function.

Keep in mind the following:

- Human Voice Audio (HVA) is the standard way in which mathematics and ELA reading passages, test questions, and appropriate answer options are presented to students in grades K and 1, so headphones will be needed.
- Students in grade 2 will need headphones if Text-to-Speech (TTS) is enabled.

The following tables provide session and timing information for the Early Literacy and Mathematics Benchmark Assessments.

English Language Arts (ELA)

Grades	Online only
K–2	• 2 sessions (2 test tickets: Part 1, Part 2) • Breaks can be provided during test sessions using the software's pause feature. • **K – Part 1: 30–40 minutes Part 2: 30–40 minutes** • **1 – Part 1: 30–40 minutes Part 2: 30–40 minutes** • **2 – Part 1: 35–45 minutes Part 2: 35–45 minutes**

Mathematics

Grades	Online only
K–2	• 2 sessions (2 test tickets: Part 1, Part 2) • Breaks can be provided during test sessions using the software's pause feature. • **K – Part 1: 25–35 minutes Part 2: 25–35 minutes** • **1 – Part 1: 25–35 minutes Part 2: 25–35 minutes** • **2 – Part 1: 35–45 minutes Part 2: 35–45 minutes**

Starting in Fall 2020, remote testing is supported for students taking the Early Literacy and Mathematics Benchmark Assessments. To better ensure valid and reliable results from the assessment and to maintain the security of test items, an in-person administration is strongly recommended. The remote testing option should be reserved for students who are receiving most or all of their instruction remotely and for whom returning to an in-person school environment is not feasible.

→ MICHIGAN LAW AND BENCHMARK ASSESSMENT REQUIREMENTS

Return to Learn Law

In August 2020, the Return to Learn (RTL) legislations was passed into law. This law, specific to the 2020-2021 academic year, requires districts to create an Extended COVID-19 Learning Plan that provides the educational goals the district expects to achieve during the year. The plan must include an assurance that the district will administer a benchmark assessment or assessments to determine whether students are making meaningful progress towards master of state academic standards in reading and math.

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Under Return to Learn:

- Districts must administer a benchmark assessment or assessments to all students in grades K-8
- The benchmark assessment(s) must be administered within the first 9 weeks of school and again before the end of the school year.
- The law encourages districts administer the same benchmark assessment or assessments that it administered in previous years.
- Districts are provided choice in the benchmark assessment or assessments they choose to administer. Choice includes:
  1. benchmark assessments are available from a list of four to five MDE-approved assessment providers
     a. The four approved assessment providers are:
        - Curriculum Associates
        - Data Recognition Corporation (DRC)
        - NWEA
        - Renaissance Learning
     b. These providers must provide benchmark assessment(s) that meet the following criteria:
        - be one of the most commonly administered benchmark assessments in Michigan
        - measure proficiency in reading and mathematics
        - be aligned to state academic standards
        - complement the state summative assessment system
        - be online or internet-delivered and allow for multiple testing opportunities
        - provide timely information and feedback on student achievement and growth
        - be nationally normed
  2. benchmark assessments or tools that:
     a. provide progress monitoring and enhanced diagnostics in reading
     b. provide progress monitoring in math
  3. a local benchmark assessment
  4. any combination of the above choices
- MDE is directed to make available a benchmark assessment at no cost to districts from the list of approved assessment providers. The following benchmark assessments are provided under the existing DRC administration contract free of charge to districts:
  - » Smarter Balanced Interim Assessments in grades 3-8
  - » MDE-developed Early Literacy and Mathematics Benchmark Assessments in grades K-2

→ FALL 2020 SAT SUITE OF ASSESSMENTS TESTING IN HIGH SCHOOL

Executive Order (EO) 2020-65 requires students who did not take the SAT or PSAT in Spring 2020 because of the suspension of statewide assessment due to the COVID-19 pandemic be administered the appropriate assessment in Fall 2020. The results from the fall administrations may not be used for accountability purposes.

Recently passed 2020-2021 budget legislation modifies the requirements of EO 2020-65.

- Districts are still required to make available the SAT and PSAT assessments to students who were in grades 8-11 last year and who were unable to take the appropriate assessment during the 2019-2020 school year.

- Students must be encouraged but not required to take these assessments.
- These tests do not replace the requirement to take the statewide administrations of SAT with Essay, PSAT 8/9, or PSAT 10 in Spring 2021 to all eligible students.
- Only the results of the Spring 2021 administrations of SAT with Essay in grade 11 and PSAT 8/9 in grade 8 will count towards accountability measures.

The dates for fall testing are:

Fall 2020 Testing Dates			
19-20 Grade	**20-21 Grade**	**Assessment**	**Test Dates/ Window**
8	9	PSAT 8/9	Choose any date between September 21 – October 29
9	10	PSAT/NMSQT	October 14 **and/or** October 29 **and/or** January 26, 2021
10	11	PSAT/NMSQT	October 14 **and/or** October 29 **and/or** January 26, 2021
11	12	SAT with Essay	September 23 **and/or** October 14 **and/or** October 27

For information on these administrations, including flexibility options provided by the College Board visit the MME or PSAT web pages (www.michigan.gov/mme or www.michigan.gov/psat).

→ RESOURCES

M-STEP, MI-Access FI, and Early Literacy and Mathematics Benchmark Assessments

Resources for Online Testers

The Office of Educational Assessment and Accountability (OEAA) has developed online resources for students taking state assessments at all grade levels. The resources support the idea that children can learn about online technology when teachers and other educators demonstrate the use of technology—classroom viewing of the student video tutorial, classroom viewing of the Online Tools Training (OTTs), followed by interacting with children while each student practices with technology (OTTs).

Student Tutorials

The OEAA has created Student Tutorials. These are student-narrated videos that introduce teachers and students to the online tests and tools contained in the M-STEP, MI-Access, and Early Literacy and Mathematics Benchmark Assessments. The Student Tutorials are designed to be administered in a group setting, such as the classroom, using a projector or other similar resource.



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The tutorials can be accessed three different ways:

- DRC INSIGHT Portal (https://mi.drcedirect.com) – Select the **Documents and Training Materials** link, then the **Test Tutorials** tab to access the tutorials.
- **INSIGHT** – Open INSIGHT and at the bottom of the page select the **DRC INSIGHT Online Assessments Tutorials** link.
- Chrome (https://wbte.drcedirect.com/MI/portals/mi) – You must use the Chrome browser to access the tutorials. Select the yellow link at the bottom of the page: **DRC INSIGHT Online Assessments Tutorials**. This is the same link used for the online sample item sets.

An important component of the Student Tutorials is that they provide explicit training on the pause/exit/end test functionality of the online testing engine. In addition, the tutorials explain how to access and use specific tools.

Online Sample Item Sets and OTTs

Another important set of resources teachers can access are online Sample Item Sets for students in grades K-8, and 11. The Sample Item Sets are a select group of test items in ELA, mathematics, science, and social studies that encompass various kinds of technology-enhanced items (including drag and drop and hot spots) and are embedded within the OTTs. The sets provide teachers and students practice in solving grade-level and content-specific test items aligned to Michigan's content standards, and provide practice in navigating the online test delivery system. The OTTs are not scored.

OTTs give students opportunities to see what different test items look like and practice using the online testing tools. Providing students with ample practice opportunities will ensure they are familiar with item types, navigation strategies, and system tools on test day.

The OTTs can be accessed two ways:

- Chrome (https://wbte.drcedirect.com/MI/portals/mi) – You must use the Chrome browser to access the OTTs. Choose the **Online Tools Training** link located under each assessment.

  Students can access the practice sets from home with the Chrome browser.
- **INSIGHT** – Open INSIGHT, select the **Online Tools Training** link under each assessment.

Feedback collected from previous administrations indicates that students and teachers who utilized the OTTs and Sample Item Sets felt more prepared for online testing, students reported feeling confident about taking assessments online, and school administrators and teachers stated they experienced fewer issues related to online testing than students and teachers who did not take advantage of this resource.

Recommended Sequence

The OEAA recommends that classroom teachers introduce online testing to their students by playing the **Student Tutorial Video** in class to show students how the online testing system and tools work. Once the Student Tutorial Video is shown and discussed in the classroom, teachers then show the **Online Tools Training (OTTs)** to the entire class (doesn't have to be on the same day). After students have watched the Student Tutorial Video projected by the teacher, followed by watching the teacher navigate through the OTTs via a projector or other classroom viewing resource, each student should be provided hands-on practice with the online **Sample Item Sets** contained within the OTTs, ideally using the device they will use during testing.

The OEAA welcomes your feedback on the online resources.

Sample Item Sets for Paper/Pencil Testers

The OEAA has posted Paper/Pencil sample item sets for ELA, mathematics, science, and social studies on the M-STEP web page (www.michigan.gov/mstep) under the **Content Specific Information** section. Sample Item Sets contain grade-level sample items showing the types of items students may encounter on the actual test. The sets provide students practice in solving grade-level and content-specific test items aligned to Michigan's content standards. The Sample Items Sets are not considered "Practice Tests," as a practice test implies a test with the same number of items and similar level of difficulty as an actual test.

WIDA ACCESS for ELLs

Online and Paper/Pencil Testers

A number of resources are available on the WIDA website (wida.wisc.edu) to help educators and students (https://wida.wisc.edu/assess/access/preparing-students) become familiar with the WIDA ACCESS for ELLs testing experience for both online and paper/pencil. These resources include Student Handouts, Online Speaking Guidance documents for educators, Online Test Demo, Interactive Sample Items for online testing, Online Test Practice, Paper-Based Sample Items, and Practice Speaking Questions for paper/pencil. Educators are strongly encouraged to review these resources with students.

→ SUPPORTS AND ACCOMMODATIONS

Michigan is committed to ensuring all students, including English Learners (ELs) and Students with Disabilities, have access to a wide array of tools for students with specific needs across all state assessments.

The tools are categorized into the following three tiers:

- **Universal Tools:**
  available for all students, use is student-driven
- **Designated Supports:**
  available when indicated by an educator or team
- **Accommodations:**
  available when need is documented in an IEP or 504 plan

Universal Tools include embedded default tools for an online assessment such as a highlighter or cross-off tool. A **Designated Support** may be Text-to-Speech (TTS), and an example of an **Accommodation** is a braille form of an assessment.

Along with making sure students have options for accessing the content of the assessments, Michigan must also ensure that these options do not provide an unfair advantage to students using them. Students must always be able to show their knowledge of a particular standard or skill. Calculators provide a perfect example of these concepts. Students are not always allowed to use a calculator on some sections or items on the mathematics assessment. This is due to specific standards being assessed. A student allowed to use a calculator on these items would not actually be able to show whether or not they know how to do some calculations required by the standards. However, there are some items for which a calculator would be permitted for all students, such as when calculation is required, but is not the standard being measured.

As educators prepare for the state assessments, it's important to note that a Universal Tool for one content area and assessment may be an Accommodation for another content area or assessment (for example, a calculator). Similarly, a Designated Support may also be an Accommodation, depending on the content target (for example, scribe). This approach is consistent given the emphasis that Michigan's assessment programs have placed on the validity of assessment results coupled with access. Allowable Universal Tools, Designated Supports, and Accommodations all yield valid scores that count as participation in statewide assessments when used in a manner consistent with Michigan's Supports and Accommodations policies and guidelines.

All policies and guidelines can be found under the **Student Supports and Accommodations** sections of each of the MDE assessment web pages. Additional information can also be found in each test administration manual.

Making Decisions on an Individual Student Basis

The selection of appropriate Universal Tools, Designated Supports, and Accommodations must be done for all students in the classroom as well as for each assessment. The Universal Tools, Designated Supports, and Accommodations used on the assessments should be ones the student is familiar with, and using during regular classroom instruction. A mismatch of supports offered can cause significant difficulties for students at the time of testing and potentially negatively impact student test scores.

For example, if a student is given the opportunity to take a mathematics assessment in Spanish but does not have sufficient literacy skills in the Spanish language, the student may struggle more than if he or she had taken the English version of the mathematics assessment. It is inappropriate for districts to make blanket decisions about assessment supports for particular student groups.

Accessibility decisions need to made on an individual basis. For students with disabilities, classroom and assessment decisions must be documented in the IEP.

For more information, review the resources on the M-STEP web page (www.michigan.gov/mstep) under **Student Support and Accommodations**.

→ TECH CORNER



Online Testing Technology Information

All online testing will use an updated version of the software from Data Recognition Corporation (DRC) that was used in 2015 through 2020.The Technology User Guide and other support materials are available on the DRC INSIGHT Portal (formally known as eDIRECT) (https://mi.drcedirect.com).

The INSIGHT Secure Browser ("INSIGHT") is the secure browser students use. It prevents students from using other applications or visiting websites while testing. One INSIGHT installation works for all assessments, including M-STEP, MI-Access, Early Literacy and Mathematics Benchmark Assessments, WIDA ACCESS for ELLs, and WIDA Screener Online. INSIGHT will prompt for a one-click update if a newer version is available, or the latest version (11.0) can be mass-deployed.

For students taking the Early Literacy and Mathematics Benchmark Assessments remotely, the INSIGHT Public Browser will be available, allowing testing from home during virtual instruction. This uses the standard Chrome web browser to allow testing with remote proctoring through standard web-conferencing tools.

INSIGHT is supported by a caching server called a Central Office Services (COS) Service Device. The local cache holds a secure copy of the test content so you download it once, saving bandwidth. Testing Site Managers were retired during the 2019-2020 academic year.

One Service Device can serve for both M-STEP and WIDA, as well as serving multiple schools. COS comes with load balancing built in. This should allow fewer, simpler, and more reliable configurations that can be shared across buildings. Content Management for your Service Devices is in the DRC INSIGHT Portal (https://mi.drcedirect.com) under **Central Office Services**. Technology Coordinators can use the Portal to download software and installation manuals, manage content hosting, and set up configuration files for INSIGHT.

A wide range of devices is supported for Spring 2021 testing. Check the DRC INSIGHT System Requirements for online testing, or the Technology User Guide for all supported devices and operating systems. These documents can be accessed on the DRC INSIGHT Portal by selecting the **Documents and Training Materials** link. The main limiting factors are device RAM and operating system support. Older operating systems age out each year as their developers stop supporting them. Watch for updates in late October and February listing expected changes for 2021-2022.

2021 Summative Testing Schedule

for Online and Paper/Pencil Assessments

The Michigan Department of Education (MDE) Spring 2021 testing windows and dates for all summative online and paper/pencil assessments are included in this document. The table below shows the testing windows for the summative assessments. Designated dates for paper/pencil assessments are provided in the calendars on the following pages.

Note: The M-STEP, MI-Access, and WIDA testing windows for online and paper/pencil have been extended for Spring 2021 only.

Spring 2021 Testing Schedule for Summative Assessments

Assessment	Week of																		
	1/27-1-29	2/1-2/5	2/8-2/12	2/15-2/19	2/22-2/26	3/1-3/5	3/8-3/12	315-3/19	3/22-3/26	3/29-4/2	4/5-4/9	4/12-4/16	4/19-4/23	4/26-4/30	5/3-5/7	5/10-5/14	5/17-5/21	5/24-5/28	5/31-6/4
M-STEP Grades 5, 8, 11												6 weeks							
M-STEP Grades 3 , 4, 6, 7														6 weeks					
MI-Access Alternate Assessments												8 weeks							
College Entrance: SAT w/Essay												4/13 only		Makeup 4/27			Makeup Contingency 5/18		
Accommodated Testing Window												4/13 – 4/26		Makeup 4/27-29			Makeup Contingency 5/18-20		
Work Skills: ACT WorkKeys												4/14 only		Makeup 4/28	Makeup Contingency 5/5				
Accommodated Testing Window												4/14 – 4/27			Makeup 4/28-5/4	Makeup Contingency 5/5-11			
PSAT 8/9 (grade 8)												4/13 only Primary 4/14-16		Makeup 4/27-5/7					
Accommodated Testing Window												4/13 –5/7							
PSAT 8/9 (gr 9) PSAT 10												Primary 4/13-16		Makeup 4/27- 5/7					
Accommodated Testing Window												4/13 – 5/7							
WIDA ACCESS & WIDA Alternate ACCESS for ELLs	Extended: January 27 - April 9, 2021																		

MICHIGAN Department of Education

Office of Educational Assessment and Accountability (OEAA)
Phone: 877-560-8378 ■ OEAA web page (www.michigan.gov/oeaa) ■ **Email:** mde-oeaa@michigan.gov

2021 Summative Testing Schedule

for Online and Paper/Pencil Assessments

Students in grades 3-10 will be administered:

- M-STEP English language arts (ELA) and mathematics (grades 3–7)
- PSAT 8/9 (grade 8)
- M-STEP science and social studies (grades 5 and 8)
- PSAT 8/9 (grade 9)
- PSAT 10 (grade 10)

Grade 11 students will take the Michigan Merit Examination (MME), which has three required components:

1. SAT with Essay college entrance exam (which provides ELA and mathematics results)
2. ACT WorkKeys workskills assessment
3. M-STEP science and social studies assessments

ONLINE Test Administration Dates

M-STEP

- **Grades 5, 8, and 11:** the online tests may be administered on any instructional day **April 12 – May May 21, 2021 (Extended)**
- **Grades 3, 4, 6, and 7:** the online tests may be administered on any instructional day **April 26 – June 4, 2021 (Extended)**

MI-Access Alternate Assessments

- **Grades 3–8 and 11:** the online tests may be administered on any instructional day **April 12 – June 4, 2021 (Extended)**

WIDA ACCESS for ELLs and Alternate ACCESS for ELLs

- **Grades 1–12:** the online tests may be administered on any instructional day **January 27 – April 9, 2021 (Extended)**

Note: A normal instructional day takes place M–F from 7 a.m. – 4 p.m. Schools that provide regularly planned instruction that extends beyond 4 p.m. must complete an Alternate Insight Availability Request.

* For online testing, not all students need to be administered the same assessment at the same time, nor on the same day.

PAPER/PENCIL Test Administration Dates

Paper/pencil assessments must be administered on the designated dates indicated in each calendar.

MI-Access Alternate Assessments

- **Grades 3–8 and 11:** the paper/pencil tests may be administered on any instructional day **April 12 – June 4, 2021 (Extended)**

WIDA ACCESS for ELLs and Alternate ACCESS for ELLs

- **Grades K-12:** the paper/pencil tests may be administered on any instructional day **January 27 – April 9, 2021 (Extended)**

The windows and dates for the paper/pencil tests in each grade level for M-STEP, PSAT, SAT, and ACT WorkKeys are shown for all content areas in the calendars on the following pages.

Office of Educational Assessment and Accountability (OEAA)
Phone: 877-560-8378 ■ OEAA web page (www.michigan.gov/oeaa) ■ **Email:** mde-oeaa@michigan.gov

2021 Summative Testing Schedule

for Online and Paper/Pencil Assessments

Paper/Pencil Test Dates – Grade 11

April–May 2021

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
11	12	13 SAT w/Essay	14 ACT WorkKeys	15	16	17
18	19	20	21	22	23	24
25	26	27 Makeup SAT w/Essay	28 Makeup ACT	29	30	1
2	3	4	5 Makeup Contingency ACT	6	7	8
9	10	11	12	13	14	15
16	17	18 Makeup Contingency SAT	19	20	21	22

M-STEP Science and Social Studies window 4/15–5/21

Note: For Spring 2021 only, schools may flexibly schedule M-STEP grade 11 paper/pencil content area tests between 4/15/21 – 5/21/21

Paper/Pencil Test Dates PSAT 8/9 for Grade 9 and PSAT 10

April–May 2021

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	1
2	3	4	5	6	7	8

PSAT 8/9 and PSAT 10*

Makeup – PSAT 8/9 and PSAT 10

Makeup – PSAT 8/9 and PSAT 10

* PSAT 8/9 (grade 9 only) and PSAT 10 (grade 10) can be administered on April 13, 14, 15, or 16. If your school chooses Tuesday, April 13 to test, then April 14, 15, and 16 become makeup days for students who were absent on the initial testing day. (PSAT 8/9 for Grade 8 testing schedule is on the grade 8 calendar on the following page.)

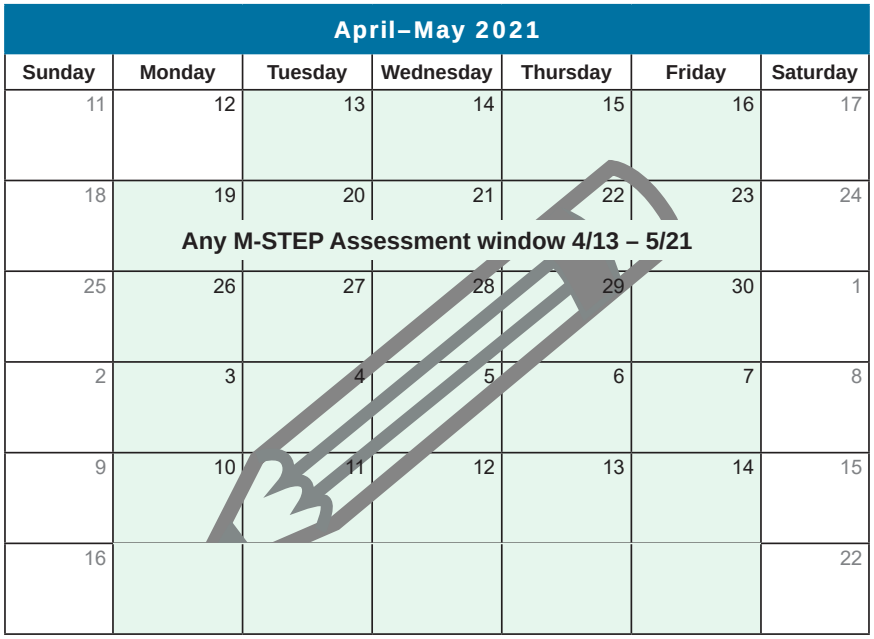
Schools can elect to administer the PSAT test to 9th graders on one day, 10th graders on the other day, or test both grades on the same day. As long as all students in the **same grade** are tested on the **same day**, schools can choose which date works best for the initial test dates and the makeup test dates.

Office of Educational Assessment and Accountability (OEAA)
Phone: 877-560-8378 ■ OEAA web page (www.michigan.gov/oeaa) ■ **Email:** mde-oeaa@michigan.gov

2021 Summative Testing Schedule

for Online and Paper/Pencil Assessments

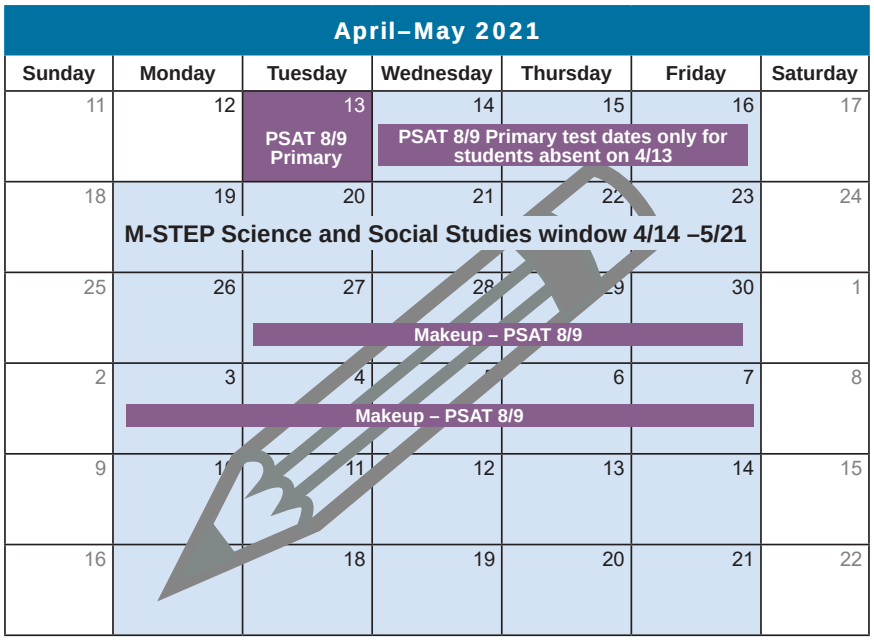
Paper/Pencil Test Dates – Grade 5



Note: For Spring 2021 only, schools may flexibly schedule M-STEP paper/pencil content area tests between 4/13/21 - 5/21/21.

It is strongly recommended that students are not administered more than one content-area assessment on any given day.

Paper/Pencil Test Dates – Grade 8



Note: For Spring 2021 only, schools may flexibly schedule M-STEP paper/pencil content area tests between 4/14/21 - 5/21/21.

It is strongly recommended that students are not administered more than one content-area assessment on any given day.

Office of Educational Assessment and Accountability (OEAA)
Phone: 877-560-8378 ■ OEAA web page (www.michigan.gov/oeaa) ■ **Email:** mde-oeaa@michigan.gov

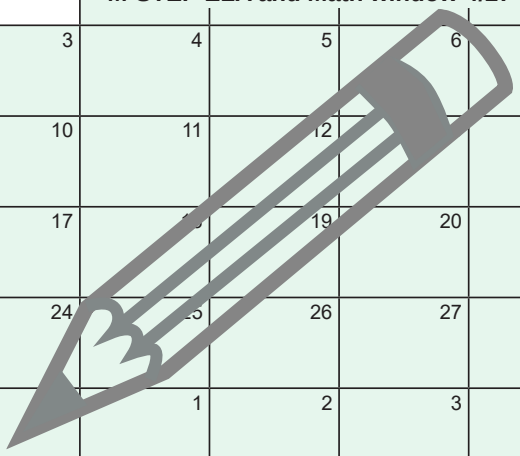
2021 Summative Testing Schedule

for Online and Paper/Pencil Assessments

Paper/Pencil Test Dates
Grades 3, 4, 6, and 7

April- June 2021

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
25	26	27	28	29	30	1
		M-STEP ELA and Math window 4/27–6/04				
2	3	4	5	6	7	8
9	10	11	12		14	15
16	17		19	20	21	22
23	24		26	27	28	29
30		1	2	3	4	5



Note: For Spring 2021 only, schools may flexibly schedule M-STEP paper/pencil content area tests between 4/27/21 - 6/04/21.

It is strongly recommended that students are not administered more than one content-area assessment on any given day.

Office of Educational Assessment and Accountability (OEAA)
Phone: 877-560-8378 ■ OEAA web page (www.michigan.gov/oeaa) ■ **Email:** mde-oeaa@michigan.gov

Appendix A.2 M-STEP Test Administration Manual

M-Step™

Michigan Student Test of Educational Progress

Spring 2021 M-STEP Test Administration Manual (TAM)

Updated April 2021

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How To Use This Manual

Introduction

This manual provides information about (1) how the administration process works from beginning to end, (2) key dates when specific assessment activities take place, (3) the roles that school personnel play in the administration process, and (4) how to use available supports and accommodations.

On January 25, 2021, the Michigan Department of Education (MDE) delivered a request to the U.S. Department of Education to waive certain assessment and accountability requirements of the federal Every Student Succeeds Act (ESSA) including the Spring 2021 M-STEP. On March 26, MDE received approval of our request to waive certain high-stakes components of accountability including the requirement to assess 95% of our student population. As of April 1st, we have not received a response that will allow us to waive the administration of the M-STEP for 2021.

To comply with current law, MDE and the Office of Educational Assessment and Accountability (OEAA) continue to prepare for the required spring assessments in the event the USED does not grant our waiver request. All students, even students receiving remote-only instruction, should have the opportunity to take the assessment. Districts have to offer remote or virtual students the opportunity to come into school to take the appropriate state summative assessments. However, those remote-only students would not be required to come into school for the sole purpose of taking the assessments.

Updates regarding the status of this request will be provided through the weekly Spotlight on Assessment and Accountability newsletter. Please know the health, safety, and well-being of students, educators, and their families is MDE's first priority.

The OEAA has developed a Safe Testing Planning Document to assist districts and schools to plan for the safe administration of the Spring 2021 assessments, including M-STEP. The planning document includes guiding questions and considerations for each aspect of testing to help you plan for your test administrations. This document is available on the M-STEP web page.

The COVID-19 pandemic has significantly impacted the 2020-2021 school year, and some policies and procedures of the M-STEP test administration have been modified to provide schools additional time and flexibility for M-STEP testing. Having said that, M-STEP must be proctored in-person by a trained test administrator according to the requirements of the Assessment Integrity Guide. Any administration in an Off-Site location must receive prior approval through the Off-Site Test Administration request process (see page 36, the Students in Different Locations section) for more information).

Important Note: eDIRECT has been renamed **DRC INSIGHT Portal**. The URL has not changed. This manual now refers to eDIRECT as the DRC INSIGHT Portal (https://mi.drcedirect.com).

Instructions for easy navigation to documents in the DRC INSIGHT Portal are on page 8.

This manual is divided into ten sections:

- **How to Use this Manual** describes the content and sections included in the manual.
- **Testing Schedule** gathers calendar-related information in one place to help school personnel prepare for, schedule, and administer the test.
- **Overview** describes general information that everyone involved in the M-STEP administration process needs to know.
- **Roles and Responsibilities** describes the roles and responsibilities of District Assessment Coordinators, Building Assessment Coordinators, Technology Coordinators, and Test Administrators.

- **Supports and Accommodations** describes in detail the supports and accommodations available to students during testing.
- **Student Pre-ID and Test Eligibility** describes the tasks associated with determining which students are eligible and expected to test, and how to pre-identify students for testing.
- **Before Testing Tasks** lists and describes the assessment-related tasks to be completed before testing.
- **During Testing Tasks** lists and describes the assessment-related tasks to be completed during testing.
- **After Testing Tasks** lists and describes the assessment-related tasks to be completed after testing.
- **Appendices**
  - M-STEP Calculator Policy
  - M-STEP Scratch Paper Policy
  - Incident Reporting Guide
  - DRC INSIGHT Portal User Guide
  - M-STEP List of Important Dates
  - M-STEP Test Administration Resources, Extended Retries Tech Bulletin
  - Checklists – before, during, and after testing
  - Change Log

All M-STEP District and Building Assessment Coordinators must read the entire Test Administrator Manual (this document). Test Administrators must read the Test Administrator Directions and Manual for each grade and test they will administer.

The M-STEP assessments are administered in person and primarily online. However, there are two instances in which they may be administered using paper/pencil versions of the test: (1) when required to meet an individual student's needs, or (2) when a school has applied to the Michigan Department of Education (MDE) for a waiver and the waiver has been approved. The current-year window to apply for a waiver has passed; it was posted in the Spotlight on Student Assessment and Accountability newsletter and in the M-STEP List of Important Dates.

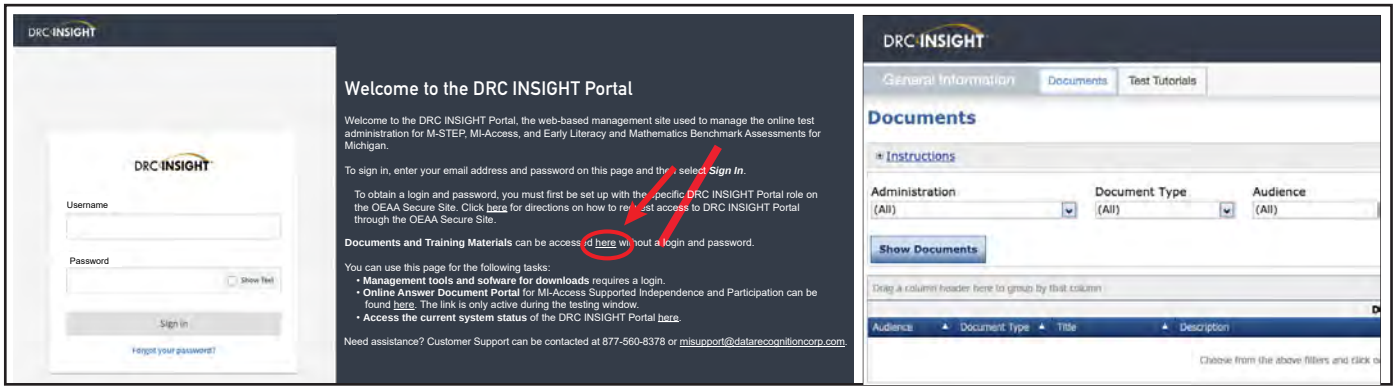
Since this manual provides information on both modes (types) of test administration (online and paper/pencil), MDE has developed two icons—a computer to represent online testing and a pencil to represent paper/pencil testing. When a section of the manual applies only to one mode of testing, the corresponding icon will appear. Sections without icons pertain to both online and paper/pencil testing.

Icon	Mode
	Paper/Pencil
	Online

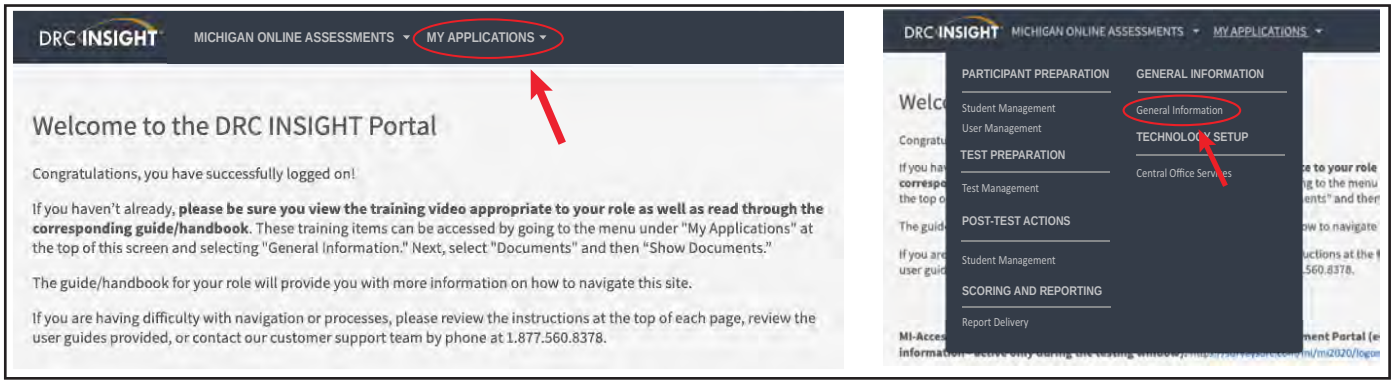
Navigating the DRC INSIGHT Portal

Users can access documents and resources in the DRC INSIGHT Portal (https://mi.drcedirect.com).

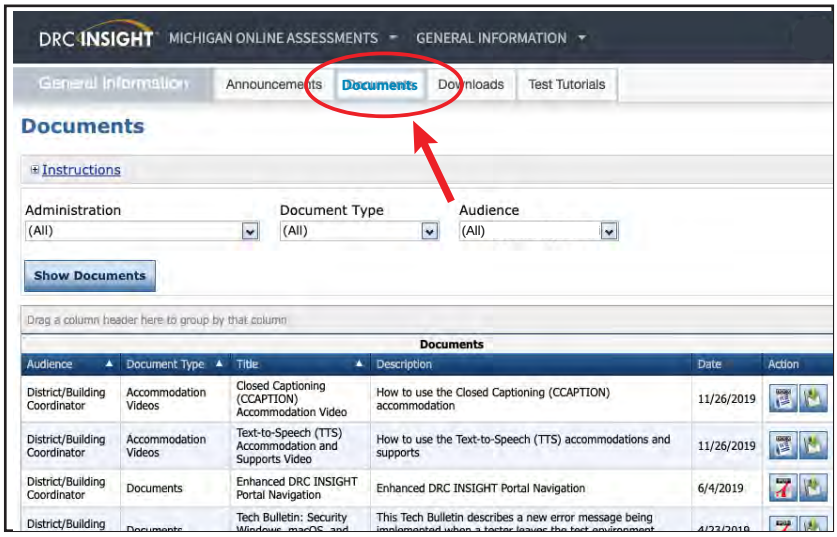
Test Administrators without secure access to the DRC INSIGHT Portal: select **"here"** in the **Documents and Training Materials** line to view all of the materials that are available without secure access.



District and Building Coordinators with secure access to the DRC INSIGHT Portal go to **My Applications** and select **General Information**.



Then, select the **Documents** tab.



Testing Schedules

You can copy and distribute these pages to others involved in the testing process.

If further updates to this manual are necessitated by the uncertainty caused by the ongoing COVID-19 pandemic, they will be announced in the Spotlight newsletter and documented in the Change Log in Appendix I.

On March 18, MDE announced the extension of the testing window. The Spring 2021 Testing Schedule for Summative Assessments has been updated to reflect these updates.

For Spring 2021 testing only, paper pencil testing windows are allowed.

Note: A complete list of dates encompassing the entire 2021 M-STEP administration cycle can be found in the List of Important Dates in Appendix E.

Spring 2021 Testing Schedule for Summative Assessments

Assessment	Week of																		
	1/27-1-29	2/1-2/5	2/8-2/12	2/15-2/19	2/22-2/26	3/1-3/5	3/8-3/12	315-3/19	3/22-3/26	3/29-4/2	4/5-4/9	4/12-4/16	4/19-4/23	4/26-4/30	5/3-5/7	5/10-5/14	5/17-5/21	5/24-5/28	5/31-6/4
M-STEP Grades 5, 8, 11												6 weeks							
M-STEP Grades 3 , 4, 6, 7														6 weeks					
MI-Access Alternate Assessments												8 weeks							
College Entrance: SAT w/Essay												4/13 only		Makeup 4/27			Makeup Contingency 5/18		
Accommodated Testing Window												4/13 – 4/26		Makeup 4/27-29			Makeup Contingency 5/18-20		
Work Skills: ACT WorkKeys												4/14 only		Makeup 4/28	Makeup Contingency 5/5				
Accommodated Testing Window												4/14 – 4/27			Makeup 4/28-5/4	Makeup Contingency 5/5-11			
PSAT 8/9 (grade 8)												4/13 only Primary 4/14-16		Makeup 4/27-5/7					
Accommodated Testing Window												4/13 –5/7							
PSAT 8/9 (gr 9) and PSAT 10												Primary 4/13-16		Makeup 4/27- 5/7					
Accommodated Testing Window												4/13 – 5/7							
WIDA ACCESS & WIDA Alternate ACCESS for ELLs	Extended: January 27 - April 9, 2021																		

MICHIGAN Department of Education

Testing Schedules

Flexibility has been provided for some paper/pencil test administration policies for the Spring 2021 administration only. These include:

- extended p/p windows
- no required content order - schools can administer in an order that makes the most sense for their students.
- every attempt should be made to complete content testing (except Day 1/Day 2 ELA) in one school day. If this is not possible, due to a schedule where students are not in school an entire day, then they should/must plan complete each part before breaking for the day (i.e. at a Stop Sign).
- Incident Reports are not required for students not completing a part/test in a day.
- 1:1 makeup administration is not required.
  - students are still not allowed to go back to previous portions of the test
  - sufficient quantities of Test Administrators/ proctors are needed to provide active monitoring

Additional contingency test days have been added to PSAT, SAT, and ACT WorkKeys assessment schedules. For more details, refer to the Guide to State Assessments), as well as the MME web page (www.michigan.gov/mme) and the PSAT web page (www.michigan.gov.psat).

Testing Schedules

Paper/Pencil Test Dates Grades 3, 4, 6, and 7

April- June 2021

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
25	26	27	28	29	30	1
		M-STEP ELA and Math window 4/27–6/04				
2	3	4	5	6	7	8
9	10	11	12		14	15
16	17		19	20	21	22
23	24		26	27	28	29
30		1	2	3	4	5

Paper/Pencil Test Dates – Grade 5

April–May 2021

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
11	12	13	14	15	16	17
18	19	20	21	22	23	24
		Any M-STEP Assessment window 4/13 – 5/21				
25	26	27	28	29	30	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22

Paper/Pencil Test Dates – Grade 8

April–May 2021

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
11	12	13 PSAT 8/9 Primary	14 PSAT 8/9 Primary test dates only for students absent on 4/13	15	16	17
18	19	20	21	22	23	24
		M-STEP Science and Social Studies window 4/14 –5/21				
25	26	27	28	29	30	1
		Makeup – PSAT 8/9				
2	3	4	5	6	7	8
	Makeup – PSAT 8/9					
9	10	11	12	13	14	15
16	17	18	19	20	21	22

Paper/Pencil Test Dates – Grade 11

April–May 2021

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
11	12	13 SAT w/Essay	14 ACT WorkKeys	15	16	17
18	19	20	21	22	23	24
		M-STEP Science and Social Studies window 4/15–5/21				
25	26	27 Makeup SAT w/Essay	28 Makeup ACT	29	30	1
2	3	4	5 Makeup Contingency ACT	6	7	8
9	10	11	12	13	14	15
16	17	18 Makeup Contingency SAT	19	20	21	22

Overview

M-STEP Assessments

The Spring 2021 Michigan Student Test of Educational Progress (M-STEP) includes summative assessments designed to measure student performance relative to the Michigan Academic Standards in English language arts (ELA), mathematics, science, and social studies. This overview will describe the unique characteristics of these content–area tests.

What's New

Updates to Spring 2021 M-STEP testing were planned for Spring 2020 but were not implemented due to the cancellation of testing. These updates will be applied in Spring 2021.

The M-STEP science test is now operational.

The M-STEP social studies test will continue to measure the Michigan Academic Standards for social studies that were adopted in 2007. The social studies test will have only one part for all grades assessed (5, 8, and 11). Students are allowed to take breaks during testing. Schools and districts should work with Test Administrators to determine when breaks are necessary and in the best interest of students.

To simplify the materials Test Administrators are required to read before testing, MDE has created updated Test Administrator's Directions and Manual documents for each grade by test mode (online and paper/pencil). These updated documents include test administration directions and other materials that cover everything Test Administrators need to know regarding test administration. This updated information would otherwise have been included in this current document – that is, the Test Administration Manual (TAM). Therefore, Test Administrators are no longer required to read the TAM; however, they are required to read the Test Administrator's Directions and Manual before administering any M-STEP test session.

Text-to-Speech (TTS) is available for test directions ONLY on all test forms except Video Sign Language (VSL) and Spanish for all students. Building and District Assessment Coordinators may decide whether to use the TTS Directions or to read test directions aloud for each test session. The test administration directions include detailed information for tests to be administered using the TTS Directions and for tests that are administered without TTS Directions.

In order to help with Test Schedule development, MDE has provided recommendations for test time estimates, test sessions, and breaks within sessions; these recommendations are on page 55 - 56 of this Test Administration Manual (TAM). These are recommendations to assist districts and buildings in the development of testing schedules—districts/buildings are not required to follow them. Refer to the Create Testing Schedules section to review this new information.

Assessment Security training requirements have been updated for Spring 2021. Building and District Assessment Coordinators are required to:

- complete the MDE Assessment Security online course through Michigan Virtual
- read the Assessment Integrity Guide

Test Administrators and Proctors are required to either

- complete either the MDE Assessment Security online course

OR

- to read the Assessment Integrity Guide.

Any educators who completed the Assessment Security training modules in the past are allowed to take the Assessment Security Refresher course in place of the full Assessment Security Training modules. More information about the Assessment Security Refresher course is available on the M-STEP web page (www.michigan.gov/mstep) under the **Professional Development** section.

Also new for Spring 2021: students using the embedded calculator will view the Desmos calculator. There is a basic four-function calculator for use in grade 6; which includes addition, subtraction, multiplication, division, and square root functions. Calculations are performed automatically as the student keys in the operation. Grade 7 uses a scientific calculator. In addition to the functions listed for grade 6, the scientific calculator includes exponential, algorithmic, trigonometric, and factorial functions.

A new feature of DRC INSIGHT for Spring 2021 is Extended Retries. With this new feature, if there are any connectivity issues, instead of displaying an error message after three attempts to reconnect, the system will continue to attempt reconnection for five minutes. The error message will display, instructing the student to raise his/her hand for help while continuing to attempt reconnection. If the system is able to reconnect, the error message will close and the student can resume testing. **Note:** It is possible that a student will see the error message but the error is resolved before the Test Administrator has had time to reach the student. If this occurs, the Test Administrator should instruct the student to resume testing.

There is a new page on the OEAA Secure Site called the COVID-19 School Closures page. Use this form to document when your school is closed for in-person instruction due to the COVID-19 pandemic.

This page provides a form for schools to document their COVID-related closures and for MDE to understand which schools and districts are impacted by COVID-19 closures. It does not remove or impact accountability requirements at this time.

As a result of the March 18 announcement to extend test administration windows, schools and districts that previously completed Testing Schedules are not required to recreate Testing Schedules for the Spring 2021 administration only.

English Language Arts

English language arts (ELA) is assessed with the M-STEP in grades 3-7. ELA covers four claims: reading, writing, listening, and research. There is one test ticket for online testers and three parts to be completed in two days for paper/pencil testers. Refer to the manuals posted on the MME and PSAT web pages for information regarding the PSAT 8/9 for students in grade 8 and the SAT with Essay for students in grade 11.

LISTENING

Listening is part of the ELA assessment for all students.

Students testing online must have headphones to hear the audio presented for this portion of the test.

Paper/pencil Test Administrators will receive a CD and a Listening Script that must be used for the Listening portion of the paper/pencil assessment. Both of these materials are provided to Building M-STEP Coordinators; it is up to them to determine which method (CD or script) will be used in their building.

If stand-alone CD players are not available to play the M-STEP ELA Listening CD for paper/pencil testers, Test Administrators may use the CD player in a classroom computer if the computer is equipped with speakers that enable each student to clearly hear the passages. If there is any doubt about whether all students can hear each passage properly, the Listening Script should be used instead of the CD. Audio files (CDs) and Listening Scripts cannot be copied and must be returned with secure, non-scorable materials after testing.

Once initial materials orders are placed, the Office of Educational Assessment and Accountability (OEAA) will send CDs and Listening Scripts to schools at a ratio of one CD and Listening Script per 20 students. If necessary, additional CDs and scripts may be requested during the Additional

Materials Order window (refer to the **List of Important Dates** in Appendix E for window dates). Test Administrators need only one or the other, but not both. CDs and Listening Scripts can also be shared.

Mathematics

Mathematics is assessed with the M-STEP in grades 3-7. It covers four claims: concepts and procedures, problem-solving, communicating reasoning, and modeling and data analysis. There is one test ticket for online testers and two parts to be completed in one day for paper/pencil testers. Refer to the manuals posted on the MME and PSAT web pages for information regarding the PSAT 8/9 for students in grade 8 and the SAT with Essay for students in grade 11.

CALCULATOR POLICY FOR MATHEMATICS ASSESSMENTS

Calculator policy for mathematics assessments use varies by grade and assessment type (online or paper/pencil). Therefore, it is important for Test Administrators to understand the state's policy on calculator use.

No Calculators Allowed in Grades 3, 4, and 5 Mathematics Assessments

Regardless of the type of test a student is taking (online or paper/pencil), calculators may not be used for any item on the mathematics grades 3, 4, and 5 assessments. Calculator use would change the construct of the items, or what they are intended to measure. All students must abide by this policy, even students whose Individualized Education Programs (IEPs) or Section 504 Plans specify otherwise. The use of a calculator in mathematics in grades 3, 4, and 5 is considered a nonstandard accommodation, which will render the assessment invalid. If a student in one of these grades uses a calculator, an incident report must be submitted. Refer to the **Incident Reporting Guide** in Appendix C.

Embedded Calculators Provided for Online Testers in Grades 6 and 7 Mathematics Assessments

Students in grades 6 and 7 taking a mathematics online test will use the calculator embedded in the online delivery engine. New for Spring 2021: Students using the embedded calculator will view the Desmos calculator. There is a basic four-function calculator for use in grade 6, which includes addition, subtraction, multiplication, division, and square root. Calculations are performed automatically as the student keys in the operation.

Grade 7 students will use the scientific calculator. This comprehensive calculator performs square root, exponential, logarithmic, trigonometric, and factorial functions, as well as the four arithmetic functions. Answers display automatically without the need for the user to select "enter".

Districts and buildings should view the Basic Calculator and Scientific Calculator tutorials with students and provide students the opportunity to practice with the new Desmos calculator in the Online Tools Training (OTT). Tutorials and OTTs are accessed without a login through the DRC INSIGHT Portal (https://mi.drcedirect.com) by selecting the **Test Tutorials** tab at the top of the page. Instructions for easy navigation to documents in the DRC INSIGHT Portal are on page 8.

Calculator Use for Paper/Pencil Testers

Students in grades 6 and 7 taking a paper/pencil test will use a handheld calculator. Students in grade 6 will use a basic calculator, and students in grade 7 will use a scientific calculator (both described in the paragraphs above). The test booklets are divided into two parts: Part 1 does not allow the use of calculators, but Part 2 does. Once a student starts Part 2, they may not return to the non-calculator items in Part 1. If a calculator is used in Part 1, an Incident Report must be submitted to mark the test as Nonstandard Accommodation.

Since external handheld graphing calculators are programmable, there is potential for a security breach. Therefore, all programmable calculators must be set to TEST mode during testing sessions.

The state's full **Calculator Policy** can be found in Appendix A. Coordinators and/or Test Administrators may copy and share the policy in its entirety with others involved in testing.

Science

The M-STEP science test is operational in Spring 2021. The M-STEP science test assesses the Michigan K-12 Science Standards in grades 5, 8, and 11. This is a fixed-form online or paper/pencil test. This year, the test will have:

- two test tickets and two parts in grades 5 and 8 for online testers
- one test ticket and one part in grade 11 for online testers
- two parts to be completed in one day for paper/pencil testers in grades 5 and 8
- one part to be completed in one day for paper/pencil testers in grade 11

The test will include seven clusters for each grade assessed.

- **Cluster** – a stimulus (or context) about a phenomenon and a set of 5-8 related items designed to assess all performance expectations (standards) in one topic bundle
- **Topic Bundle** – a group of related performance expectations (standards) that are assessed as a group

CALCULATOR POLICY FOR SCIENCE ASSESSMENTS

Students in grades 5, 8, and 11 are allowed to use calculators for both the online and paper/pencil science assessment.

Embedded Calculators are Provided for Online Testers in Grades 5, 8, and 11 Science Assessments

Students in grades 5, 8, and 11 taking a science online test will use the calculator embedded in the online delivery engine. The Desmos calculator will be available for all items on the science test.

- Grade 5 includes a basic four-function calculator which includes addition, subtraction, multiplication, division and square root
- Grades 8 and 11 include the scientific calculator. This comprehensive calculator performs square root, exponential, logarithmic, trigonometric, and factorial functions, as well as the four arithmetic functions. Answers display automatically without the need for the user to select "enter".

The Desmos calculator used for the science assessment is the same calculator available on the grades 6 and 7 mathematics assessments.

Calculator Use for Paper/Pencil Testers

Students in grades 5, 8, and 11 taking a paper/pencil test will use a handheld calculator on the entire test. Students in grade 5 will use a basic calculator, and students in grades 8 and 11 will use a scientific calculator.

Since external handheld graphic calculators are programmable, there is potential for a security breach. Therefore, all programmable calculators must be set to TEST mode during testing sessions.

The state's full **Calculator Policy** can be found in Appendix A. Coordinators and/or Test Administrators may copy and share the policy in its entirety with others involved in testing.

Social Studies

Social studies is assessed in grades 5, 8, and 11 with a fixed-form online or paper/pencil test. The Spring 2021 M-STEP assessments are based on the 2007 Michigan K-12 Social Studies Standards

and do not reflect any changes in the recently approved 2019 Social Studies Standards. The test will have:

- one test ticket and one part in grades 5, 8, and 11 for online testers
- one part to be completed in one day for paper/pencil testers in grades 5, 8, and 11

The Michigan Merit Examination

The Michigan Merit Examination (MME) is administered to grade 11 students and consists of the SAT® with Essay, ACT® WorkKeys®, and M-STEP summative assessments in science and social studies. Because testing was canceled in Spring 2020 only first-time 11th graders are required to take the MME. Repeating 11th graders and 12th graders may choose to participate in the full MME if they are missing a component. To learn more about requirements and eligibility for taking the MME as well as information on administering the MME, go to the MME web page (www.michigan.gov/mme).

Required Grade 8 Testing

Students in grade 8 will take the M-STEP science and social studies tests, and the PSAT 8/9. Information on administering the PSAT 8/9 is found in the PSAT 8/9 Coordinator Manual and on the PSAT web page (www.michigan.gov/psat).

Test Administrator's Directions and Manual

New for Spring 2021: The test directions documents have been expanded to include all information that a Test Administrator will need to know. This means that Test Administrators are no longer required to read any section of the Test Administration Manual (TAM)—everything they need is in the Test Administrator's Directions and Manual document.

Text-to-Speech Test Directions

New for Spring 2021: Text-to-Speech (TTS) test directions are available for all students. District and/or Building Assessment Coordinators determine whether TTS Test Directions will be used in the district and/or school.

To use TTS for test directions, Test Administrators will follow the "TTS Directions Only" section of the test directions in the Test Administrator's Directions and Manual. These directions provide introductory information and test verification, then direct students to select the "Play" button to listen to the directions. **Note:** All students must have headphones in order to use TTS for test directions. **Test administration directions are explicit and must be followed exactly as written.**

Scratch Paper Guidelines

Scratch paper use varies by test, grade, and content area. Review the state's full **Scratch Paper Policy** in Appendix B.

Designated Supports and Accommodations

The Michigan Supports and Accommodations Guidance Document (which includes the **Supports and Accommodations Tables)**, presents the appropriate Universal Tools, Designated Supports, and Accommodations, as well as identification processes, classroom considerations, and guidelines for all state assessments. The document can be found on the M-STEP web page (www.michigan.gov/mstep). Guidance in the documents pertains to general education students, as well as to English learners (ELs), students with disabilities (SWDs), and students who are considered ELs and are also identified as SWDs.

Some Designated Supports and Accommodations may require a student to take the test online. Identifying individual students who require online Designated Supports and/or Accommodations must be done in the DRC

INSIGHT Portal. Remember: When testing students online, a caching server must be set up and the test engine, INSIGHT, must be installed.

Conversely, other Designated Supports and Accommodations for students require the students to take paper/pencil versions of the tests. The paper/pencil test materials must be specifically requested when materials are ordered in the OEAA Secure Site.

Refer to the Supports and Accommodations section of this manual for more detailed information.

Resources for Students to Prepare for Testing

A number of resources and tools have been developed to help students gain valuable experience with testing. The resources for online testing may be accessed in the **Accessing Online Tools Training** mini-module, which is available on the DRC INSIGHT Portal (www.mi.drcedirect.com) by selecting **Show Documents**. Instructions for easy navigation to documents in the DRC INSIGHT Portal are on page 8.

Sample items for paper/pencil testers are available on the M-STEP web page (www.michigan.gov/mstep).

Available resources include:

- grade-level Sample Item Sets
- sample essay prompts
- calculator practice
- Student Tutorials for use with classrooms of students to provide an overview of what they will practice using the OTTs
- Online Tools Trainings (OTTs) for general education students
- OTTs for students using supports and accommodations

It is highly recommended that schools provide students with opportunities to practice using these resources before they take the online or paper/pencil tests.

Call Center Contact Information

The Office of Educational Assessment and Accountability (OEAA) has a call center to answer questions related to M-STEP testing.

Agents are available to receive questions at the following toll-free phone number and email address during the specified hours.

- **Call:** 1-877-560-8378
- **Email:** mde-oeaa@michigan.gov
- **December 1, 2020 - April 12, 2021:** 8:00 AM–5:00 PM (M–F)
- **April 12, 2021 - June 4, 2021:** 7:00 AM–5:00 PM (M-F)

The following table shows the options related to the M-STEP that are available on the call center phone menu. Select the appropriate option when contacting the OEAA, either through our toll-free number (877-560-8378) or the Lansing-area local number (517-241-4102).

Topic	Option
Known or suspected cheating or unethical testing practices on any state assessment	1
DRC INSIGHT Portal, INSIGHT, Central Office Services (COS), or online assessment tools related to the online M-STEP	2
OEAA Secure Site, testing policies and paper/pencil materials regarding the M-STEP, MI-Access, and Accountability reporting	3

OEAA Communications with Schools and Districts

Keeping educators up to date regarding changes in assessment and accountability is critical. The OEAA communicates with the field in a number of different ways, including:

- **Spring 2021 Training (live and recorded) and Video Tutorials** (online focus only) for online M-STEP Coordinators; in the DRC INSIGHT Portal (https://mi.drcedirect .com)
- **Spring 2021 M-STEP Test Administration Recorded Presentations** (online and paper/pencil testing information in chapters); available on the M-STEP web page (www.michigan.gov/mstep) – watch the Spotlight for details
- **Spotlight on Student Assessment and Accountability weekly newsletter** – sign up to receive the newsletter and/or read archived copies on the Spotlight web page (www.michigan.gov/mde-spotlight)
- M-STEP web page (www.michigan.gov/ mstep)
- DRC INSIGHT Portal (https://mi.drcedirect.com)
- the Announcement page on the OEAA Secure Site (www.michigan.gov/oeaa-secure)
- targeted email communications for important or urgent communications during the testing window (targeted emails are sent to the persons who have assigned roles in the Educational Entity Master [EEM]; it is important that all roles are current and contact information is up to date)
- presentations at state conferences, including the Michigan School Testing Conference held each year in February

Check these sources regularly to stay up to date on assessment- and accountability-related issues and activities.

Standardized Testing

Uniform procedures are essential to a standardized testing program. To ensure comparable scores, all testing staff must follow the same testing procedures and give instructions exactly as they appear in this manual.

Ensure that you and all testing staff comply with all applicable laws, including those relating to discrimination. By strictly following policies and procedures, you give students the best guarantee of fair testing and the best possible test day experience.

Assessment System Access for District and Building Assessment Coordinators

The OEAA Secure Site, the Educational Entity Master (EEM), and the DRC INSIGHT Portal are systems used for test administration tasks.

THE OEAA SECURE SITE

Many testing functions take place in the OEAA Secure Site (www.michigan.gov/oeaa-secure), including:

- pre-identification of students
- off-site test administration requests
- test selection and test session creation
- ordering of paper/pencil test materials (and accompanying return materials)
- printing of barcode labels for paper/pencil answer documents (as necessary)
- incident reporting
- reviewing “Accountable Students and Test Verification” functions
- downloading the L1 (First Language) glossaries for mathematics assessments
- look-up for district and school contacts
- access to student scores and reports

Accessing the OEAA Secure Site

If District or Building M-STEP Coordinators do not have an OEAA Secure Site user ID and password (which are required to enter the site), they should contact their district administrator (as assigned by the District Superintendent), who is responsible for maintaining the site at the district level.

Overview

A user must have a Michigan Education Information System (MEIS) login to log into the OEAA Secure Site. The OEAA Secure Site login screen will contain a link to the "Request MEIS ID" process. If the user has a MEIS ID but does not have access to the OEAA Secure Site, the system will display a screen to request access after logging on. Users requesting district, school administrator, and/or school user access will be able to submit a request using the request access screen.

Those who are unfamiliar with the OEAA Secure Site can find training resources on the Secure Site Training web page (www.michigan.gov/securesitetraining).

THE EDUCATIONAL ENTITY MASTER

The Educational Entity Master (EEM) is a repository that contains basic contact information for public schools, nonpublic schools, intermediate school districts, and institutions of higher education.

Because the EEM serves as the directory for identifying and linking educational entities with other data collection applications, it is necessary that districts and schools keep their information up to date. The OEAA will use this information in various ways throughout the M-STEP testing process.

For the M-STEP administration, it is especially important to ensure the district and building M-STEP coordinator contact information and physical address is accurate and up to date, to ensure testing materials are sent to the correct address. **Note:** Test materials are sent to the address provided for the M-STEP Coordinator and cannot be shipped to a post office box.

The EEM may be accessed on the EEM web page (www.michigan.gov/eem). The EEM may be viewed by anyone, but it can only be updated by the authorized district EEM user. If you do not know who your EEM authorized user is, you can locate their name, email, and phone number on the **District and School Contact page** of the OEAA Secure Site. The EEM authorized user is listed on the District and School Contact page.

DRC INSIGHT PORTAL

The DRC INSIGHT Portal is used for online test administration tasks, including:

- assigning online Universal Tools, Designated Supports, and Accommodations
- test session setup
- printing test tickets and test rosters
- monitoring student completion of assigned tests

Accessing the DRC INSIGHT Portal

Secure access to the DRC INSIGHT Portal for Building and District Assessment Coordinators is assigned through the OEAA Secure Site. Refer to the How do I get access to the DRC INSIGHT Portal? document on the OEAA Secure Site Training web page (www.michigan.gov/securesitetraining).

Helpful Hint: Most districts review EEM contact lists at the beginning of each academic year to ensure they are still correct.

If any changes in staffing are made during the year, it is important for the authorized district EEM user to update the EEM with the correct information.

Be sure to notify your authorized district EEM user if you have any changes or updates to your assessment staff!

Roles and Responsibilities

District and school professional staff members play a key role in the fair and equitable administration of state assessments.

While districts may adjust the roles and responsibilities to fit their size and organizational structure, all roles must be filled in some way. Each role may be carried out by one individual or split among several individuals. However, no function or responsibility can be ignored.

There are four roles associated with M-STEP testing:

1. District Coordinators
2. Building Coordinators
3. Test Administrators
4. Technology Coordinators

Technology Coordinators have a separate manual that provides detailed information on how to install and configure the software used for testing. It is called the **Technology User Guide** and can be found in the DRC INSIGHT Portal (formerly eDIRECT) (https://mi.drcedirect.com).

The District, Building, and Technology coordinators should all be identified in the EEM. **Note:** While the EEM will allow multiple entries for each role, the OEAA only uses the most recent entry.

Following is a brief description of each M-STEP role. Detailed information on the roles and responsibilities of district and school staff involved in test administration can be found in the Assessment Integrity Guide, which is located on the M-STEP web page (www.michigan.gov/mstep).

DISTRICT COORDINATORS

District M-STEP Coordinators are responsible for overseeing all testing at the district level and acting as backup support at the school or building level. The person fulfilling this role must develop necessary testing policies, ensure that all other roles associated with testing are filled, lead professional development activities associated with testing, and ensure that Building Coordinators and Test Administrators are aware of training opportunities for students.

The District Coordinator must be identified in the EEM with current and accurate contact information.

District Coordinators must:

- complete the OEAA Assessment Security Compliance Form
- complete the Michigan Virtual online Assessment Security Training modules
- read the TAM (this document) in its entirety
- read the Assessment Integrity Guide

District Coordinators who completed the Assessment Security Training modules in the past can take the Assessment Security Refresher course in place of the Assessment Security Training modules.

BUILDING COORDINATORS

Each school building involved with M-STEP testing—including alternative education programs, Shared Educational Entities (SEEs), and Specialized Shared Educational Entities (S2E2s)—must have a Building M-STEP Coordinator. This person may be the school principal or another professional staff member. The Building M-STEP Coordinator is responsible for arranging training opportunities for Test Administrators and students, making all testing arrangements, developing test schedules based on the school's resources (including available computers and testing rooms) and needs, and ensuring the overall integrity of the assessment process.

The Building Coordinator must be identified in the EEM with current and accurate contact information.

Roles and Responsibilities

Building Coordinators must:

- complete the OEAA Assessment Security Compliance Form
- complete the Michigan Virtual online Assessment Security Training modules
- read the TAM (this document) in its entirety
- read the Assessment Integrity Guide

Building Coordinators who completed the Assessment Security Training modules in the past can take the Assessment Security Refresher course in place of the Assessment Security Training modules.

TEST ADMINISTRATORS

Test Administrators are responsible for making preparations for and administering the M-STEP tests directly to students.

New in 2021: The Test Administrator's Directions and Manual include all policy and procedure information that Test Administrators need to know. These documents are specific to each grade. Test Administrators must read the entire Test Administrator's Directions and Manual for each test that will be administered prior to the test administration.

Test Administrators must:

- complete the OEAA Assessment Security Compliance Form
- complete the Michigan Virtual online Assessment Security Training modules and/or read the Assessment Integrity Guide
- read the Test Administrator's Directions and Manual for each grade level and test mode to be administered

TECHNOLOGY COORDINATORS

Technology Coordinators are responsible for numerous tasks related to the software used for testing (INSIGHT), as well as the Central Office Services (COS), a local caching system that securely caches test content and student responses.

Technology Coordinators must:

- complete an OEAA Assessment Security Compliance form
- download and install INSIGHT and Central Office Services (COS) on any devices new to online testing
- verify that the latest versions of INSIGHT and COS are installed (if the school participated in online testing before, this may require old programs be uninstalled) or updated
- configure all devices used for testing in schools to communicate with the COS (if not already done)
- provide contact information to District and Building M-STEP Coordinators so they can easily request help in solving any technology issues that arise before, during, or after testing
- be available during testing to troubleshoot and help Building M-STEP Coordinators and Test Administrators

The Technology Coordinator must be identified in the EEM with current and accurate contact information.

Supports and Accommodations

What Are Supports and Accommodations?

Generally speaking, Universal Tools, Designated Supports, and Accommodations are tools, resources, and strategies that allow all students equitable access to the content measured on the state's standardized assessments.

The three broad categories into which these tools, resources, and strategies fall are:

1. **Universal Tools** – available to **all** students
2. **Designated Supports** – based on **individual student need** (including EL supports), as determined by an adult or team
3. **Accommodations** – specifically documented in a student's **Individualized Education Program (IEP)** or **Section 504 Plan**

This section of the manual provides detailed information specifically related to the latter two categories—Designated Supports and Accommodations. It should be noted that what is considered a **Designated Support** for one content area and/or one grade may be considered an **Accommodation** for another content area or grade, so it is imperative to approach the provision of Designated Supports and Accommodations from a student-centered perspective. **Note:** Do not assume that what applies to one student in one grade taking a particular content-area test will apply across the board to all students.

Detailed information about what is allowable for students in each category (Universal Tools, Designated Supports, and Accommodations) can be found in the Supports and Accommodations Guidance Document, which includes the **Student Supports and Accommodations Tables**. The guidance document is available on the M-STEP web page (www.michigan.gov/mstep).

Supports and Accommodations Tracking Sheet

The OEAA has developed an optional **Supports and Accommodations Tracking Sheet** for District and Building M-STEP Coordinators to record the Designated Supports and Accommodations individual students require, regardless of paper/pencil or online testing. It can be used to not only ensure the correct materials are ordered, but that the correct Designated Supports/Accommodations are turned on/recorded in the DRC INSIGHT Portal (formerly known as eDIRECT). The sheet is intended only for organizational purposes; it should not replace or usurp team-level decisions or documented needs in a student's IEP or Section 504 Plan. The tracking sheet is available on the M-STEP web page (www.michigan.gov/mstep).

Ordering Accommodated Materials

Some Designated Supports and Accommodations may require a student to take the test online. Some Designated Supports and/or Accommodations that an individual student needs to test online must be identified and enabled in the DRC INSIGHT Portal.

Conversely, other Designated Supports and Accommodations for students require them to take paper/pencil versions of the tests. **Note:** These tests must be specifically requested when ordering materials in the OEAA Secure Site (www.michigan.gov/oeaa-secure).

If a student requires a Reader Script, an audio CD, or a video DVD, a special accommodations kit must be ordered for that student. **These kits contain only one paper/pencil test booklet**. Therefore, when more than one student will use the same Reader Script, CD, or DVD (when

students will be testing in small groups), additional paper/pencil test booklets must be ordered. (The order screen will request the number of students expected to test with each kit, so be sure to enter the correct number.) Braille and Enlarged Print Kits must be ordered individually.

Embedded and Non-embedded Supports and Accommodations

The Spring 2021 M-STEP **online** assessments offer two kinds of designated supports and accommodations—embedded and non-embedded.

Embedded Designated Supports and Accommodations are those that are integrated into the online testing system. These Designated Supports and Accommodations must be turned on, or enabled, by the Building M-STEP Coordinator in the DRC INSIGHT Portal **before** a student's test ticket is generated.

Helpful Hint: District and/or Building Assessment Coordinators work with Special Education Directors to ensure all Designated Supports and Accommodations are assigned **BEFORE** any test ticket is generated.

Test tickets that are generated before embedded Designated Supports and Accommodations are assigned will not have the Designated Supports or Accommodations available on the test.

Non-embedded Accommodations are those that are not available within the test engine, such as noise buffers or having a teacher read the items aloud to a student. Keep in mind that **any option identified as an Accommodation must only be made available to students with IEPs/504 plans** and should only be made available to those students if they have a need for the Accommodation outlined in their IEP/504.

The **Student Supports and Accommodations Tables** included in the Supports and Accommodations Guidance Document can help educators determine which Designated Supports and Accommodations need to be enabled and identified for use in the DRC INSIGHT Portal. The table is located on the M-STEP web page (www.michigan.gov/mstep).

Turning On Designated Supports and Accommodations

For detailed information related to turning on embedded Designated Supports and Accommodations, refer to the mini-module called **How to Assign and Mass-assign Student Supports and Accommodations**, which can be found in the DRC INSIGHT Portal (https://mi.drcedirect.com). Select **Document Type: Mini-Modules**. Instructions for easy navigation to documents in the DRC INSIGHT Portal are on page 8.

Verifying Test Tickets

Test Administrators can verify a student's online Universal Tools, Designated Supports, and Accommodations by reviewing the student's test ticket(s). Detailed information about what is allowable for students in each category (Universal Tools, Designated Supports, and Accommodations) can be found in the Supports and Accommodations Guidance Document.

M-STEP Spring 2021

Test Ticket G3 ELA

Student Name: Smith, John J
Date of Birth: 3/3/20XX

Username: JSMITH1
Password: ZM5XQYZ8

(Note: Username and password are not case sensitive)
Accommodation: **MSK**
Test Session: Sample Session

Supports and Accommodations

The following table shows how online Designated Supports and Accommodations are abbreviated on the test tickets.

Online Supports/ Accommodations	Test Ticket Abbreviation
Abacus	A
Auditory Amplification	AA
Alt communication devices	ACD
Administered Individually/Small Group	AISG
Sign Language ASL Video	ASL
Administrator Sign Test Content in ASL	ASTC
Administrator Sign Test Directions in ASL	ASTD
Bilingual word-to-word dictionary	BWWD
Color Choices	CC
Closed Captioning	CCAPTION
Continuous Magnification	CM
Contrasting Color	CTC
Masking	MSK
Noise Buffers	NB
Non-embedded Calculator	NEC
OEAA Multiplication Table	OMT
Oral Translated Test Directions	OTTD
Read Aloud (Human Reader)	RAHR
Scribe (Non-Writing Items)	SNWI
Spanish Translation (Stacked)	ST
Scribe (Writing Items)	SWI
Text-To Speech (Items Only)	TTS
Text-to-Speech (Items & Passages)	TTSPASSAGE
Visual Aids	VA

Keep in mind that not all available Universal Tools, Designated Supports, and Accommodations are tracked in the DRC INSIGHT Portal.

Where to Find More Information on Designated Supports and Accommodations

Essential Designated Supports and Accommodations information can be found on the M-STEP web page (www.michigan.gov/mstep), including:

- Supports and Accommodations Guidance Document – includes the **Student Supports and Accommodations Tables**, as well as guidance related to qualifications for translators; scribing protocols; English, Arabic, and Spanish read-aloud guidelines; and text-to-speech/read-aloud guidance
- Online videos with additional information will be available under the **Professional Development** section; watch the Spotlight for details

Nonstandard Accommodations

Any student who receives a nonstandard accommodation will not count as being assessed. If a non-eligible student receives an accommodation during testing, coordinators are required to submit an Incident Report. Incident reports are submitted in the OEAA Secure Site. Select Incident Reports under the Student Assessment tab. Contact the OEAA Call Center (at 1-877-560-8378) for assistance, if needed.

The following are two examples of why some accommodations are considered nonstandard.

- The M-STEP grade 3–5 ELA tests are intended to measure how well a student can read and comprehend through decoding. Therefore, if the reading passages are read aloud to a

student, it becomes a listening test and not a reading test. In this way, the construct of the test (or what it is designed to measure) is changed.

- Using a calculator on any portion of the M-STEP mathematics tests where calculators are not permitted is considered a nonstandard accommodation, because the items are intended to measure a student's ability to make the calculations independently (for example, adding or subtracting two numbers). If a calculator is used on these items, it changes the construct of what is being measured.

Filling Out Designated Supports and Accommodations Information on Answer Documents

Test Administrators working with paper/pencil testers to complete the demographic portion of their answer documents will need to make sure that information related to Designated Supports and Accommodations is correctly recorded on the answer documents.

ELA STANDARD SUPPORTS AND ACCOMMODATIONS

- Directions Read in Native Language
- Braille (Form 88)
- Enlarged Print
- Multiple-Day Testing
- Alternate Response
- American Sign Language (ASL)
- Noise Buffers
- Read Aloud
- Scribe
- Speech-to-Text
- Other (as allowed according to the Supports and Accommodations Tables)

MATHEMATICS STANDARD SUPPORTS AND ACCOMMODATIONS

- Directions Read in Native Language
- Oral Translation in Native Language
- Braille (Form 88)
- Spanish Booklet
- Enlarged Print
- Multiple-Day Testing
- Alternate Response
- American Sign Language (ASL)
- Noise Buffers
- Read Aloud
- Scribe
- Speech-to-Text
- Abacus
- L1 Glossary
- Other (as allowed according to the Supports and Accommodations Tables)

SCIENCE AND SOCIAL STUDIES STANDARD SUPPORTS AND ACCOMMODATIONS

- English DVD
- Spanish DVD
- Arabic DVD
- Reader Script
- Oral Translation in Native Language
- Braille (Form 88)
- Enlarged Print
- Audio CD
- Multiple-Day Testing
- Other (as allowed according to the Supports and Accommodations Tables)

Using Audio CD Versions of the Tests

(Use Form 1 test booklet only)

- **Audio CDs are ONLY available for the M-STEP science and social studies assessments**. This is considered a Designated Support.
- The audio CD versions of the M-STEP tests are created from a **Form 1 test booklet**.
- Students using an audio CD must have a printed copy of a **Form 1 test booklet** to use during testing. Be sure to grid **"Form 1"** on the students' answer documents as noted in the test directions.
- This version of the test (Designated Support) will be shipped with one Form 1 test booklet. Be sure to order additional Form 1 test booklets if using an audio CD with multiple students; this is done by accurately indicating the number of students to be tested with the CD on the materials order page in the OEAA Secure Site (www.michigan.gov/oeaa-secure).
- The District/Building M-STEP Coordinator may order additional audio CDs.

The following instructions should be followed when administering audio CD versions of the tests.

- Audio CDs are intended to be used by one student or by small groups of no more than five students.
- Individual students may use their audio CD in a small group setting only when the computer or CD player has headphones and the student has personal control over the equipment.
- Since this designated support would be used routinely in the classroom, students should be able to use the equipment independently. Students may be assisted in playing the audio CD but may not be given any help with answering test items. Students who use audio CDs (based on individual need) must use a standard Spring 2021 Answer Document. Student responses can be recorded in a number of different ways. Students may:
  - grid their own answer documents
  - mark their answers in their test booklets and have a Test Administrator, proctor, or test accommodations provider transcribe them onto their answer documents
  - dictate responses to a scribe or into a tape recorder and have a Test Administrator, proctor, or test accommodations provider grid the answer documents (refer to the **Scribing Protocol** found in the Supports and Accommodations Guidance Document located on the M-STEP web page under the **Student Supports and Accommodations** section)
  - braille their responses and have a Test Administrator, proctor, or test accommodations provider transcribe the answers onto the answer documents
- **Important:** The **"Audio CD"** circle on the students' answer documents must be filled in for students using an audio CD as a Designated Support.
- Make sure a barcode label is placed on the front of each student's answer document where indicated.

Using Video DVD Versions of the Tests

(Use Form 1 test booklet only.)

- Video DVDs—available only for the M-STEP science and social studies tests—provide an enhancement to the audio CD versions. Video DVDs are not available for ELA and mathematics.
- Students can use the video display as an additional cue for determining where they should be in a test booklet while they are taking a test. The video displays an English

version of the book while playing an audio translation into Broadcast Spanish or Standard Arabic.

- DVDs are designed to be used with a television and a DVD player. This equipment will produce the highest quality results.
- Students using a DVD must have a printed copy of a **Form 1 test booklet** to use during testing. Be sure to indicate **"Form 1"** on each student's answer document as noted in the test directions.
- This version of the test will be shipped with one Form 1 test booklet. Be sure to order additional Form 1 test booklets if using a DVD with multiple students; this is done by accurately indicating the number of students to be tested with the DVD on the materials order page in the OEAA Secure Site (www.michigan.gov/oeaa-secure).
- The District/Building M-STEP Coordinator may order additional video DVDs.
- Video DVDs for science and social studies are available in Spanish, Arabic, and English.

HOW TO ADMINISTER VIDEO DVD VERSIONS OF THE TEST

The following instructions should be followed when administering video DVD versions of the tests.

- Tests are to be administered to students either individually or in small groups (up to five students) in a setting where the video will not disturb other students.
- The Test Administrator will need to make sure the appropriate video language (Arabic, English, Spanish) circle is filled in on each student's answer document.
- Students who use videos (based on individual need) must use a standard Spring 2021 answer document. Responses can be recorded in a number of ways. Students may:
  - grid their own answer documents
  - mark answers in their test booklets and have a Test Administrator, proctor, or test accommodations provider transcribe the answers onto the answer documents
  - dictate responses to a scribe or into a tape recorder and have a Test Administrator, proctor, or test accommodations provider grid the answer documents (refer to the **Scribing Protocol** found in the Supports and Accommodations Guidance Document located on the M-STEP web page under the **Student Supports and Accommodations** section)
- Each test question on the DVD has a marker (track number) that allows students to return to a particular question as needed during test administration.
- For students using DVDs as a Designated Support, mark the appropriate DVD bubble on their answer document.
- Make sure a barcode label is placed on the front of each student's answer document where indicated.

Reading Directions and Track/Chapter Numbers—Audio CDs and Video DVDs

Audio CDs and video DVDs are formatted so that the track number in Part 1 of each test corresponds to the test questions for each test part. Test Administrators and accommodations providers should be aware of the following information.

- Test Administrators or accommodation providers must read the directions aloud to the student(s) exactly as written, so students may ask questions before beginning the test. Students will hear the directions a second time on the CD or DVD, because the directions are attached to test question tracks.

- Directions on the CDs and DVDs are attached to a test question. For example, the initial directions for science, Part 1 will be part of Track or Chapter 1. This means a student who returns to test question 1 will hear the directions again. This might be seen as a drawback in the test administration, but it is the only way tracks/chapters can be aligned with the actual test question numbers.
- Tracks/chapters for Part 2 (if applicable) of the DVDs may begin with Track or Chapter 1 again. This may not correspond to the test question numbers. Students may need to search for the test question numbers by paging back and forth rather than by using the menu function offered in the software.
- For science grade 11, there are two CDs with 7 clusters.

Using Reader Scripts

The use of Reader Scripts (scripted versions of the M-STEP test) standardizes the way tests are read aloud to students. Reader Scripts are only offered for M-STEP science and social studies and they are considered a designated support. (Refer to the **Read-Aloud Guidelines** on page 31 for information on readers for ELA and mathematics.)

Reader Scripts may be administered one-on-one or in small groups of up to five students. Students will use a **Form 1 test booklet** while the test administrator reads aloud from the Reader Script. (**Note:** A Form 2 Reader Script and Test Booklet are required for emergency testing.) The ordering process for Reader Scripts is similar to the process used for ordering audio CDs and video DVDs.

For students using a Reader Script as a designated support, it is important that the **"Reader Script"** circle is filled in on their answer document. Also make sure a barcode label is placed on the front of each student's answer document where indicated.

Using Oral Translations for Native Language

(Use Form 1 test booklet only)

For science and social studies, translations for native languages must use the Reader Script. If administering a science or social studies Form 2 (emergency) test, the Form 2 Reader Script must be used. (Refer to the **Read-Aloud Guidelines** on page 31 for information on readers for ELA and mathematics.)

Using Enlarged Print Versions of the Test

(Use Form 1 test booklet only)

- Use of the enlarged print version of the assessment is an Accommodation.
- **Form 1** is the basis for the enlarged print version of the test.
- Students who use an enlarged print version of the test must record their answers in their enlarged print test booklet; the answers are transferred by a Test Administrator, proctor, or accommodations provider onto a regular answer document. Spelling, punctuation, and indentation must be transcribed exactly as it appears in the student's original response.
- Once student responses have been transcribed onto a regular answer document, the student's test booklet can be returned in a secure, non-scorable box.
- If students use an enlarged print version of the test, it is important that the **"Enlarged Print"** circle is filled in on their answer document.
- Make sure a barcode label is placed on the front of the transcribed answer document where indicated.

Supports and Accommodations

Using Braille Versions of the Test

Using braille versions of the assessment is an Accommodation.

- The use of a braillewriter is permissible. If a student uses a braillewriter as an assessment Accommodation, a Test Administrator, proctor, or accommodations provider must transcribe the student's responses onto a regular answer document that is returned along with other secure, scorable materials. Spelling, punctuation, and indentation must be transcribed exactly as it appears in the student's original response.
- Each braille version of a content-area M-STEP test will be a unique test form (Form 88).
- Each grade-level/content-area braille accommodated kit will include a companion **Assessment Administrator Booklet for Braille (AABB)**. This booklet is provided so Test Administrators/accommodations providers can see how the original test items were modified for the student. It also allows them to follow along with the student, even if they do not read braille.
- A **Print-to-Braille Correspondence** document is available on the M-STEP web page (www.michigan.gov/mstep).
- If students use a braille version of the test or a braillewriter, it is important that **"Form 88"** is bubbled on their answer document.
- The answer document to be used for braille is included in the braille kit.
- Make sure a barcode label is affixed to the front of the student's transcribed answer document where indicated.

Directions for Other Common Supports and Accommodations

SCRIBES AND TAPE RECORDERS

(Use the test booklet form assigned to the student)

Dictating responses to a scribe or into a tape recorder is allowable. **Note:** Using a scribe for extended responses on the ELA test is considered an Accommodation. For mathematics, science, and social studies, using a scribe for all other question types is considered a Designated Support.

- Scribes should review the **Scribing Protocol** found in the Supports and Accommodations Guidance Document to make sure they are doing their job correctly. The guidance document can be found on the M-STEP web page (www.michigan.gov/mstep).
- If a student uses a tape recorder or scribe, a Test Administrator, proctor, or accommodations provider must transcribe the student's response onto a regular answer document that is returned along with other scorable materials.
- For students using a tape recorder, it is important to grid the **"Other"** circle on each student's answer document and indicate the administered Accommodation.
- For students using a scribe, grid the **"Scribe"** circle on each student's answer documents and indicate the administered Support.
- Make sure a barcode label is affixed to the front of the answer document where indicated.

WORD PROCESSORS

(Use the test booklet form assigned to the student)

The use of word processors for constructed response items is an accommodation for students who need this support or Accommodation as defined in their IEP or Section 504 Plan, or for students who have rapid onset of a medical disability.

Supports and Accommodations

Because the ELA tests assess the student's use of the conventions of writing, including correct spelling and grammatical usage, students using word processors or word processing software must be monitored to ensure that spell-checking, dictionary, thesaurus, and grammatical software is not activated. Autocorrect may not be used, either.

- Fill in the **"Other"** circle on the student's answer document and indicate that the student used a word processor.
- If the spell-check, dictionary, thesaurus, and grammatical software were not deactivated, the **"Nonstandard Accommodations"** circle must be filled in.
- If a student uses a word processor or another Accommodation to record multiple-choice answers, these must be transferred onto a regular answer document by the student, Test Administrator, proctor, or accommodations provider. Word-processed constructed response answers do not need to be transcribed onto the student's answer document.
- Each word-processed page must be printed and identified with the following student information:
  - student barcode label from the OEAA Secure Site (www.michigan.gov/oeaa-secure)
  - content area and item number
  - current test year (for example, Spring 2021)

  OR

  - student name, unique identification code (UIC), and birth date
  - school code and district code
  - current test year, grade, content area, and item number
- Word-processed page(s) must be inserted into the student's answer document with all required student identification information completed. Do not staple or otherwise attach word-processed pages to the answer document.
- Word-processed pages returned without a completed student answer document cannot be scored.
- Make sure a barcode label is placed on the front of the answer document where indicated.
- All answer documents containing word-processed pages must be shipped in the orange Special Handling Envelope.

ADDITIONAL OR ADAPTED PAPER

(Use the test booklet form assigned to the student)

- The use of additional paper is permitted for students who need this Accommodation due to their large handwriting. The need must be documented in the student's IEP or Section 504 Plan.
- When additional paper is used, the student should only be allowed to write the equivalent of what could be written (with average-sized handwriting) in the original space provided in the test booklet.
- Each additional piece of paper must be identified with the following information:
  - student barcode label from the OEAA Secure Site (www.michigan.gov/oeaa-secure)
  - content area and item number
  - current test year (for example, Spring 2021)

  OR

  - student name, UIC, and birth date
  - school code and district code
  - current test year, grade, content area, and item number
- It is important to grid the **"Other"** circle on the student's answer document and to indicate the administered accommodation.

- The additional paper must be inserted into the student's answer document with all required student identification information completed. Do not staple or otherwise attach additional paper to the answer document.
- Additional paper that is returned without a completed student answer document cannot be scored.
- All answer documents containing additional paper must be shipped in the orange Special Handling Envelope.

EXTENDED TIME/MULTIPLE DAY

As with any support, educators must provide **only** those supports the student needs. Significant research indicates that providing students with unnecessary or unneeded tools or supports may negatively impact their test scores.

- All M-STEP tests are untimed and student-paced.
- If an online tester requires more than one day to complete any single section of an online test, the test may be paused and exited at any point. The student will be able to log back into his/her test at any subsequent point within the testing window to complete the session. It is important that the student's test be paused and exited, and not submitted.
- Students taking a paper/pencil test with a multiple-day designated support will use the form of the test assigned to their school.
- If extended time is used for a paper/pencil test, it is important to fill in the **"Multiple-Day Testing"** circle on the student answer document(s).
- Students testing online who need additional time have until the last day of the grade-specific online testing window to finish the test.
- Students may not begin a content-area test before the first date the content-area test is scheduled for all students.

Closed Captioning for ELA Listening

Closed captioning is only available for the listening passages and associated questions on the ELA online assessments. It will not be available for any other ELA questions or for the mathematics, science, or social studies tests.

Read-Aloud Guidelines for ELA and Mathematics

The use of human readers is allowed across all grades as a **Designated Support** for M-STEP mathematics and all but the reading passages in the ELA assessments. Human readers are also allowable for ELA reading passages as a **documented Accommodation** in grades 6–7 (but not for grades 3–5). This Accommodation is appropriate for only a very small number of students. For information on documentation requirements and decision-making criteria related to using human readers, refer to the Supports and Accommodations Guidance Document found on the M-STEP web page under the **Student Supports and Accommodations** section.

The M-STEP online ELA and mathematics assessments have a text-to-speech Designated Support option. Students who do not have access to this support or who take a paper/pencil test may utilize the Read-Aloud Designated Support.

The Read-Aloud support is administered with a human reader who provides an oral presentation of the assessment text to an eligible student. The student depends on the reader to read the test questions accurately, pronounce words correctly, and speak in a clear voice throughout the test. The reader must be trained and qualified and must follow the **M-STEP Read-Aloud Guidelines** found in the Supports and Accommodations Guidance Document. The guidance document is available on the M-STEP web page (www.michigan.gov/mstep).

Supports and Accommodations

Scribing Protocol

The **Scribing Protocol** can be found in the Supports and Accommodations Guidance Document located on the M-STEP web page (www.michigan.gov/mstep). The protocol outlines the required procedures a scribe must follow. A scribe is an adult who writes down exactly what a student dictates via speech, American Sign Language, or an assistive communication device. The guiding principle in scribing is to ensure that the student has access to and can respond to test content. Scribes are allowed as a documented Accommodation for ELA writing, and as a Designated Support for science, social studies, mathematics, and ELA non-writing items.

Scribes may also be necessary for testing students with "sudden or rapid onset" conditions, such as broken arms or wrists. Save any documentation, such as doctor's notes, when using a scribe for sudden or rapid onset conditions.

Word-to-Word Bilingual Dictionaries

The **M-STEP and MI-Access Word-to-Word Bilingual Dictionary Guidance** provides a recommended list of non-electronic word-to-word bilingual dictionaries and glossaries that can be used during M-STEP and MI-Access testing only. The guidance document is available upon request through an email to mde-oeaa@michigan.gov. This list is different than the lists used for the SAT suite of assessments and ACT WorkKeys and cannot be used for those assessments.

L1 (First Language) Glossaries

L1 Glossaries are only available for the M-STEP mathematics assessment. Glossaries are available in a number of different languages for use on the paper/pencil mathematics tests. All L1 glossaries can be downloaded from the Initial Materials Order window in the Secure Site. The following languages are available:

- Arabic (can also be ordered during Initial Materials Orders in the OEAA Secure Site)
- Burmese
- Cantonese
- Eastern Punjabi
- Hmong
- Ilokano
- Korean
- Mandarin
- Russian
- Spanish (can also be ordered during Initial Materials Orders in the OEAA Secure Site)
- Somali
- Tagalog
- Ukrainian
- Vietnamese
- Western Punjabi

Stacked Spanish

Stacked Spanish is only available for the M-STEP mathematics assessment. "Stacked Spanish" refers to the presentation of one part of the item in Spanish followed by the same part in English. New for the Spring 2021: The online Stacked Spanish form of the assessment will have Spanish audio (Human Voice Audio – HVA) available for students to use with the Spanish test. A stacked Spanish test is available for use on the mathematics online and paper/pencil tests for students who are fluent in Spanish but may need a parallel English version to fully demonstrate what they know and are able to do. Spanish-speaking students are presented with both Spanish and English as they work through the test. It is possible that a Spanish-speaking student may not be able to read Spanish; in that case, the stacked Spanish paper form of the test could be used as a Spanish Reader Script by a qualified translator who follows the Spanish Read-Aloud Guidelines

found on the M-STEP web page (www.michigan.gov/mstep). This is an option if the online form with Spanish HVA is not a good option for the student.

The Spanish mathematics tests for online test takers is selected in the DRC INSIGHT Portal. For paper/pencil testing, the Spanish mathematics test booklet is ordered as a material from the OEAA Secure Site and marked as a support on the student's mathematics answer document.

M-STEP Multiplication Table

The M-STEP Multiplication table is only available for the M-STEP mathematics assessment. For students in grade 4 and above who have a need (such as a persistent calculation disability [dyscalculia]) that is documented in their Individualized Education Program (IEP) or Section 504 Plan, the OEAA has developed the M-STEP Multiplication Table. It can be used for both the online and paper/pencil mathematics tests.

Use of the multiplication table outside of the parameters specified here and in the Supports and Accommodations Guidance document is an invalid Accommodation; for paper/pencil tests, the answer document must be bubbled as such; for online tests an incident report must be submitted.

The table can be accessed upon request by sending an email to mde-oeaa@michigan.gov. Include the number of students at each grade level for whom the Multiplication Table is to be provided.

Returning Accommodated Materials and Answer Documents

- Audio CDs, video DVDs, enlarged print, and braille versions of the test, as well as Reader Scripts, are secure materials that must be returned at the end of each test window. No copies of these materials may be made, downloaded, or retained. Make sure that all secure materials are included in return shipments.
- If a paper/pencil tester has word–processed or additional pages, those pages must be inserted in the student's answer document and returned in the orange Special Handling Envelope in order to be scored. All other answer documents may be returned together in the secure, scorable materials boxes. Refer to the Materials Handling and Return section of this manual for more detailed information.

Other Reminders for Test Administrators and Accommodations Providers

- The **Student Supports and Accommodations Tables** are the educator's guide to understanding Universal Tools, Designated Supports, and Accommodations offered on the state assessments. The table can be found in the Supports and Accommodations Guidance Document, which is located on the M-STEP web page (www.michigan.gov/mstep) under the **Student Supports and Accommodations** section.
- All M-STEP Universal Tools, Designated Supports, and Accommodations must be clearly defined by content area in the testing section of each student's IEP, Section 504 Plan, or EL instructional record.
- New students with IEPs, Section 504 Plans, and EL services who move from one Michigan school to another must be identified quickly, so Universal Tools, Designated Supports, and/or Accommodations from the previous school can be implemented.
- Plan ahead. The OEAA recommends that schools/districts maintain a spreadsheet

of students, with each student's needed Universal Tools, Designated Supports, and/or Accommodations listed by content area. A template can be found on the M-STEP web page (www.michigan.gov/mstep).

- Ensure that each student is taking the correct test (M-STEP or MI-Access) for each content area. Students who mistakenly take the wrong test(s) may have to take an emergency test to gain a valid score. An Incident Report must be filed.
- An M-STEP test administered with an incorrect Universal Tool, Designated Support, or Accommodation based upon the IEP is considered invalid. The student must take a new (emergency) test to gain a valid score. An Incident Report must be filed.
- Students may refuse to use a Universal Tool, Designated Support, or Accommodation they may actually need or is outlined in their IEP/504 plan. If this happens, try to resolve the situation with the students' parents/guardians immediately. Document any change approved by parents/guardians in the IEP/504 plan if necessary.

PAPER/PENCIL ONLY:

- Audio CDs, video DVDs, Reader Scripts, and Read-Aloud Guidelines must be used when test content is to be read aloud as a Designated Support or Accommodation.
- Be sure to administer all parts of the tests.
- When students with Designated Supports and Accommodations use audio CDs, video DVDs, and Reader Scripts in small groups of up to five students, extra Form 1 test booklets may be needed. When ordering, be sure to specify the number of students using each accommodated kit.
- Some Designated Supports and Accommodations, such as using a scribe, do not require Form 1 test booklets. Use the form assigned to the student.
- Do not begin a content-area test before the start of the designated paper/pencil window.
- Audio CDs, Reader Scripts, or DVDs may not be used with braille kits.
- Standard answer documents are used with the enlarged print and braille versions of the M-STEP tests.
- Braille and enlarged print kits are ordered by student on the Materials Order page.

Student Pre-ID and Test Eligibility

Students to be Tested

Pending the approval of MDE's assessment waiver request, districts are required to offer all students the opportunity to test; testing for students who are home-schooled or who attend nonpublic schools remains optional.

Following is a detailed description of testing requirements for students in various populations, locations, and unique circumstances.

STUDENTS WITH IEPS AND SECTION 504 PLANS

Students receiving special education services (also referred to as students with disabilities [SWDs]) must participate in the state's general education or alternate assessments, with or without accommodations as specified by content area in their Individualized Education Program (IEP). Students with a Section 504 plan must have accommodations identified in their Section 504 plan. There may also be students who require Universal Tools or Designated Supports during testing.

Students with disabilities placed in private schools as a means of receiving special education and related services are required to be included in the statewide assessment system.

The Michigan Department of Education (MDE) has two online resources aimed at helping school/district personnel, parents, and the public understand the state guidelines for selecting the proper state assessment for a student. These are available on the MI-Access web page (www.michigan.gov/mi-access).

- **Assessment Selection Guidelines Training** – a web-based presentation focused on helping IEP teams understand how to make decisions between general and alternate assessments
- **Assessment Selection Interactive Decision-Making Tool for IEP Teams** – a question-based navigational tool to help IEP teams to decide the most appropriate level of assessment for students

The Supports and Accommodations section of this manual includes more detailed information.

To learn more about the Universal Tools, Designated Supports, and Accommodations allowed for these populations during M-STEP testing, refer to the Supports and Accommodations Guidance Document, which is located on the M-STEP web page (www.michigan.gov/mstep).

ENGLISH LEARNERS (ELS)

All English Learners (ELs), including ELs with disabilities, must participate in state assessment programs. ELs who are in their first year in a United States school (defined as the first twelve months of enrollment) may not be required to participate in the M-STEP ELA assessment if they have taken the WIDA ACCESS Placement Test (W-APT), WIDA Screener, or WIDA ACCESS for ELLs and have been identified in the Michigan Student Data System (MSDS) as needing EL services. This flexibility is only allowed one time per student. In order to take advantage of the one-time exemption, a Not Tested issue with the reason of the one-time exemption must be submitted and approved. This is done in June, in the OEAA Secure Site Answer Documents Received and Not Tested Students page.

Student Grade Considerations

STUDENTS WHO REPEAT A GRADE LEVEL OR ARE IN ADVANCED CLASSES

Students must take the M-STEP test for the grade level in which they are enrolled. If a student takes a test that is in a grade different from the one identified for him/her in the Michigan Student Data System (MSDS), the student will be considered "Out of Level", will not receive a score, and "Not Tested" for accountability purposes.

Student Pre-ID and Test Eligibility

GRADE 12 STUDENTS NOT PREVIOUSLY INCLUDED IN ACCOUNTABILITY

Grade 12 students who were not included in 11th grade accountability (for example, they skipped 11th grade) may take the complete Michigan Merit Examination (MME), which includes M-STEP science and social studies. 12th grade students will not be included in accountability in Spring 2021.

For additional information on MME eligibility, refer to the Who Must/Can Take the MME? document on the MME web page (www.michigan.gov/mme).

Students in Different Locations

HOMESCHOOLED STUDENTS

Homeschooled students are eligible for testing, but they are not required to test. If they opt to participate in testing, they must contact their local public school and arrange for their participation. All homeschooled students who test must have a state-assigned unique identification code (UIC); additionally, if the school claims a partial Full-time Equivalent (FTE) for homeschooled students, the correct residency code (07 or 15) for these students must be entered in the Michigan Student Data System (MSDS) to keep the student out of the school's accountability calculations.

If the district is not claiming a partial FTE for a homeschooled student, then the student must be identified as homeschooled (HS) in his/her record on the student's demographic screen in the OEAA Secure Site.

When homeschooled students take the test, their test results will not be included in school and district aggregate reports if the student is appropriately reported in MSDS and/or identified in the OEAA Secure Site as homeschooled.

Students are expected to follow the school-established test schedule (the school is not required to provide makeup testing).

When returning test results to homeschooled students, schools may request a stamped, self-addressed envelope from the parent.

STUDENTS ENROLLED IN PRIVATE/ NONPUBLIC SCHOOLS

Private/nonpublic students are eligible for testing, but they are not required to test. If they opt to participate in testing, they may only take M-STEP tests at their own school, unless the students also take courses at a public school. In that case, students may take the M-STEP tests in the public school, but they MUST have the correct nonpublic residency code of 04 or 08 entered in the residency field in the MSDS, or they will be included on the school's "Expected to Test" list and accountability calculations.

REMOTE LEARNERS AND VIRTUAL SCHOOLS

During the COVID-19 pandemic, MDE does not support bringing otherwise remote or virtual students into school solely for the purpose of state assessment. Pending the approval of MDE's assessment waiver, districts have to offer remote or virtual students the opportunity to come into school to take the M-STEP assessments. However, those remote-only students are not required to come into school for the sole purpose of taking the assessments.

Students may not be tested online in their homes or in any unproctored session. Test sessions must be proctored in person by a test administrator and may not have family serve as proctors or have virtual proctors.

Online or virtual schools must offer students the opportunity to test at a remote site. Virtual schools are those schools that offer full-time virtual learning for their educational program . **Note:** Schools offering remote learning due to the COVID-19 pandemic are not considered virtual schools. They may test at their building or at another district location. The next section does not apply to them.

Student Pre-ID and Test Eligibility

Virtual school personnel should plan to work closely with the OEAA to ensure that testing at remote sites is managed in a secure fashion. An Off-site Test Administration Request must be submitted and approved . The request form is available in the OEAA Secure Site (www.michigan.gov/oeaa-secure) .

SHARED EDUCATIONAL ENTITIES (SEES) / SPECIALIZED SHARED EDUCATIONAL ENTITIES (S2E2S)

All information for students enrolled in SEEs or S2E2s will be based on MSDS enrollment information. All students are expected to test where they are enrolled. SEE schools and the schools that operate S2E2 classroom programs are responsible for handling all assessment and related verification processes in the OEAA Secure Site. These processes occur during various date windows and should be completed on behalf of the resident districts that the SEE/S2E2 serves.

Only SEE schools and the schools that operate S2E2 classroom programs will be able to view and manage the SEE/S2E2 students in the OEAA Secure Site to ensure enrollment and demographics are correct. SEE schools and the schools that operate S2E2 classroom programs are the only entities that can view and submit issues for missing answer documents or not-tested students. Student scores will be sent back for school accountability attribution purposes; however, testing arrangements and expectations are still based on enrollment information submitted in the MSDS.

A student's Primary Educational Providing Entity (PEPE) school is the school responsible for testing that student.

SEAT TIME WAIVERS

Students receiving seat time waivers must be tested on the same dates, using the same guidelines as all other students. Students with seat time waivers should be tested by their PEPE school.

HOMEBOUND AND HOSPITALIZED STUDENTS

Students who are homebound or hospitalized during the test window are required to test.

"Homebound" refers to students who are receiving educational services at home due to a documented medical condition; this does not include students learning from home due to the COVID-19 pandemic or students who are quarantining at home. If these students return to school for in-person instruction during the testing window, they can be assessed. Watch the Spotlight for further information or announcements.

The off-site test administration request form is available in the OEAA Secure Site.

Students in Unique Circumstances

SUSPENDED STUDENTS

Schools must test suspended students. Testing may occur in a separate location, such as an administration building; students taking the online test may be given a unique time within the established window. If students are tested off campus, an off-site test administration request must be filed.

EXPELLED STUDENTS

Schools are not expected to test expelled students unless the expulsion specifies "With Services"; however, MSDS enrollment information must reflect the expulsion status. Students who are expelled "With Services" are still expected to be tested by their PEPE school. Students who are expelled "Without Services" are not expected to be tested by their PEPE school and instead must have a district exit record submitted for them in the MSDS, using an appropriate "as of" date prior to the Student Record Maintenance (SRM) deadline for assessment and accountability purposes.

STUDENTS IN DETENTION OR JUVENILE FACILITIES

A student's enrollment information in the MSDS determines who is responsible for administering the M-STEP. The school where the student is reported as enrolled by the end of testing will be the school held accountable for testing the student.

Accountability Considerations

STUDENTS WHO MOVE INTO A SCHOOL DURING TESTING

All students who move into a receiving school during the testing window must complete M-STEP tests for the grade level in which they are enrolled. This includes students moving into the school district from outside the state or country. Students moving from one Michigan school to another Michigan school may have completed one or more of the M-STEP tests in their previous school.

To determine if they have, use the following steps. (Do not rely on the student or parents to confirm which tests the student might or might not have taken.)

Directions for the receiving school:

- Contact the new student's former school principal and confirm which, if any, M-STEP tests the student completed prior to arriving in the receiving school. Students moving from within the state do not need to retake content-area tests if the sending school confirms that all parts of the test have been completed. Maintain documentation.
- Verify whether the new student has an IEP, Section 504 plan, or EL instruction documentation that specifies an alternate state assessment or any required supports and/or accommodations.
- Pre-identify the student for M-STEP in the OEAA Secure Site.
- If a new student has not started a previously scheduled M-STEP test, then administer the missed test(s) on a regularly scheduled makeup day for either paper/pencil or online tests.
- If a student tested online and completed a content area, the content should be indicated on the student's demographic screen in the OEAA Secure Site in one to two business days.

  The school can access the student summary page for that student to obtain some basic information.

  1. Log into the OEAA Secure Site
  2. Click on the Student Search under the Student Assessments menu
  3. Search by either student information or UIC and click Search
  4. Click on the student's name under the Search Results section
  5. On the Student Summary page, you can view the assigned assessments under the Current Assessments section. This will show which assessment(s) the student was assigned to and if they have already taken one or more parts of the test. **This only works with online tests, and remember; online data is loaded 48 hours after the test is taken.**

  Important Note: This does not guarantee a valid score for the student but only that the online test was submitted.
- For all paper/pencil or online M-STEP tests scheduled on the day of or after the new student's arrival, administer tests according to the M-STEP schedule. This applies to any new student, including out-of-state students, previously homeschooled students, or transferring nonpublic school students.

Student Pre-ID and Test Eligibility

- If the new student has started, but not completed, all parts of a previously scheduled M-STEP test, online and paper/pencil schools must administer the entire test. If the test has more than one part/test ticket, then all parts/test tickets must be administered for the content area.
- Be sure to generate, print, and affix barcode labels for the new student; attach one to each of his/her content-area answer documents (paper/pencil).
- Ensure that the student's MSDS information and entry date into the school are correct.
- For accountability purposes, it is critical that the "Accountable Students and Test Verification" processes on the OEAA Secure Site are carefully reviewed for these students. Make sure MSDS reflects accurate enrollment and exit dates.

STUDENTS WHO MOVE OUT OF A SCHOOL DURING TESTING

Students who move out of a sending school during the test window create record-keeping challenges. The following steps should help school administrators ensure that such students do not adversely affect the school's test results and accountability.

Directions for the sending school:

- Do not send any test materials with the student to the new school. The sending school remains responsible for these materials.
- If the student has completed one or more paper/pencil M-STEP tests, return his/her answer document(s) with the rest of the school's scorable materials to the scoring vendor.
- If the student has started, but not completed, all parts of one or more content-area M-STEP online tests, an Incident Report should be filed to request a Do Not Score for the test. Refer to the **Incident Reporting Guide** in Appendix C for information about how to submit an Incident Report.
- If the student has started, but not completed, one or more content-area M-STEP paper/pencil tests, write "Do Not Score" prominently across the front page of his/her answer document(s) along with the reason, and return the answer document(s) in the orange Special Handling Envelope provided by the M-STEP contractor.
- Be prepared to accept a call from the student's new school and to provide information on which state assessments he/she has not yet taken; the status of test completion; and any documented accommodations in the student's IEP, Section 504 Plan, or EL instruction documentation.
- Ensure that the student is exited from the school on the correct date in the MSDS.

For accountability purposes, it is critical that the "Accountable Students and Test Verification" processes on the OEAA Secure Site are carefully reviewed for these students. Ensure the MSDS reflects accurate enrollment and exit dates. Simply unassigning students from the M-STEP in the OEAA Secure Site does not remove them from accountability calculations.

Unique Identification Codes

Each student in Michigan is assigned a unique identification code (UIC) when he or she enrolls in a public school. Homeschooled, private, and non-public students are also required to have a UIC in order to take state assessments. UICs are used to identify students and report their test results; therefore, it is vital that the codes are correctly applied.

Student Pre-ID and Test Eligibility

Test Administration Windows

To provide more flexibility to administer the M-STEP, MDE extended the testing windows to allow districts and schools additional time to administer the M-STEP.

This additional time will provide greater flexibility for options such as testing in smaller groups or scheduling around school closures and hybrid schedules.

In addition, for Spring 2021 only, additional scheduling flexibility is allowed within the identified Paper/Pencil Testing Windows. Schools may determine the order in which grade-leve content tests are administered.

Students should still take tests with more than one part in order. However, if a student is absent during the administration of a prior part, it is allowable for the student to complete the subsequent part with the class and the prior part in a makeup session.

Computer Adaptive Testing for ELA and Mathematics

The ELA and mathematics M-STEP tests in grades 3-7 will continue to use computer adaptive testing (CAT). This means that item presentation will vary depending on a student's responses. For example, if a student answers Question 1 correctly, he or she will be presented with a more challenging second question than a student who answers Question 1 incorrectly. In this way, the computer adjusts, or adapts, itself to each student. This is not the case for science and social studies; these will be tested using fixed forms (items will be presented in the same order, regardless of student responses).

Students who take CATs may notice that when they get to the end of the test, they will receive a congratulatory message and will have to click on an "Exit" button. There is no "End Test" button or option to review responses on the CAT as there is for fixed-form online tests.

INSIGHT Availability

INSIGHT—DRC's online testing engine, which provides a secure online testing environment—will only be available from 7:00 A.M. to 4:00 P.M. unless an Alternate INSIGHT Availability Request is submitted and approved by the date listed on the **Important Dates** document in Appendix E. The **Alternate INSIGHT Availability Request** form is available on the M-STEP web page (www.michigan.gov/mstep).

Absences and Makeup Testing

All makeup testing must be completed during the designated test window (based on grade). Being absent during a regular testing session is not a reason for students not to test.

For online students who never started a test, there is no need to create a new test session for makeups. Students can remain in the same test session to which they were originally assigned. (For paper/pencil test dates, refer to the **Paper/Pencil Testing** calendars on page 10 of this manual.)

Incident Reporting

Incident reports must be completed by authorized users in the OEAA Secure Site. Examples of when Incident Reports must be completed include:

- requesting a new test (online or paper/pencil)
- reporting test irregularities and misadministrations
- marking a test "Do Not Score"
- marking a test "Prohibited Behavior"
- marking a test "Nonstandard Accommodation"

For more detailed information on situations that require incident reports, refer to the **Incident Reporting Guide** in Appendix C of this manual.

Testing Irregularities

Any irregularities that occur outside the scope of Appendix C must be reported to the OEAA Call Center as quickly as possible (1-877-560-8378). The OEAA will work with the school to avoid marking tests "Do Not Score" or "Misadministration". It is possible that an emergency test(s) will be required. If it becomes necessary to use an emergency test, there will be no charge when the incident is self-reported by the district. However, a $50 fee will be charged per scored test if the irregularity is not self-reported.

Examples of test irregularities include, but are not limited to:

- not removing or covering posters, maps, and other instructional aids in the testing room(s)
- not allowing a student to complete a test (M-STEP tests are untimed, so time should not be a factor if assessments are scheduled properly)
- security breaches with test materials or answer documents
- allowing students to be unsupervised during testing

Training Tools

The OEAA and its testing contractors have developed a number of resources to help staff prepare for test administration.

RECORDED PRESENTATIONS ON THE M-STEP WEB PAGE

The following presentation will be available in chapters on the M-STEP web page (www.michigan.gov/mstep). Go to the **Professional Development** section.

Recorded Presentation	Description	Date Available
M-STEP Online and Paper/Pencil Test Administration Training	Covers information necessary to correctly administer the online and paper/pencil M-STEP assessments.	Watch the Spotlight for availability

RECORDED PRESENTATIONS IN THE DRC INSIGHT PORTAL

The following presentations will be available in the DRC INSIGHT Portal (formerly known as eDIRECT) (https://mi.drcedirect.com). Select **Document Type: Training Presentations & FAQs**. Instructions for easy navigation to documents in the DRC INSIGHT Portal are on page 8.

Recorded Presentation	Description	Date Available
District and Building Coordinator Training (recorded)	Provides (a) an overview of what's new for Spring 2021, (b) where to find resources, (c) software required for the implementation of online testing, and (d) a Q&A. Watch the Spotlight for information on how to register for the live training.	March 2, 2021
Technology Coordinator Recorded Presentation	Provides an overview of the software and technology setup required for M-STEP and MI-Access Spring 2021 testing. It is *optional* viewing for District and Building Coordinators.	available now

Before Testing

MANUALS

The following manuals are available on the M-STEP web page (www.michigan.gov./mstep) and in the DRC INSIGHT Portal (https://mi.drcedirect.com). Select **Document Type: Documents**. Instructions for easy navigation to documents in the DRC INSIGHT Portal are on page 8.

Manual	Description	Where to Find It	Date Available
M-STEP Test Administration Manual (TAM)	This manual (electronic only)	M-STEP web page and DRC INSIGHT Portal	January 2021
M-STEP Online Test Administrator's Directions and Manual	Online test administration directions and manual for Test Administrators (printed booklet and electronic)	M-STEP web page and DRC INSIGHT Portal	Watch the Spotlight for dates available
M-STEP Paper/Pencil Test Administrator's Directions and Manual	Paper/Pencil test administration directions for Test Administrators (printed and electronic booklet and manual)	M-STEP web page	Watch the Spotlight for dates available
Assessment Coordinator Training Guide	This training guide provides information and resources for new Assessment Coordinators for before, during and after testing. The guide can be used as a training tool and read beginning to end, or it can be used as a refresher with modules or chapters that address specific questions.	M-STEP web page and all MDE assessment web pages	available now

MINI-TUTORIALS (ONLINE ADMINISTRATION ONLY)

Mini-tutorials are short videos designed to help District M-STEP Coordinators, Building M-STEP Coordinators, and Test Administrators better understand online testing tasks. They are available in the DRC INSIGHT Portal (https://mi.drcedirect.com). Select **Document Type: Mini-Modules**. Instructions for easy navigation to documents in the DRC INSIGHT Portal are on page 8.

Mini-Tutorial	Description	Where to Find It	Role
How to Access Documents on the DRC INSIGHT Portal	A mini-module on how to access documents on the DRC INSIGHT Portal	DRC INSIGHT Portal	All
How to Access the Online Tools Trainings (OTTs)	A mini-module on how to access the OTTs for student training	DRC INSIGHT Portal	All

Mini-Tutorial	Description	Where to Find It	Role
How to Search for Students	A mini-module on how to search for students	DRC INSIGHT Portal	District Coordinator, Building Coordinator
How to Assign and Mass-Assign Student Supports and Accommodations	A mini-module on adding, editing, and mass-assigning Universal Tools, Designated Supports, and Accommodations for students	DRC INSIGHT Portal	District Coordinator, Building Coordinator
How to Create Test Sessions and Print Test Tickets	A mini-module on how to create test sessions and print test tickets	DRC INSIGHT Portal	District Coordinator, Building Coordinator
Checking Student Test Status	How to check where students are in the testing process at any given time (not started, in progress, or completed)	DRC INSIGHT Portal	District Coordinator, Building Coordinator

ASSESSMENT SECURITY TRAINING MODULES THROUGH MICHIGAN VIRTUAL

The following training modules are available through Michigan Virtual (http://bit.ly/MDEAssessmentSecurity).

Training Module	Description	Date Available
Module 1: An Introduction to Test Security	This module covers why test security is important.	Currently Available
Module 2: Getting Ready for Testing	This module covers steps to take before testing, such as staff training and preparing the test environment. These steps will help you avoid common security problems, protecting both your staff and the validity of your test results.	Currently Available
Module 3: Test Administration	This module covers security concerns and considerations during testing. What should test administrators do on-site? What student behaviors should you watch for?	Currently Available
Module 4: Incident Response	This module covers what to do if something goes wrong. Most problems can be prevented with preparation and monitoring, and most can be mitigated with a quick and careful response.	Currently Available
Assessment Security Refresher Course	This refresher course can be used by educators who completed modules one through four in the previous assessment administration in place of modules one through four.	Currently Available

Before Testing

Assessment Security

The primary goals of test security are to protect the integrity of the assessment and to ensure that results are accurate and meaningful. Test security is integral in ensuring that no student has an unfair advantage or a disadvantage in assessment performance.

The Assessment Integrity Guide (AIG) was revised and updated in November 2020. This document, available for download on the M-STEP web page (www.michigan.gov/mstep), details how state-level assessments should be securely administered. The AIG also includes information on the roles and responsibilities of testing staff, test preparation, administration irregularities, and security. District and Building Coordinators are required to read the AIG in its entirety. By following the guidelines in the Assessment Integrity Guide, schools ensure that:

- student test results are valid and reliable
- the testing context is equitable for all students
- all practices are ethical

The Michigan Department of Education (MDE) also provides the Assessment Security online course through Michigan Virtual (http://bit.ly/MDEAssessmentSecurity). This four-module training series is used to train building staff on the importance of test security by following the Assessment Integrity Guide. Upon completion of the four modules and demonstration of knowledge on a short test, participants will receive a Certificate of Completion, which must be retained on file with signed security compliance forms. After successful completion of this training, staff are required to participate in the refresher course in subsequent years.

ASSESSMENT TRAINING

The District Assessment Coordinator is responsible for providing clear and comprehensive annual training on test administration and security procedures to building-level staff; the coordinator must comply with state assessment requirements.

ASSESSMENT SECURITY TRAINING

All staff members who participate in a state assessment must be fully trained in assessment security.

District/Building Assessment Coordinator Training Requirements:

- Complete the MDE Assessment Security online course through Michigan Virtual (http://bit.ly/MDEAssessmentSecurity).
- Read the Assessment Integrity Guide.

Test Administrators/Room Supervisors/Proctors Training Requirements:

- Read the Assessment Integrity Guide.

and/or

- Complete the MDE Assessment Security online course through Michigan Virtual (http://bit.ly/MDEAssessmentSecurity).

Technology Coordinators and Other Staff (anyone who handles or has access to secure materials) Training Requirements:

- Read the Keeping Assessment Materials Secure training document, which is available in the Assessment Integrity Guide in Appendix E.

Note: Assessment Security Training does not replace mandatory assessment administration training.

Material Security

- All materials that allow access to or contain test questions or student responses are considered secure materials and must be handled in a way that maintains their security before, during, and after testing. This includes paper/pencil materials, accommodated materials, used scratch paper, online test tickets, and test rosters.

Before Testing

- All secure materials must be retained in one secure, locked location within the school. During the test administration window, the materials must be distributed and collected daily.
- Secure materials are bar-coded and recorded on the security checklists that accompany shipments, and must be returned to the scoring contractor. **Note:** Schools should expect to account for every secure item recorded on the materials list.
- Test tickets used to log students into each online test are considered secure materials and must be treated as such. Test rosters, which automatically print along with test tickets, are also considered secure.
- Unused answer documents must be securely shredded.
- All used scratch paper (including graph paper) must be collected and returned to the building M-STEP Coordinator immediately after testing, to be shredded. No used scratch or graph paper may be kept in the classroom. Used scratch paper must never be taken from one test session to another.
- No test materials that contain test questions or student responses may be copied at any time or retained in the schools.
- The use of cameras or cell phones and the posting of pictures to social media sites during testing is an enormous security risk. Therefore, students or testing personnel may not take photographs at any time during testing. If students violate this policy, their tests will be marked "Prohibited Behavior" and no emergency tests will be permitted.

Test Administration

All testing staff must adhere to these guidelines.

- Ensure an appropriate testing environment is maintained.
- Begin all standardized test administration procedures according to the explicit directions in the Test Administrator's Directions and Manual.
- If not using the Text-to-Speech (TTS) for directions option, read test directions to the students exactly as they are written, as required.
- Monitor student behavior closely for adherence to proper test-taking practices. Ensure that there are no distractions during the test administration period, including talking, noises, and other interactions among students; prevent students from viewing another student's computer screen or answer document.
- Ensure that students whose IEP and/or section 504 plan requires them to use Universal Tools, Designated Supports, and Accommodations have these available to them at the time of testing.
- Ensure that any student who needs an allowable Universal Tool or Designated Support has these resources available to them at the time of testing.
- Maintain material security.

Security Compliance

All staff involved in the administration of M-STEP tests must read and sign an Office of Educational Assessment and Accountability (OEAA) Assessment Security Compliance Form, affirming that they have read the required assessment materials related to their role in the M-STEP administration process, and that they understand their role and responsibilities. Completed forms

are required from Technology Coordinators, District and Building Test Coordinators, Test Administrators, proctors, and all other staff or volunteers with access to secure test materials or student responses. All OEAA Assessment Security Compliance Forms must be returned to the District M-STEP Coordinator and kept on file for three years.

Anyone involved in the administration of the M-STEP is obligated to report any suspected violations of test security.

Materials Permitted or Required During Testing

MDE-APPROVED INSIGHT TOOLS POSTER

The MDE-approved **INSIGHT Tools** (https://www.michigan.gov/mde/0,4615,7-140-22709_70117-407429--,00.html) poster is the **only** INSIGHT Tools poster that may be posted during testing. No other tools poster or testing help/tips may be displayed at any time during testing.

The **INSIGHT Tools** poster must not be within reach of students during testing; the poster is to be displayed in the classroom, but not placed at or on student desks or computers.

Any other use of these posters, or any other INSIGHT Tools poster, is prohibited.

CALCULATORS

For information on the state's **Calculator Policy**, refer to Appendix A of this manual. Specific directions related to the use of both handheld (paper/pencil) and embedded (online) calculators are also contained in the grade-level specific Test Administrator's Directions and Manual that are shipped to schools along with their other assessment materials.

NUMBER 2 PENCILS

To ensure responses are correctly captured by the scanning equipment, number 2 pencils are required for paper/pencil testing and are optional for online testing. If a different writing utensil is used on an answer document, it will be necessary to transcribe the answers onto a new answer document by following these steps.

- For your protection, file an Incident Report. Refer to the **Incident Reporting Guide** in Appendix C of this manual for information about how to submit an Incident Report.
- Affix a new barcode label for the student to a new answer document and fill out the student name and date of birth, and the district/school fields.
- Have the student transcribe his/her answers onto the new answer document in a one-on-one proctored session.
- Write **"Do Not Score"** across the front page of the original answer document and place it in the orange Special Handling Envelope for return to the contractor.

Number 2 pencils should be made available to online test takers to use with scratch paper or graph paper.

HIGHLIGHTERS

- Highlighters are a universal tool.
- Highlighters are embedded in the online test engine (INSIGHT).
- Highlighters can be provided to paper/pencil testers and may be used **only** in the test booklet (never on the student's answer document).

If highlighters are used on a paper/pencil student answer document, follow these steps.

- For your protection, file an Incident Report. Refer to the **Incident Reporting Guide** in Appendix C of this manual for information about how to submit an Incident Report.

- Affix a new barcode label for the student to a new answer document and fill out the student name and date of birth, and district/school fields.
- Have the student transcribe his/her answers onto a new answer document in a one-on-one proctored session.
- Write **"Do Not Score"** across the front page of the original answer document and place it in the orange Special Handling Envelope for return to the contractor.

ADDITIONAL PAPER

- Scratch paper is allowed for both the online and paper/pencil tests.
- Graph paper will be provided to online testers in grades 6–7 for the mathematics test. Paper/pencil testers may write on the graphs that are printed in their test booklets.
- The school may choose to provide additional graph paper to paper/pencil testers; however, no formulas, reference materials, or information of any kind can appear on that paper.
- Under no circumstances can used scratch paper, graph paper, or notes be taken from one test session or test part to another.
- All scratch paper and graph paper must be collected immediately after testing, returned to the Building Coordinator, and securely shredded.

For more detailed information on scratch paper, refer to the **Scratch Paper Policy** in Appendix B.

HEADPHONES

- Headphones are required for (1) ELA online listening items, (2) online testers who need text-to-speech accommodations, (3) students using CDs or DVDs as an accommodation or support for paper/pencil science and social studies, and (4) for any test session using the TTS test directions.
- Students may use their own headphones or earbuds, but Test Administrators should check them prior to testing to ensure they are working properly.

CDs/DVDs

- CD/DVD players may be used for students using CDs or DVDs as an Accommodation or Designated Support for paper/pencil science and social studies.
- CD players may also be used for the listening part of the paper/pencil ELA test. A script of the listening part is also provided if the school prefers to have someone read that part of the ELA test aloud to students.
- Additional information about the use of CDs and DVDs can be found in the Supports and Accommodations section of this manual.

Software and Testing Devices

DRC INSIGHT Portal (https://mi.drcedirect.com)

The DRC INSIGHT Portal (formerly known as eDIRECT) is Data Recognition Corporation's (DRC's) custom-built web application. The DRC INSIGHT Portal allows Michigan users to access training materials, download testing software, manage online test sessions, print test tickets, assign and manage online testing accommodations, and monitor testing progress. Each DRC INSIGHT Portal user will receive his/her own login information and password with specific permissions based on his/her role as entered in the OEAA Secure Site. Test Administrators do not need secure access to the DRC INSIGHT Portal. The DRC INSIGHT Portal is used in connection with DRC's online test engine, INSIGHT.

INSIGHT AND CENTRAL OFFICE SERVICES

DRC's INSIGHT is software that provides a secure online testing environment. The software is available from the DRC INSIGHT Portal and must be installed on each device used for testing. In addition, Central Office Services (COS) is needed to (1) allow the audio components of the test to function properly, and (2) ensure a smooth and secure testing environment. COS helps manage network traffic, connectivity, and bandwidth issues, so students are not kicked out of the system during testing. COS also reduces bandwidth consumption and provides extended retries in the event of network issues. Refer to the **Technology User Guide** available in the DRC INSIGHT Portal (https://mi.drcedirect.com) for additional details.

SUPPORTED TESTING DEVICES

Students may test using the following devices:

- Windows-based desktops or laptops
- Mac-based desktops or laptops
- iPads
- Chromebooks, Chromeboxes, and Chromebases, including CloudReady

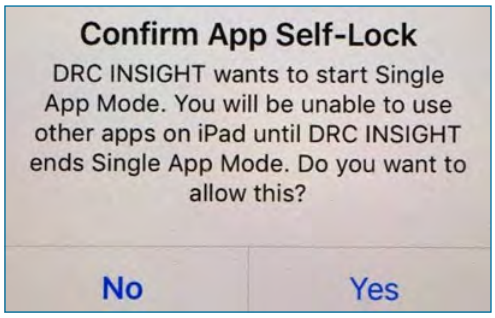
Chromebooks should use the latest Chrome OS stable channel available and must use version 83 or later for Spring 2021. Devices more than a year past "End of Life" support may not be able to update their OS and could become unavailable as testing devices.

Refer to the **Technology User Guide** or "DRC INSIGHT System Requirements" available in the DRC INSIGHT Portal (https://mi.drcedirect.com) for more detailed information about supported devices and versions.

Notes about Chromebooks: When testing on Chromebooks, the keyboard must be set to US Keyboard. If it is not set this way, the student will not be able to use quotation marks or apostrophes in text boxes.

- **BEFORE testing:** select "Settings" then "Keyboard Settings" and select US Keyboard
- **DURING testing:** click anywhere outside of the text box and press CTRL + SHIFT + SPACE BAR to select US Keyboard

Note about iPads: When testing on iPads, after logging in to the test, students will receive the following message:



The student or Test Administrator should select "Yes" to continue testing. Once "Yes" has been selected, the test Welcome page will appear.

Important Tasks Before Testing

The following tasks should be performed in the order listed.

1. TRAINING REQUIREMENTS AND RESOURCES FOR STUDENTS

Online Student Tutorials

Online Student Tutorials are designed to be viewed with students in a classroom environment to provide an overview of the INSIGHT testing engine and tools. It is a companion activity that prepares students for the Online Tools Training (OTTs). The tutorials are not a substitute for the hands-on practice that the OTTs provide.

The tutorials are available in two places:

- DRC INSIGHT Portal (https://mi.drcedirect.com) – select "here" in the **Documents and Training Materials** bullet point and then

select the Test Tutorials tab. Instructions for easy navigation to documents in the DRC INSIGHT Portal are on page 8.

- INSIGHT testing engine – select the tutorial link at the bottom of the DRC INSIGHT Portal screen.

Online Tools Training for Students

Online Tools Trainings (OTTs) allow students to see what different test items look like and to practice using the online testing tools. Before the testing software is installed, you must use the **Google Chrome** web browser to access the OTTs at the OTT portal (https://wbte.drcedirect.com/MI/portals/mi/). **Note:** If Chrome is not your default browser, you will need to copy and paste this URL address into a CHROME web browser. You can access the OTTs through the testing software, once it is installed.

OTT resources include:

- all ELA, mathematics, science, and social studies OTTs
- calculator practice module
- graphing practice
- masking (Designated Support)
- color choices/contrasting color (Designated Supports)
- mathematics stacked Spanish translation (Designated Support)
- text-to-speech (TTS):
  - ELA and mathematics TTS – items only (Designated Support)
  - ELA TTS – items and passages (Accommodation)
- Video Sign Language (VSL) (Accommodation)

Providing students with ample practice opportunities will ensure they are familiar with the test content, item types, navigation strategies, and system tools on test day.

Paper/Pencil Sample Item Sets for Students

Sample Item Sets are not a practice test; they provide students practice opportunities (by grade and content area) to practice with the types of items and answer options they will encounter on the paper/pencil M-STEP assessments. Answer keys for mathematics and social studies are provided at the end of each document; answer keys for ELA and science are separate documents.

To access the paper/pencil Sample Item Sets, go to the M-STEP web page (www.michigan.gov/mstep) and scroll to the **Content Specific Information** section, and select Paper/Pencil Sample Item Sets.

2. ASSIGN ROLES FOR DISTRICT USERS

District M-STEP Coordinators will need to make sure all key personnel in the assessment process (Technology Coordinators, District Coordinators, and Building Coordinators) have access to the DRC INSIGHT Portal. Staff who need access to the DRC INSIGHT Portal should request the access they need through the OEAA Secure Site. Instructions on how to request access are available on the Secure Site Training web page (www.michigan.gov/securesitetraining) under the **Security** section. Users with a role in the OEAA Secure Site for the DRC INSIGHT Portal and with access to M-STEP will be loaded into the DRC INSIGHT Portal. This is the only method to get access to the DRC INSIGHT Portal.

- Technology Coordinators will need access to the DRC INSIGHT Portal to download testing software.
- Building Coordinators will need DRC INSIGHT Portal access to manage online test sessions, assign accommodations, and print test tickets.
- District Coordinators will need access to the DRC INSIGHT Portal to monitor testing progress and serve as backup support for Building Coordinators.

- Test Administrators do not need access to the password-protected part of the DRC INSIGHT Portal to obtain the materials they need.

Everyone, including Test Administrators, has access to the **Documents** section of the DRC INSIGHT Portal (https://mi.drcedirect.com) as this section does not require a login (open the link in the **Documents and Training Materials** bullet point). Instructions for easy navigation to documents in the DRC INSIGHT Portal are on page 8 of this manual.

3. PRE-IDENTIFY STUDENTS FOR TESTING

The Office of Educational Assessment and Accountability (OEAA) pre-identified students for the Spring 2021 M-STEP using the Fall 2020 MSDS General Collection and Student Record Maintenance (SRM) files. Starting January 6, 2021, a Pre-ID Student Report can be generated from the OEAA Secure Site. Instructions on how to create a Pre-ID Student Report can be found on the Secure Site Training web page (www.michigan.gov/securesitetraining). It is the responsibility of the district/school to review the report and take the following actions:

- Ensure that all students in grades 3–8 and 11 are included in the Pre-ID Student Report.
- Remove (unassign) students who have exited the school or are taking the MI-Access assessment (the state's alternate assessment).

  (**Note:** Students who are unassigned from testing are not removed from accountability calculations, just from testing. To remove a student from accountability calculations, the student must be exited in the MSDS in the Spring 2021 MSDS General Collection or in an SRM collection.)

Helpful Hint: Be sure to remove students who are testing in MI-Access from the M-STEP Pre-ID list before creating test sessions. Once a test session is assigned and pulled into the DRC INSIGHT Portal, an M-STEP test ticket will be generated for the student. This can cause confusion in the school if a Test Administrator is given a test roster and test tickets that include students who are supposed to take the MI-Access assessment, and in some cases may result in students taking both MI-Access and M-STEP tests.

- Assign any new students to M-STEP testing if they have enrolled since the fall MSDS General Collection (student count day).

The testing contractor will print barcode labels, which will be shipped along with the requested test materials for students who were pre-identified as M-STEP paper/pencil testers in the Secure Site by 5:00 P.M., February 17, 2021. Schools administering the paper/pencil tests will be required to print barcode labels from the Secure Site for students pre-identified after that date.

4. ORDER TEST MATERIALS

It is up to the district to determine who will handle the placing of orders for paper/pencil test materials—either the District or the Building M-STEP coordinator.

Initial Materials Orders

All test materials orders are placed in the OEAA Secure Site (www.michigan.gov/oeaa-secure) during a specific time frame. Initial material orders are created based on the number of students pre-identified to the M-STEP and flagged for paper/pencil testing on the OEAA Secure Site. Accommodated orders must be keyed in by the district or school on the Initial Material Order page.

Before Testing

To ensure that materials are ordered and shipped to the correct location, the person responsible for placing orders must verify on the Initial Order Screen in the Secure Site that the name and shipping address of the building or district M-STEP coordinator (depending on the shipping destination selected) is correct. The address must be verified even if testing online to ensure arrival of online materials. If the information is incorrect, it must be updated in the EEM by the authorized district EEM user by no later than 5:00 P.M. on February 17, 2021. If you do not know who your district authorized EEM user is, you can find their name, email, and phone number on the **District and Schools Contact** page of the Secure Site.

Instructions for Initial Materials Orders (IMO) can be found on the Secure Site Training web page (www.michigan.gov/securesitetraining). Click on "Initial Materials Order" under the **Material Orders** section.

For both online and paper/pencil testing, all buildings will receive::

- OEAA Security Compliance Forms
- Return Kit
  - FedEx Air Bills
  - Instructions for Materials Return
  - Scorable Labels
  - Special Handling Envelopes

Based on Pre-ID, buildings will receive in their IMO order:

Online Testing	Paper/Pencil Testing
Online Test Administrator's Directions and Manuals – based on building Pre-ID	**Paper/Pencil Test Administrator's Directions and Manuals** – based on building Pre-ID
Graph Paper – one per Pre-IDed student in grade 6 or 7	**Blank Labels** for schools that have any students Pre-IDed for paper/pencil testing
	Listening Scripts, CDs – based on number of ELA test booklets ordered for paper/pencil testing only
	Paper/Pencil Test Booklets/Answer Documents – based on students Pre-IDed for paper/pencil testing or available as ordered
	Pre-ID Labels – per student Pre-IDed for paper/pencil testing; one for each content area tested

As ordered materials available:

- Accommodated materials kits
- DVDs
- Glossaries

Orders for Online Testers

Materials needed for online testing are automatically sent to all schools; schools should verify the shipping information on the Initial Material Order page of the OEAA Secure Site, but no other action is necessary. It is important for M-STEP coordinators to view the instructions for

Initial Material Orders on the Secure Site Training web page (www.michigan.gov/securesitetraining). This will ensure that you understand how this process works and you get the correct amount of materials. Refer to the **List of Important Dates** in Appendix E of this manual for material ordering dates.

Additional Materials Orders

During the Additional Materials Order window, schools will have the opportunity to order additional standard and accommodated paper/pencil test materials, if necessary, from the Additional Material Order page of the Secure Site. Refer to the **List of Important Dates** in Appendix E of this manual for dates when additional material orders can be placed. Instructions for placing an additional material order can be found on the Secure Site Training web page (www.michigan.gov/securesitetraining).

Supports and Accommodations

Some Designated Supports and Accommodations for students require them to take paper/pencil versions of the tests. These tests must be specifically requested when materials are ordered in the OEAA Secure Site (www.michigan.gov/oeaa-secure).

Inventory of Materials

Each order contains a packing list of all materials included in the shipment. It is the responsibility of the Building and/or District Assessment Coordinator to inventory all materials in the order upon receipt to verify that all materials were received. If there are any materials included on the packing list but not included in the shipment, contact the call center, 1-877-560-8378 and select Option 3 to report the discrepancy. Schools/districts are expected to return all secure materials as indicated on the packing list to the scoring contractor after testing.

5. LOAD STUDENTS IN THE DRC INSIGHT PORTAL

Students cannot be loaded directly into the DRC INSIGHT Portal. Instead, follow the procedures established to pre-identify students in the Secure Site. Once students are entered there, it will take about one business day for them to be loaded into the DRC INSIGHT Portal.

Note: If a student is loaded into the DRC INSIGHT Portal from the OEAA Secure Site, but then unassigned in the OEAA Secure Site, the student will **not** be removed from the DRC INSIGHT Portal. Students can be removed from the test session in the DRC INSIGHT Portal, but they cannot be removed from the DRC INSIGHT Portal.

Helpful Hint: Some schools choose to create a "Not Testing" session in the DRC INSIGHT Portal and move those students there to avoid confusion.

6. ASSIGN/EDIT TEST SESSIONS

There are two methods to assign test sessions for students testing online. Initially, this is done in the OEAA Secure Site according to pre-identification by student and grade. If students were not assigned to test sessions in the OEAA Secure Site before the posted deadline (refer to the **List of Important Dates** in Appendix E), those students can be placed directly into test sessions within the DRC INSIGHT Portal. After this posted deadline, students must still be pre-identified on the OEAA Secure Site. They will then be transferred into the DRC INSIGHT Portal; from there, schools will have to place students into test sessions.

- Schools administering assessments online can group students into online sessions on the OEAA Secure Site before the posted deadline (refer to the **List of Important Dates** in Appendix E). This is true for all students, whether they were pre-identified by the district/school or by the OEAA.

- Instructions for completing assigning test sessions in the Secure Site can be found on the Secure Site Training web page (www.michigan.gov/securesitetraining). Click on "Creating Online Sessions" located under the **Quick Reference** section.
- After the posted deadline:
  - **pre-identified students** will be pulled into their online session groups from the OEAA Secure Site and automatically entered into the DRC INSIGHT Portal
  - schools will need to place **new students** into a test session directly in the DRC INSIGHT Portal
  - pre-identified students will be available in the DRC INSIGHT Portal within one business day, starting March 5, 2021

7. ASSIGN SUPPORTS AND ACCOMMODATIONS

The Spring 2021 M-STEP online assessments offer two kinds of supports and accommodations—embedded and non-embedded. Embedded supports and accommodations are those that are integrated into the online testing system.

Note: When assigning Universal Tools, Designated Supports, and Accommodations, be sure to review the **Student Supports and Accommodations Tables** found in the Supports and Accommodations Guidance Document on the M-STEP web page (www.michigan.gov/mstep).

The embedded supports and accommodations need to be turned on in the DRC INSIGHT Portal **before** the student's test ticket is generated. Non-embedded supports and accommodations are those that are not available within the test engine, such as noise buffers or having a teacher read the items aloud to a student.

Helpful Hint: Embedded supports and accommodations must be assigned in the DRC INSIGHT Portal **before** generating test tickets.

For detailed information on assigning accommodations, refer to the **How to Assign and Mass-assign Student Supports and Accommodations** mini-module found in the DRC INSIGHT Portal (https://mi.drcedirect.com). Select **Document Type: Mini-Modules**. Instructions for easy navigation to documents in the DRC INSIGHT Portal are on page 8.

Helpful Hint: Helpful resources for managing, recording, and tracking Universal Tools, Designated Supports, and Accommodations are available to buildings/districts on the M-STEP web page (www.michigan.gov/mstep) under **Student Supports and Accommodations**. Select **Recording and Tracking Resources**.

8. CREATE TESTING SCHEDULES

Before testing begins, testing schedules must be developed for the school. Testing schedules must be established and maintained on-site for three years.

Due to the testing window extension, for Spring 2021 only, districts and schools that created Testing Schedules prior to the March 18, 2021 testing window extension announcement are encouraged, but not required, to recreate testing schedules.

Documentation of testing schedules must minimally include:

- district name
- building name
- building coordinator's name
- date of assessment administration
- location of testing session(s) (such as room number, classroom)
- starting and ending times of testing sessions
- assessment/grade/content being administered for each testing session
- test administrator(s) and proctor(s) for each session

Before Testing

For detailed information and a sample test schedule, refer to the Assessment Integrity Guide. (AIG), which can be found on the M-STEP web page (www.michigan.gov/mstep).

To support the development of testing schedules, the OEAA has prepared estimates of the time it expects each test component to take, as shown in the following tables. **Note:** The overall time is the same for both online and paper/pencil tests, although the latter tests have different test sessions/parts.

M-STEP tests are untimed and student-paced. Therefore, students must be given as much time as they need to complete each session or part of the test. You may expect some students will complete the test in less time than estimated while others may require additional time. Be sure to plan for both contingencies. Schools should also consider the ages and needs of their students and schedule planned breaks as appropriate.

Estimated test session times do not include:

- travel to and from the testing room
- distribution and collection of test tickets, test booklets, answer documents, scratch paper, and calculators (as allowed)
- signing into the test session
- review of online or paper/pencil test directions and paper/pencil ELA and mathematics sample items with students
- completion of the first page (demographic page) of the answer document

Spring 2021 Estimated Test Session Timings Grades 3–7

Content Area	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
ELA Computer Adaptive	2:00	2:00	2:00	2:00	2:00
Mathematics Computer Adaptive	1:30	1:30	1:30	2:00	2:00
Science Part 1	NA	NA	0:45	NA	NA
Science Part 2	NA	NA	0:45	NA	NA
Social Studies	NA	NA	0:60	NA	NA
Estimated Total Hours	**3:30**	**3:30**	**6:00**	**4:00**	**4:00**

Note: Times are in **hours:minutes**. Example, **1:30** equals **1 hour 30 minutes**.

Spring 2021 Estimated Test Session Timings Grade 8

Content Area	Grade 8
M-STEP Science Part 1	:45
M-STEP Science Part 2	:45
M-STEP Social Studies	:60
PSAT 8/9 (ELA and Mathematics)	2:40
Estimated Total Hours	**5:10**

Note: The science test is now operational.

Before Testing

Spring 2021 M-STEP Test Session Timings	
Content Area	**Grade 11**
Science	1:30
Social Studies	1:00
Estimated Total Hours	2:30

Schools should consider the needs of students, space and device availability, and staffing resources when developing a test schedule; this will ensure all students have a safe, orderly testing environment with adequate time to complete each M-STEP assessment.

For online testing, MDE offers the following recommendations to consider when building your testing schedule. **Note:** These are not requirements; rather they are suggestions to consider based on feedback received from the field in past administrations:

English Language Arts (ELA) and Mathematics

	Recommendations	Notes
Number and Duration of Session	• Administered in two sessions • Session durations range from 40–60 minutes	Test time estimates: • ELA grades 3-7: 2 hours • mathematics grades 3–5: 1 hour 30 minutes • mathematics grades 6–7: 2 hours
Breaks within Sessions	• Breaks within a single test session should not exceed 20 minutes. If breaks longer than 20 minutes are used, students should resume testing in a later test session. • Breaks should be provided based on the needs of the students and building policy. Breaks are important to ensure students remain focused on the content of the assessment throughout the test; breaks are strongly encouraged for any testing session that lasts longer than 40-60 minutes based on the needs of the students.	Breaks are allowed and can be provided during the test session using INSIGHT's pause feature. If the test is paused for 20 minutes or longer, students will need test tickets to log back in.
Total Duration	• Students should complete the test within five days of starting the test.	Tests that are not submitted are available for students to resume testing until the end of the testing window.

Science and Social Studies

	Recommendations	Notes
Number and Duration of Session	• Science grades 5 and 8: Administered in two sessions • Science grade 11: Administered in one session • Science session durations range from 40–60 minutes • Social studies grades 5, 8, and 11: Administered in one session • Social studies session durations range from 40–60 minutes	Test time estimates: • Science grades 5, 8, and 11: 1 hour 30 minutes • Social studies grades 5, 8, and 11: 1 hour
Breaks within Sessions	• Breaks within a single test session should not exceed 20 minutes. If breaks longer than 20 minutes are used, students should resume testing in a later test session. • Breaks should be provided based on the needs of the students and building policy. Breaks are important to ensure students remain focused on the content of the assessment throughout the test; breaks are strongly encouraged for any testing session that lasts longer than 40-60 minutes, based on the needs of the students.	Breaks are allowed and can be provided during the test session using INSIGHT's pause feature. If the test is paused for 20 minutes or longer, students will need test tickets to log back in.
Total Duration	• Students should complete the test within five days of starting the test.	Tests that are not submitted are available for students to resume testing until the end of the testing window.

9. TEST TICKET PRINTING

Each student will require a test ticket for every online test session. Each test ticket has a username and a unique password.

Helpful Hint: Building Coordinators may want to print test tickets for each session on a different color paper, to reduce potential confusion about which test tickets to use. For example, use one color for each content area or for each grade.

Refer to the following table to determine the number of test tickets required for each grade.

Test Tickets by Grade

Grade	Total Number of Tickets	Number of Tickets
3	2	ELA (1) Mathematics (1)
4	2	ELA (1) Mathematics (1)
5	5	ELA (1) Mathematics (1) Science (2) Social Studies (1)
6	2	ELA (1) Mathematics (1)
7	2	ELA (1) Mathematics (1)
8	3	Science (2) Social Studies (1)
11	2	Science (1) Social Studies (1)

A test roster will print with each set of test tickets. If a roster is not desired, it is possible to print only the tickets by adjusting the print settings to leave off the first 1–2 pages of the document. Both the test tickets and test roster are secure materials.

Sample Test Tickets

Each test ticket will have a unique password. Following are examples of test tickets.

M-STEP Spring 2021

Test Ticket G3 ELA

Student Name: Smith, John J
Date of Birth: 3/3/20XX

Username: JSMITH1
Password: ZM5XQYZ8

(Note: Username and password are not case sensitive)
Accommodation: **MSK**
Test Session: Sample Session

For detailed information on printing test tickets, refer to the **How to Create Test Sessions and Print Test Tickets** mini-module found in the DRC INSIGHT Portal (https:// mi.drcedirect.com). Select **Document Type: Mini Modules**. Instructions for easy navigation to documents in the DRC INSIGHT Portal are on page 8.

During Testing

Important Tasks During Testing

The following tasks should be performed in the order listed.

1. MANAGING STUDENT TEST TICKETS

Test tickets and rosters are secure materials. Once printed, they must be kept in a secure location until the test session is scheduled to begin. Test Administrators are instructed to distribute test tickets just prior to student login, and to collect test tickets after all students have logged in and begun testing.

Only one test ticket should be distributed at a time; students should not have access to any test ticket other than the one for the test the student is currently taking.

After a testing session is complete, the Test Administrator should return all test tickets (and rosters, if printed) to the Building M-STEP Coordinator for:

- destruction (if all students finished the test)

OR

- secure storage (if students have not completed the test)

Helpful Hint: To help manage test tickets, some schools sort them into envelopes for "complete", "in progress", and "not started".

2. VERIFYING SUPPORTS AND ACCOMMODATIONS ON TEST TICKETS

For students with supports and accommodations, some of those supports/accommodations will be displayed at the bottom of their test ticket (see the bold text on the following sample test ticket).

M-STEP Spring 2021

Test Ticket G3 ELA

Student Name: Smith, John J
Date of Birth: 3/3/20XX

Username: JMSITH1
Password: ZM5XQYZ8

(Note: Username and password are not case sensitive)
Accommodation: **MSK**
Test Session: Sample Session

Online supports and accommodations are abbreviated on the test tickets as follows:

Embedded Online Supports/ Accommodations	Test Ticket Abbreviation
Abacus	A
Auditory Amplification	AA
Alt communication devices	ACD
Administered Individually/Small Group	AISG
Sign Language ASL Video	ASL
Administrator Sign Test Content in ASL	ASTC
Administrator Sign Test Directions in ASL	ASTD
Bilingual word-to-word dictionary	BWWD
Color Choices	CC
Continuous Magnification	CM
Closed Captioning	CCAPTION
Contrasting Color	CTC
Masking	MSK
Noise Buffers	NB
Non-embedded Calculator	NEC
OEAA Multiplication Table	OMT
Oral Translated Test Directions	OTTD
Read Aloud (Human Reader)	RAHR

Embedded Online Supports/ Accommodations	Test Ticket Abbreviation
Scribe (Non-Writing items)	SNWI
Spanish Translation (Stacked)	ST
Scribe (Writing items)	SWI
Text-To Speech (Items Only)	TTS
Text-to-Speech (Items & Passages)	TTSPASSAGE
Visual Aids	VA

Test Administrators need to know which Universal Tools, Designated Supports, and Accommodations are needed for all students prior to the test administration.

Helpful Hint: Create a procedure for your district/building that ensures Test Administrators are made aware of all Designated Supports and/or Accommodations in each test session. Some schools use a Google sheet that includes student Designated Supports and Accommodations. This allows Test Administrators to verify students in their test sessions with supports and/or accommodations.

Students or Test Administrators will be required to turn on some supports and accommodations once the student has launched INSIGHT. Refer to the **M-STEP Online Test Administrator's Directions and Manual** for more information about turning on Universal Tools, Designated Supports, and Accommodations. These grade-specific documents are available in the DRC INSIGHT Portal (https://mi.drcedirect.com) and on the M-STEP web page (www.michigan.gov/mstep).

3. DURING A TEST SESSION

Detailed test directions are included in the **M-STEP Online Test Administrator's Directions and Manual** and the **M-STEP Paper/Pencil Test Administrator's Directions and Manual**. Electronic copies of these resources can be downloaded from the M-STEP web page (www.michigan.gov/mstep) or the DRC INSIGHT Portal (https://mi.drcedirect.com). Printed copies of the M-STEP Online Test Administrator's Directions and Manual and the M-STEP Paper/Pencil Test Administrator's Directions and Manual are also included in the Initial Material Orders.

Test Administrators must have a printed copy of the M-STEP Online Test Administrator's Directions and Manual and the M-STEP Paper/Pencil Test Administrator's Directions and Manual for the test being administered. Directions must be read and followed explicitly.

Ensuring Test Directions Are Read for Each Test Administered

Some schools have asked the Michigan Department of Education if they can be allowed to administer more than one test at a time for mixed-age and/or mixed-content groups of students, while directions for one test are read.

- "Can we administer the grade 3 and 4 mathematics M-STEP at the same time, reading the directions from one of the tests to all students?"
- "Can students be given test tickets for more than one test so they can move from one test to the next?"
- "Can students taking different tests be tested in the same room?"

The answer to all of these questions is based on this requirement:

Directions Must be Read and Followed Explicitly.

Test Administrators cannot read directions for one test and presume that those directions will apply to any other test in the same grade and/or content area. There are slight but important differences in the directions for different grade and/or content area tests.

During Testing

If the Test Administrator is able to ensure that the appropriate Test Directions are read to students for each test, while not disrupting testing of any other students (such as with TTS for Directions only), then testing in more than one grade or content area is allowable.

Per the Assessment Integrity Guide, noting the content area and grade on the Testing Schedule for each test session is required. When testing more than one grade or content area in a single test session, each assessment being administered to each student must be clearly documented in the Testing Schedule. In addition, a notation must be made on the Testing Schedule describing the steps taken to ensure all students are provided a quiet, distraction-free testing environment when more than one assessment is administered in the same room.

Helpful Hint: Test Administrators administering multiple content area or grade tests in a single test session should consider using the TTS option for test directions. Remember that the directions include a brief read-aloud section, to verify the students have the correct test ticket and are assigned to and selecting the correct test.

In a makeup or extended session, testing of multiple grades and content areas in the same room is allowable if students are resuming testing and have already heard the test directions read aloud.

Text-to-Speech Test Directions

New for Spring 2021: Text-to-Speech (TTS) test directions are available for all students.

To use TTS for test directions, Test Administrators will follow the "TTS Test Directions" section of the Test Administrator's Directions and Manual. These directions provide introductory information and test verification, then direct students to select the "play" button to listen to the directions. **Note:** All students must have headphones in order to use TTS for test directions.

Breaks During Testing

Breaks are allowed during M-STEP testing (online and paper/pencil).

During online test sessions, breaks can be provided using the software's "Pause" feature (do not click "Review/End Test"—that will cause the student's responses to be submitted). Tests can be paused for up to 20 minutes. If the 20-minute limit expires, a student will need his/her test ticket to log back in.

If a student does not finish a single assessment on the same day in which it was started, the Test Administrator should collect the student's test ticket and store it in a secure, locked storage area for redistribution on the next testing day. All test tickets must be destroyed once the test is complete.

Paper/pencil testers are allowed to take breaks any time a "stop" sign appears in their test booklets. These signs appear at the end of each test part, which will be noted in the test directions. If a student leaves the room, the Test Administrator must collect their answer documents and any used scratch paper, put them inside the students' test booklets, and give the booklets back to the students when they return. Students may not return to an earlier part of their test booklet after a break.

Testing Status

A student's testing status can be checked in the DRC INSIGHT Portal. For information on how to access the student test status, refer to the **How to Find Student Testing Status** mini-module in the DRC INSIGHT Portal (https://mi.drcedirect.com). Select **Document Type: Mini-Modules**. Instructions for easy navigation to documents in the DRC INSIGHT Portal are on page 7.

The following table defines the status notations that are used in the INSIGHT Portal.

Status	Description
Not Started	Student has not started this test
In Progress	Student began this test but has not finished
Completed	Student completed and submitted the test or clicked "End Test"

Testing Irregularities

Any irregularities that occur before, during, or after testing must be reported to the District M-STEP Coordinator and the OEAA (as appropriate) as soon as possible. Refer to the Incident Reporting Guide in Appendix C for examples of what is considered an irregularity and what follow-up may be required.

Issues Specific to Online Testers

While test directions are being read to online testers, it is very common for them to click ahead. Some students may reach the "Begin Test" button before they are directed to begin. In some cases, the student may even start taking the test. On a fixed-form test (that is, any grade and part of science or social studies, and some accommodated versions of ELA and mathematics), when the student realizes he or she has gone too far, there is a tendency to click "End Test" to get out of the test. If this happens, the test will become locked and cannot be unlocked. This will result in the submission of a test with no responses. Therefore, before beginning to read the test directions, remind students not to click ahead. If they do click the "Begin Test" button early, they should select the "Pause" button and wait for your directions.

On a Computer Adaptive Test (CAT) (non-accommodated ELA and mathematics), a student who selects "Begin Test" before being directed to should pause the test while the test directions are read. Once test directions are completed, the student can resume testing by selecting "Resume".

If the test has been paused for more than 20 minutes, the student will need to log in again using the original test ticket.

Internet Connectivity

Online testing requires a reliable connection to the internet. If a student's computer loses its connection during testing, the system will continue to attempt reconnection for five minutes. The error message will display, instructing the student to raise his/her hand for help while continuing to attempt reconnection. If the system is able to reconnect, the error message will close and the student can resume testing. **Note:** It is possible that a student could see the error message but the error is resolved before the Test Administrator has had time to reach the student. If this occurs, the Test Administrator should instruct the student to resume testing.

The connection is checked every 45 seconds or whenever an answer is selected. At most, one answer is lost to a lost connection (or up to 45 seconds of an essay). Testing resumes at the point where the connection was lost. Where available, wired connections usually have fewer disconnect "blips" than wireless connections. Work with the Building Coordinator and Technology Coordinator to resolve connectivity and other computer issues.

4. RESUMED TESTING

Moving Online Testers to a Different Testing Device or Room

There are two main reasons why it would be necessary to move an online tester from one computer to another during testing.

- Technology issues with the computer software or hardware that make it difficult and/or impossible for the student to continue testing on that computer.
- The student requires additional time to complete the test and another location would be more suitable.

If a student must move from one computer to another after testing has begun, follow these steps.

1. Click on the “Pause” button and then click the “Exit” button (do not click “End Test”).
2. Collect the student’s test ticket and any used scratch paper, to bring to the new testing computer.
3. Escort the student to the new location (or computer).
4. Launch the testing software.
5. Hand the test ticket back to the student.
6. Observe the student entering his/her username and password.
7. The student will be required to view and click through the test directions.
8. The student will click “Start Test” and will be taken to the same question where he/ she left off prior to pausing.
9. Collect the student’s test ticket.
10. Continue to monitor the test session with the normal security procedures.

Paper/Pencil Testers

For test security reasons, students taking paper/pencil tests should complete each test part on one day. Every attempt should be made to complete content testing (except Day 1/Day 2 ELA) in one school day. If this is not possible, due to a schedule where students are not in school an entire day, then students should complete each part before breaking for the day (i.e.at a Stop Sign).

The OEAA recommends that testing begins as early as feasible in the school day to accommodate students who need additional time.

Schools with hybrid scheduling models due to the COVID-19 pandemic with less than full-day schedules must schedule test administration to begin as early in the day as possible to allow students to complete each part on the same day. It is allowable to schedule content area tests over across multiple days, however each test part should be completed in one school day.

Students may resume testing if:

- the student goes home sick
- the student is removed from school by a parent or guardian for an appointment

When this happens, the following must be done:

- Flag the last item answered; the student may not go back to previously answered questions.
- Resume testing in a makeup test session.

Moving Paper/Pencil Testers to a Different Room

Sometimes paper/pencil testers have to be moved to a different location during testing. This usually happens when one student takes longer than other students to complete the test. If this happens, the Test Administrator must put the student’s answer document and any used scratch paper inside the test booklet, and move the student to a quiet location that is void of cluing materials (maps, equations, posters). The student must be accompanied by a Test Administrator or proctor until he/she finishes testing.

5. VIDEO SURVEILLANCE CAMERAS

A test security issue could be created if a school has surveillance video cameras in any room used for testing. However, in the interest of student and staff safety, the use of surveillance cameras during testing is allowed. Cameras should be directed at equipment and test materials in such a way that test items or student responses are not compromised. Once testing is complete, any recordings made during test sessions must be deleted as soon as possible. The video recording of any test session or material cannot be archived.

6. ENDING A TEST SESSION

Online Testers

When students have completed their test, they should click “End Test” (or “Exit” if taking a CAT.) Students taking fixed-form tests will see the review screen after clicking “End Test.” Students should review any flags they selected on any items and ensure they have answered all questions. After viewing the review screen, students will click “End Test.” The next screen will give students an opportunity to return to the review screen or Submit the test. Clicking “Submit” ends the test and takes the student to the INSIGHT sign-in screen.

When taking a CAT test, students will work until they click “Next” on an item and receive a “Congratulations!” screen, which shows they have completed the test. Students select “Exit” and return to the INSIGHT sign-in screen. At that point, the Test Administrator should see the desktop or home screen of the device.

If students are testing on devices they carry with them (commonly called 1:1 devices), Test Administrators must check the devices to make sure the desktop or home screen is showing before students leave the testing room. This is the only way to be sure that students are not still logged into the testing software. (Refer to the **M-STEP Online Test Administrator’s Directions and Manual** for more detailed information on ending online tests.)

Paper/Pencil Testers

All parts of the M-STEP test are untimed and student-paced. Therefore, students must be given as much time as needed during the same continuous session to complete each part of the test. If a test session time slot has ended but some students need more time to finish, their test materials may be collected and they may be escorted immediately to a different supervised location where they can complete their testing. Students should not transport their own materials between testing locations.

When all other students have finished testing, collect their test materials individually (do not have them pass their materials to the ends of rows or aisles). Verify that each student has returned both his/her answer document and test booklet, and then return the secure materials to the Building M-STEP Coordinator. Refer to the **M-STEP Paper/Pencil Test Administrator’s Directions and Manual** for more detailed information on ending paper/pencil tests.

After Testing

Important Tasks After Testing

The following tasks should be performed in the order listed. **Note:** This task list focuses primarily on the administration of the assessment; other accountability and reporting tasks to be done are not included here (watch the Spotlight for up-to-date information).

1. REPORTING DECISIONS

In some instances, District and/or Building M-STEP Coordinators may be called on to make two important decisions that will impact the reporting of results.

Research I and II Fields

The use of research fields in the student data file is optional. Research codes are only reported in the student data file results (dynamic online reports do not include the research code information).

In the past, school districts have used the optional research fields to answer such questions as:

- Is there a relationship between the number of years students have attended school in our district and their test scores?
- Is there a difference in the attainment of achievement objectives among those students who participated in reading program A v. reading program B?

The following important points should be considered before deciding to use research fields:

- Codes for research fields may be developed at the district or school level and assigned a distinct number, from 1 to 10.
- Districts may elect to use one or both of the research code options at any or all of the grades assessed.
- Research codes can be entered into the Secure Site beginning on the first day of pre-identification through the end of Tested Roster, or they can be filled in on the student answer document.

Reporting Codes

Reporting codes allow districts and/or schools to receive and filter reports organized by class or group designation(s). This is an optional field. It is up to the district or school to determine whether this option will be used and to define the codes that will be most helpful.

The Mass Updates Assessments document on the Secure Site Training page (www.michigan.gov/securesitetraining) explains how to assign Reporting Codes to a group of students. The Reporting Code Labels (https://www.michigan.gov/documents/mde/Reporting_Codes_Instructions_609853_7.pdf) document explains how to create a label for reporting codes and is also available on the Secure Site Training page.

Reporting codes can be entered in the OEAA Secure Site beginning on the first day of pre-identification through the last day of the Answer Documents Received window.

Helpful Hint: Schools can create unique cohorts of students to view data from a specific group of students after testing. For example:

- students receiving intensive supports
- students in certain classes
- student list according to teacher

2. MATERIALS HANDLING AND RETURN

All test materials must be managed in a specific way after each test window closes. In addition to online test tickets and rosters, this applies to used and unused paper/pencil test booklets (standard, braille, and enlarged print); used and unused answer documents (student-completed and adult-transcribed); CDs; DVDs; word-processed pages; glossaries; scratch paper; graph paper; Listening Scripts; Listening CDs; Reader Scripts. The table below shows what to do with each material once testing is complete.

After Testing

How to Process Secure M-STEP Test Materials After Testing

Secure Test Materials	Return to M-STEP Contractor	Schools Keep	Schools Destroy
Used answer documents (all content areas)	scorable box(es)		
Student test tickets and test rosters			✓
Used orange Special Handling Envelope(s) with contents	scorable box(es)		
Used and unused test booklets (grades 3–8 & 11)	✓*		
Accommodated versions of the test (reader scripts, braille, enlarged print, audio CD, video DVD, translated versions)	✓*		
ELA Listening CDs	✓*		
ELA Listening Scripts	✓*		
L1 (First language) Glossaries (mathematics)			✓
Used scratch paper (including graph paper)			✓

* Can be returned with the scorable materials, or in a separate box as directed in **Instructions for Packing Non-scorable Materials for Return** on page 69 of this manual.

How to Process Non-Secure M-STEP Test Materials After Testing

Non-Secure Test Materials	Return to M-STEP Contractor	Schools Keep	Schools Destroy
Unused answer documents (all content areas)			✓
Unused orange Special Handling envelopes			✓
Test administration manuals		optional	
Test Administrator's Directions and Manual		optional	
Signed OEAA Assessment Security Compliance Forms		store at district for 3 years	
Testing Schedules		store at district for 3 years	

After Testing

Return Tools

The M-STEP contractor has provided districts/schools with a number of tools for returning materials, including:

- Orange Special Handling Envelopes
- FedEx Express Airbills for shipping
- Blue scorable stickers for the outside of boxes containing scorable materials

Note: Districts and schools are encouraged to complete and return test materials as early as possible following each grade-specific testing window. Refer to the **List of Important Dates** in Appendix E of this manual for window dates. The M-STEP scoring contractor can then begin to scan and score student responses immediately.

Additional return materials may be ordered if needed during the Additional Material Order window.

Return Shipping Schedule

The **Materials Return Dates** on page 70 of this manual shows the dates by which answer documents must be returned for each testing window. Materials must be returned within three weekdays of the close of each testing window to ensure scoring. Answer documents returned after May 26, 2021 (for the grades 5, 8, and 11 window) and after June 9, 2021 (for the grades 3, 4, 6, and 7 window) **will not be scored**.

Schools are encouraged to return materials as soon as possible after all students have completed testing.

OEAA Assessment Security Compliance Forms and Testing Schedules

Building M-STEP Coordinators must give their school's signed OEAA Assessment Security Compliance Forms and test schedules to the District M-STEP Coordinator, who will keep them on file for a minimum of three years. Do not return these documents to the M-STEP contractor.

Preparing Answer Documents for Return

The Orange Special Handling Envelope

The Orange Special Handling Envelope(s) is used for the following materials:

- damaged answer documents that are not biohazards
  - Responses on contaminated answer documents must be transcribed onto a new answer document; the contaminated answer document must be securely destroyed
  - Schools must submit an Incident Report when transcribing any answer document. Refer to the **M-STEP Incident Reporting Guide** in Appendix C.
  - When transcribing any new answer document, a bar code label must be printed and affixed to the new answer document, which will be returned with the scorable materials.
- used answer documents that the school has invalidated by printing "Do Not Score" prominently on the front page
- all word-processed pages and additional paper, with complete student information inserted in each student's answer document, for students who required these Accommodations; refer to the Word Processors section in the **Supports and Accommodations** chapter of this manual

When preparing materials for return, set aside the completed Orange Special Handling Envelope(s) with its contents. The envelope(s) must be placed at the top of Box 1 prior to the box being sealed and shipped.

The Orange Special Handling Envelope only has to be returned if it is used. If the school does not have any items to be placed in the Orange Special Handling Envelope, the envelope should be securely destroyed.

After Testing

Organizing Answer Documents for Verification

Follow these steps when preparing M-STEP Answer Documents for return to the M-STEP contractor at the end of each testing window.

First, organize the answer documents into stacks for each grade level and content being tested in your school. For example, at the end of the testing windows for grades 5 and 8, there will be discrete answer document stacks for grade 5 mathematics, ELA, science, and social studies, and discrete answer document stacks for grade 8 science and social studies.

If any student used an enlarged print or braille version of the test, a Test Administrator must transcribe their responses onto a regular answer document. Transcribed answer documents may be returned along with the other used answer documents.

Reviewing/Verifying Answer Documents

Once the answer documents are separated into stacks, review them using the following steps. Be sure to conduct this review for each stack of answer documents at the end of each grade-specific testing window.

For each stack, verify that:

- all answer documents are for the same grade level and same content area
- all answer documents are for M-STEP (not MI-Access, ACT WorkKeys, SAT, or PSAT)
- only number 2 pencils have been used in the answer documents
- no correction fluid, crayons, markers, highlighters, or colored pencils have been used
- any sticky notes, paper clips, rubber bands, staples, glue, or other extraneous materials have been removed from inside and outside the answer documents

All used answer documents for the grades tested in the particular test window will go into the scorable boxes.

All verified unused answer documents should be securely shredded, immediately following shipment of all other M-STEP materials.

Individual Answer Document Checks

Once all the answer documents are in stacks but before they are packed into scorable boxes, review each individual answer document to ensure that:

- the student information has been completed at the top of the answer document (student's legal name, teacher name, school name, district or PSA)
- the Student Birth Date field has been filled in accurately
- the Assessment Date and Test Form Number fields have been filled in accurately
- the applicable "School Use Only" bubbles are correctly completed
- each answer document has an undamaged barcode label adhered carefully within the designated frame (a $10 fee may be assessed for every answer document returned for scoring without a barcode label)
- the student name and school name on each barcode label matches the student information at the top of the answer document

It is not permissible for anyone to inspect answer documents for completion or to review student responses at this time. Test Administrators are responsible for ensuring that students have completed testing prior to the materials being collected from students and returned to the Building M-STEP Coordinator.

Packing Scorable and Non-scorable Materials for Return

Either the District M-STEP Coordinator or the School M-STEP Coordinator may return materials for scoring through FedEx Express shipping. Regardless of which coordinator is returning materials, the packing instructions are the same. Follow the instructions below when packing scorable materials.

After Testing

It is vital that used answer documents be returned in boxes marked with a Blue Scorable Label. Failure to return answer documents properly can jeopardize a school's accountability calculations.

Instructions for Packing Scorable Materials for Return

1. Organize used answer documents by grade and then by content area for the appropriate test window.
2. Pack used answer documents in boxes, using cushioning materials if needed to keep them secure. Schools should use the same boxes the materials were delivered in to ship the materials to M-STEP Scoring Services (the M-STEP scoring contractor). If these boxes are not available, use sturdy boxes to return the materials. **Note:** Do not use boxes that originally contained copy paper.
3. When returning multiple boxes of scorable materials, place the completed orange Special Handling Envelope (if used) on top of the contents of the first box.
4. **Note:** Used answer documents and other secure materials (such as test booklets) may be returned in the same box when only one box is being returned. When returning all materials in the same box, place the scorable materials and the Special Handling Envelope on the top and separate the scorable materials from the nonscorable materials with a sheet of paper. Place a Blue Scorable Label on the top of the box.
5. Remove or black out any old shipping labels on the boxes, including the original shipping barcode, and seal the boxes with plastic shipping tape. Place three strips of tape on the top of each box and three strips of tape on the bottom.
6. Affix a Blue Scorable Label to the top of all boxes containing used answer documents.
7. In addition to the Blue Scorable Label, affix a FedEx Express Airbill to the first box of your scorable materials boxes. The FedEx Express driver will produce additional multiple-piece shipment labels and affix to them to the remaining boxes of scorable materials.

   Note: Only one box in a shipment needs a FedEx Express Airbill. Do not tamper with the preprinted information on the Airbill in any way, as this may affect FedEx processing and delay your shipment.

Instructions for Packing Non-scorable Materials for Return

1. Pack all used and unused test booklets and any accommodated materials in the boxes, using cushioning materials to keep them secure. All CDs, DVDs, Reader Scripts, ELA Listening CDs, ELA Listening Scripts, Enlarged Print, and/or braille materials must be returned. Pack CDs and DVDs at the top of the box(es). It is preferable to use the same boxes that the materials originally came in to ship the materials to M-STEP Scoring Services (the M-STEP scoring contractor).
2. Remove or black out any old shipping labels, including the original shipping barcode, and seal the boxes with plastic shipping tape. Place three strips of tape on the top of the boxes and three strips of tape on the bottom. **Note:** Boxes that contain only nonscorable materials no longer need a nonscorable label.

   Note: Only one box in a shipment needs a FedEx Express Airbill. Do not tamper with the preprinted information on the Airbill in any way as this may affect FedEx processing and delay the shipment.

After Testing

Reminder: Materials must be returned within three weekdays of the close of each testing window to ensure scoring. Schools are encouraged to return materials as soon as possible after all students have completed testing. Answer documents returned after May 26, 2021 (for the grades 5, 8, and 11 window) and after June 9, 2021 (for the grades 3, 4, 6, and 7 window) **will not be scored**.

Instructions for Returning All Materials via FedEx Express

1. Place the boxes where the FedEx driver normally delivers or picks up packages.
2. To schedule a pickup, call **1-800-GoFedEx (1-800-463-3339)**. After the voice prompt, **you can press 9 or say, "Premiere Customer Service Program."**
3. When prompted, enter 999 999 933 as the nine-digit FedEx account number. When transferred to a Customer Service Representative, specify that you need to schedule a FedEx Express pickup for the M-STEP project.
4. Have the following information available when you call:
   - your phone number (if you have called to schedule FedEx pickups or shipped materials prior to this call, FedEx will have your address information in their system; otherwise, this information will need to be provided)
   - the pickup date
   - the total number of boxes you are returning (specify a "multiple piece shipment") if returning more than one box
   - the average box weight (you can use 20 pounds per box)
5. If you do not have enough Scorable Labels and/or FedEx Express Airbills, order them on the Additional Materials Order page in the OEAA Secure Site (www.michigan.gov/oeaa-secure).
6. Any remaining Scorable Labels can be used for other testing windows if needed. After returning all of your materials for this project, destroy any remaining FedEx Express Airbills, as these are year-specific.

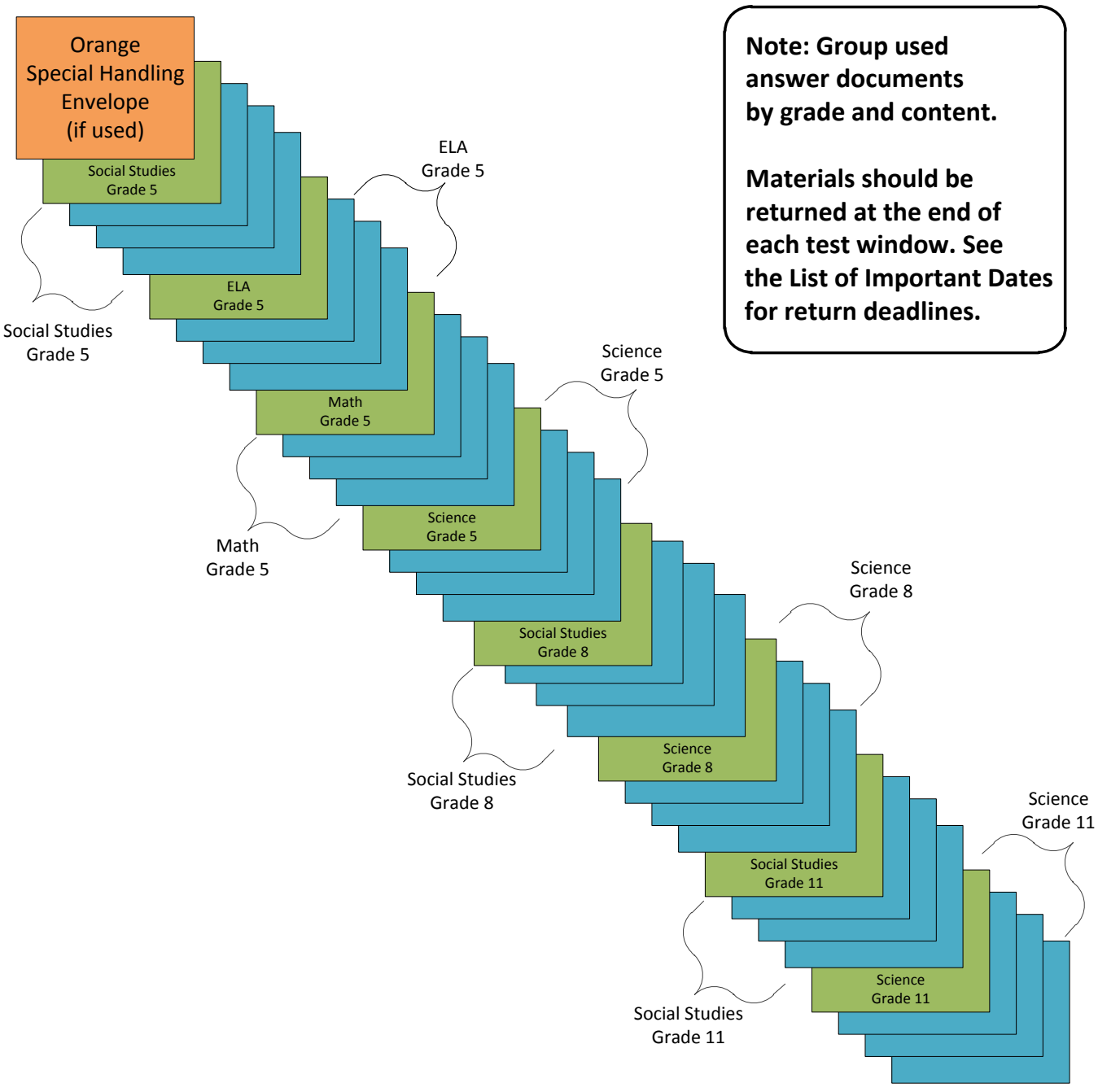
Important: Keep the sender's copy of the FedEx Express Airbill for each package so you can easily track your packages. If requested, the FedEx Express driver will supply small adhesive tracking labels. These labels will match the multiple-piece shipment labels on your packages.

Materials Return Dates

Grades	Final date to ship for inclusion in answer document verification
Grades 5, 8 and 11	May 26, 2021
Grades 3, 4, 6 and 7	June 9, 2021

After Testing

Diagram for Packing Scorable Materials



Example:
Assembling Answer Documents for Return After the Grades 5, 8, and 11 Testing Window

Appendix A: Calculator Policy

Online and Paper/Pencil Testers

MATHEMATICS

Students in grades 3, 4, and 5 are **not** allowed to use a calculator on ANY item in the mathematics assessment, as the use of calculators at these grade levels changes the construct of the items and what they are intended to measure. All students must abide by this no-calculator-allowed policy, even students whose IEP or 504 Plan specifies otherwise. **The use of a calculator at grades 3, 4, or 5 is considered a nonstandard accommodation.** Nonstandard accommodations render the assessment invalid.

SCIENCE

Students in grade 5, 8, and 11 are allowed to use a calculator on any item in the science assessment.

Online Testers

On grades 6 and 7 mathematics and grades 5, 8, and 11 science assessments, students will use the calculator embedded within the online delivery engine. The calculator will appear in the toolbar when items allow its use; it will not appear when items do not allow its use.

There are two types of embedded online calculators:

- Basic calculator - science grade 5 and mathematics grade 6
- Scientific calculator - science grades 8 and 11 and mathematics grade 7

The Office of Educational Assessment and Accountability (OEAA) has developed resources for online testers to help prepare them for online testing. One of the resources is an online calculator practice tool. It is recommended that online testers visit the practice environment to see sample items and familiarize themselves with the online calculator tool. To practice using the M-STEP online calculators, go to the Online Tools Training (OTT) portal (https://wbte.drcedirect.com/MI/portals/mi/) using the Google Chrome browser.

Paper/Pencil Testers

On grades 6 and 7 mathematics and grades 5, 8 and 11 science assessments, students will use a handheld calculator.

Calculators are allowed on all items of the science assessments. Calculators are allowed only on Part 2 of the mathematics assessment.

Mathematics test booklets are divided into two parts. Part 1 of the paper/pencil mathematics assessment is considered non-calculator, and students must not have a calculator within reach. Part 2 of the paper/pencil mathematics assessment allows the use of a calculator. Once students start Part 2, they are not allowed to return to the non-calculator items on Part 1.

Since external hand-held graphing calculators are programmable, there is a potential of a security breach. All programmable calculators must be set to TEST mode during the testing session for both mathematics and science assessments.

Types of hand-held calculators:

- Basic calculator - science grade 5 and mathematics grade 6
- Scientific calculator - science grades 8 and 11 and mathematics grade 7

Important Notes

ALIGNMENT

The operational items on all of the assessments have been field-tested and are aligned to Michigan's standards.

Appendix A: Calculator Policy

FAIRNESS

The issue of fairness between online testers and paper/pencil testers with regard to calculator usage has been raised. The OEAA decided not to burden schools by requiring them to purchase calculators specifically for this assessment as a possible one-time use. Some schools may not have the grade-specific calculators for their paper/pencil testers to use. The OEAA has reviewed every item to determine if the use of an above-grade-level calculator gives those students an advantage. Students will not be advantaged or disadvantaged based on using an above-grade calculator on the assessment.

MANAGING ONLINE TESTERS AND EXTERNAL HAND-HELD CALCULATORS

The OEAA prohibits online testers from using external handheld calculators instead of the embedded online calculator. The only online testers who may use an external calculator are those students whose IEP or Section 504 Plan specifies the use of a special adaptive calculator.

Appendix B: Scratch Paper Policy

M-STEP Scratch Paper Policy

Scratch paper is a universal tool that may be made available to students during testing. Used scratch paper is a secure material. District Coordinators should develop and disseminate procedures for the secure handling and disposal of used scratch paper.

TERMS

Graph Paper: blank, gridded paper provided by MDE for use in grades 6-7 mathematics

Scratch Paper: blank, lined, or unlined paper

Graph paper and scratch paper are separated into two types:

Unused Scratch/Graph Paper: scratch/graph paper that does not include any student markings; unused scratch/graph paper may include a student's name written on it

Used Scratch/Graph Paper: scratch/graph paper that includes any student markings beyond the student's name

ONLINE TESTERS: MATHEMATICS

Scratch paper is allowed in all test sessions. For students in grades 6-7, blank graph paper is required and is provided in the online initial material order. The grades 3-5 tests do not include items that require graph paper. However, it is optional to provide graph paper for grades 3-5. Additional graph paper can be downloaded from the M-STEP web page (www.michigan.gov/mstep).

For grades 3-5, scratch paper must be blank ruled or unruled, or (optionally) graph paper.

For grades 6-7 the graph paper must be blank.

Fresh scratch/graph paper must be distributed at the start of each new test session. That is, when a student receives a new test ticket for login, a fresh sheet of scratch paper must be provided at that time. Once a test session is completed, used scratch paper must be returned with the test tickets to the Building Coordinator for secure shredding.

Students must write their names on the scratch paper. When students are given a break, the scratch paper must be collected and securely stored with test tickets until testing resumes.

If a student's name is clearly written on the used scratch paper, it can be returned to that student to use when resuming an in-progress test.

ONLINE TESTERS: ENGLISH LANGUAGE ARTS, SCIENCE, AND SOCIAL STUDIES

Scratch paper is allowed in all test sessions. For all grades this must be blank ruled or unruled paper.

Fresh scratch paper must be distributed at the start of each new test session. That is, when a student receives a new test ticket for login, a fresh sheet of scratch paper must be provided at that time. Once a test session is completed, used scratch paper must be returned with the test tickets to the Building Coordinator for secure shredding.

Students must write their names on the scratch paper. When students are given a break, the scratch paper must be collected and securely stored with test tickets until testing resumes.

If a student's name is clearly written on the used scratch paper, it can be returned to that student to use when resuming an in-progress test.

PAPER/PENCIL TESTERS: MATHEMATICS

Scratch paper is allowed in all test sessions and test parts. For grades 3-5 this must be blank ruled or unruled, or (optionally) graph paper. Testers in grades 6-7 may be provided blank graph paper in place of blank ruled or unruled paper; however, students may also use the graphs in their test

Appendix B: Scratch Paper Policy

booklets to solve problems. Additional graph paper can be downloaded from the M-STEP web page (www.michigan.gov/mstep).

Fresh scratch paper must be distributed with each part of a test and students must write their names on the scratch paper. After students encounter a "stop" sign in the test booklets, scratch paper must be collected and securely stored until it can be returned with the rest of the test materials to the Building M-STEP Coordinator for shredding. If paper/pencil testers are provided a break not associated with a test part, then used scratch paper must be placed inside their closed test booklets.

PAPER/PENCIL TESTERS: ENGLISH LANGUAGE ARTS, SCIENCE, AND SOCIAL STUDIES

Scratch paper is allowed in all test sessions and test parts. For all grades this must be blank ruled or unruled paper.

Fresh scratch paper must be distributed with each part of a test and students must write their names on the scratch paper. After students encounter a "stop" sign in the test booklets, scratch paper must be collected and securely stored until it can be returned with the rest of the test materials to the Building M-STEP Coordinator for shredding. If paper/pencil testers are given a break not associated with a test part, then used scratch paper must be placed inside their closed test booklets.

Note: In order to prevent the use of an inappropriate writing utensil on the answer document, students should only have access to number 2 pencils during paper/pencil testing.

Mathematics: Online and Paper/Pencil

Grade	Graph Paper (required)	Graph Paper (optional)	Scratch Paper (available Universal Tool)
3		X	X
4		X	X
5		X	X
6	X		X
7	X		X

English Language Arts, Science, and Social Studies: Online and Paper/Pencil

Grade	Scratch Paper (available Universal Tool)
3	X
4	X
5	X
6	X
7	X
8*	X
11*	X

*Does not apply to English language arts.

M-STEP Incident Reporting Guide

Any testing irregularities that occur before, during, or after testing must be reported to the Office of Educational Assessment and Accountability (OEAA) within two school days. All incidents are required to be reported; do not neglect to report an incident if more than two school days have passed since you were aware of it. This table identifies the incident categories and sub-categories that are used in the Secure Site Incident Reporting tool and provides sample scenarios for each category or sub-category.

You will find detailed information on how to access and use the tool at the Secure Site Incident Reporting tool (www.michigan.gov/documents/mde/Incident_Reporting_520328_7.pdf).

Incident Category: Test Not Completed				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Test submitted prior to completion	Student accidentally ends/ submits the test without answering all questions	If 5 or fewer questions have been answered, contact the Call Center at 1-877-560-8378 Option 2. If more than 5 questions have been answered, an Incident Report is required.	N/A	Online: **Required** if more than 5 item responses Paper/ Pencil: N/A
Student became ill	Student becomes ill and goes home before finishing a test	Pause and Exit test (do not End test). Resume testing with the original test ticket in a makeup session.	Collect test materials and flag the last question answered. Students are not allowed to return to previously answered questions.	Online: **Optional** Paper/ Pencil: **Optional**
Student was removed from school by parent/ guardian	Student is removed from class by a parent or guardian during the test administration	Pause and Exit test (do not End test). Resume testing with the original test ticket in a makeup session.	Collect test materials and flag the last question answered. Students are not allowed to return to previously answered questions.	Online: No Incident Report Necessary Paper/ Pencil: **Optional**

Incident Category: Test Not Completed				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Student moved from school	Student transfers or moves from school with an incomplete content area test **NOTE:** Be prepared to accept a phone call from student's receiving school requesting information on test completion and needed accommodations or designated supports.	Submit an incident report with request for test to be marked **Do Not Score**.	Mark the answer document **Do Not Score** and return it in the Special Handling Envelope.	Online: **Required** Paper/ Pencil: **Required**
Do Not Score requested	Student has taken (or logged into) incorrect assessment (took M-STEP instead of MI-Access assessment) **NOTE:** A student who begins a test and subsequently becomes ill does not meet the requirements for the test to be marked **Do Not Score**.	Submit incident report with request for the test to be marked **Do Not Score.**	N/A	Online: **Required** Paper/ Pencil: N/A
Student does not complete test by end of day	Student does not complete testing by the end of the school day **NOTE:** Testing must be completed by the end of the grade-level testing window. There are no exceptions.	Pause and Exit test (do not End test). Resume testing with the original test ticket in a makeup session. (Schools should consider the ages and needs of their students and schedule intentionally planned breaks as appropriate.)	With proper planning and scheduling, this should be avoided. • Schedule all testing early in the day to allow students to complete required testing. The schedule must allow for students who require additional time. • Consider the multiple day testing designated support—this is allowable as **intentional** scheduling for some students who use additional supports. • Exceptions for individual students will be considered on a case-by-case basis.	Online: No Incident Report necessary Paper/ Pencil: **Optional**

Incident Category: Accommodation / Designated Support Issue				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper / Pencil Testers**	**Incident Report Required / Optional**
Designated support/ required accommodation not provided	Student is not provided appropriate designated support or accommodations	Test misadministration. Submit an Incident Report. For students with an IEP or Section 504 plan that requires the missing designated support or accommodation: A new test with appropriate designated support or accommodation may be administered with: • notification to and approval of parents or guardians • documentation provided that identifies required designated support or accommodation (such as IEP plan) For students who do not have an IEP or Section 504 plan the requires the missing designated support: A new test with appropriate designated support may be administered with: • notification to and approval of parents or guardians • signed documentation from the person responsible for day-to-day instruction in the content area affirming the student's daily use of the designated support during regular instruction	Test misadministration. Submit an Incident Report. Emergency test with appropriate designated support or accommodation may be administered with notification to and approval of parents or guardians. Original answer document must be marked **Do Not Score** and returned in the orange Special Handling Envelope.	Online: **Required** Paper/ Pencil: **Required**

Incident Category: Accommodation / Designated Support Issue				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper / Pencil Testers**	**Incident Report Required / Optional**
Nonstandard designated support/ accommodation provided	Nonstandard accommodation provided (Refer to the "Nonstandard Accommodations" information on page 24 of this manual.)	The student's test is invalidated. Inform parents or guardians. Submit an Incident Report—working with the OEAA, in some cases students may be able to retest with the appropriate accommodation, if the student's parents and school agree it is in the best interest of the student. Perform an internal investigation as needed and keep the resulting documentation on file as Nonstandard Accommodations may be appealed during the Answer Document Verification window.	Mark the student's test as **Nonstandard Accommodation** on the answer document and return with scorable materials. The student's test is invalidated. Inform the parent or guardian. Submit an Incident Report—working with the OEAA, in some cases students may be able to retest with the appropriate accommodation, if the student's parents and school agree it is in the best interest of the student. Perform an internal investigation as needed and keep the resulting documentation on file as Nonstandard Accommodations may be appealed during the Answer Document Verification window.	Online: **Required** Paper/ Pencil: **Required**

Incident Category: Misadministration				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Wrong test administered	Student is administered the incorrect test (for example, an M-STEP test instead of a MI-Access test)	Inform parents or guardians. Students must be assigned to the correct test in the Secure Site and the appropriate test must be given in order to be included in accountability calculations. Submit an Incident Report—the test will be marked **Do Not Score**.	Inform parents or guardians. Mark the answer document with **Do Not Score** and return in the orange Special Handling Envelope. Student must be given the correct test in order to be included in accountability calculations — material orders should be ordered on the Secure Site using the normal additional material order process.	Online: **Required** Paper/ Pencil: **Required**
Wrong test ticket used	Student is issued wrong test ticket and begins the test	Stop the test as soon as the error is identified. Pause and Exit the test (do not End the test) Submit an Incident Report.	N/A	Online: **Required** Paper/ Pencil: N/A
Part missed or not administered	Student is not administered one part of a test	If it is identified within the testing window for the grade, administer the test. If it is past the testing window for the grade, submit an Incident Report. The test may not be administered.	If it is identified on the day of the administration or within the makeup window for the content area and grade, administer the test. If it is not identified on the test day or within the makeup window for the content area and grade, submit an Incident Report. **Important reminder:** This is for a Part missed in the test. It is not permissible to inspect answer documents for completion or to review student responses at this time.	Online: **Optional** Paper/ Pencil: **Optional**

Incident Category: Misadministration				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Wrong answer document used	Student uses wrong answer document when testing	N/A	If the wrong answer document is the correct grade and test, but has a wrong barcode label, then a new correct barcode label should be printed and affixed. An Incident Report is not required. If the answer document is the wrong grade and/or content, then mark the wrong answer document(s) used with **Do Not Score** and return in the orange Special Handling Envelope. Submit an Incident Report. (See **Answer document transcription required/ suggested** Incident Sub-Category on page 85 of this manual.)	Online: N/A Paper/ Pencil: **Optional**
Test not administered on scheduled day/time **For Spring 2021 only** use this sub-category for "Test not administered within scheduled testing window"	Test is administered outside of scheduled testing window	N/A	Mark student's answer document **Do Not Score** and return in the Orange Special Handling Envelope. Submit an Incident Report.	Online: N/A Paper/ Pencil: **Required**

Incident Category: Misadministration				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Other	Test administrator/proctor helps student by giving information other than test directions Test administrator/proctor indicating the correct answers to students Test administrator leaves students unattended during testing Secure materials are not kept secure before, during, or after test administration Test administrator/proctor or other building staff taking photos of test items or test environment Staff posting test items or content to social media during testing	Submit an Incident Report—working with the OEAA, the district may be able to quickly resolve issues.	Submit an Incident Report—working with the OEAA, the district may be able to quickly resolve issues.	Online: **Required** Paper/ Pencil: **Required**

Incident Category: Building Emergency				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Building emergency	Building emergency occurs during the test and requires student(s) to leave the room or otherwise interrupts testing	Address the building emergency—pause tests as appropriate/possible. Submit an Incident Report.	Address the building emergency—secure test materials as appropriate/possible. Submit an Incident Report.	Online: **Required** Paper/ Pencil: **Required**

Incident Category: Prohibited Behavior				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Electronics/ social media	Student(s) taking photos of test items, use of social media during testing.	The student's test will be marked Prohibited Behavior and invalidated. Inform parents or guardians. Perform internal investigation as needed and keep resulting documentation on file as Prohibited Behaviors may be appealed during the Answer Document Verification window. Submit an Incident Report.	Inform parents or guardians. Perform internal investigation as needed and keep resulting documentation on file as Prohibited Behaviors may be appealed during the Answer Document Verification window. Submit an Incident Report.	Online: **Required** Paper/ Pencil: **Required**
Other	Disruptive behaviors impacting testing session/ completion, cheating, use of calculator (mathematics) or dictionary/thesaurus (ELA) during non-permitted section of the test **NOTE:** The use of non-permitted tools results in test invalidation.	Students engaged in disruptive or egregious behavior must be removed from the testing room. Where feasible, students should be redirected and allowed to continue testing. Students engaged in prohibited behavior need not be removed from the testing room unless they are affecting other students. The student's test will be marked Prohibited Behavior and invalidated. Inform parents or guardians. Perform internal investigation as needed and keep resulting documentation on file as Prohibited Behaviors may be appealed during the Answer Document Verification window. Submit an Incident Report.	Students engaged in disruptive or egregious behavior must be removed from the testing room. Where feasible, students should be redirected and allowed to continue testing. Students engaged in prohibited behavior need not be removed from the testing room unless they are affecting other students. The student's test will be marked Prohibited Behavior and invalidated. Inform parents or guardians. Perform internal investigation as needed and keep resulting documentation on file as Prohibited Behaviors may be appealed during the Answer Document Verification window. Submit an Incident Report.	Online: **Required** Paper/ Pencil: **Required**

Incident Category: Technical Problems with Online Testing				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Repeated disconnections	Student(s) has repeated disconnections during testing session	Contact local tech support. Tech support can contact DRC Customer Support if they need additional help to resolve the matter. Submit an Incident Report.	N/A	Online: **Optional** Paper/Pencil: N/A
	Entire classroom has repeated disconnections during testing session	Contact local tech support. Tech support can contact DRC Customer Support if they need additional help to resolve the matter. Submit an Incident Report.	N/A	Online: **Optional** Paper/Pencil: N/A
INSIGHT freezing, crashing, or not advancing	INSIGHT stops working and the student(s) cannot continue testing	Contact local tech support. Tech support can contact DRC Customer Support if they need additional help to resolve the matter. Submit an Incident Report.	N/A	Online: **Optional** Paper/Pencil: N/A
Item functionality	An item on the test is not functioning as expected; for example, the student believes the correct answer cannot be selected	Instruct the student to answer as best they are able. Submit an Incident Report with the test and question number (if known), and computer used for testing (Windows PC, Mac, iPad, Chromebook).	N/A	Online: **Required** Paper/Pencil: N/A
Hardware failure	Power outage, internet connection interrupted through local error, stolen computers	If the problem is with just one computer, move the student to another computer and resume testing.(Refer to "Resumed Testing" information on page 62 of this manual.) If the problem will be resolved in sufficient time to complete testing (restore power or internet connection), continue testing another time or day. If online testing becomes impossible, file an Incident Report.	N/A	Online: **Required IF** it is necessary to move to emergency paper forms; otherwise optional Paper/Pencil: N/A

Incident Category: Technical Problems with Online Testing				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Other	Use this category if your technical problem does not conform to the listed technical issues.	Contact your local IT staff, or if further support is required, contact DRC Customer Support.	N/A	Online: **Optional** Paper/Pencil: N/A

Incident Category: Materials				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**IR Required/ Optional**
Answer document transcription required/ suggested	Students write in the wrong section of an assessment; wrong answer document used; a writing utensil other than a number 2 pencil is used on an answer document	N/A	Student must transcribe all responses exactly as recorded from the original answer document to a fresh answer document in a one-on-one proctored section. Print and affix a bar code label to the new answer document and return with the scorable materials. Original answer document must be marked **Do Not Score** and returned in the Orange Special Handling Envelope.	Online: N/A Paper/ Pencil: **Optional**
Answer document damaged, defective, or lost	Answer document becomes damaged in such a way that will impact scanning—ripped, torn; is defective upon arrival; or is lost during test administration.	N/A	Student must transcribe all responses exactly as recorded from the original answer document in a one-on-one proctored session. Print and affix a bar code label to the new answer document and return with the scorable materials. Original answer document must be marked **Do Not Score** and be returned in the Orange Special Handling Envelope. **NOTE:** Biohazards should not be returned. Any secure material with biohazardous material should be securely destroyed.	Online: N/A Paper/ Pencil: **Optional**

Incident Category: Other				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**IR Required/ Optional**
Other	Use this category only if an incident occurs that does not fit into the listed categories.	Varies	Varies	Online: **Optional** Paper/ Pencil: **Optional**

Incident Category: Staff Unethical				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**IR Required/ Optional**
Staff Unethical	District administration or management company needs to report an incident involving inappropriate test administration practices of District/Building Coordinators or Building Administration **Note:** When using this category, only the incident report submitter and anyone identified in the CC field of the report will receive notification of progress of this incident.	Submit an Incident Report; In working with the OEAA, the district may be able to quickly resolve issues.	Submit an Incident Report- In working with the OEAA, the district may be able to quickly resolve issues.	Online: **Required** Paper/ Pencil: **Required**

The Michigan Department of Education (MDE) has updated incident reporting requirements to ensure accurate and valid student-level assessment data for the specific situations described below; that is, if a student:

- becomes ill and leaves school early due to illness on the day that the test was completed and submitted
- spends fewer than 15 minutes testing and submits a test
- did not take prescribed medication prior to testing and completes and submits a test

These tests can be regenerated if the incident report is submitted on the date of the incident (by 11:59 PM) and parent permission is documented. If it is not possible to obtain documentation of parent permission on the date of the incident, the school must submit the incident report on the date of occurrence and provide documentation of parent permission subsequently.

Regeneration of any test for any of these listed reasons will only occur once; for example, if a student does not take his or her medication one day and the test is regenerated, and then the student subsequently tests without his or her medication a second time, a new test will not be regenerated. Or, if a student becomes ill and goes home on one test day, the test is regenerated, then if the student spends less than 15 minutes on the test on the next test day, the second test will not be regenerated.

Incidents Requiring Immediate Action (must be submitted by 11:59 PM on the date of occurrence)

Incident Category	Incident Sub-Category	Scenario	Response for Online Testers	Response for Paper/Pencil Testers	IR Required/ Optional
Test Not Completed	Student became ill	Student becomes ill, completes and submits test, and then goes home from school sick	Submit an Incident Report **on the date of occurrence by 11:59 PM** requesting regeneration Gather documentation that verifies: • Parental permission to retest (use form provided in OEAA Secure Site) • The student left school early due to illness	N/A	Online: **Optional** Paper/ Pencil: N/A

Incidents Requiring Immediate Action (must be submitted by 11:59 PM on the date of occurrence)

Incident Category	Incident Sub-Category	Scenario	Response for Online Testers	Response for Paper/Pencil Testers	IR Required/Optional
Misadministration	Other	Student submits test after spending fewer than 15 minutes testing	Submit an Incident Report **on the date of occurrence by 11:59 PM** requesting regeneration Gather documentation that verifies parent permission to retest (use form provided in OEAA Secure Site)	N/A	Online: **Optional** Paper/ Pencil: N/A
Misadministration	Other	Student takes test without prescribed medication	Submit an Incident Report **on the date of occurrence by 11:59 PM** requesting regeneration Gather documentation that verifies parent permission to retest (use form provided in OEAA Secure Site)	N/A	Online: **Optional** Paper/ Pencil: N/A

Incident Category: COVID-Related

Incident Sub-Category	Scenario	Response for Online Testers	Response for Paper/Pencil Testers	IR Required/Optional
COVID-Related	Any COVID-related issue that does not conform to any other incident category **Note:** School closures should be submitted on the School Closings page of the OEAA Secure Site. Not Tested Issues should be submitted during the Accountable Students window.	varies	varies	Online: **Optional** Paper/ Pencil: **Optional**

Appendix D: DRC INSIGHT Portal User Guide

DRC INSIGHT Portal User Guide

The **DRC INSIGHT Portal User Guide** discusses the DRC INSIGHT Portal, the interface to the administrative functions of the DRC INSIGHT Online Learning System.

The guide is divided into three main sections:

- **Working with the DRC INSIGHT Portal** describes some of its more common menu functions and options
- **Test Setup** describes the test setup options for editing student information and test sessions
- **Checking Student Testing Status** describes the options for monitoring student testing status in the DRC INSIGHT Portal

Access the full guide in the DRC INSIGHT Portal (https://mi.drcedirect.com). Once you have logged into the DRC INSIGHT Portal, select **Document Type: Manuals and Directions**. Instructions for easy navigation to documents in the DRC INSIGHT Portal are on page 8.

Appendix E: List of Important Dates

2021 M-STEP List of Important Dates

Start	End	Task / Activity	Mode
10/19/20	11/24/20	Online Waiver Window – request waiver to administer paper/pencil **by 5 p.m.**	PP
01/06/21	02/17/21	Initial Material Order Window (all grades) **by 5 p.m.**	PP
01/06/21	02/17/21	Pre-identification of students for barcode labels **by 5 p.m.**	PP
01/06/21	02/23/21	Online test session setup in the OEAA Secure Site **by 5 p.m.**	OL
01/06/21	05/20/21	Off-site Test Administration Request – Grades 5, 8, and 11	Both
01/06/21	06/03/21	Off-site Test Administration Request – Grades 3, 4, 6, and 7	Both
01/06/21	05/20/21	Pre-identification of students **by 5 p.m.** – Grades 5, 8, and 11	OL
01/06/21	06/03/21	Pre-identification of students **by 5 p.m.** – Grades 3, 4, 6, and 7	OL
01/14/21	03/05/21	Alternate Insight Availability Request	OL
02/18/21	05/20/21	Pre-identification of students for local printing of barcode labels	PP
02/18/21	06/03/21	Pre-identification of students for local printing of barcode labels	PP
03/02/21	03/02/21	Online District and Building Coordinator Training – DRC INSIGHT Portal (formerly eDIRECT) at **10 p.m.** – recording available **03/03/21**	OL
03/05/21	06/04/21	Create/Manage Online Test Sessions and assign Universal Tools, Designated Supports, and Accommodations in DRC INSIGHT Portal	OL
03/29/21	03/31/21	Materials arrive in schools – Grades 5, 8, and 11	Both
04/08/21	05/18/21	Additional Material Order Window **(closes at noon)** – Grades 5, 8, and 11	PP
04/05/21	04/07/21	Materials arrive in schools – alternate delivery date requested – Grades 5, 8, and 11	Both
04/12/21	04/14/21	Materials arrive in schools – Grades 3, 4, 6, and 7	Both
04/12/21	**05/21/21**	**Online Test Administration Window – Grades 5, 8, and 11**	**OL**

Appendix E: List of Important Dates

Start	End	Task / Activity	Mode
04/13/21	**05/21/21**	**Paper/Pencil Test Administration Window - Grade 5**	**PP**
04/14/21	**05/21/21**	**Paper/Pencil Test Administration Window - Grade 8**	**PP**
04/15/21	**05/21/21**	**Paper/Pencil Test Administration Window - Grade 11**	**PP**
04/14/21	TBD	Preliminary Reports (within 48 hours of online test completion)	OL
04/15/21	06/01/21	Additional Material Order Window **(closes at noon)** – Grades 3, 4, 6, and 7	PP
04/26/21	**06/04/21**	**Online Test Administration Window – Grades 3, 4, 6, and 7**	**OL**
04/27/21	**06/04/21**	**Paper/Pencil Test Administration Window - Grades 3, 4, 6, and 7**	**PP**
05/26/21	05/26/21	Return of Materials Deadline – Grades 5, 8, and 11	PP
06/09/21	06/09/21	Return of Materials Deadline – Grades 3, 4, 6, and 7	PP
June 2021	June 2021	Accountable Students Enrolled and Demographics – watch Spotlight for details	Both
June 2021	June 2021	Answer Documents Received – watch Spotlight for details	Both
June 2021	June 2021	Students Not Tested – watch Spotlight for details	Both
June 2021	June 2021	Submitted Issues for Answer Documents – watch Spotlight for details	Both
TBD	TBD	Final Reports – watch Spotlight for details	Both

Appendix F: Administration Resources

M-STEP Administration Resources

This appendix lists the resources available to help Assessment Coordinators with pre-administration, during-administration, and after-administration tasks for M-STEP. There are additional resources available on these web pages for other tasks.

M-STEP Web page

(www.michigan.gov/mstep)

- **Current Assessment Administration**
  - Spring 2021 Flexibilities for Statewide Summative Assessment - **pending**
  - Off-Site Test Administration Request
  - Guide to State Assessments
  - M-STEP List of Important Dates
  - MDE-Approved INSIGHT Tools Poster
  - Assessment Integrity Guide
  - Graph Paper, Grades 6-7
  - Scratch Paper Policy
  - Security Compliance Form
  - Test Directions
- **Student Supports and Accommodations**
  - Frequently Asked Questions
  - Supports and Accommodations Guidance Document includes:
    - Read-Aloud Guidelines
    - Student Supports and Accommodations Table
    - Scribing Protocol
    - Braille Assessment Plan
  - M-STEP Accommodations Worksheets
  - M-STEP Multiplication Table
- **Content Specific Information**
  - Sample Passage-based Writing Prompt Essay
  - ELA – Test Overview
  - ELA and Mathematics – Crosswalk Documents: Claims, Targets, and Standards
  - Online Practice for M-STEP ELA, Math, Science, and Social Studies
  - Michigan Academic Standards
- **Professional Development**
  - Assessment Coordinator Training Guide
  - Assessment Security Training Registration
  - ELA – Navigating the Computer Adaptive Test
  - Mathematics – Navigating the Computer Adaptive Test
  - Test Administration Training Videos and PowerPoints
  - Student Supports and Accommodations Webinar Links and PowerPoints
- **Spotlight on Student Assessment and Accountability weekly newsletter**

DRC INSIGHT Portal

formerly known as eDIRECT
(https://mi.drcedirect.com)

- **Documents** (Instructions for easy navigation to documents in the DRC INSIGHT Portal are on page 8)
  - Technology User Guide
  - DRC INSIGHT Portal (formerly known as eDIRECT) User Guide
  - Accommodations: Adding, Editing, and Mass-Assigning

Appendix F: Administration Resources

  - Checking Student Test Status
  - Creating Test Sessions in eDIRECT

- **Test Tutorials** (Select the **Test Tutorials** tab.) Instructions for easy navigation to documents in the DRC INSIGHT Portal are on page 8.
  - Michigan Online Assessment Student Tutorials (for students to use before testing to become familiar with the M-STEP online test)

MDE Secure Site Training

(www.michigan.gov/securesitetraining)

This site includes documents that provide directions for pre-identification of students, all materials ordering, Incident Reporting, Accountability-related tasks, and accessing student data score files and the Dynamic Score Reporting Site.

- **Security**
  - Create a New User
  - How do I get access to eDIRECT?
  - Manage Access Requests
  - Request Access to the Secure Site
  - Secure Site Roles and Assessment Descriptions

- **Pre-Identification of Students**
  - Early Roster
  - Creating Online Sessions
  - Mass Update Assessments
  - MSDS Copy
  - One Student at a Time/Student Search
  - Pre-ID File Upload
  - Pre-ID Student Report
  - Pre-Identification for State Assessments Overview
  - Reporting Code Labels

- **Material Ordering**
  - Additional Material Orders
  - Initial Material Orders

- **Miscellaneous Secure Site Functions**
  - District and School Contacts
  - Incident Reporting

Appendix G: Extended Retries Tech Bulletin

DRC INSIGHT: Extended Retries Tech Bulletin

A new feature of DRC INSIGHT for Spring 2021 is Extended Retries. With this new feature, if there are any connectivity issues, instead of displaying an error message after three attempts to reconnect, the system will continue to attempt reconnection for five minutes. The error message will display, instructing the student to raise his/her hand for help, but continue to attempt reconnection. If the system is able to reconnect, the error message will close and the student can resume testing. Note that it is possible that a student sees the error message but the error is resolved before the Test Administrator has had time to reach the student. If this occurs, the Test Administrator should instruct the student to resume testing.

Appendix H: Checklist

Before Testing Checklist

- ☐ **1. Watch the District/Building Coordinator Online Training** (Live **March 2, 2021**) or a recording of the training (posted by **March 3**), located in the DRC INSIGHT Portal (https://mi.drcedirect.com) by selecting **Document Type: Training Presentations & FAQs** (Instructions for easy navigation to documents in the DRC INSIGHT Portal are on page 8) and on the M-STEP web page (www.michigan.gov/mstep)
- ☐ Provide Staff Training. Resources include::
  - Assessment Coordinator Training Guide
  - Read/review Manuals
  - Read/review Test Administrator's Directions and Manual
- ☐ Obtain OEAA Assessment Security Compliance Forms from all staff involved in M-STEP Testing
- ☐ Ensure software and testing devices are prepared for testing (refer to page 49 of this manual)
- ☐ **2. Assign Roles for District Users**
- ☐ **3. Pre-Identify Students for Testing (January 6 - February 17, 2021** for barcode labels)
- ☐ **4. Order Test Materials**
- ☐ Inventory all materials received
- ☐ **5. Load students in the DRC INSIGHT Portal**
- ☐ **6. Assign/Edit Test Sessions** (by **February 23, 2021** for online test session setup in the OEAA Secure Site)
- ☐ **7. Assign Supports and Accommodations** (and be sure Test Administrators are aware of all Designated Supports and Accommodations for students in each test session)
- ☐ Prepare students for testing:
  - Review Tutorials
  - Practice with OTTs
- ☐ **8. Create Testing Schedules** (see AIG for required components)
- ☐ **9. Print Test Tickets and Rosters**
- ☐ Submit any Off-Site Testing Requests (as appropriate)

Appendix H: Checklists

During Testing Checklist

Ensure no academic posters are visible in any testing room (vocabulary lists, maps, etc.) See AIG for more information.

Print and post INSIGHT Tools Poster (optional)

- ☐ **1.** **Manage handling of secure materials**, including: test tickets and rosters, scratch paper, test booklets, and answer documents
- ☐ **2.** **Verify Supports and Accommodations are assigned** and Test Administrators are aware of all Supports and Accommodations in each test session
- ☐ **3.** **During a Test Session**
  Provide test directions to test administrators, breaks during testing, testing status, testing irregularities, and other test session tasks.
- ☐ **4.** **Resumed Testing** (**Note:** ONLY students who are assigned to test sessions appear on this screen; if a student is not assigned to a test session but MDE expects that student to test, the student will NOT appear on this screen)
- ☐ **5.** **Video Surveillance Cameras** If there are cameras in any testing room, ensure the test session is deleted as soon as possible after testing is completed
- ☐ **6.** **Ending a Test Session**

After Testing Checklist

- ☐ **1.** **Assign Research/Reporting Codes**
- ☐ **2.** Return materials to M-STEP Contractor/Destroy secure materials not returned (refer to the **Materials Handling and Return** section for detailed instructions and deadlines)

Accountability Tasks

(watch Spotlight for these dates)

- ☐ Accountable Students Enrolled and Demographics
- ☐ Answer Documents Received
- ☐ Submitted Issues for Answer Documents
- ☐ Students Not Tested

Appendix I: Change Log

April 12, 2021

Page 49. Updated Chromebook Chrome OS version requirement to version 83.

April 1, 2021

Page 06: Updated Introduction to include references to updated policies and procedures as a result of additional flexibility for M-STEP testing.

Page 09: Replaced Spring 2021 Testing Schedule for Summative Assessments with updated dates reflective of the Test Window Extension.

Page 10: Added flexibility information for paper/pencil testing.

Page 11: Replaced Paper/Pencil Test Dates calendars for all grades with updated Paper/Pencil Testing Windows.

Page 13: Update to Testing Schedules requirement. Schools that previously completed Test Schedules are encouraged, but not required, to recreate Testing Schedules for the Spring 2021 administration only.

Page 17: Updated Call Center Contact Information dates to extend to June 4, 2021.

Page 31: Removed reference to initial paper/pencil dates and makeup test dates.

Page 34: Removed reference to initial paper/pencil dates and makeup test dates.

Page 35: Added "Pending the approval of MDE's assessment waiver request…" regarding Students to be Tested.

Page 36: Change section title from "Virtual Schools" to "Remote Learners and Virtual Schools". Updated information about students who are learning remotely or quarantined at home due to COVID-19.

Page 40: Added information about the Testing Window Extension for online and paper/pencil testing. Removed reference to paper/pencil makeup test dates.

Page 54: Clarified update to Testing Schedule requirement to indicate that Testing Schedules created prior to the testing window extension announcement are not required to be recreated.

Page 63: Removed reference to initial test days and makeup test days. Removed requirement to resume paper/pencil testing in a one-on-one proctored test session.

Clarified that schools operating with hybrid scheduling models due to the COVID-19 pandemic must schedule paper/pencil test sessions as early in the day as possible to allow students to complete each part on the same day. It is allowable to schedule content area tests over multiple days.

Page 67: Materials Return Dates updated.

Page 70: Materials Return Dates updated. Added: Schools are encouraged to return materials as soon as possible after all students have completed testing.

Page 76: Update to Incident Report Subcategories: Student became ill and Student was removed from school by parent/guardian to remove paper/pencil requirement to resume testing in an individual one-on-one proctored makeup session and changed paper/pencil from required to submit to optional.

Page 77: Update to Incident Report Subcategory: Student does not complete test by end of day. Changed requirement to submit an Incident Report to optional.

Page 81: Added Spring 2021 note to Misadministration subcategory: Test not administered on scheduled day/time.

Page 90: Replaced List of Important Dates with revised List of Important Dates to reflect Testing Window Extension.

Page 92: Added "Spring 2021 Flexibilities for Statewide Summative Assessment (pending)" to list of resources on M-STEP web page.



M-STEP Test Administration Manual
Spring 2021

Office of Educational Assessment and Accountability (OEAA)
Phone: 1-877-560-8378
Website: www.michigan.gov/mstep
Email: mde-oeaa@michigan.gov

Appendix A.3 M-STEP Test Administration Directions – Grade 5 Online



M-STEP Online Test Administrator's Directions and Manual Grade 5

Michigan Student Test of Educational Progress

Spring 2021

Michigan Department of Education
Office of Educational Assessment and Accountability

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MICHIGAN STUDENT TEST OF EDUCATIONAL PROGRESS

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The M-STEP Online Grade 5 Test Administrator's Directions and Manual includes all information that a Test Administrator needs to know to administer any grade 5 M-STEP assessment. With the exception of the Test Directions for content you will **not** administer, Test Administrators are required to read this document in its entirety **before** administering any grade 5 M-STEP assessment.

The following sections are included in this document:

- Overview
- Before Testing
- During Testing
- After Testing
- Online Test Administration Directions

Online Assessments Covered

These test directions apply to the following Grade 5 assessments:

- English Language Arts Computer Adaptive Test (CAT)
- English Language Arts Computer Adaptive Test (CAT) with Text-to-Speech (TTS) enabled
- English Language Arts—Video Sign Language (VSL) and Closed Captioning (CCAPTION) fixed form
- Math Computer Adaptive Test (CAT)
- Math Computer Adaptive Test (CAT) with Text-to-Speech (TTS) enabled
- Math—Stacked Spanish (ST) fixed form
- Math—Stacked Spanish (ST) fixed form with Human Voice Audio (HVA) enabled
- Math—Video Sign Language (VSL) fixed form
- Science
- Science with Text-to-Speech (TTS) enabled
- Social Studies
- Social Studies with Text-to-Speech (TTS) enabled

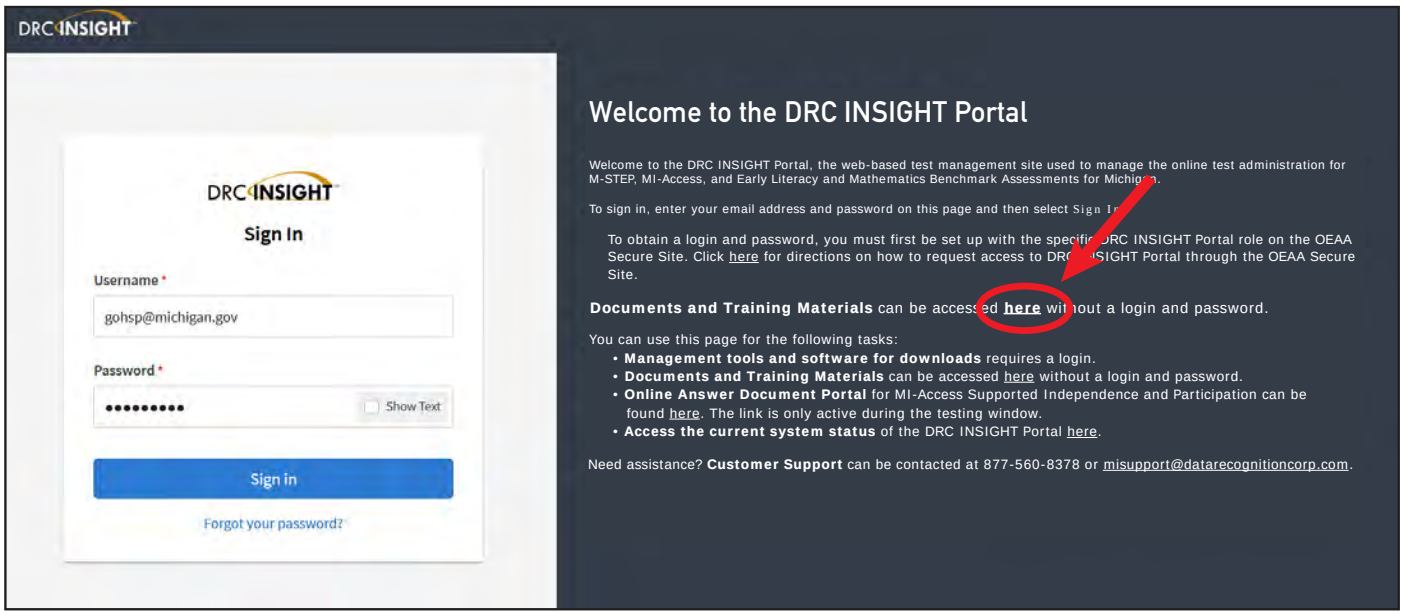
DRC INSIGHT Portal

Important Note: eDIRECT has been renamed **DRC INSIGHT Portal**. The URL has not changed. This manual now refers to eDIRECT as the DRC INSIGHT Portal (https://mi.drcedirect.com).

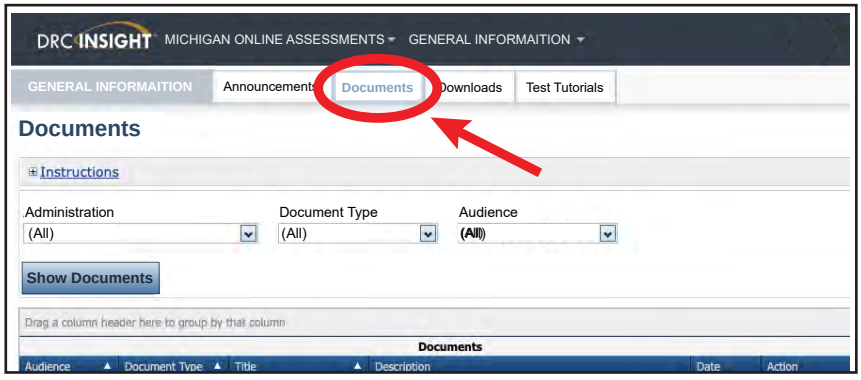
Instructions for easy navigation to documents in the DRC INSIGHT Portal are below.

Users can access documents and resources in the DRC INSIGHT Portal **(**https://mi.drcedirect.com).

Test Administrators select **"here"** in the **Documents and Training Materials** bullet point to view all of the materials that are available without secure access.



Then, select the Documents tab.



Key

Icons	Descriptions
	Speak the words in the shaded box.
TIP! TIP! Icon	This is a tip to help with a smooth testing experience.
Chromebook Icon	Information specific to Chromebooks

Online Tools Training (OTT) and Student Tutorials

The Online Tools Training (OTT) is an essential part of the testing process. For detailed instructions on how to administer OTTs, please refer to the Student Tutorials found on the DRC Insight Portal (https://mi.drcedirect.com) or INSIGHT. The Student Tutorials should be used to familiarize students with the functions and tools of the testing system. Additionally, the M-STEP Test Administration Manual (TAM) will provide more information about using OTTs as well as accessing and using the Student Tutorials.

Introduction

On January 25, 2021, the Michigan Department of Education (MDE) delivered a request to the U.S. Department of Education to waive certain assessment and accountability requirements of the federal Every Student Succeeds Act (ESSA) including the Spring 2021 M-STEP. To comply with current law, MDE and the Office of Educational Assessment and Accountability (OEAA) must continue to prepare for the required spring assessments in the event the USED does not grant our waiver request. Updates regarding the status of this request will be provided through the weekly Spotlight on Assessment and Accountability newsletter. Please know the health, safety, and well-being of students, educators, and their families is MDE's first priority.

M-STEP Assessments

The Spring 2021 Michigan Student Test of Educational Progress (M-STEP) includes summative assessments designed to measure student performance relative to the Michigan Academic Standards in English language arts (ELA), mathematics, science, and social studies. This overview will describe the unique characteristics of these content–area tests.

What's New

Updates to Spring 2021 M-STEP testing were planned for Spring 2020 but were not implemented due to the cancellation of testing. These updates will be applied in Spring 2021.

The M-STEP science test will be operational in Spring 2021. The M-STEP science test assesses the Michigan K-12 Science Standards in grades 5, 8, and 11.

The M-STEP social studies test will continue to measure the Michigan Academic Standards adopted in 2007 in social studies. The social studies test will have only one part for all grades assessed (5, 8, and 11). Students are allowed to take breaks during testing. Schools and districts should work with Test Administrators to determine if breaks during testing are necessary.

To simplify the materials Test Administrators are required to read before testing, MDE has created updated Test Administrator's Directions and Manual documents for each grade by test mode (online and paper/pencil). These updated documents (this document) include test administration directions and other materials that cover everything Test Administrators need to know regarding test administration. This updated information would otherwise have been included in the Test Administration Manual (TAM). Therefore, Test Administrators are no longer required to read the TAM; however, they are required to read the Test Administrator's Directions and Manual (this document) before administering any M-STEP test session.

Text-to-Speech (TTS) is available for test directions ONLY on all test forms except Video Sign Language (VSL) and Spanish for all students. Building and District Assessment Coordinators may decide whether to use the TTS Directions or to read test directions aloud for each test session. The test administration directions include detailed information for tests to be administered using the TTS Directions and for tests that are administered without TTS Directions.

In order to help with Test Schedule development, MDE has provided recommendations for test time estimates, test sessions, and breaks within sessions on page 8 of this manual. These are recommendations to assist districts and buildings in the development of testing schedules—they are not required.

Assessment Security training requirements have been updated for Spring 2021. Test Administrators and Proctors are required to

- complete the MDE Assessment Security online course **and/or** read the Assessment Integrity Guide (determined by the District or Building Coordinator)

Any educator who completed the Assessment Security training modules in the past are allowed to take the Assessment Security Refresher course in place of the full Assessment Security Training modules. More information about the Assessment Security Refresher course is available on the M-STEP web page (www.michigan.gov/mstep) under the **Professional Development** section.

Also new for Spring 2021: students using the embedded calculator will view the Desmos calculator. There is a basic four-function calculator for use on grade 5 science.

A new feature of DRC INSIGHT for Spring 2021 is Extended Retries. With this new feature, if there are any connectivity issues, instead of displaying an error message after three attempts to reconnect, the system will continue to attempt reconnection for five minutes. The error message will display, instructing the student to raise his/her hand for help, but continue to attempt reconnection. If the system is able to reconnect, the error message will close and the student can resume testing. **Note:** It is possible that a student sees the error message but the error is resolved before you have had time to reach the student. If this occurs, you should instruct the student to resume testing.

English Language Arts

English language arts (ELA) is assessed with the M-STEP in grades 3-7. ELA covers four claims: reading, writing, listening, and research. There is one test ticket for online testers.

Listening

Listening is part of the ELA assessment for all students. Students testing online will be required to have headphones to hear the audio presented for this portion of the test.

Mathematics

Mathematics is assessed with the M-STEP in grades 3-7. It covers four claims: concepts and procedures, problem-solving, communicating reasoning, and modeling and data analysis. There is one test ticket for online testers.

Calculator Policy for Mathematics Assessments

Calculator policy for mathematics assessments use varies by grade and assessment type (online or paper/pencil). Therefore, it is important for Test Administrators to understand the state's policy on calculator use.

No Calculators Allowed in Grades 3, 4, and 5 Mathematics Assessments

Regardless of the type of test a student is taking (online or paper/pencil), calculators may not be used for any item on the mathematics grades 3, 4, and 5 assessments. Calculator use would change the construct of the items, or what they are intended to measure. All students must abide by this policy, even students whose Individualized Education Programs (IEPs) or Section 504 Plans specify otherwise. The use of a calculator in mathematics in grades 3, 4, and 5 is considered a nonstandard accommodation, which will render the assessment invalid. If a student in one of these grades uses a calculator, an incident report must be submitted. Refer to the **Incident Reporting Guide** in Appendix C.

The state's full **Calculator Policy** can be found in Appendix A. Coordinators and/or Test Administrators may copy and share it in its entirety with others involved in testing mathematics.

Science

The M-STEP science test is operational in Spring 2021. The M-STEP science test assesses the Michigan K-12 Science Standards in grades 5, 8, and 11. This is a fixed-form online or paper/pencil test. This year, the test will have:

- two test tickets and two parts in grades 5 and 8 for online testers
- one test ticket and one part in grade 11 for online testers

The test will include seven clusters for each grade assessed.

- **Cluster** – a stimulus (or context) about a phenomenon and a set of 5-8 related items designed to assess all performance expectations (standards) in one topic bundle
- **Topic Bundle** – a group of related performance expectations (standards) that are assessed as a group

Calculator Policy for Science Assessments

Students in grades 5, 8, and 11 are allowed to use calculators for both the online and paper/pencil science assessment.

Embedded Calculators are Provided for Online Testers in Grades 5, 8, and 11 Science Assessments

Students in grades 5, 8, and 11 taking a science online test will use the calculator embedded in the online delivery engine. The Desmos calculator will be available for all items on the science test.

- Grade 5 includes a basic four-function calculator which includes addition, subtraction, multiplication, division and square root

The Desmos calculator used for the science assessment is the same calculator available on the grades 6 and 7 mathematics assessments.

Social Studies

Social studies is assessed in grades 5, 8, and 11 with a fixed-form online or paper/pencil test. The Spring 2021 M-STEP assessments are based on the 2007 Michigan K-12 Social Studies Standards and do not reflect any changes in the recently approved 2019 Social Studies Standards. The test will have:

- one test ticket and one part in grade 5

Test Administrator's Directions and Manual

New for Spring 2021: The test directions documents have been expanded to include all information that a Test Administrator will need to know. This means that Test Administrators are no longer required to read any section of the Test Administration Manual (TAM)—everything they need is in the Test Administrator's Directions and Manual document (this document).

Text-to-Speech Test Directions

New for Spring 2021: Text-to-Speech (TTS) test directions are available for all students. District and/or Building Assessment Coordinators determine whether TTS Test Directions will be used in the district and/or school.

To use TTS for test directions, Test Administrators will follow the "TTS Directions Only" section of the test directions in the Test Administrator's Directions and Manual (this document). These directions provide introductory information and test verification, then direct students to select the "Play" button to listen to the directions. **Note:** All students must have headphones in order to use TTS for test directions. **Test administration directions are explicit and must be followed exactly as written.**

Scratch Paper Guidelines

Scratch paper use varies by test, grade, and content area. Review the state's full **Scratch Paper Policy** in Appendix B.

Designated Supports and Accommodations

The Michigan Supports and Accommodations Guidance Document, which includes the **Supports and Accommodations Tables**, presents appropriate Universal Tools, Designated Supports, Accommodations, identification processes, classroom considerations, and guidelines for all state assessments. The document can be found on the M-STEP web page (www.michigan.gov/mstep). Guidance in the documents pertains to general education students, as well as to English learners (ELs), students with disabilities (SWDs), and students who are considered ELs and are also identified as SWDs.

Call Center Contact Information

The Office of Educational Assessment and Accountability (OEAA) has a call center to answer questions related to M-STEP testing.

Agents are available to receive questions at the following toll-free phone number and email address during the specified hours.

- **Call:** 1-877-560-8378
- **Email:** mde-oeaa@michigan.gov
- **December 1, 2020 - April 12, 2021:** 8:00 AM–5:00 PM (M–F)
- **April 12, 2021 - June 4, 2021:** 7:00 AM–5:00 PM (M-F)

The following table shows the options related to the M-STEP that are available on the call center phone menu. Select the appropriate option when contacting the OEAA, either through our toll-free number (877-560-8378) or the Lansing-area local number (517-241-4102).

Topic	Option
Known or suspected cheating or unethical testing practices on any state assessment	1
DRC INSIGHT Portal, INSIGHT, Central Office Services (COS), or online assessment tools related to the online M-STEP	2
OEAA Secure Site, testing policies and paper/pencil materials regarding the M-STEP, MI-Access, and Accountability reporting	3

OEAA Communications with Schools and Districts

Keeping educators up to date regarding changes in assessment and accountability is critical. The OEAA communicates with the field in a number of different ways, including:

- **Spotlight on Student Assessment and Accountability weekly newsletter** – sign up to receive the newsletter and/or read archived copies on the Spotlight web page (www.michigan.gov/mde-spotlight)
- M-STEP web page (www.michigan.gov/mstep)
- DRC INSIGHT Portal (https://mi.drcedirect.com)
- the Announcement page on the OEAA Secure Site (www.michigan.gov/oeaa-secure)
- targeted email communications for important or urgent communications during the testing window (targeted emails are sent to the persons who have assigned roles in the Educational Entity Master [EEM]; it is important that all roles are current and contact information is up to date)
- presentations at state conferences, including the Michigan School Testing Conference held each year in February

Check these sources regularly to stay up to date on assessment- and accountability-related issues and activities.

Standardized Testing

Uniform procedures are essential to a standardized testing program. To ensure comparable scores, all testing staff must follow the same testing procedures and give instructions exactly as they appear in this manual.

Ensure that you and all testing staff comply with all applicable laws, including those relating to discrimination. By strictly following policies and procedures, you give students the best guarantee of fair testing and the best possible test day experience.

Test Session Timings

Spring 2021 Estimated Test Session Timings Grades 3–7					
Subject	**Grade 3**	**Grade 4**	**Grade 5**	**Grade 6**	**Grade 7**
ELA Computer Adaptive	2:00	2:00	2:00	2:00	2:00
Mathematics Computer Adaptive	1:30	1:30	1:30	2:00	2:00
Science Part 1	NA	NA	0:45	NA	NA
Science Part 2	NA	NA	0:45	NA	NA
Social Studies	NA	NA	0:60	NA	NA
Estimated Total Hours	**3:30**	**3:30**	**6:00**	**4:00**	**4:00**

Note: Times are in **hours:minutes**. Example, **1:30** equals **1 hour 30 minutes**.

Assessment Security

The primary goals of test security are to protect the integrity of the assessment and to ensure that results are accurate and meaningful. Test security is integral in ensuring that no student has an unfair advantage or a disadvantage in assessment performance.

The Assessment Integrity Guide (AIG) was revised and updated in November 2020. This document, available for download on the M-STEP web page (www.michigan.gov/mstep), details how state-level assessments should be securely administered. The AIG also includes information on roles and responsibilities of testing staff, test preparation, administration irregularities, and security. District and Building Coordinators are required to read the AIG in its entirety. By following the guidelines in the Assessment Integrity Guide, schools ensure that:

- student test results are valid and reliable
- the testing context is equitable for all students
- all practices are ethical

The Michigan Department of Education (MDE) also provides the Assessment Security online course through Michigan Virtual (http://bit.ly/MDEAssessmentSecurity). This four-module training series is used to train building staff on the importance of test security by following the Assessment Integrity Guide. Upon completion

of the four modules and demonstration of knowledge on a short test, participants will receive a Certificate of Completion, which must be retained on file with signed security compliance forms. After successful completion of this training, staff are required to participate in the refresher course in subsequent years.

Assessment Security Training

All staff members who participate in a state assessment must be fully trained in assessment security.

Test Administrators/Room Supervisors/ Proctors/ Training Requirements:

- complete the MDE Assessment Security online course **and/or** read the Assessment Integrity Guide (determined by the District or Building Coordinator)

Any educators who completed the Assessment Security training modules in the past are allowed to take the Assessment Security Refresher course in place of the full Assessment Security Training modules. More information about the Assessment Security Refresher course is available on the M-STEP web page (www.michigan.gov/mstep) under the **Professional Development** section.

Material Security

- All materials that allow access to or contain test questions or student responses are considered secure materials and must be handled in a way that maintains their security before, during, and after testing. This includes paper/pencil materials, accommodated materials, used scratch paper, online test tickets, and test rosters.
- All secure materials must be retained in one secure, locked location within the school. During the test administration window, the materials must be distributed and collected daily.
- Secure materials are bar-coded and recorded on the security checklists that accompany shipments, and must be returned to the scoring contractor. **Note:** Schools should expect to account for every secure item recorded on the materials list.
- Test tickets used to log students into each online test are considered secure materials and must be treated as such. Test rosters, which automatically print along with test tickets, are also considered secure.
- All used scratch paper (including graph paper) must be collected and returned to the building M-STEP Coordinator immediately after testing, to be shredded. No used scratch or graph paper may be kept in the classroom. Used scratch paper must never be taken from one test session to another.
- No test materials that contain test questions or student responses may be copied at any time or retained in the schools.
- The use of cameras or cell phones and the posting of pictures to social media sites during testing is an enormous security risk. Therefore, students or testing personnel may not take photographs at any time during testing. If students violate this policy, their tests will be marked “Prohibited Behavior” and no emergency tests will be permitted.

Test Administration

All testing staff must adhere to these guidelines.

- Ensure an appropriate testing environment is maintained.
- Begin all standardized test administration procedures according to the explicit directions in the Test Administrator’s Directions and Manual.

- If not using the Text-to-Speech (TTS) for directions option, read test directions to the students exactly as they are written, as required.
- Monitor student behavior closely for adherence to proper test-taking practices. Ensure that there are no distractions during the test administration period, including talking, noises, and other interactions among students; prevent students from viewing another student's computer screen or answer document.
- Ensure that students whose IEP and/or section 504 plan requires them to use Universal Tools, Designated Supports, and Accommodations have these available to them at the time of testing.
- Ensure that any student who needs an allowable Universal Tool or Designated Support has these resources available to them at the time of testing.
- Maintain material security.

Security Compliance

All staff involved in the administration of M-STEP tests must read and sign an Office of Educational Assessment and Accountability (OEAA) Assessment Security Compliance Form, affirming that they have read the required assessment materials related to their role in the M-STEP administration process, and that they understand their role and responsibilities. Completed forms are required from Technology Coordinators, District and Building Test Coordinators, Test Administrators, proctors, and all other staff or volunteers with access to secure test materials or student responses. All OEAA Assessment Security Compliance Forms must be returned to the District M-STEP Coordinator and kept on file for three years.

Anyone involved in the administration of the M-STEP is obligated to report any suspected violations of test security.

Training Requirements and Resources for Students

Resources for Students to Prepare for Testing

A number of resources and tools have been developed to help students gain valuable experience with testing. The resources for online testing may be accessed in the **Accessing Online Tools Training** mini-module available on the DRC INSIGHT Portal (www.mi.drcedirect.com) by selecting **Show Documents**. Instructions for easy navigation to documents in the DRC INSIGHT Portal are on page 2.

Available resources include:

- grade-level Sample Item Sets
- sample essay prompts
- Student Tutorials (for use with classrooms of students to provide an overview of what they will practice using the OTTs)
- Online Tools Trainings (OTTs) for general education students
- OTTs for students using Supports and Accommodations

It is highly recommended that schools provide students with opportunities to practice using these resources before they take the online or paper/pencil tests.

Online Student Tutorials

Online Student Tutorials are designed to be viewed with students in a classroom environment to provide an overview of the INSIGHT testing engine and tools. It is a companion activity that prepares students for the Online Tools Training (OTTs). The tutorials are not a substitute for the hands-on practice that the OTTs provide.

The tutorials are available in two places.

- DRC INSIGHT Portal (https://mi.drcedirect.com) – select "here" in the **Documents and Training Materials** bullet point and then select the Test Tutorials tab. Instructions for easy navigation to documents in the DRC INSIGHT Portal are on page 2.
- INSIGHT testing engine – select the tutorial link at the bottom of the screen

Online Tools Training for Students

Online Tools Trainings (OTTs) allow students to see what different test items look like and to practice using the online testing tools. Before the testing software is installed, you must use the Google **Chrome** web browser to access the OTTs at the OTT Portal (https://wbte.drcedirect.com/MI/portals/mi/). **Note:** If Chrome is not your default browser, you will need to copy and paste this url address into a CHROME web browser. You can access the OTTs through the testing software, once it is installed.

OTT resources include:

- all ELA, math, science, and social studies OTTs
- masking (Designated Support)
- color choices/contrasting color (Designated Supports)
- mathematics stacked Spanish translation (Designated Support)
- text-to-speech (TTS):
  - ELA and mathematics TTS – items only (Designated Support)
  - ELA TTS – items and passages (Accommodation)
- Video Sign Language (VSL) (Accommodation)

Providing students with ample practice opportunities will ensure they are familiar with the test content, item types, navigation strategies, and system tools on test day.

Before Testing Checklist

- ☐ With the exception of the Test Directions for content you will **not** administer, Test Administrators are required to read this document in its entirety **before** administering any grade 5 M-STEP assessment.
- ☐ Complete the MDE Assessment Security online course **and/or** read the Assessment Integrity Guide (determined by the District or Building Coordinator)
- ☐ Sign the OEAA Assessment Security Compliance Form
- ☐ Verify INSIGHT software is installed on all testing devices
- ☐ Ensure you know how to launch INSIGHT on the device students will be using to test
- ☐ Ensure students have viewed the student tutorials and practiced using the OTTs
- ☐ Ensure student's Designated Supports and/or Accommodations (if applicable) have been set and/or that all materials necessary to administer assigned Designated Supports and/or Accommodations are available, such as headphones for TTS
- ☐ If administering any ELA test or using TTS—either for directions only or as a Designated Support and/or Accommodation—ensure that headphones are available
- ☐ Clearly understand the scheduled testing time, including planned breaks
- ☐ Prepare the classroom for testing:
  - ➢ Remove or cover all classroom instructional materials that may affect the validity of the assessment. All instructional materials must be removed or covered. This includes all information regarding the content area of the test being administered or test-taking strategies. Examples include, but are not limited to:
    - » tips for taking tests
    - » content displays
    - » word lists
    - » writing formulas
    - » definitions
    - » mathematical formulas/theorems
    - » multiplication tables
    - » charts or maps

    Note: The INSIGHT Tools poster is allowed if it is posted in the classroom (not at students' desks).
  - ➢ Ensure student testing devices are positioned in such a way that students cannot easily read another student's screen or interact with one another.
  - ➢ If using portable testing devices, such as a laptop, iPad, or Chromebook, ensure the devices are connected to a power source (preferred) or fully charged.
  - ➢ Check to make sure there are no test tickets or scratch paper left over from another testing session. If found, return to the Building Test Coordinator.
  - ➢ Verify the testing room will be free of distractions for the duration of the test session.
- ☐ Obtain a student test ticket for each student who will be testing. Test tickets are secure materials and should be securely stored until you are ready to pass them out. Students will require a separate ticket for each part of the test. See chart below on number of test tickets needed for each assessment.

Assessment	Number of Test Tickets Required
ELA	One
Math	One
Social Studies	One
Science	Two

- ☐ Make note on the test roster of the test tickets you are distributing. Use the test roster to verify you have collected all tickets after students have signed in.

Test Materials Needed for M-STEP

Materials Needed by Test Administrator	Materials Needed by Students
This booklet	Test ticket
Class set of test tickets and roster for the test session being administered	Testing device
	Pencil (optional—needed if scratch paper is used)
	Headphones for ELA listening or the TTS/HVA Designated Support or TTS for Directions Only
	Blank scratch paper (optional—Universal Tool)
	Basic calculator for science parts one and two

TIP! *Take a few minutes to review all the parts of this document you will need to read aloud during testing. Use sticky notes or sticky flags to give yourself a quick reference to the next set of directions to read.*

CHROMEBOOK: *If your students are testing on a Chromebook, there are a few additional tasks you'll need to be aware of. It is important to review the information on* *page 19* *BEFORE the first day of testing to ensure a smooth testing experience.*

Important Tasks During Testing

The following tasks should be performed in the order listed.

Managing Student Test Tickets

Test tickets and rosters are secure materials. Once printed, they must be kept in a secure location until the test session is scheduled to begin. Test Administrators are instructed to distribute test tickets just prior to student login, and to collect test tickets after all students have logged in and begun testing.

Only one test ticket should be distributed at a time; students should not have access to any test ticket other than the test the student is currently taking.

After a testing session is complete, the Test Administrator should return all test tickets (and rosters, if printed) to the Building M-STEP Coordinator for:

- destruction (if all students finished the test)

OR

- secure storage (if students have not completed the test)

TIP! *Some schools sort test tickets into envelopes for "complete", "in progress", and "not started" to help manage test tickets.*

Verifying Supports and Accommodations on Test Tickets

For students with Supports and Accommodations, some of those Supports/ Accommodations will be displayed at the bottom of their test ticket (see the bold text on the sample test ticket below).

M-STEP Spring 2021
Test Ticket - G5 SS - part 1

Student Name: Smith, John J.
Date of Birth: 11/3/20XX

Username: **JSMITH1**
Password: **234K79HQ**

(Note: Username and password are not case sensitive)
Universal Tools - Designated Supports - Accommodations: MSK
Test Session: gr 5 ss

Online Supports and Accommodations are abbreviated on the test tickets as follows:

Online Supports / Accommodations	Test Ticket Abbreviation
Abacus	A
Auditory Amplification	AA
Alt communication devices	ACD
Administered Individually/ Small Group	AISG
Sign Language ASL Video	ASL
Administrator Sign Test Content in ASL	ASTC
Administrator Sign Test Directions in ASL	ASTD
Bilingual word-to-word dictionary	BWWD
Color Choices	CC
Continuous Magnification	CM
Closed Captioning	CCAPTION
Contrasting Color	CTC
Masking	MSK
Noise Buffers	NB
Non-embedded Calculator	NEC

Online Supports/ Accommodations	Test Ticket Abbreviation
OEAA Multiplication Table	OMT
Oral Translated Test Directions	OTTD
Read Aloud (Human Reader)	RAHR
Scribe (Non-Writing items)	SNWI
Spanish Translation (Stacked)	ST
Scribe (Writing items)	SWI
Text-To Speech (Items Only)	TTS
Text-to-Speech (Items & Passages)	TTSPASSAGE
Visual Aids	VA

Test Administrators need to know which Universal Tools, Designated Supports, and Accommodations are needed for all students prior to the test administration.

Students or Test Administrators will be required to turn on some Accommodations once the student has launched INSIGHT.

Permitted Items in Testing Room

Students may only have required testing materials and any Accommodations specified in the student's IEP, Section 504 Plan, and EL instruction documentation at their work spaces during testing.

Item	Permitted?
Pencil	YES – If students are provided scratch paper as a Universal Tool.
Highlighter	NO – A highlighting function is included within the test engine.
Additional paper (provided by School/ District)	YES – Blank scratch paper is *allowed* for ELA, social studies, science, and mathematics as a Universal Tool.
Calculator	YES – Basic calculator is allowed for both parts of science only. All programmable calculators must be set to TEST mode during testing.
CD and DVD Players	NO – Not needed for online testing.
Headphones (provided by School/ District)	YES – For tests with an audio component (ELA does have a listening component for each grade) or students using the TTS/HVA Designated Support or if TTS for Directions Only will be used. NO – For tests that do not have an audio component or students not using the TTS/ HVA Designated Support.
Non-academic reading material	YES – Non-academic reading material is allowed for student use **after** testing is completed. Electronic formats are **not** allowed. Reading material must be a traditional book or magazine. Reading material must be kept off work surface until the test has been submitted.

Providing Assistance

It is important to understand the difference between helping students understand test directions and online tools and helping them with their responses. With the exception of making sure students understand the directions and implementing any approved Universal Tools, Designated Supports, or Accommodations, test administrators and proctors **may not give help of any kind** to students during this test. This includes defining or pronouncing words, reading any part of the test aloud to students, or manipulating tools. These activities are not appropriate and will result in test scores being invalidated.

Student Log In and Questions

- **Assisting a student to log in:** if a student is struggling to log in, the Test Administrator should first verify that the student has selected the M-STEP assessment on the INSIGHT screen (and not the OTTs). Next, the Test Administrator can tell the student that login and password are not case sensitive and observe the student typing the login and password. If the student is still unable to login, the Test Administrator may type the student login and password with the student observing.
- **Answering student questions:** Test Administrators must not help students with any content of the test.
  - » Prohibited practices include (but are not limited to):
    - ➢ providing hints
    - ➢ defining any words
    - ➢ helping to read or pronounce any word
    - ➢ pointing out important information in the question or suggesting a student read a certain section of the item or highlight any part of the question
    - ➢ in any way provide any verification of a correct/incorrect answer if asked by a student

    Any of these activities are inappropriate and violate ethical test administration practices and will result in test scores being invalidated.
  - » Allowable practices include:
    - ➢ telling the student to “do their best work”
    - ➢ telling the student to select their best answer for a question

Procedures for Testing Breaks, Interruptions, or Pauses

If a student needs to pause their test for a few minutes, use the **blue Pause button** in the tool bar along the bottom of the screen. Once the **Pause** button is selected, the test questions are removed from the screen (for test security reasons), and the student has up to 20 minutes to return and resume testing before being logged out of the test.

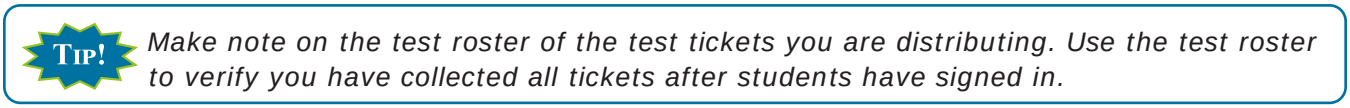
If a student needs to exit the test to move to another workstation or to resume at a later time, select the **Pause** button, select the **Exit** button, and then select the **Yes, Exit** button on the pop-up screen. The student will need their test ticket to log in again. The test will remain “In Progress.”

Test Directions – All M-STEP Grade 5 Assessments

Introduction

1. The Introduction section of Online Test Directions is the same for all online tests. Insert the test name in the appropriate blank as you read the directions to students. (Page 27 lists pages for subject-specific directions that are read after the Introduction for schools administering the M-STEP without TTS for Directions Only.)
2. Make sure that each student is sitting at a separate testing device and that each device is turned on and the desktop/home screen is visible.
3. Make sure that no student is in possession of a cell phone, camera, or other personal electronic device. Any electronic devices must be powered off and stored away from the students' work area at all times during a test session.

Instruct students that they should not open anything on their computers until they are told to do so. The device desktop/home screen should be visible until you instruct students to open INSIGHT. Distribute and ensure students have all allowed test materials.



SAY: Welcome to the M-STEP (Insert Name of Test**) _____. We are now ready to begin. It is important that you give this test your best effort so that you can show yourself, your teachers, and your parents what you know and can do. Please carefully follow these directions. Do not select anything on your computer until I tell you to do so.**

I will now pass out your test ticket.

Pass out test tickets.

SAY: Each of you now has a test ticket. Check to make sure that your name and correct date of birth appear on the test ticket and it has the correct name of the assessment (Name of assessment) **_____. Raise your hand if your test ticket does not have your name, your correct date of birth, or the correct assessment name on it.**

Correct any ticket distribution errors. If a test ticket contains incorrect student information, report the issue to your Building Assessment Coordinator immediately.

M-STEP Spring 2021
Test Ticket - G5 SS - part 1

Student Name: Smith, John J.
Date of Birth: 11/3/20XX

Username: **JSMITH1**
Password: **234K79HQ**

(Note: Username and password are not case sensitive)
Universal Tools - Designated Supports - Accommodations: MSK
Test Session: gr 5 ss

TIP! *A list of Accommodations and the abbreviations used are available on page 14.*

If your school is using scratch paper as a Universal Tool, read the following section:

SAY: I will now pass out scratch paper for you to use during your test.

Pass out scratch paper.

If headphones are needed, read the following section:

SAY: I will now pass out headphones to use during your test.

Pass out headphones.

Test Sign-In

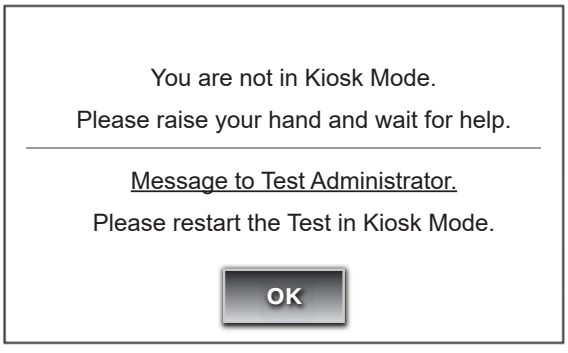
SAY: Now we are ready to begin. First, launch INSIGHT on your computer (or iPad). You should see the Michigan Department of Education screen with a picture for M-STEP, a picture for MI-Access, and a picture for Early Literacy and Mathematics. Is there anyone who does not see this screen?



Pause to assist students if necessary. If a student receives an error message, note the content of the error message and contact the M-STEP Technology Coordinator or M-STEP Building Assessment Coordinator. It is acceptable to move the student to another computer.

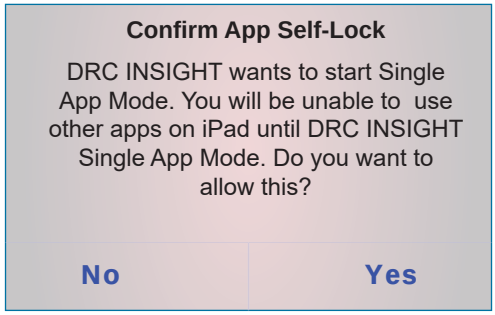
CHROMEBOOK: *Students can NOT be logged in to a Google account. As a guest, they should be directed to launch INSIGHT by selecting "apps" from the taskbar. This will launch INSIGHT in "kiosk mode." If the app is launched while signed in to a Google account, they will receive an error.*

Login steps are the same as for the desktop/laptop version, except that students will use their finger to move the cursor (instead of a mouse). MDE recommends that students use an external keyboard, and if they've already been taught, they can use the "tab" key to move the cursor between fields.



Chromebook Not in Kiosk Mode
Error Message

TIP! **Note about iPads:** When testing on iPads, after logging in to the test, students will receive the following message:



Students should be instructed to select "Yes" which will open the test sign-in screen.

When all students are ready,

SAY: On the left-hand side of the screen, under M-STEP, select Test Sign In. You should then see the sign-in screen appear. Is there anyone who does not see the sign-in screen?

Pause to assist students as necessary.



Welcome Screen

When all students are ready,

SAY: You may now enter your Username and Password in the spaces provided on the screen. Your Username and Password are found on your test ticket. If you need assistance, please raise your hand. When you have finished entering your Username and Password, select the Sign In button in the middle of the screen.

Please do not go ahead. We will do several screens together.

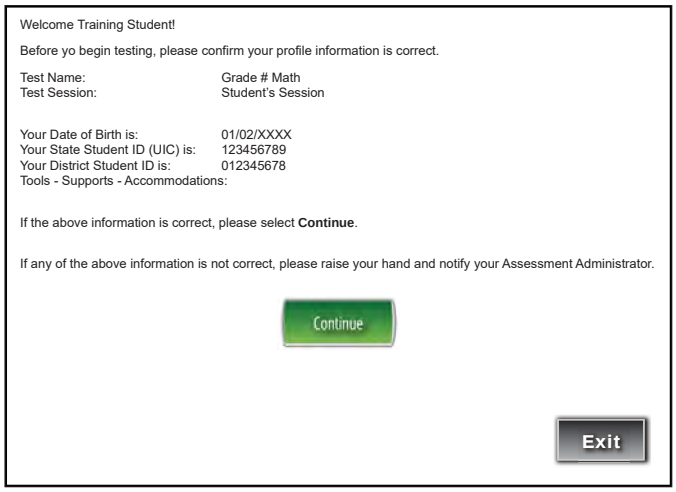
Pause while students enter their login credentials. Assist students as necessary to enter the information. Remember: Usernames and Passwords are unique to each student and to each grade/content/part; Usernames and Passwords are **not** case sensitive. The student's date of birth should be used to verify that the correct test ticket is given to a student.

TIP! *If a student receives an "invalid login," select the "back" button in the bottom left corner of the sign-in screen. Select Test Sign In below the M-STEP icon (be sure you are not selecting below the MI-Access or Early Literacy and Mathematics icons or the OTT) and try again. Verify correct Username and Password have been entered.*

When all students are ready,

SAY: When you have selected the Sign In button, a welcome screen with your name opens. Is there anyone who does not see the welcome screen with your name?

Pause to assist students as necessary.

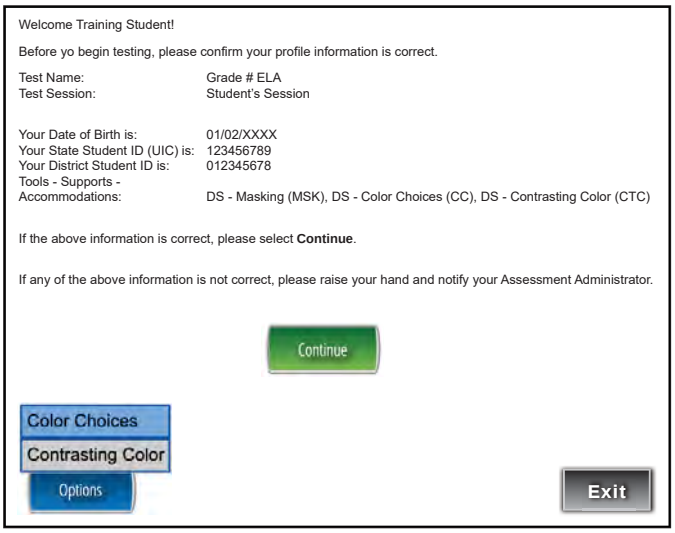


Welcome Screen with No Accommodations

When all students are ready,

SAY: Look at the information on the welcome screen and make sure that the following facts about you are correct:

- **Your first name, middle initial (if available), and last name**
- **Your test name**
- **Your test session**
- **Your date of birth**
- **Your State Student ID (also called your UIC)**
- **Your District Student ID (if available)**



Welcome Screen with Color Chooser Option

TIP! *This screen is the first opportunity to turn on the color Accommodations for **students with vision impairments that require one or more of these Designated Supports**. Color Choices (CC) and Contrasting Color (CTC) are available using the Options button when assigned in the DRC INSIGHT Portal by the Building Assessment Coordinator. You may need to assist these students.*

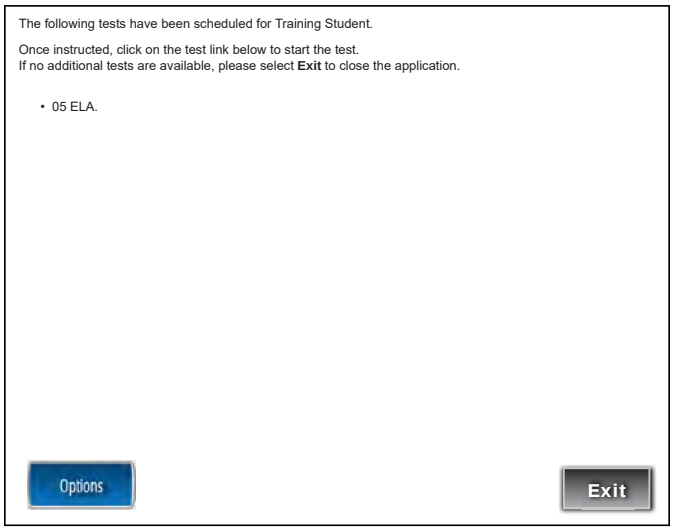
SAY: If the information about you is correct, select the Continue button. If the information is not correct, raise your hand.

Pause to assist students as necessary.

When students are ready,

SAY: After you have selected the Continue button, the test selection screen will open. Is there anyone who does not see the test selection screen?

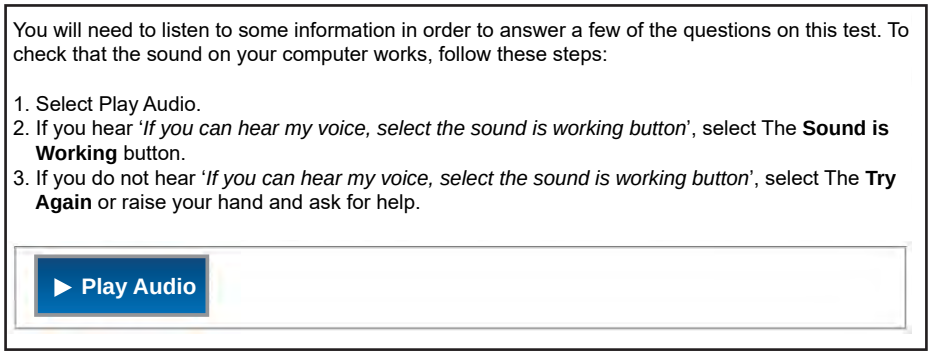
Pause to assist students as necessary.



- If you are administering this assessment with TTS for Test Directions Only, go to page 24.
- If you are administering this assessment without TTS for Test Directions Only, go to page 25.

For Administration with TTS Directions Only – All Grade 5 Tests

SAY: Use your pointer to select (test name). **Once you have selected the test name, the audio check screen should open. Is there anyone who does not see the audio check screen?**



SAY: You will need to listen to some information in order to answer a few of the questions on this test. To check that the sound on your computer works, follow these steps:

1. **Select Play Audio.**
2. **If you hear "If you can hear my voice, select The Sound is Working button," select "The Sound is Working" button.**
3. **If you do not hear "If you can hear my voice, select The Sound is Working button," select "Try Again" or raise your hand and ask for help.**

TIP! *If a student's headphones are plugged in and the volume on the headphones is turned up but the student does not hear the test, the student must log out, close INSIGHT, and verify that the computer volume is turned up and not muted.*

When all students are ready,

SAY: When you are listening to the test directions, you can increase the volume by selecting the Options button. You can pause by selecting the pause button or stop the directions by selecting the stop button.

You will listen to several directions screens that will tell you what you are allowed to do and what you are not allowed to do during the test. It will also show you the tools that are available to you during the test.

Be sure to listen to these directions carefully. Does anyone have any questions?

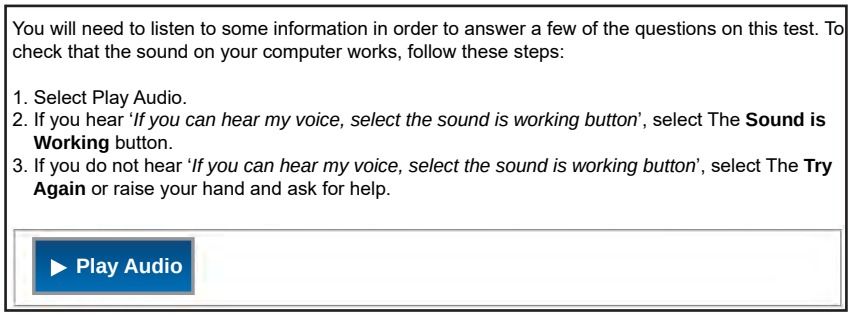
Answer any questions.

SAY: If you have any questions after listening to the directions, raise your hand and I will come over to answer your question.

Select the blue play button on your screen to listen to the directions.

For Administration without TTS Directions Only – All Grade 5 Tests

SAY: Use your pointer to select (test name). **Once you have selected the test name, the audio check screen should open. Is there anyone who does not see the audio check screen?**



If you are administering the test without TTS for Directions and have **no students** using the TTS Designated Support:

SAY: This screen plays an audio check. You will not be using any audio on this test. Press the "Play Audio" button, you may not hear anything, but in a moment a green button that reads "The Sound is Working" will appear. When you see the green "The Sound is Working" button, select this button to move to the next page and wait for further instructions.

If you are administering the test without TTS for Directions and have **some students** using the TTS Designated Support:

SAY: This screen plays an audio check. If you have not been provided headphones, you will not be using any audio on this test. Press the "Play Audio" button, you may not hear anything, but in a moment a green button that reads "The Sound is Working" will appear. When you see the green "The Sound is Working" button, select this button to move to the next page.

If you have been provided headphones, you will need to listen to some information in order to answer a few of the questions on this test. To check that the sound on your computer works, follow these steps: select Play Audio. If you hear "If you can hear my voice, select the sound is working button", select "The Sound is Working" button. If you do not hear "If you can hear my voice, select the sound is working button", select "Try Again" or raise your hand and ask for help.

TIP! *If you have devices with volume turned on but no headphones, you may hear the audio play on these devices. Instruct students to select the Sound is Working button to go to the next screen.*

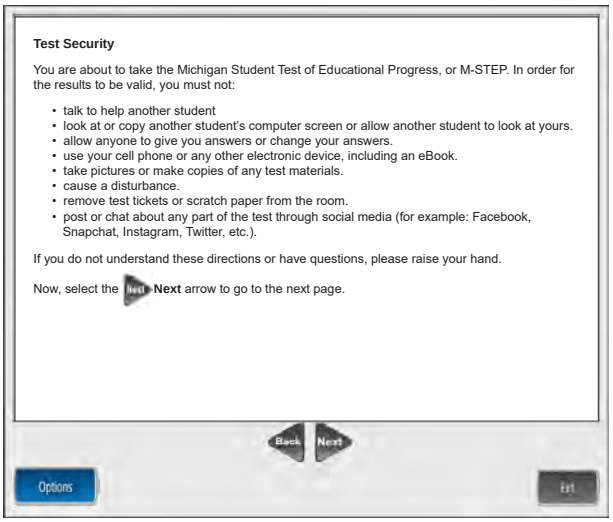
System Check and Test Security

SAY: I will now read the Test Directions. Read the Test Directions silently as I read them aloud. Use the Next button to move to the next page to follow along.

Note: For students taking the Math Accommodated Stacked Spanish (ST) form, the Spanish test directions will appear first, followed by the English version. For students using the Human Voice Audio (HVA) feature, only the Spanish portions will be read aloud.

(Read Aloud for ALL ASSESSMENTS)

Check monitors to confirm that all students are now on the "Test Security" page.



SAY: You should now be on the Test Security screen.

You are about to take the Michigan Student Test of Educational Progress, or M-STEP. In order for the results to be valid, you must not:

- **talk to or help another student**
- **look at or copy another student's computer screen or allow another student to look at yours**
- **allow anyone to give you answers or change your answers**
- **use your cell phone or any other electronic device, including an eBook**
- **take pictures or make copies of any test materials**
- **cause a disturbance**
- **remove test tickets or scratch paper from the room**
- **post or chat about any part of the test through social media (for example: Facebook, Snapchat, Instagram, Twitter, etc.)**

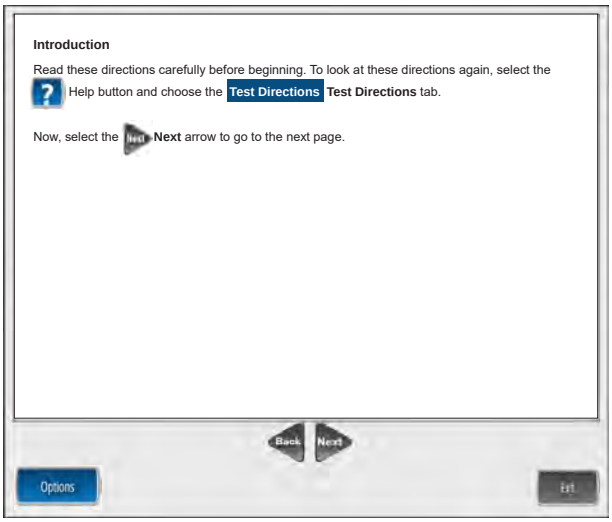
If you do not understand these directions or have questions, please raise your hand.

Pause for questions.

SAY: Now, select the Next arrow to go to the next page.

Introduction Page

Check monitors to confirm that all students are on the Introduction page.



SAY: Read these directions carefully before beginning. To look at these directions again, select the Help button and choose the Test Directions tab. Now, select the Next arrow to go to the next page.

For the remainder of the test directions, the directions differ depending on which assessment you are administering. Be sure you read the correct directions for the specific test you are administering based on the chart below. The "Use These Pages" column indicates the pages in the manual where you should continue reading test directions for your specific test.

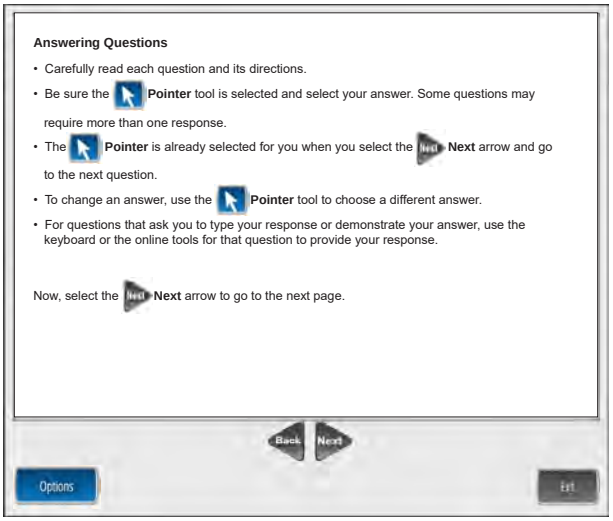
Assessment	Specific Test to Administer	Use These Pages
ELA CAT	• English Language Computer Adaptive Test (CAT) • English Language Arts Computer Adaptive Test (CAT) with Text-to-Speech (TTS) enabled	Use pages 28 to 33
ELA Accommodated Forms	• English Language Arts—Video Sign Language (VSL) and Closed Captioning (CCAPTION) fixed form	Use pages 34 to 39
Math CAT	• Math Computer Adaptive Test (CAT) • Math Computer Adaptive Test (CAT) with Text-to-Speech (TTS) enabled	Use pages 40 to 45
Math Accommodated Forms	• Math—Stacked Spanish (ST) fixed form • Math—Stacked Spanish (ST) fixed form with Human Voice Audio (HVA) • Math—Video Sign Language (VSL) fixed form	Use pages 46 to 51
Science	• Science • Science with Text-to-Speech (TTS) enabled	Use pages 52 to 57
Social Studies	• Social Studies • Social Studies with Text-to-Speech (TTS) enabled	Use pages 57 to 63

Test Directions for Grade 5 ELA CAT Assessment

Answering Questions—ELA CAT

Be sure you have completed the directions on pages 17–27 before you start this section.

Check monitors to confirm that all students are on the Answer Questions page.



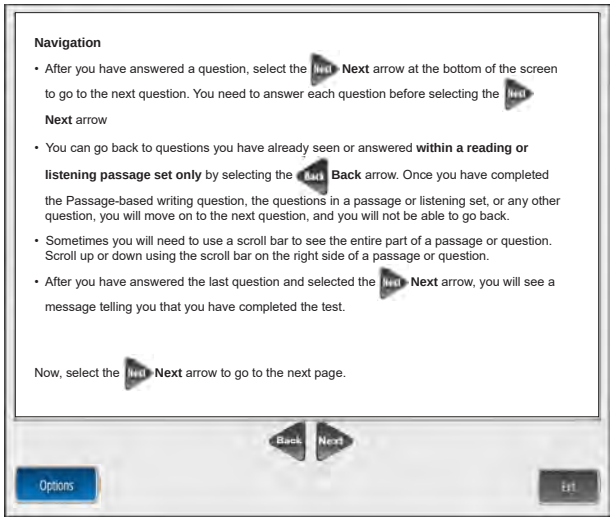
SAY: You should now be on the Answering Questions screen.

- **Carefully read each question and its directions.**
- **Be sure the Pointer tool is selected and select your answer. Some questions may require more than one response.**
- **The Pointer is already selected for you when you select the Next arrow and go to the next question.**
- **To change an answer, use the Pointer tool to choose a different answer.**
- **For questions that ask you to type your response or demonstrate your answer, use the keyboard or the online tools for that question to provide your response.**

Now, select the Next arrow to go to the next page.

Navigation—ELA CAT

Check monitors to confirm that all students are on the Navigation page.



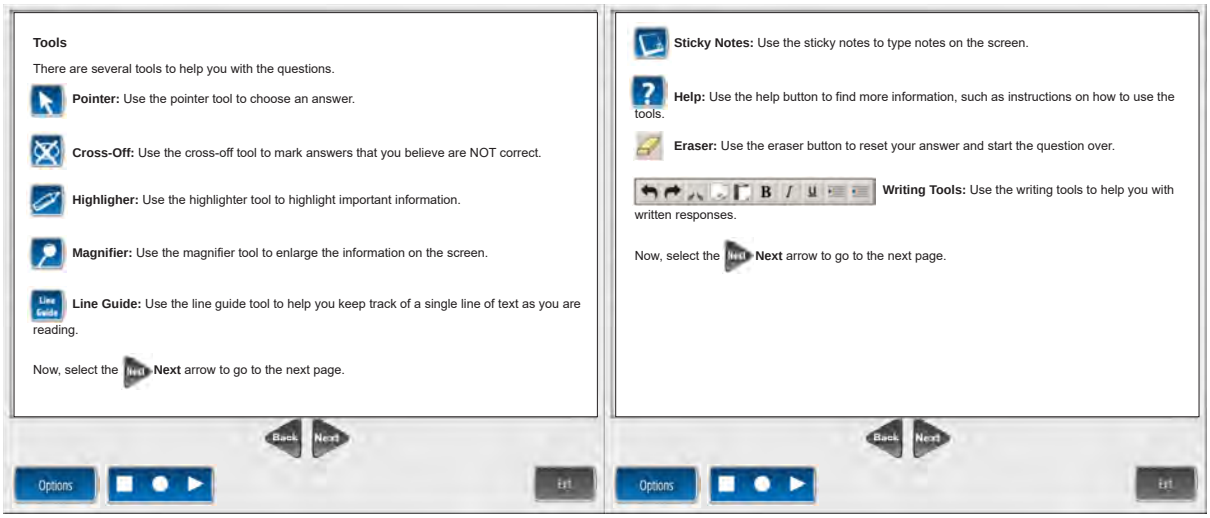
SAY: You should now be on the Navigation screen.

- **After you have answered a question, select the Next arrow at the bottom of the screen to go to the next question. You need to answer each question before selecting the Next arrow.**
- **You can go back to questions you have already seen or answered within a reading or listening passage set only by selecting the Back arrow. Once you have completed the Passage-based writing question, the questions in a passage or listening set, or any other question, you will move on to the next question, and you will not be able to go back.**
- **Sometimes you will need to use a scroll bar to see the entire part of a passage or question. Scroll up or down using the scroll bar on the right side of a passage or question.**
- **After you have answered the last question and selected the Next arrow, you will see a message telling you that you have completed the test.**

Now, select the Next arrow to go to the next page.

Tools—ELA CAT

Check monitors to confirm that all students are on the Tools page.



SAY: You should now be on the Tools screen.

There are several tools to help you with the questions.

***Pointer*: Use the pointer tool to choose an answer.**

***Cross-Off*: Use the cross-off tool to mark answers that you believe are NOT correct.**

***Highlighter*: Use the highlighter tool to highlight important information.**

***Magnifier*: Use the magnifier tool to enlarge the information on the screen.**

***Line Guide*: Use the line guide tool to help you keep track of a single line of text as you are reading.**

Now, select the Next arrow to go to the next page.

***Sticky Notes*: Use the sticky note tool to type notes on the screen.**

***Help*: Use the help button to find more information, such as instructions on how to use the tools.**

***Eraser*: Use the eraser button to reset your answer and start the question over.**

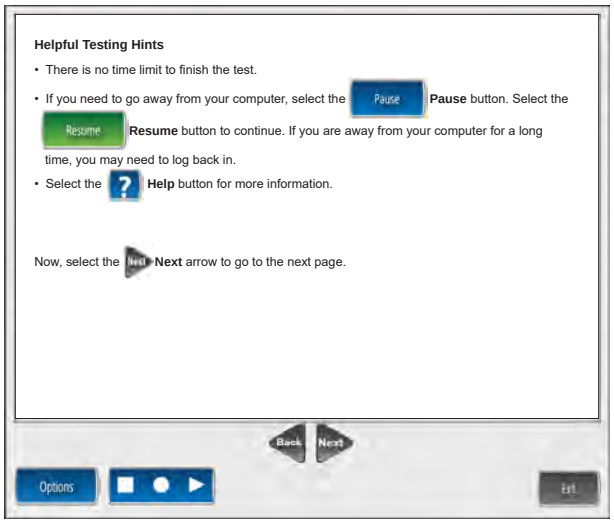
***Writing Tools:* Use the writing tools to help you with written responses.**

When you have read the tools section, prompt students to go on. Note that the tools are listed on multiple pages.

SAY: Now, select the Next arrow to go to the next page.

Helpful Testing Hints—ELA CAT

Check monitors to confirm that all students are on the Helpful Testing Hints page.



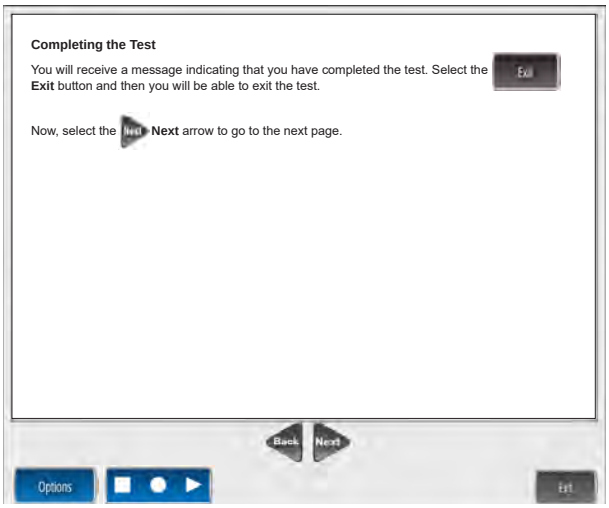
SAY: You should now be on the Helpful Testing Hints screen.

- **There is no time limit to finish the test.**
- **If you need to go away from your computer, select the Pause button. Select the Resume button to continue. If you are away from your computer for a long time, you may need to log back in.**
- **Select the Help button for more information.**

Now, select the Next arrow to go to the next page.

Completing the Test—ELA CAT

Check monitors to confirm that all students are on the Completing the Test page.



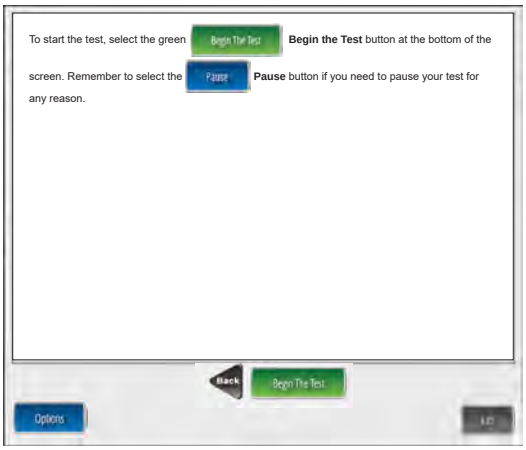
SAY: You will receive a message indicating that you have completed the test. Select the Exit button and then you will be able to exit the test.

Are there any questions about the test directions?

Answer all questions.

SAY: Now, select the Next arrow to go to the next page.

Check monitors to confirm that all students are on the Begin the Test page.



When all students are ready,

SAY: To start the test, select the green Begin the Test button at the bottom of the screen. Remember to select the Pause button if you need to pause your test for any reason.

SAY: You may begin.

TIP! *Remind students using TTS as a Designated Support to put their headphones on and be sure they are working properly.*

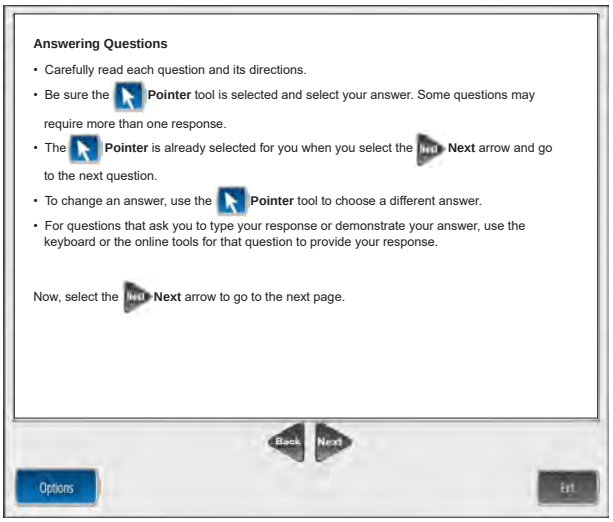
Turn to page 64 for the Monitoring During Testing instructions.

Test Directions for Grade 5 ELA Accommodated Assessments

Answering Questions—ELA Accommodated

ELA Accommodated forms include: Video Sign Language (VSL) and Closed Captioning (CCAPTION).

Be sure you have completed the directions on pages 17–27 before you start this section.



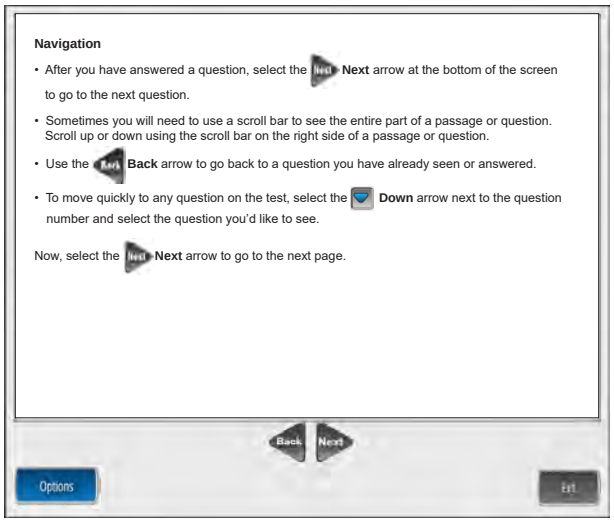
SAY: You should now be on the Answering Questions screen.

- **Carefully read each question and its directions.**
- **Be sure the Pointer tool is selected and select your answer. Some questions may require more than one response.**
- **The Pointer is already selected for you when you select the Next arrow and go to the next question.**
- **To change an answer, use the Pointer tool to choose a different answer.**
- **For questions that ask you to type your response or demonstrate your answer, use the keyboard or the online tools for that question to provide your response.**

Now, select the Next arrow to go to the next page.

Navigation—ELA Accommodated

Check monitors to confirm that all students are on the Navigation page.



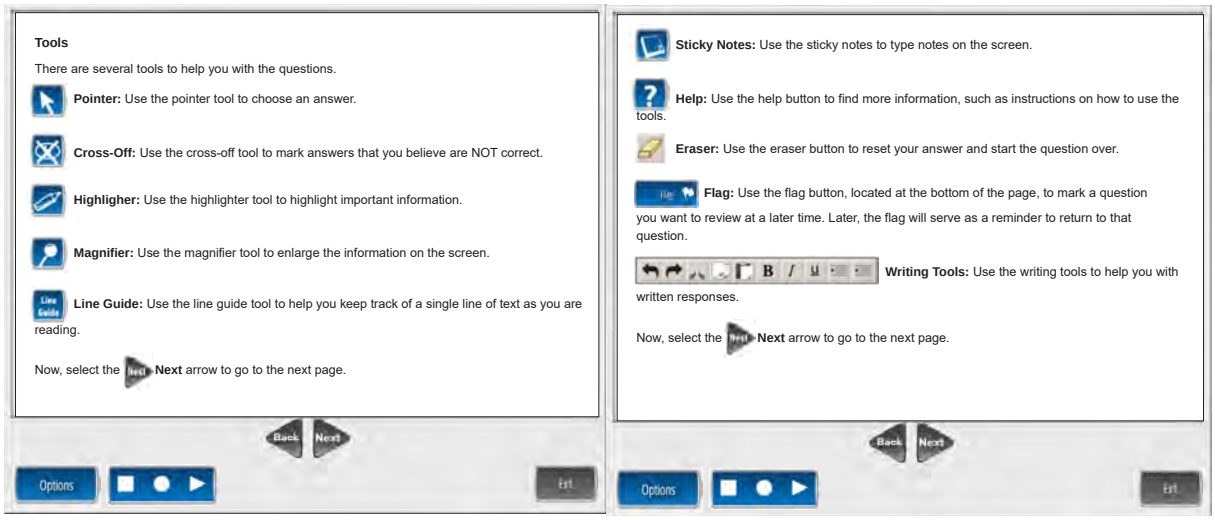
SAY: You should now be on the Navigation screen.

- **After you have answered a question, select the Next arrow at the bottom of the screen to go to the next question.**
- **Sometimes you will need to use a scroll bar to see the entire part of a passage or question. Scroll up or down using the scroll bar on the right side of a passage or question.**
- **Use the Back arrow to go back to a question you have already seen or answered.**
- **To move quickly to any question on the test, select the Down arrow next to the question number and select the question you'd like to see.**

Now, select the Next arrow to go to the next page.

Tools—ELA Accommodated

Check monitors to confirm that all students are on the Tools page.



SAY: You should now be on the Tools screen.

There are several tools to help you with the questions.

***Pointer*: Use the pointer tool to choose an answer.**

***Cross-Off*: Use the cross-off tool to mark answers that you believe are NOT correct.**

***Highlighter*: Use the highlighter tool to highlight important information.**

***Magnifier*: Use the magnifier tool to enlarge the information on the screen.**

***Line Guide*: Use the line guide tool to help you keep track of a single line of text as you are reading.**

Now, select the Next arrow to go to the next page.

***Sticky Notes*: Use the sticky note tool to type notes on the screen.**

***Help*: Use the help button to find more information, such as instructions on how to use the tools.**

***Eraser*: Use the eraser button to reset your answer and start the question over.**

***Flag*: Use the flag button, located at the bottom of the page, to mark a question you want to review at a later time. Later, the flag will serve as a reminder to return to that question.**

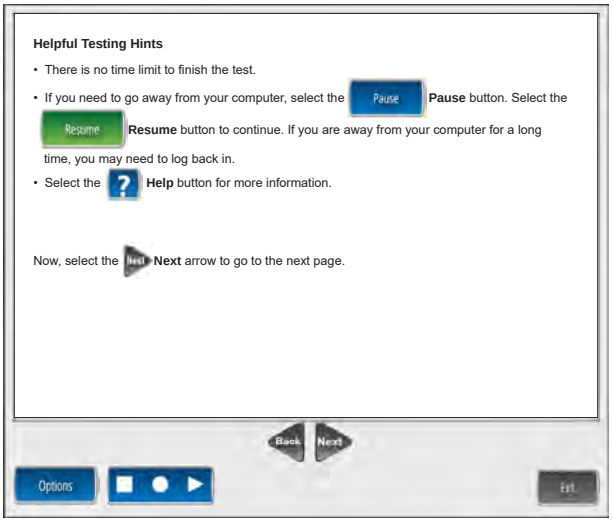
***Writing Tools:* Use the writing tools to help you with written responses.**

Note that the tools are listed on multiple pages.

SAY: Now, select the Next arrow to go to the next page.

Helpful Testing Hints—ELA Accommodated

Check monitors to confirm that all students are on the Helpful Testing Hints page.



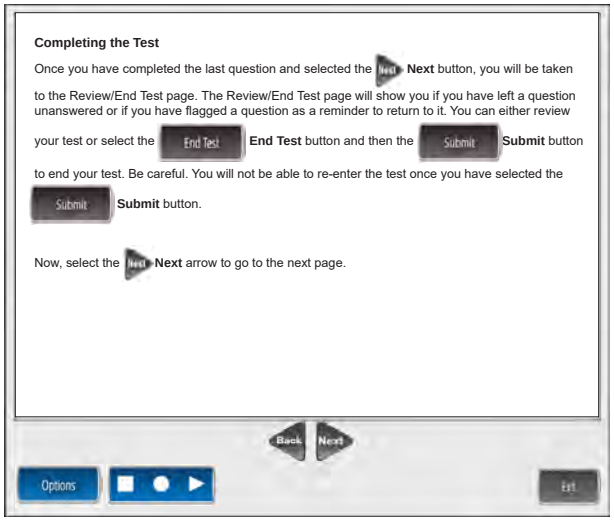
SAY: You should now be on the Helpful Testing Hints screen.

- **There is no time limit to finish the test.**
- **If you need to go away from your computer, select the Pause button. Select the Resume button to continue. If you are away from your computer for a long time, you may need to log back in.**
- **Select the Help button for more information.**

Now, select the Next arrow to go to the next page.

Completing the Test—ELA Accommodated

Check monitors to confirm that all students are on the Completing the Test page.



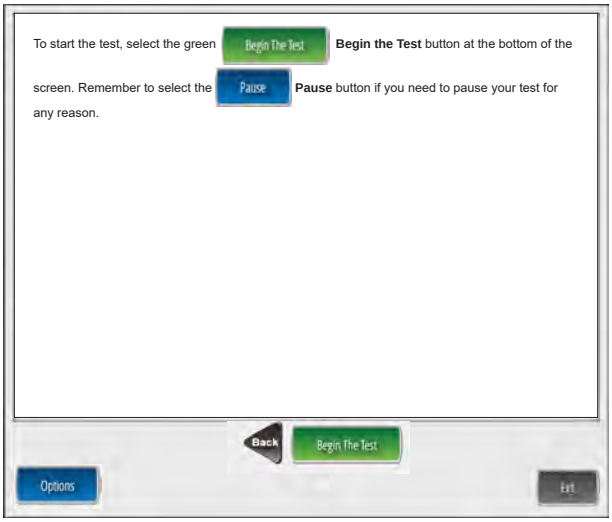
SAY: Once you have completed the last question and selected the Next button, you will be taken to the Review/End Test page. The Review/End Test page will show you if you have left a question unanswered or if you have flagged a question as a reminder to return to it. You can either review your test or select the End Test button and then the Submit button to end your test. Be careful. You will not be able to re-enter the test once you have selected the Submit button.

Are there any questions about the test directions?

Answer all questions.

SAY: Now, select the Next arrow to go to the next page.

Check monitors to confirm that all students are on the Begin the Test page.



When all students are ready,

SAY: To start the test, select the green Begin the Test button at the bottom of the screen. Remember to select the Pause button if you need to pause your test for any reason.

SAY: You may begin.

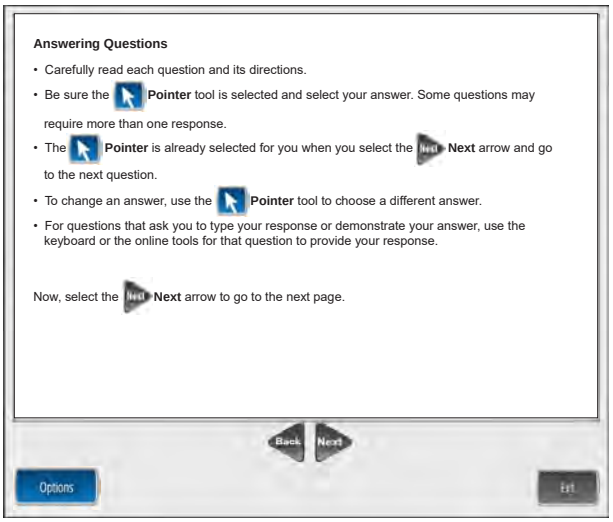
Turn to page 64 for the Monitoring During Testing instructions.

Test Directions for Grade 5 Math CAT

Answering Questions—Math CAT

Be sure you have completed the directions on pages 17–27 before you start this section.

Check monitors to confirm that all students are on the Answering Questions page.



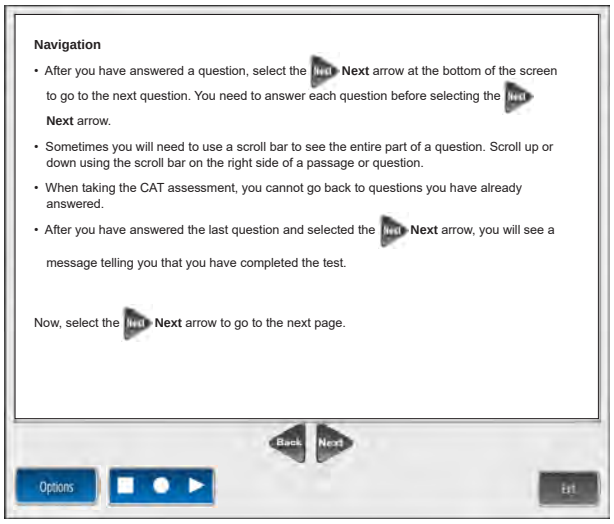
SAY: You should now be on the Answering Questions screen.

- **Carefully read each question and its directions.**
- **Be sure the Pointer tool is selected and select your answer. Some questions may require more than one response.**
- **The Pointer is already selected for you when you select the Next arrow and go to the next question.**
- **To change an answer, use the Pointer tool to choose a different answer.**
- **For questions that ask you to type your response or demonstrate your answer, use the keyboard or the online tools for that question to provide your response.**

Now, select the Next arrow to go to the next page.

Navigation—Math CAT

Check monitors to confirm that all students are on the Navigation page.



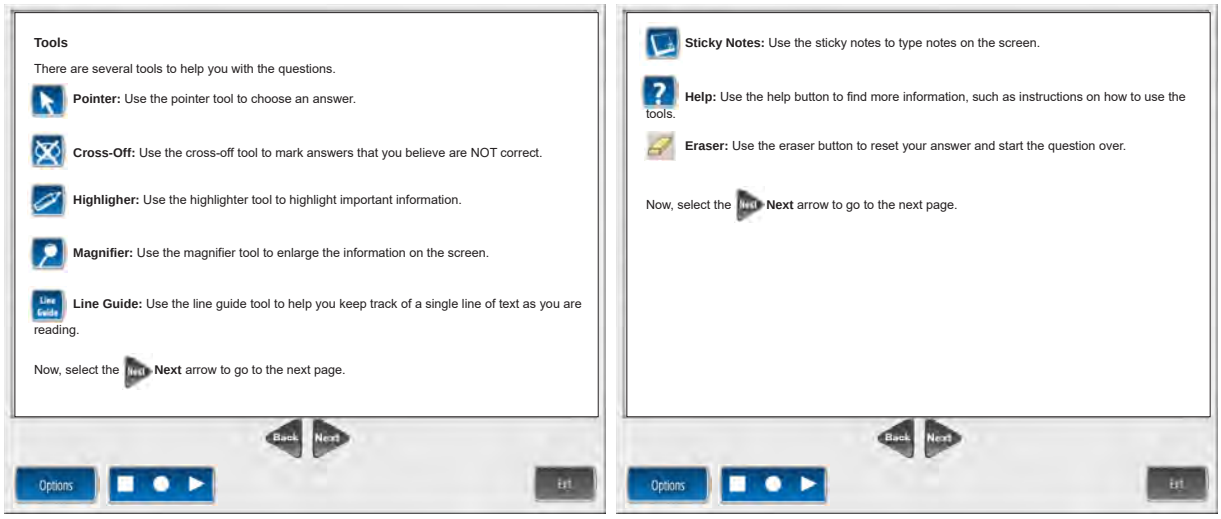
SAY: You should now be on the Navigation screen.

- **After you have answered a question, select the Next arrow at the bottom of the screen to go to the next question. You need to answer each question before selecting the Next arrow.**
- **Sometimes you will need to use a scroll bar to see the entire part of a question. Scroll up or down using the scroll bar on the right side of the question.**
- **When taking the CAT assessment, you cannot go back to questions you have already answered.**
- **After you have answered the last question and selected the Next arrow, you will see a message telling you that you have completed the test.**

Now, select the Next arrow to go to the next page.

Tools—Math CAT

Check monitors to confirm that all students are on the Tools page.



SAY: You should now be on the Tools screen.

There are several tools to help you with the questions.

***Pointer*: Use the pointer tool to choose an answer.**

***Cross-Off*: Use the cross-off tool to mark answers that you believe are NOT correct.**

***Highlighter*: Use the highlighter tool to highlight important information.**

***Magnifier*: Use the magnifier tool to enlarge the information on the screen.**

***Line Guide*: Use the line guide tool to help you keep track of a single line of text as you are reading.**

Now, select the Next arrow to go to the next page.

***Sticky Notes*: Use the sticky note tool to type notes on the screen.**

***Help*: Use the help button to find more information, such as instructions on how to use the tools.**

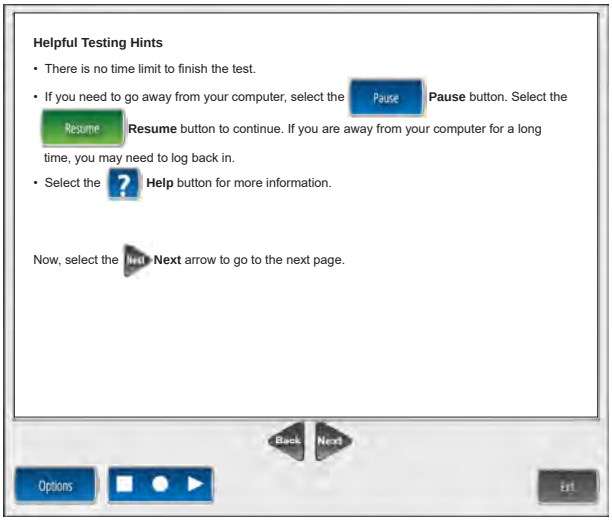
***Eraser*: Use the eraser button to reset your answer and start the question over.**

When you have read the tools section, prompt students to go on. Note that the tools are listed on multiple pages.

SAY: Now, select the Next arrow to go to the next page.

Helpful Testing Hints—Math CAT

Check monitors to confirm that all students are on the Helpful Testing Hints page.



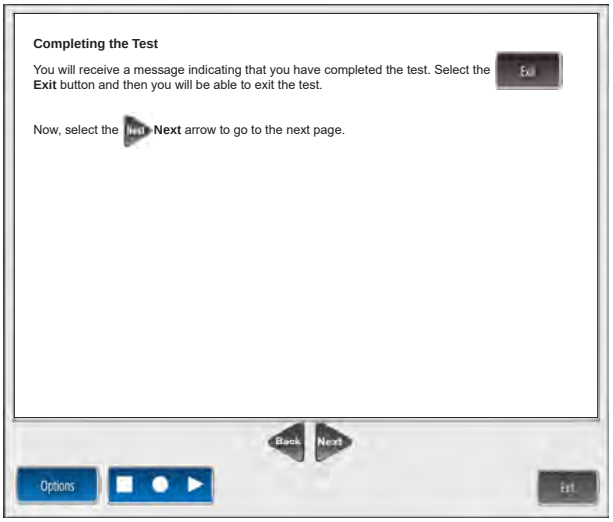
SAY: You should now be on the Helpful Testing Hints screen.

- **There is no time limit to finish the test.**
- **If you need to go away from your computer, select the Pause button. Select the Resume button to continue. If you are away from your computer for a long time, you may need to log back in.**
- **Select the Help button for more information.**

Now, select the Next arrow to go to the next page.

Completing the Test—Math CAT

Check monitors to confirm that all students are on the Completing the Test page.



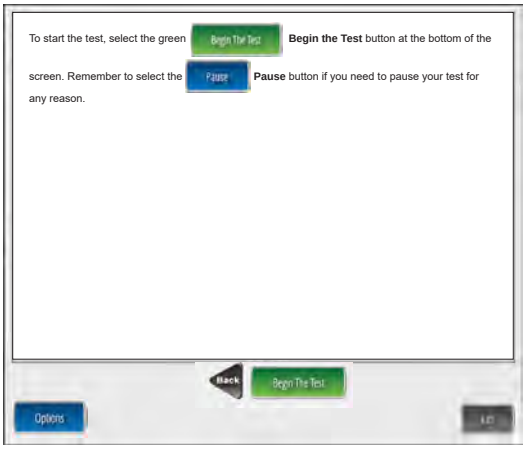
SAY: You will receive a message indicating that you have completed the test. Select the Exit button and then you will be able to exit the test.

Are there any questions about the test directions?

Answer all questions.

SAY: Now, select the Next arrow to go to the next page.

Check monitors to confirm that all students are on the Begin the Test page.



When all students are ready,

SAY: To start the test, select the green Begin the Test button at the bottom of the screen. Remember to select the Pause button if you need to pause your test for any reason.

SAY: You may begin.

TIP! *Remind students using TTS as a Designated Support to put their headphones on and be sure they are working properly.*

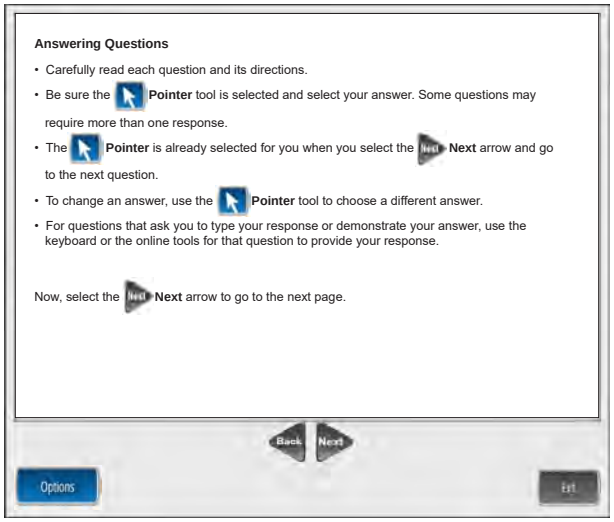
Turn to page 64 for the Monitoring During Testing instructions.

Test Directions for Grade 5 Math Accommodated Assessments

Answering Questions—Math Accommodated

Math Accommodated forms include: Stacked Spanish (ST) and Video Sign Language (VSL).

Be sure you have completed the directions on pages 17–27 before you start this section.



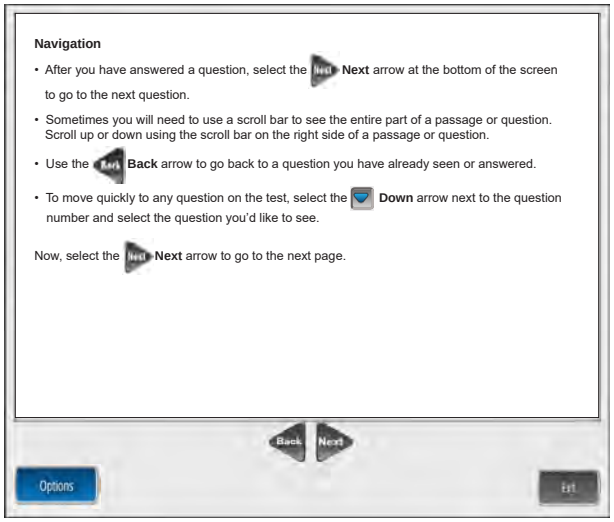
SAY: You should now be on the Answering Questions screen.

- **Carefully read each question and its directions.**
- **Be sure the Pointer tool is selected and select your answer. Some questions may require more than one response.**
- **The Pointer is already selected for you when you select the Next arrow and go to the next question.**
- **To change an answer, use the Pointer tool to choose a different answer.**
- **For questions that ask you to type your response or demonstrate your answer, use the keyboard or the online tools for that question to provide your response.**

Now, select the Next arrow to go to the next page.

Navigation—Math Accommodated

Check monitors to confirm that all students are on the Navigation page.



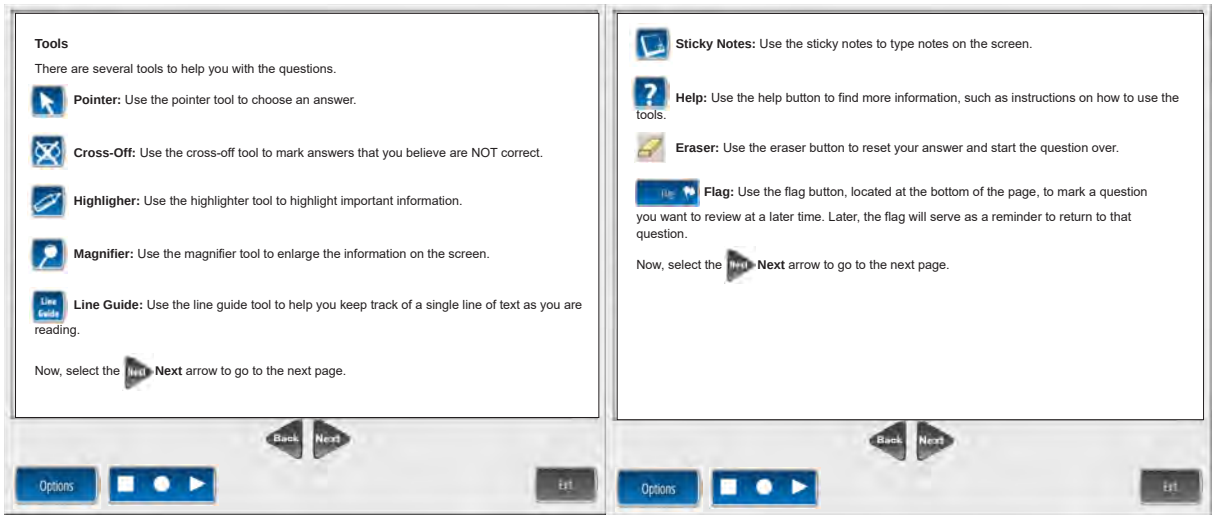
You should now be on the Navigation screen.

- **After you have answered a question, select the Next arrow at the bottom of the screen to go to the next question.**
- **Sometimes you will need to use a scroll bar to see the entire part of a question. Scroll up or down using the scroll bar on the right side of the question.**
- **Use the Back arrow to go back to a question you have already seen or answered.**
- **To move quickly to any question on the test, select the Down arrow next to the question number and select the question you'd like to see.**

Now, select the Next arrow to go to the next page.

Tools—Math Accommodated

Check monitors to confirm that all students are on the Tools page.



SAY: You should now be on the Tools screen.

There are several tools to help you with the questions.

***Pointer*: Use the pointer tool to choose an answer.**

***Cross-Off*: Use the cross-off tool to mark answers that you believe are NOT correct.**

***Highlighter*: Use the highlighter tool to highlight important information.**

***Magnifier*: Use the magnifier tool to enlarge the information on the screen.**

***Line Guide*: Use the line guide tool to help you keep track of a single line of text as you are reading.**

Now, select the Next arrow to go to the next page.

***Sticky Notes*: Use the sticky note tool to type notes on the screen.**

***Help*: Use the help button to find more information, such as instructions on how to use the tools.**

***Eraser*: Use the eraser button to reset your answer and start the question over.**

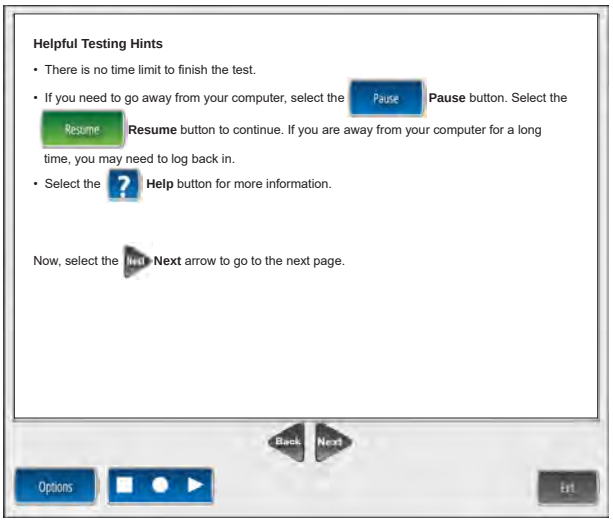
***Flag*: Use the flag button, located at the bottom of the page, to mark a question you want to review at a later time. Later, the flag will serve as a reminder to return to that question.**

Note that the tools are listed on multiple pages.

SAY: Now, select the Next arrow to go to the next page.

Helpful Testing Hints—Math Accommodated

Check monitors to confirm that all students are on the Helpful Testing Hints page.



SAY: You should now be on the Helpful Testing Hints screen.

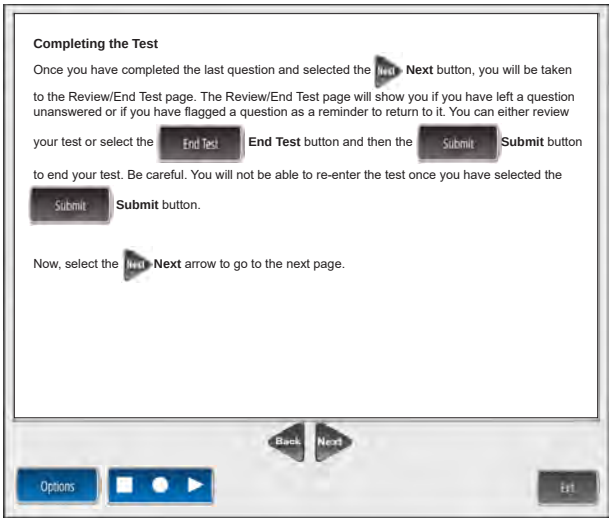
- **There is no time limit to finish the test.**
- **If you need to go away from your computer, select the Pause button. Select the Resume button to continue. If you are away from your computer for a long time, you may need to log back in.**
- **Select the Help button for more information.**

Now, select the Next arrow to go to the next page.

MATH ACCOMMODATED

Completing the Test—Math Accommodated

Check monitors to confirm that all students are on the Completing the Test page.



SAY: Once you have completed the last question and selected the Next button, you will be taken to the Review/End Test page. The Review/End Test page will show you if you have left a question unanswered or if you have flagged a question as a reminder to return to it. You can either review your test or select the End Test button and then the Submit button to end your test. Be careful. You will not be able to re-enter the test once you have selected the Submit button.

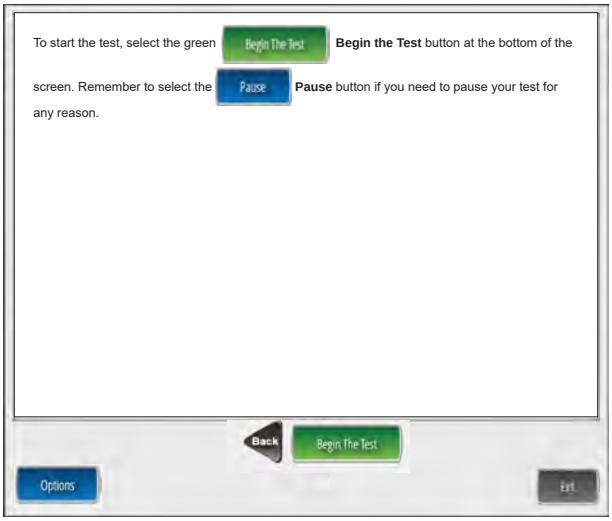
Are there any questions about the test directions?

Answer all questions.

SAY: Now, select the Next arrow to go to the next page.

MATH ACCOMMODATED

Check monitors to confirm that all students are on the Begin the Test page.



When all students are ready,

SAY: To start the test, select the green Begin the Test button at the bottom of the screen. Remember to select the Pause button if you need to pause your test for any reason.

SAY: You may begin.

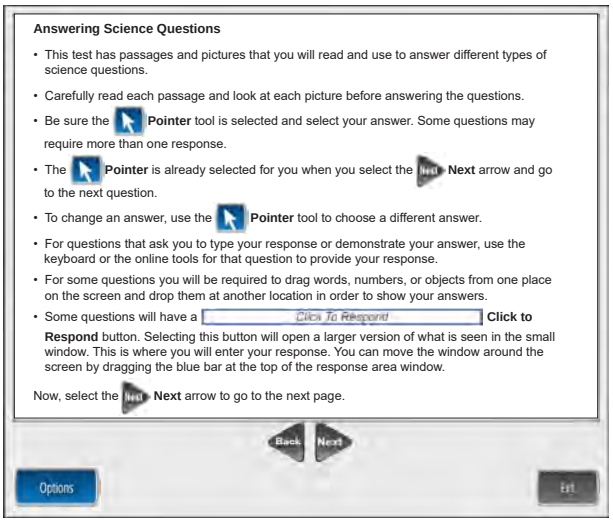
TIP! *Remind students using TTS or HVA as a Designated Support to put their headphones on and be sure they are working properly.*

Turn to page 64 for the Monitoring During Testing instructions.

Test Directions for Grade 5 Science Assessments

Answering Science Questions

Be sure you have completed the directions on pages 17–27 before you start this section.



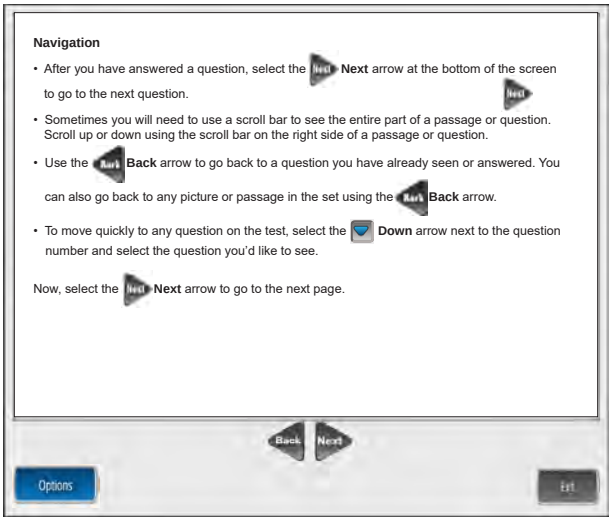
SAY: You should now be on the Answering Science Questions screen.

- **This test has passages and pictures that you will read and use to answer different types of science questions.**
- **Carefully read each passage and look at each picture before answering the questions.**
- **Be sure the Pointer tool is selected and choose your answer. Some questions may require more than one answer.**
- **The Pointer is already selected for you when you select the Next arrow and go to the next question.**
- **To change an answer, use the Pointer tool to choose a different answer.**
- **For questions that ask you to type your response or show your answer, use the keyboard or the online tools for that question to provide your response.**
- **For some questions you will be required to drag words, numbers, or objects from one place on the screen and drop them at another location in order to show your answers.**
- **Some questions will have a Click to Respond button. Selecting this button will open a larger version of what is seen in the small window. This is where you will enter your response. You can move the window around the screen by dragging the blue bar at the top of the response area window.**

Now, select the Next arrow to go to the next page.

Navigation—Science

Check monitors to confirm that all students are on the Navigation page.



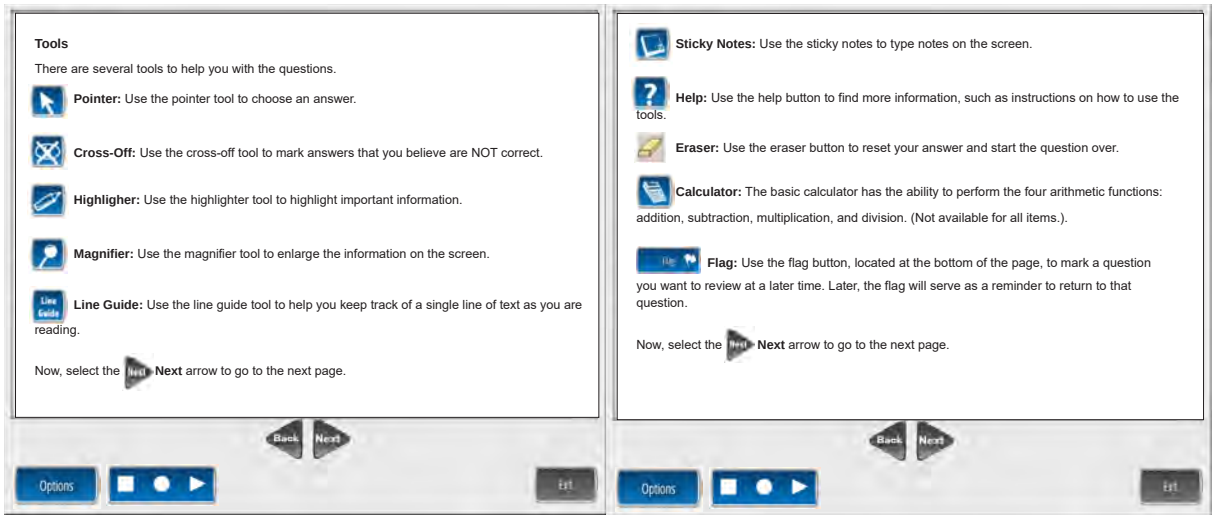
SAY: You should now be on the Navigation screen.

- **After you have answered a question, select the Next arrow at the bottom of the screen to go to the next question.**
- **Sometimes you will need to use a scroll bar to see the entire part of a passage or question. Scroll up or down using the scroll bar on the right side of a passage or question.**
- **Use the Back arrow to go back to a question you have already seen or answered. You can also go back to any picture or passage in the set using the Back arrow.**
- **To move quickly to any question on the test, select the Down arrow next to the question number and select the question you would like to see.**

Now, select the Next arrow to go to the next page.

Tools—Science

Check monitors to confirm that all students are on the Tools page.



SAY: You should now be on the Tools screen.

There are several tools to help you with the questions.

***Pointer*: Use the pointer tool to choose an answer.**

***Cross-Off*: Use the cross-off tool to mark answers that you believe are NOT correct.**

***Highlighter*: Use the highlighter tool to highlight important information.**

***Magnifier*: Use the magnifier tool to enlarge the information on the screen.**

***Line Guide*: Use the line guide tool to help you keep track of a single line of text as you are reading.**

Now, select the Next arrow to go to the next page.

***Sticky Notes*: Use the sticky note tool to type notes on the screen.**

***Help*: Use the help button to find more information, such as instructions on how to use the tools.**

***Eraser*: Use the eraser button to reset your answer and start the question over.**

***Calculator:* The basic calculator has the ability to perform the four arithmetic functions: addition, subtraction, multiplication, and division.**

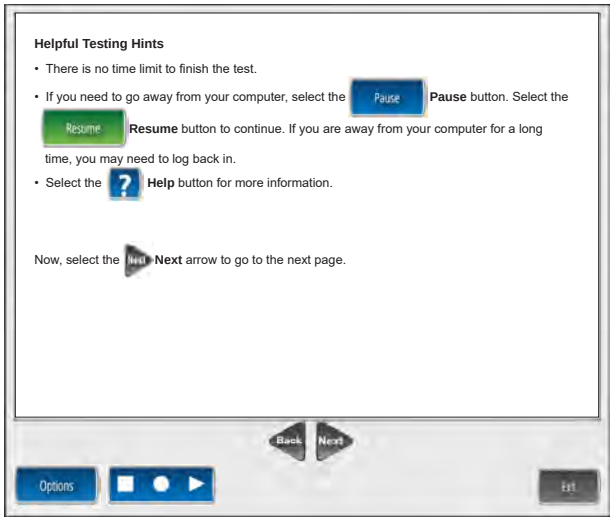
***Flag*: Use the flag button, located at the bottom of the page, to mark a question you want to review at a later time. Later, the flag will serve as a reminder to return to that question.**

When you have read the tools section, prompt students to go on. Note that the tools are listed on multiple pages.

SAY: Now, select the Next arrow to go to the next page.

Helpful Testing Hints—Science

Check monitors to confirm that all students are on the Helpful Testing Hints page.



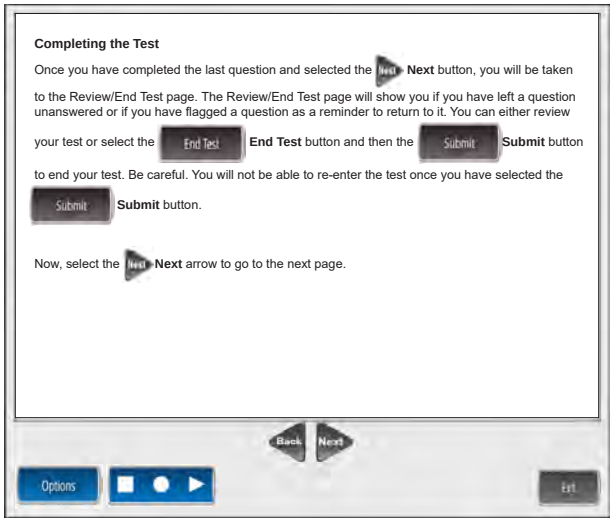
SAY: You should now be on the Helpful Testing Hints screen.

- **There is no time limit to finish the test.**
- **If you need to go away from your computer, select the Pause button. Select the Resume button to continue. If you are away from your computer for a long time, you may need to log back in.**
- **Select the Help button for more information.**

Now, select the Next arrow to go to the next page.

Completing the Test—Science

Check monitors to confirm that all students are on the Completing the Test page.



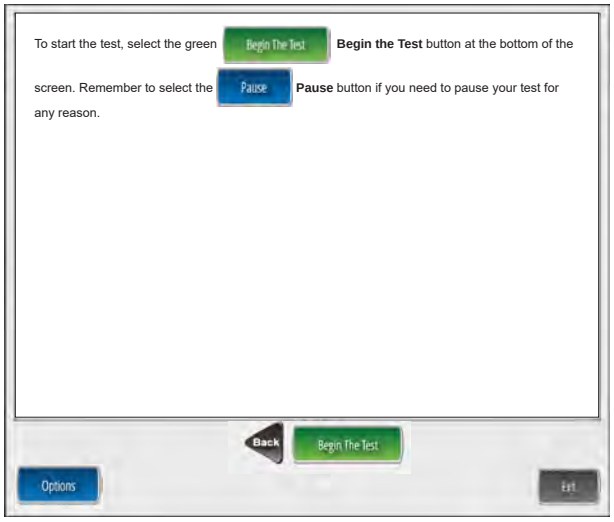
SAY: Once you have completed the last question and selected the Next button, you will be taken to the Review/End Test page. The Review/End Test page will show you if you have left a question unanswered or if you have flagged a question as a reminder to return to it. You can either review your test or select the End Test button and then the Submit button to end your test. Be careful. You will not be able to re-enter the test once you have selected the Submit button.

Are there any questions about the test directions?

Answer all questions.

SAY: Now, select the Next arrow to go to the next page.

Check monitors to confirm that all students are on the Begin the Test page.



When all students are ready,

SAY: To start the test, select the green Begin the Test button at the bottom of the screen. Remember to select the Pause button if you need to pause your test for any reason.

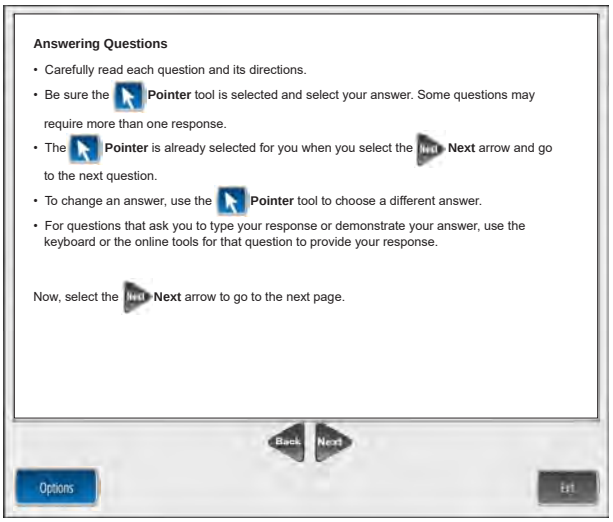
TIP! *Remind students using TTS as a Designated Support to put their headphones on and be sure they are working properly.*

Turn to page 64 for the Monitoring During Testing instructions.

Test Directions for Grade 5 Social Studies Assessments

Answering Questions—Social Studies

Be sure you have completed the directions on pages 17–27 before you start this section.



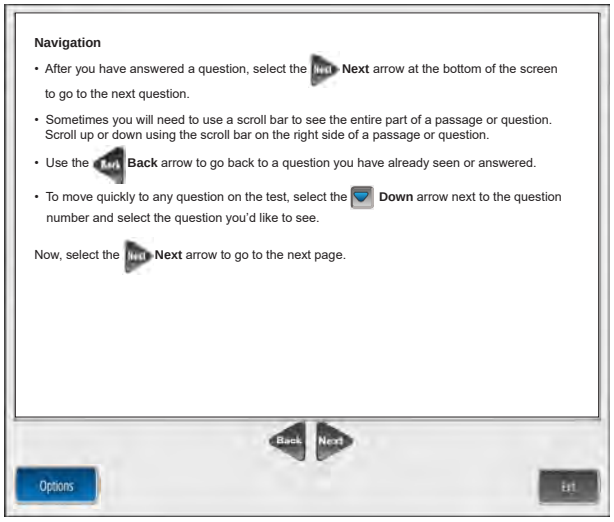
SAY: You should now be on the Answering Questions screen.

- **Carefully read each question and its directions.**
- **Be sure the Pointer tool is selected and select your answer. Some questions may require more than one response.**
- **The Pointer is already selected for you when you select the Next arrow and go to the next question.**
- **To change an answer, use the Pointer tool to choose a different answer.**
- **For questions that ask you to type your response or demonstrate your answer, use the keyboard or the online tools for that question to provide your response.**

Now, select the Next arrow to go to the next page.

Navigation—Social Studies

Check monitors to confirm that all students are on the Navigation page.



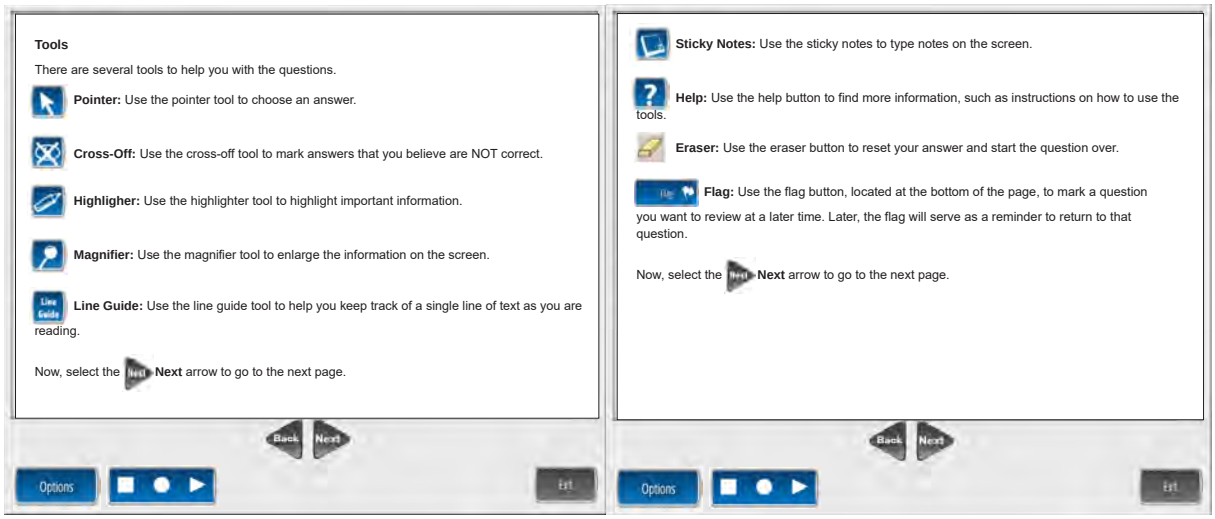
SAY: You should now be on the Navigation screen.

- **After you have answered a question, select the Next arrow at the bottom of the screen to go to the next question.**
- **Sometimes you will need to use a scroll bar to see the entire part of a question. Scroll up or down using the scroll bar on the right side of the question.**
- **Use the Back arrow to go back to a question you have already seen or answered.**
- **To move quickly to any question on the test, select the Down arrow next to the question number and select the question you'd like to see.**

Now, select the Next arrow to go to the next page.

Tools—Social Studies

Check monitors to confirm that all students are on the Tools page.



SAY: You should now be on the Tools screen.

There are several tools to help you with the questions.

***Pointer*: Use the pointer tool to choose an answer.**

***Cross-Off*: Use the cross-off tool to mark answers that you believe are NOT correct.**

***Highlighter*: Use the highlighter tool to highlight important information.**

***Magnifier*: Use the magnifier tool to enlarge the information on the screen.**

***Line Guide*: Use the line guide tool to help you keep track of a single line of text as you are reading.**

Now, select the Next arrow to go to the next page.

***Sticky Notes*: Use the sticky note tool to type notes on the screen.**

***Help*: Use the help button to find more information, such as instructions on how to use the tools.**

***Eraser*: Use the eraser button to reset your answer and start the question over.**

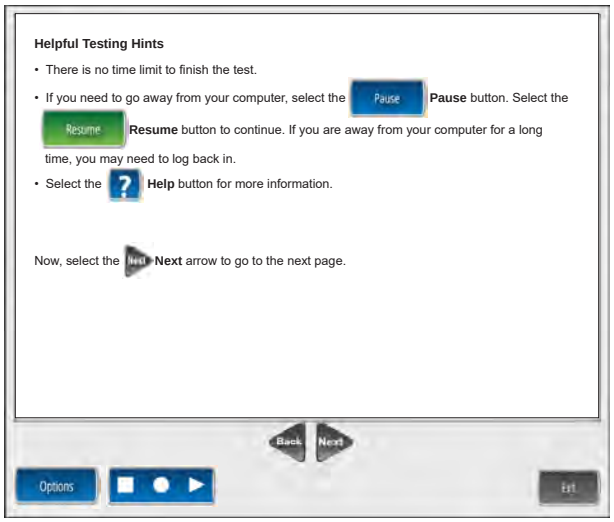
***Flag*: Use the flag button, located at the bottom of the page, to mark a question you want to review at a later time. Later, the flag will serve as a reminder to return to that question.**

When you have read the tools section, prompt students to go on. Note that the tools are listed on multiple pages.

SAY: Now, select the Next arrow to go to the next page.

Helpful Testing Hints—Social Studies

Check monitors to confirm that all students are on the Helpful Testing Hints page.



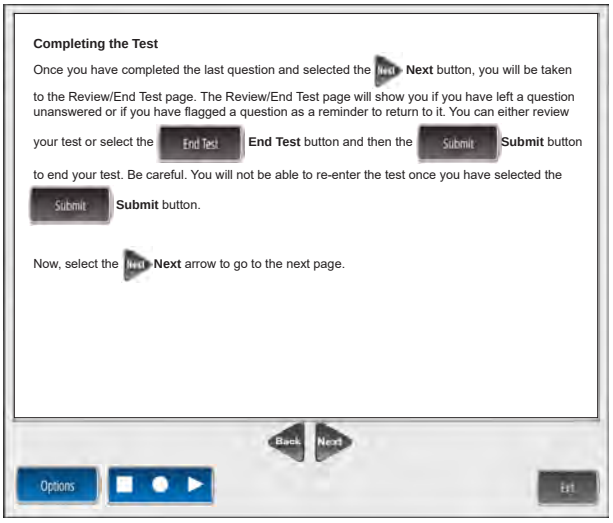
SAY: You should now be on the Helpful Testing Hints screen.

- **There is no time limit to finish the test.**
- **If you need to go away from your computer, select the Pause button. Select the Resume button to continue. If you are away from your computer for a long time, you may need to log back in.**
- **Select the Help button for more information.**

Now, select the Next arrow to go to the next page.

Completing the Test—Social Studies

Check monitors to confirm that all students are on the Completing the Test page.



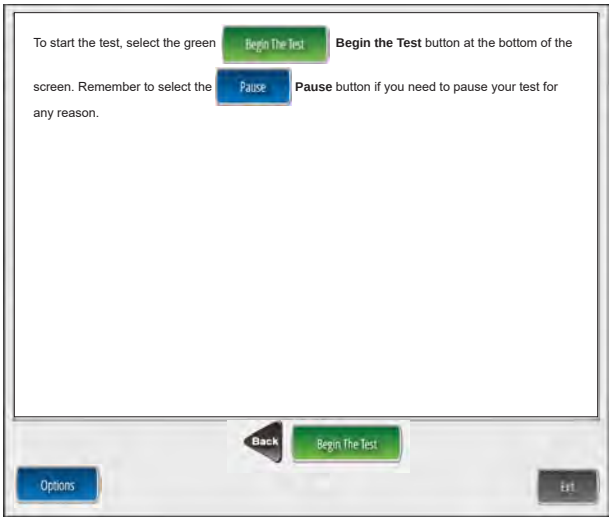
SAY: Once you have completed the last question and selected the Next button, you will be taken to the Review/End Test page. The Review/End Test page will show you if you have left a question unanswered or if you have flagged a question as a reminder to return to it. You can either review your test or select the End Test button and then the Submit button to end your test. Be careful. You will not be able to re-enter the test once you have selected the Submit button.

Are there any questions about the test directions?

Answer all questions.

SAY: Now, select the Next arrow to go to the next page.

Check monitors to confirm that all students are on the Begin the Test page.



When all students are ready,

SAY: To start the test, select the green Begin the Test button at the bottom of the screen. Remember to select the Pause button if you need to pause your test for any reason.

SAY: You may begin.

TIP! *Remind students using TTS as a Designated Support to put their headphones on and be sure they are working properly.*

Turn to page 64 for the Monitoring During Testing instructions.

Monitoring During Testing

Collect and recount all student test tickets after students have logged in. Ensure the number of tickets returned matches the number noted from before testing. Student test tickets are considered secure material. Save these tickets in case a student is logged off and needs it again. Each individual test session requires a different test ticket. **Test tickets must be returned to the Building Assessment Coordinator with all secure materials at the end of each testing session.**

As students are working, move around the room to ensure students are working on the correct part. If a student has selected an incorrect part, select the Pause button, the Exit button, and then the "Yes, Exit" button to return to the test sign-in screen; **do not select the "Review/End Test" button**.

Maintain a secure and distraction-free test environment.

Testing Irregularities

Refer to Appendix C.

Completing the Test Session

Collect and recount test tickets. All test tickets must be returned to the Building Assessment Coordinator unless the student did not complete the test and is being escorted to another location to complete test. **Note:** Students are not allowed to transport test materials from one location to another. If students have NOT completed their test but will resume at a later time, return test tickets to the Building Assessment Coordinator for secure storage until testing can resume. A new test ticket can be printed by the Building Coordinator, if necessary.

Exiting the Test Engine

Students using a desktop, laptop, iPad, or Chromebook can simply exit INSIGHT once they have finished. Ensure you can see the desktop or home screen of every testing device before a student is dismissed. This is particularly important for 1:1 devices that stay with the student (such as a Chromebook, laptop, or iPad).

TIP! *Some schools sort test tickets into envelopes for "complete" "in progress" and "not started" to help manage test tickets.*

APPENDIX A: M-STEP Calculator Policy

Online and Paper/Pencil Testers

Mathematics

Students in grades 3, 4, and 5 are **not** allowed to use a calculator on ANY item in the mathematics assessment, as the use of calculators at these grade levels changes the construct of the items and what they are intended to measure. All students must abide by this no-calculator-allowed policy, even students whose IEP or 504 Plan specifies otherwise. **The use of a calculator at grades 3, 4, or 5 is considered a nonstandard accommodation.** Nonstandard accommodations render the assessment invalid.

Science

Students in grade 5, 8, and 11 are allowed to use a calculator on any item in the science assessment.

Online Testers

On grades 6 and 7 mathematics and grades 5, 8, and 11 science assessments, students will use the calculator embedded within the online delivery engine. The calculator will appear in the toolbar when items allow its use; it will not appear when items do not allow its use.

There are two types of embedded online calculators:

- Basic calculator - science grade 5 and mathematics grade 6
- Scientific calculator - science grades 8 and 11 and mathematics grade 7

The Office of Educational Assessment and Accountability (OEAA) has developed resources for online testers to help prepare them for online testing. One of the resources is an online calculator practice tool. It is recommended that online testers visit the practice environment to see sample items and familiarize themselves with the online calculator tool. To practice using the M-STEP online calculators, go to the Online Tools Training (OTT) portal (https://wbte.drcedirect.com/MI/portals/mi/) using the Google Chrome browser.

Paper/Pencil Testers

On grades 6 and 7 mathematics and grades 5, 8 and 11 science assessments, students will use a handheld calculator.

Calculators are allowed on all items of the science assessments. Calculators are allowed only on Part 2 of the mathematics assessment.

Mathematics test booklets are divided into two parts. Part 1 of the paper/pencil mathematics assessment is considered non-calculator, and students must not have a calculator within reach. Part 2 of the paper/pencil mathematics assessment allows the use of a calculator. Once students start Part 2, they are not allowed to return to the non-calculator items on Part 1.

Since external hand-held graphing calculators are programmable, there is a potential of a security breach. All programmable calculators must be set to TEST mode during the testing session for both mathematics and science assessments.

Types of hand-held calculators:

- Basic calculator - science grade 5 and mathematics grade 6
- Scientific calculator - science grades 8 and 11 and mathematics grade 7

Important Notes

Alignment

The operational items on all of the assessments have been field-tested and are aligned to Michigan's standards.

Fairness

The issue of fairness between online testers and paper/pencil testers with regard to calculator usage has been raised. The OEAA decided not to burden schools by requiring them to purchase calculators specifically for this assessment as a possible one-time use. Some schools may not have the grade-specific calculators for their paper/pencil testers to use. The OEAA has reviewed every item to determine if the use of an above-grade-level calculator gives those students an advantage. Students will not be advantaged or disadvantaged based on using an above-grade calculator on the assessment.

Managing Online Testers and External Hand-held Calculators

The OEAA prohibits online testers from using external handheld calculators instead of the embedded online calculator. The only online testers who may use an external calculator are those students whose IEP or Section 504 Plan specifies the use of a special adaptive calculator.

APPENDIX B: M-STEP Scratch Paper Policy

Scratch paper is a Universal Tool that may be made available to students during testing. Used scratch paper is a secure material. District Coordinators should develop and disseminate procedures for the secure handling and disposal of used scratch paper.

Terms

Graph Paper: blank, gridded paper provided by MDE for use in grades 6-7 mathematics

Scratch Paper: blank, lined, or unlined paper

Graph paper and scratch paper are separated into two types:

Unused Scratch/Graph Paper: scratch paper that does not include any student markings; unused scratch/ graph paper may include a student's name written on it

Used Scratch/Graph Paper: scratch/graph paper that includes any student markings beyond the student's name

Online Testers: Mathematics

Scratch paper is allowed in all test sessions. For students in grades 6-7, blank graph paper is required and is provided in the online initial material order. The grades 3-5 tests do not include items that require graph paper. Additional graph paper can be downloaded from the M-STEP web page (www.michigan.gov/mstep).

For grades 3-5, scratch paper must be blank ruled or unruled, or (optionally) graph paper.

For grades 6-7 the graph paper must be blank.

Fresh scratch/graph paper must be distributed at the start of each new test session. That is, when a student receives a new test ticket for login, a fresh sheet of scratch paper must be provided at that time. Once a test session is completed, used scratch paper must be returned with the test tickets to the Building Coordinator for secure shredding.

Students must write their names on the scratch paper. When students are given a break, the scratch paper must be collected and securely stored with test tickets until testing resumes.

If a student's name is clearly written on the used scratch paper, it can be returned to that student to use when resuming an in-progress test.

Online Testers: English Language Arts, Science, and Social Studies

Scratch paper is allowed in all test sessions. For all grades this must be blank ruled or unruled paper.

Fresh scratch paper must be distributed at the start of each new test session. That is, when a student receives a new test ticket for login, a fresh sheet of scratch paper must be provided at that time. Once a test session is completed, used scratch paper must be returned with the test tickets to the Building Coordinator for secure shredding.

Students must write their names on the scratch paper. When students are given a break, the scratch paper must be collected and securely stored with test tickets until testing resumes.

If a student's name is clearly written on the used scratch paper, it can be returned to that student to use when resuming an in-progress test.

Paper/Pencil Testers: Mathematics

Scratch paper is allowed in all test sessions and test parts. For grades 3-5 this must be blank ruled or unruled, or (optionally) graph paper. Testers in grades 6-7 may be provided blank graph paper in place of blank ruled or unruled paper; however, students may also use the graphs in their test booklets to solve problems. Additional graph paper can be downloaded from the M-STEP web page (www.michigan.gov/mstep).

Fresh scratch paper must be distributed with each part of a test and students must write their names on the scratch paper. After students encounter a "stop" sign in the test booklets, scratch paper must be collected and securely stored until it can be returned with the rest of the test materials to the Building M-STEP Coordinator for shredding. If paper/pencil testers are provided a break not associated with a test part, then used scratch paper must be placed inside their closed test booklets.

Paper/Pencil Testers: English Language Arts, Science, and Social Studies

Scratch paper is allowed in all test sessions and test parts. For all grades this must be blank ruled or unruled paper.

Fresh scratch paper must be distributed with each part of a test and students must write their names on the scratch paper. After students encounter a "stop" sign in the test booklets, scratch paper must be collected and securely stored until it can be returned with the rest of the test materials to the Building M-STEP Coordinator for shredding. If paper/pencil testers are given a break not associated with a test part, then used scratch paper must be placed inside their closed test booklets.

Note: In order to prevent the use of an inappropriate writing utensil on the answer document, students should only have access to number 2 pencils during paper/pencil testing.

Mathematics: Online and Paper/Pencil

Grade	Graph Paper (required)	Graph Paper (optional)	Scratch Paper (available Universal Tool)
3		X	X
4		X	X
5		X	X
6	X		X
7	X		X

English Language Arts, Science, and Social Studies: Online and Paper/Pencil

Grade	Scratch Paper (available Universal Tool)
3	X
4	X
5	X
6	X
7	X
8*	X
11*	X

*Does not apply to English language arts.

APPENDIX C: M-STEP Incident Reporting Guide

Any testing irregularities that occur before, during, or after testing must be reported to the Office of Educational Assessment and Accountability (OEAA) within two school days. All incidents are required to be reported; do not neglect to report an incident if more than two school days have passed since you were aware of it. This table identifies the incident categories and sub-categories that are used in the Secure Site Incident Reporting tool and provides sample scenarios for each category or sub-category.

You will find detailed information on how to access and use the tool at the Secure Site Incident Reporting tool (www.michigan.gov/documents/mde/Incident_Reporting_520328_7.pdf).

Incident Category: Test Not Completed				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Test submitted prior to completion	Student accidentally ends/ submits the test without answering all questions	If 5 or fewer questions have been answered, contact the Call Center at 1-877-560-8378 Option 2. If more than 5 questions have been answered, an Incident Report is required.	N/A	Online: **Required** if more than 5 item responses Paper/ Pencil: N/A
Student became ill	Student becomes ill and goes home before finishing a test	Pause and Exit test (do not End test). Resume testing with the original test ticket in a makeup session.	Collect test materials and flag the last question answered. Students are not allowed to return to previously answered questions.	Online: **Optional** Paper/ Pencil: **Optional**
Student was removed from school by parent/ guardian	Student is removed from class by a parent or guardian during the test administration	Pause and Exit test (do not End test). Resume testing with the original test ticket in a makeup session.	Collect test materials and flag the last question answered. Students are not allowed to return to previously answered questions.	Online: No Incident Report Necessary Paper/ Pencil: **Optional**

Incident Category: Test Not Completed				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Student moved from school	Student transfers or moves from school with an incomplete content area test **NOTE:** Be prepared to accept a phone call from student's receiving school requesting information on test completion and needed accommodations or designated supports.	Submit an incident report with request for test to be marked **Do Not Score**.	Mark the answer document **Do Not Score** and return it in the Special Handling Envelope.	Online: **Required** Paper/ Pencil: **Required**
Do Not Score requested	Student has taken (or logged into) incorrect assessment (took M-STEP instead of MI-Access assessment) **NOTE:** A student who begins a test and subsequently becomes ill does not meet the requirements for the test to be marked **Do Not Score**.	Submit incident report with request for the test to be marked **Do Not Score.**	N/A	Online: **Required** Paper/ Pencil: N/A
Student does not complete test by end of day	Student does not complete testing by the end of the school day **NOTE:** Testing must be completed by the end of the grade-level testing window. There are no exceptions.	Pause and Exit test (do not End test). Resume testing with the original test ticket in a makeup session. (Schools should consider the ages and needs of their students and schedule intentionally planned breaks as appropriate.)	With proper planning and scheduling, this should be avoided. • Schedule all testing early in the day to allow students to complete required testing. The schedule must allow for students who require additional time. • Consider the multiple day testing designated support—this is allowable as **intentional** scheduling for some students who use additional supports. • Exceptions for individual students will be considered on a case-by-case basis.	Online: No Incident Report necessary Paper/ Pencil: **Optional**

APPENDIX C

Incident Category: Accommodation / Designated Support Issue				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper / Pencil Testers**	**Incident Report Required / Optional**
Designated support/ required accommodation not provided	Student is not provided appropriate designated support or accommodations	Test misadministration. Submit an Incident Report. For students with an IEP or Section 504 plan that requires the missing designated support or accommodation: A new test with appropriate designated support or accommodation may be administered with: • notification to and approval of parents or guardians • documentation provided that identifies required designated support or accommodation (such as IEP plan) For students who do not have an IEP or Section 504 plan the requires the missing designated support: A new test with appropriate designated support may be administered with: • notification to and approval of parents or guardians • signed documentation from the person responsible for day-to-day instruction in the content area affirming the student's daily use of the designated support during regular instruction	Test misadministration. Submit an Incident Report. Emergency test with appropriate designated support or accommodation may be administered with notification to and approval of parents or guardians. Original answer document must be marked **Do Not Score** and returned in the orange Special Handling Envelope.	Online: **Required** Paper/ Pencil: **Required**

Incident Category: Accommodation / Designated Support Issue				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper / Pencil Testers**	**Incident Report Required / Optional**
Nonstandard designated support/ accommodation provided	Nonstandard accommodation provided	The student's test is invalidated. Inform parents or guardians. Submit an Incident Report—working with the OEAA, in some cases students may be able to retest with the appropriate accommodation, if the student's parents and school agree it is in the best interest of the student. Perform an internal investigation as needed and keep the resulting documentation on file as Nonstandard Accommodations may be appealed during the Answer Document Verification window.	Mark the student's test as **Nonstandard Accommodation** on the answer document and return with scorable materials. The student's test is invalidated. Inform the parent or guardian. Submit an Incident Report—working with the OEAA, in some cases students may be able to retest with the appropriate accommodation, if the student's parents and school agree it is in the best interest of the student. Perform an internal investigation as needed and keep the resulting documentation on file as Nonstandard Accommodations may be appealed during the Answer Document Verification window.	Online: **Required** Paper/ Pencil: **Required**

APPENDIX C

Incident Category: Misadministration				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Wrong test administered	Student is administered the incorrect test (for example, an M-STEP test instead of a MI-Access test)	Inform parents or guardians. Students must be assigned to the correct test in the Secure Site and the appropriate test must be given in order to be included in accountability calculations. Submit an Incident Report—the test will be marked **Do Not Score**.	Inform parents or guardians. Mark the answer document with **Do Not Score** and return in the orange Special Handling Envelope. Student must be given the correct test in order to be included in accountability calculations — material orders should be ordered on the Secure Site using the normal additional material order process.	Online: **Required** Paper/ Pencil: **Required**
Wrong test ticket used	Student is issued wrong test ticket and begins the test	Stop the test as soon as the error is identified. Pause and Exit the test (do not End the test) Submit an Incident Report.	N/A	Online: **Required** Paper/ Pencil: N/A
Part missed or not administered	Student is not administered one part of a test	If it is identified within the testing window for the grade, administer the test. If it is past the testing window for the grade, submit an Incident Report. The test may not be administered.	If it is identified on the day of the administration or within the makeup window for the content area and grade, administer the test. If it is not identified on the test day or within the makeup window for the content area and grade, submit an Incident Report. **Important reminder:** This is for a Part missed in the test. It is not permissible to inspect answer documents for completion or to review student responses at this time.	Online: **Optional** Paper/ Pencil: **Optional**

Incident Category: Misadministration				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Wrong answer document used	Student uses wrong answer document when testing	N/A	If the wrong answer document is the correct grade and test, but has a wrong barcode label, then a new correct barcode label should be printed and affixed. An Incident Report is not required. If the answer document is the wrong grade and/or content, then mark the wrong answer document(s) used with **Do Not Score** and return in the orange Special Handling Envelope. Submit an Incident Report. (See **Answer document transcription required/ suggested** Incident Sub-Category on page 79 of this manual.)	Online: N/A Paper/ Pencil: **Optional**
Test not administered on scheduled day/time **For Spring 2021 only** use this sub-category for "Test not administered within scheduled testing window"	Test is administered outside of scheduled testing window	N/A	Mark student's answer document **Do Not Score** and return in the Orange Special Handling Envelope. Submit an Incident Report.	Online: N/A Paper/ Pencil: **Required**

APPENDIX C

Incident Category: Misadministration				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Other	Test administrator/proctor helps student by giving information other than test directions Test administrator/proctor indicating the correct answers to students Test administrator leaves students unattended during testing Secure materials are not kept secure before, during, or after test administration Test administrator/proctor or other building staff taking photos of test items or test environment Staff posting test items or content to social media during testing	Submit an Incident Report—working with the OEAA, the district may be able to quickly resolve issues.	Submit an Incident Report—working with the OEAA, the district may be able to quickly resolve issues.	Online: **Required** Paper/ Pencil: **Required**

Incident Category: Building Emergency				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Building emergency	Building emergency occurs during the test and requires student(s) to leave the room or otherwise interrupts testing	Address the building emergency—pause tests as appropriate/possible. Submit an Incident Report.	Address the building emergency—secure test materials as appropriate/possible. Submit an Incident Report.	Online: **Required** Paper/ Pencil: **Required**

Incident Category: Prohibited Behavior				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Electronics/ social media	Student(s) taking photos of test items, use of social media during testing.	The student's test will be marked Prohibited Behavior and invalidated. Inform parents or guardians. Perform internal investigation as needed and keep resulting documentation on file as Prohibited Behaviors may be appealed during the Answer Document Verification window. Submit an Incident Report.	Inform parents or guardians. Perform internal investigation as needed and keep resulting documentation on file as Prohibited Behaviors may be appealed during the Answer Document Verification window. Submit an Incident Report.	Online: **Required** Paper/ Pencil: **Required**
Other	Disruptive behaviors impacting testing session/ completion, cheating, use of calculator (mathematics) or dictionary/thesaurus (ELA) during non-permitted section of the test **NOTE:** The use of non-permitted tools results in test invalidation.	Students engaged in disruptive or egregious behavior must be removed from the testing room. Where feasible, students should be redirected and allowed to continue testing. Students engaged in prohibited behavior need not be removed from the testing room unless they are affecting other students. The student's test will be marked Prohibited Behavior and invalidated. Inform parents or guardians. Perform internal investigation as needed and keep resulting documentation on file as Prohibited Behaviors may be appealed during the Answer Document Verification window. Submit an Incident Report.	Students engaged in disruptive or egregious behavior must be removed from the testing room. Where feasible, students should be redirected and allowed to continue testing. Students engaged in prohibited behavior need not be removed from the testing room unless they are affecting other students. The student's test will be marked Prohibited Behavior and invalidated. Inform parents or guardians. Perform internal investigation as needed and keep resulting documentation on file as Prohibited Behaviors may be appealed during the Answer Document Verification window. Submit an Incident Report.	Online: **Required** Paper/ Pencil: **Required**

APPENDIX C

Incident Category: Technical Problems with Online Testing				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Repeated disconnections	Student(s) has repeated disconnections during testing session	Contact local tech support. Tech support can contact DRC Customer Support if they need additional help to resolve the matter. Submit an Incident Report.	N/A	Online: **Optional** Paper/Pencil: N/A
	Entire classroom has repeated disconnections during testing session	Contact local tech support. Tech support can contact DRC Customer Support if they need additional help to resolve the matter. Submit an Incident Report.	N/A	Online: **Optional** Paper/Pencil: N/A
INSIGHT freezing, crashing, or not advancing	INSIGHT stops working and the student(s) cannot continue testing	Contact local tech support. Tech support can contact DRC Customer Support if they need additional help to resolve the matter. Submit an Incident Report.	N/A	Online: **Optional** Paper/Pencil: N/A
Item functionality	An item on the test is not functioning as expected; for example, the student believes the correct answer cannot be selected	Instruct the student to answer as best they are able. Submit an Incident Report with the test and question number (if known), and computer used for testing (Windows PC, Mac, iPad, Chromebook).	N/A	Online: **Required** Paper/Pencil: N/A
Hardware failure	Power outage, internet connection interrupted through local error, stolen computers	If the problem is with just one computer, move the student to another computer and resume testing. If the problem will be resolved in sufficient time to complete testing (restore power or internet connection), continue testing another time or day. If online testing becomes impossible, file an Incident Report.	N/A	Online: **Required IF** it is necessary to move to emergency paper forms; otherwise optional Paper/Pencil: N/A

Incident Category: Technical Problems with Online Testing				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Other	Use this category if your technical problem does not conform to the listed technical issues.	Contact your local IT staff, or if further support is required, contact DRC Customer Support.	N/A	Online: **Optional** Paper/Pencil: N/A

Incident Category: Materials				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**IR Required/ Optional**
Answer document transcription required/ suggested	Students write in the wrong section of an assessment; wrong answer document used; a writing utensil other than a number 2 pencil is used on an answer document	N/A	Student must transcribe all responses exactly as recorded from the original answer document to a fresh answer document in a one-on-one proctored section. Print and affix a bar code label to the new answer document and return with the scorable materials. Original answer document must be marked **Do Not Score** and returned in the Orange Special Handling Envelope.	Online: N/A Paper/ Pencil: **Optional**
Answer document damaged, defective, or lost	Answer document becomes damaged in such a way that will impact scanning—ripped, torn; is defective upon arrival; or is lost during test administration.	N/A	Student must transcribe all responses exactly as recorded from the original answer document in a one-on-one proctored session. Print and affix a bar code label to the new answer document and return with the scorable materials. Original answer document must be marked **Do Not Score** and be returned in the Orange Special Handling Envelope. **NOTE:** Biohazards should not be returned. Any secure material with biohazardous material should be securely destroyed.	Online: N/A Paper/ Pencil: **Optional**

APPENDIX C

Incident Category: Other				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**IR Required/ Optional**
Other	Use this category only if an incident occurs that does not fit into the listed categories.	Varies	Varies	Online: **Optional** Paper/ Pencil: **Optional**

Incident Category: Staff Unethical				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**IR Required/ Optional**
Staff Unethical	District administration or management company needs to report an incident involving inappropriate test administration practices of District/Building Coordinators or Building Administration **Note:** When using this category, only the incident report submitter and anyone identified in the CC field of the report will receive notification of progress of this incident.	Submit an Incident Report; In working with the OEAA, the district may be able to quickly resolve issues.	Submit an Incident Report- In working with the OEAA, the district may be able to quickly resolve issues.	Online: **Required** Paper/ Pencil: **Required**

The Michigan Department of Education (MDE) has updated incident reporting requirements to ensure accurate and valid student-level assessment data for the specific situations described below; that is, if a student:

- becomes ill and leaves school early due to illness on the day that the test was completed and submitted
- spends fewer than 15 minutes testing and submits a test
- did not take prescribed medication prior to testing and completes and submits a test

These tests can be regenerated if the incident report is submitted on the date of the incident (by 11:59 PM) and parent permission is documented. If it is not possible to obtain documentation of parent permission on the date of the incident, the school must submit the incident report on the date of occurrence and provide documentation of parent permission subsequently.

Regeneration of any test for any of these listed reasons will only occur once; for example, if a student does not take his or her medication one day and the test is regenerated, and then the student subsequently tests without his or her medication a second time, a new test will not be regenerated. Or, if a student becomes ill and goes home on one test day, the test is regenerated, then if the student spends less than 15 minutes on the test on the next test day, the second test will not be regenerated.

Incidents Requiring Immediate Action (must be submitted by 11:59 PM on the date of occurrence)

Incident Category	Incident Sub-Category	Scenario	Response for Online Testers	Response for Paper/Pencil Testers	IR Required/ Optional
Test Not Completed	Student became ill	Student becomes ill, completes and submits test, and then goes home from school sick	Submit an Incident Report **on the date of occurrence by 11:59 PM** requesting regeneration Gather documentation that verifies: • Parental permission to retest (use form provided in OEAA Secure Site) • The student left school early due to illness	N/A	Online: **Optional** Paper/ Pencil: N/A

APPENDIX C

Incidents Requiring Immediate Action (must be submitted by 11:59 PM on the date of occurrence)					
Incident Category	**Incident Sub-Category**	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**IR Required/ Optional**
Misadministration	Other	Student submits test after spending fewer than 15 minutes testing	Submit an Incident Report **on the date of occurrence by 11:59 PM** requesting regeneration Gather documentation that verifies parent permission to retest (use form provided in OEAA Secure Site)	N/A	Online: **Optional** Paper/ Pencil: N/A
Misadministration	Other	Student takes test without prescribed medication	Submit an Incident Report **on the date of occurrence by 11:59 PM** requesting regeneration Gather documentation that verifies parent permission to retest (use form provided in OEAA Secure Site)	N/A	Online: **Optional** Paper/ Pencil: N/A

Incident Category: COVID-Related				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**IR Required/ Optional**
COVID-Related	Any COVID-related issue that does not conform to any other incident category **Note:** School closures should be submitted on the School Closings page of the OEAA Secure Site. Not Tested Issues should be submitted during the Accountable Students window.	varies	varies	Online: **Optional** Paper/ Pencil: **Optional**



Office of Educational Assessment and Accountability (OEAA)
E-mail: mde-oeaa@michigan.gov
Phone: 877-560-8378

Appendix A.4 M-STEP Test Administration Directions – Grade 11 Online



M-STEP Online Test Administrator's Directions and Manual Grade 11

Michigan Student Test of Educational Progress

Spring 2021

Michigan Department of Education
Office of Educational Assessment and Accountability

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MICHIGAN STUDENT TEST OF EDUCATIONAL PROGRESS

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The M-STEP Online Grade 11 Test Administrator's Directions and Manual includes all information that a Test Administrator needs to know to administer any grade 11 M-STEP assessment. With the exception of the Test Directions for content you will **not** administer, Test Administrators are required to read this document in its entirety **before** administering any grade 11 M-STEP assessment.

The following sections are included in this document:

- Overview
- Before Testing
- During Testing
- After Testing
- Online Test Administration Directions

Online Assessments Covered

These test directions apply to the following grade 11 assessments:

- Science
- Science with Text-to-Speech (TTS) enabled
- Social Studies
- Social Studies with Text-to-Speech (TTS) enabled

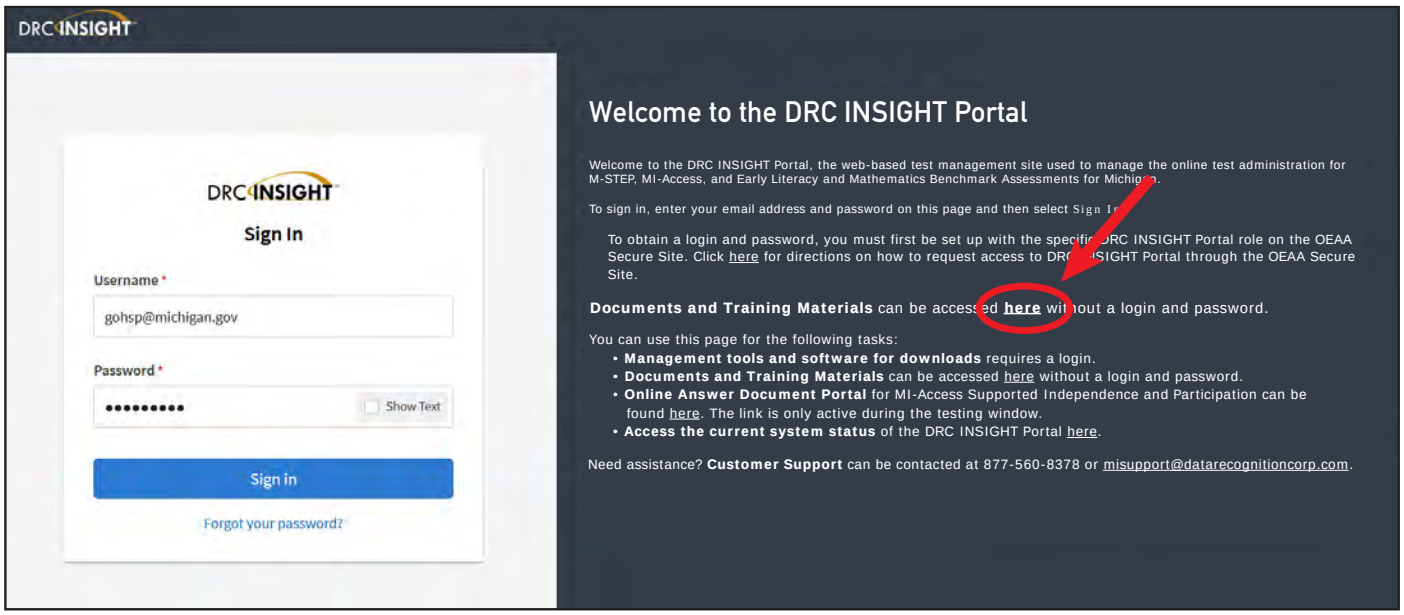
DRC INSIGHT Portal

Important Note: eDIRECT has been renamed **DRC INSIGHT Portal**. The URL has not changed. This manual now refers to eDIRECT as the DRC INSIGHT Portal (https://mi.drcedirect.com).

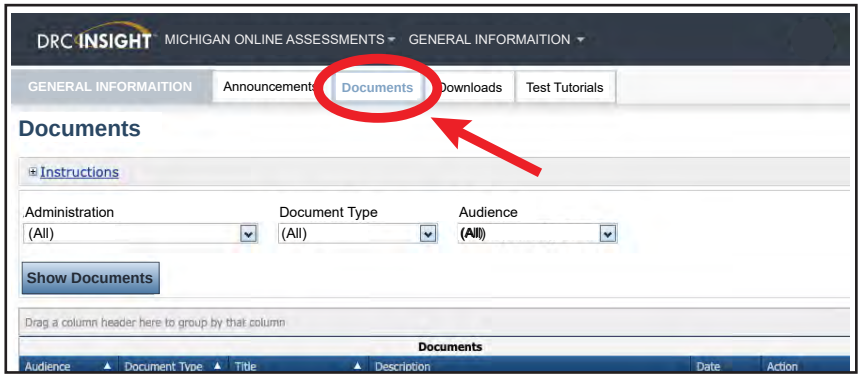
Instructions for easy navigation to documents in the DRC INSIGHT Portal are below.

Users can access documents and resources in the DRC INSIGHT Portal **(**https://mi.drcedirect.com).

Test Administrators select **"here"** in the **Documents and Training Materials** bullet point to view all of the materials that are available without secure access.



Then, select the Documents tab.



Key

Icons	Descriptions
	Speak the words in the shaded box.
TIP! TIP! Icon	This is a tip to help with a smooth testing experience.
Chromebook Icon	Information specific to Chromebooks

Online Tools Training (OTT) and Student Tutorials

The Online Tools Training (OTT) is an essential part of the testing process. For detailed instructions on how to administer OTTs, please refer to the Student Tutorials found on the DRC Insight Portal (https://mi.drcedirect.com) or INSIGHT. The Student Tutorials should be used to familiarize students with the functions and tools of the testing system. Additionally, the M-STEP Test Administration Manual (TAM) will provide more information about using OTTs as well as accessing and using the Student Tutorials.

Introduction

On January 25, 2021, the Michigan Department of Education (MDE) delivered a request to the U.S. Department of Education to waive certain assessment and accountability requirements of the federal Every Student Succeeds Act (ESSA) including the Spring 2021 M-STEP. To comply with current law, MDE and the Office of Educational Assessment and Accountability (OEAA) must continue to prepare for the required spring assessments in the event the USED does not grant our waiver request. Updates regarding the status of this request will be provided through the weekly Spotlight on Assessment and Accountability newsletter. Please know the health, safety, and well-being of students, educators, and their families is MDE's first priority.

What's New

Updates to Spring 2021 M-STEP testing were planned for Spring 2020 but were not implemented due to the cancellation of testing. These updates will be applied in Spring 2021.

The M-STEP science test will be operational in Spring 2021. The M-STEP science test assesses the Michigan K-12 Science Standards in grades 5, 8, and 11.

The M-STEP social studies test will continue to measure the Michigan Academic Standards for social studies that were adopted in 2007. The social studies test will have only one part for all grades assessed (5, 8, and 11). Students are allowed to take breaks during testing. Schools and districts should work with Test Administrators to determine when breaks are necessary and in the best interest of students.

To simplify the materials Test Administrators are required to read before testing, MDE has created updated Test Administrator's Directions and Manual documents (this document) for each grade by test mode (online and paper/pencil). These updated documents include test administration directions and other materials that cover everything Test Administrators need to know regarding test administration. This updated information would otherwise have been included in the Test Administration Manual (TAM). Therefore, Test Administrators are no longer required to read the TAM; however, they are required to read the Test Administrator's Directions and Manual (this document) before administering any M-STEP test session.

Text-to-Speech (TTS) is available for test directions ONLY on all test forms except Video Sign Language (VSL) and Spanish for all students. Building and District Assessment Coordinators may decide whether to use the TTS Directions or to read test directions aloud for each test session. The test administration directions include detailed information for tests to be administered using the TTS Directions and for tests that are administered without TTS Directions.

In order to help with Test Schedule development, MDE has provided recommendations for test time estimates, test sessions, and breaks within sessions on page 7 of this manual. These are recommendations to assist districts and buildings in the development of testing schedules—they are not required.

Assessment Security training requirements have been updated for Spring 2021. Test Administrators and Proctors are required to

- complete the MDE Assessment Security online course **and/or** read the Assessment Integrity Guide (determined by the District or Building Coordinator)

Any educators who completed the Assessment Security training modules in the past are allowed to take the Assessment Security Refresher course in place of the full Assessment Security Training modules. More information about the Assessment Security Refresher course is available on the M-STEP web page (www.michigan.gov/mstep) under the **Professional Development** section.

Also new for Spring 2021: students using the embedded calculator will view the Desmos calculator. In grade 11 science, the scientific calculator includes exponential, algorithmic, trigonometric, and factorial functions.

A new feature of DRC INSIGHT for Spring 2021 is Extended Retries. With this new feature, if there are any connectivity issues, instead of displaying an error message after three attempts to reconnect, the system will continue to attempt reconnection for five minutes. The error message will display, instructing the student to raise his/her hand for help while continuing to attempt reconnection. If the system is able to reconnect, the error message will close and the student can resume testing. **Note:** It is possible that a student will see the error message but the error is resolved before the Test Administrator has had time to reach the student. If this occurs, the Test Administrator should instruct the student to resume testing.

Science

The M-STEP science test is operational in Spring 2021. The M-STEP science test assesses the Michigan K-12 Science Standards in grades 5, 8, and 11. This is a fixed-form online or paper/pencil test. This year, the test will have:

- one test ticket and one part in grade 11 for online testers

The test will include seven clusters for each grade assessed.

- **Cluster** – a stimulus (or context) about a phenomenon and a set of 5-8 related items designed to assess all performance expectations (standards) in one topic bundle
- **Topic Bundle** – a group of related performance expectations (standards) that are assessed as a group

Calculator Policy for Science Assessments

Students in grades 5, 8, and 11 are allowed to use calculators for both the online and paper/pencil science assessment.

Embedded Calculators are Provided for Online Testers in Grades 5, 8, and 11 Science Assessments

Students in grades 5, 8, and 11 taking a science online test will use the calculator embedded in the online delivery engine. The Desmos calculator will be available for all items on the science test.

- Grades 8 and 11 include the scientific calculator. This comprehensive calculator performs square root, exponential, logarithmic, trigonometric, and factorial functions, as well as the four arithmetic functions. Answers display automatically without the need for the user to select "enter".

The Desmos calculator used for the science assessment is the same calculator available on the grades 6 and 7 mathematics assessments.

The state's full **Calculator Policy** can be found in Appendix A. Coordinators and/or Test Administrators may copy and share the policy in its entirety with others involved in testing.

Social Studies

Social studies is assessed in grades 5, 8, and 11 with a fixed-form online or paper/pencil test. The Spring 2021 M-STEP assessments are based on the 2007 Michigan K-12 Social Studies Standards and do not reflect any changes in the recently approved 2019 Social Studies Standards. The test will have:

- one test ticket and one part in grades 5, 8, and 11 for online testers

The Michigan Merit Examination

The Michigan Merit Examination (MME) is administered to grade 11 students and consists of the SAT® with Essay, ACT® WorkKeys®, and M-STEP summative assessments in science and social studies. Because testing was canceled in Spring 2020 only first-time 11th graders are required to take the MME. Repeating 11th graders and 12th graders may choose to participate in the full MME if they are missing a component. To learn more about requirements and eligibility for taking the MME as well as information on administering the MME, go to the MME web page (www.michigan.gov/mme).

Test Administrator's Directions and Manual

New for Spring 2021: The test directions documents have been expanded to include all information that a Test Administrator will need to know. This means that Test Administrators are no longer required to read any section of the Test Administration Manual (TAM)—everything they need is in the Test Administrator's Directions and Manual document (this document).

Text-to-Speech Test Directions

New for Spring 2021: Text-to-Speech (TTS) test directions are available for all students. District and/or Building Assessment Coordinators determine whether TTS Test Directions will be used in the district and/or school.

To use TTS for test directions, Test Administrators will follow the "TTS Directions Only" section of the test directions in the Test Administrator's Directions and Manual. These directions provide introductory information and test verification, then direct students to select the "Play" button to listen to the directions. **Note:** All students must have headphones in order to use TTS for test directions. **Test administration directions are explicit and must be followed exactly as written.**

Scratch Paper Guidelines

Scratch paper use varies by test, grade, and content area. Review the state's full **Scratch Paper Policy** in Appendix B.

Designated Supports and Accommodations

The Michigan Supports and Accommodations Guidance Document, which includes the **Supports and Accommodations Tables**, presents appropriate Universal Tools, Designated Supports, Accommodations, identification processes, classroom considerations, and guidelines for all state assessments. The document can be found on the M-STEP web page (www.michigan.gov/mstep). Guidance in the documents pertains to general education students, as well as to English learners (ELs), students with disabilities (SWDs), and students who are considered ELs and are also identified as SWDs.

Call Center Contact Information

The Office of Educational Assessment and Accountability (OEAA) has a call center to answer questions related to M-STEP testing.

Agents are available to receive questions at the following toll-free phone number and email address during the specified hours.

- **Call:** 1-877-560-8378
- **Email:** mde-oeaa@michigan.gov
- **December 1, 2020 - April 12, 2021:** 8:00 AM–5:00 PM (M–F)
- **April 12, 2021 - June 4, 2021:** 7:00 AM–5:00 PM (M-F)

The following table shows the options related to the M-STEP that are available on the call center phone menu. Select the appropriate option when contacting the OEAA, either through our toll-free number (877-560-8378) or the Lansing-area local number (517-241-4102).

Topic	Option
Known or suspected cheating or unethical testing practices on any state assessment	1
DRC INSIGHT Portal, INSIGHT, Central Office Services (COS), or online assessment tools related to the online M-STEP	2
OEAA Secure Site, testing policies and paper/pencil materials regarding the M-STEP, MI-Access, and Accountability reporting	3

OEAA Communications with Schools and Districts

Keeping educators up to date regarding changes in assessment and accountability is critical. The OEAA communicates with the field in a number of different ways, including:

- **Spotlight on Student Assessment and Accountability weekly newsletter** – sign up to receive the newsletter and/or read archived copies on the Spotlight web page (www.michigan.gov/mde-spotlight)
- M-STEP web page (www.michigan.gov/mstep)
- DRC INSIGHT Portal (https://mi.drcedirect.com)
- the Announcement page on the OEAA Secure Site (www.michigan.gov/oeaa-secure)
- targeted email communications for important or urgent communications during the testing window (targeted emails are sent to the persons who have assigned roles in the Educational Entity Master [EEM]; it is important that all roles are current and contact information is up to date)
- presentations at state conferences, including the Michigan School Testing Conference held each year in February

Check these sources regularly to stay up to date on assessment- and accountability-related issues and activities.

Standardized Testing

Uniform procedures are essential to a standardized testing program. To ensure comparable scores, all testing staff must follow the same testing procedures and give instructions exactly as they appear in this manual.

Ensure that you and all testing staff comply with all applicable laws, including those relating to discrimination. By strictly following policies and procedures, you give students the best guarantee of fair testing and the best possible test day experience.

Test Session Timings

Spring 2021 M-STEP Test Session Timings

Content Area	Grade 11
Science	1:30
Social Studies	0:30
College Entance*	4:07
Work Skills	3:00
Estimated Total Hours	9:07

*Includes scheduled breaks

Assessment Security

The primary goals of test security are to protect the integrity of the assessment and to ensure that results are accurate and meaningful. Test security is integral in ensuring that no student has an unfair advantage or a disadvantage in assessment performance.

The Assessment Integrity Guide (AIG) was revised and updated in November 2020. This document, available for download on the M-STEP web page (www.michigan.gov/mstep), details how state-level assessments should be securely administered. The AIG also includes information on the roles and responsibilities of testing staff, test preparation, administration irregularities, and security. Coordinators are required to read the AIG in its entirety. By following the guidelines in the Assessment Integrity Guide, schools ensure that:

- student test results are valid and reliable
- the testing context is equitable for all students
- all practices are ethical

The Michigan Department of Education (MDE) also provides the Assessment Security online course through Michigan Virtual (http://bit.ly/MDEAssessmentSecurity). This four-module training series is used to train building staff on the importance of test security by following the Assessment Integrity Guide. Upon completion of the four modules and demonstration of knowledge on a short test, participants will receive a Certificate of Completion, which must be retained on file with signed security compliance forms. After successful completion of this training, staff are required to participate in the refresher course in subsequent years.

Assessment Training

The District Assessment Coordinator is responsible for providing clear and comprehensive annual training on test administration and security procedures to building-level staff; the coordinator must comply with state assessment requirements.

Assessment Security Training

All staff members who participate in a state assessment must be fully trained in assessment security.

District/Building Assessment Coordinator Training Requirements:

- Complete the MDE Assessment Security online course through Michigan Virtual (http://bit.ly/MDEAssessmentSecurity).
- Read the Assessment Integrity Guide.

Test Administrators/Room Supervisors/Proctors Training Requirements:

- Read the Assessment Integrity Guide.

AND/OR

- Complete the MDE Assessment Security online course through Michigan Virtual (http://bit.ly/MDEAssessmentSecurity).

Technology Coordinators and Other Staff (anyone who handles or has access to secure materials) Training Requirements:

- Read the Keeping Assessment Materials Secure training document, which is available in the Assessment Integrity Guide (AIG) in Appendix E.

Note: Assessment Security Training does not replace mandatory assessment administration training.

Material Security

- All materials that allow access to or contain test questions or student responses are considered secure materials and must be handled in a way that maintains their security before, during, and after testing. This includes paper/pencil materials, accommodated materials, used scratch paper, online test tickets, and test rosters.

- All secure materials must be retained in one secure, locked location within the school. During the test administration window, the materials must be distributed and collected daily.
- Test tickets used to log students into each online test are considered secure materials and must be treated as such. Test rosters, which automatically print along with test tickets, are also considered secure.
- All used scratch paper (including graph paper) must be collected and returned to the building M-STEP Coordinator immediately after testing, to be shredded. No used scratch or graph paper may be kept in the classroom. Used scratch paper must never be taken from one test session to another.
- No test materials that contain test questions or student responses may be copied at any time or retained in the schools.
- The use of cameras or cell phones and the posting of pictures to social media sites during testing is an enormous security risk. Therefore, students or testing personnel may not take photographs at any time during testing. If students violate this policy, their tests will be marked "Prohibited Behavior" and no emergency tests will be permitted.

Test Administration

All testing staff must adhere to these guidelines.

- Ensure an appropriate testing environment is maintained.
- Begin all standardized test administration procedures according to the explicit directions in this document.
- If not using the Text-to-Speech (TTS) for directions option, read test directions to the students exactly as they are written, as required.
- Monitor student behavior closely for adherence to proper test-taking practices. Ensure that there are no distractions during the test administration period, including talking, noises, and other interactions among students; prevent students from viewing another student's computer screen or answer document.
- Ensure that students whose IEP and/or section 504 plan requires them to use Universal Tools, Designated Supports, and Accommodations have these available to them at the time of testing.
- Ensure that any student who needs an allowable Universal Tool or Designated Support has these resources available to them at the time of testing.
- Maintain material security.

Security Compliance

All staff involved in the administration of M-STEP tests must read and sign an Office of Educational Assessment and Accountability (OEAA) Assessment Security Compliance Form, affirming that they have read the required assessment materials related to their role in the M-STEP administration process, and that they understand their role and responsibilities. Completed forms are required from Technology Coordinators, District and Building Test Coordinators, Test Administrators, proctors, and all other staff or volunteers with access to secure test materials or student responses. All OEAA Assessment Security Compliance Forms must be returned to the District M-STEP Coordinator and kept on file for three years.

Anyone involved in the administration of the M-STEP is obligated to report any suspected violations of test security.

Training Requirements and Resources for Students

Resources for Students to Prepare for Testing

A number of resources and tools have been developed to help students gain valuable experience with testing. The resources for online testing may be accessed in the **Accessing Online Tools Training** mini-module available on the DRC INSIGHT Portal (www.mi.drcedirect.com) by selecting **Show Documents**. Instructions for easy navigation to documents in the DRC INSIGHT Portal are on page 2.

Available resources include:

- grade-level Sample Item Sets
- sample essay prompts
- Student Tutorials (for use with classrooms of students to provide an overview of what they will practice using the OTTs)
- Online Tools Trainings (OTTs) for general education students
- OTTs for students using Supports and Accommodations

It is highly recommended that schools provide students with opportunities to practice using these resources before they take the online or paper/pencil tests.

Online Student Tutorials

Online Student Tutorials are designed to be viewed with students in a classroom environment to provide an overview of the INSIGHT testing engine and tools. It is a companion activity that prepares students for the Online Tools Training (OTTs). The tutorials are not a substitute for the hands-on practice that the OTTs provide.

The tutorials are available in two places.

- DRC INSIGHT Portal (https://mi.drcedirect.com) – select "here" in the **Documents and Training Materials** bullet point and then select select the Test Tutorials tab. Instructions for easy navigation to documents in the DRC INSIGHT Portal are on page 2.
- INSIGHT testing engine – select the tutorial link at the bottom of the screen

Online Tools Training for Students

Online Tools Trainings (OTTs) allow students to see what different test items look like and to practice using the online testing tools. Before the testing software is installed, you must use the Google **Chrome** web browser to access the OTTs at the OTT Portal (https://wbte.drcedirect.com/MI/portals/mi/). **Note:** If Chrome is not your default browser, you will need to copy and paste this url address into a CHROME web browser. You can access the OTTs through the testing software, once it is installed.

OTT resources include:

- all ELA, math, science, and social studies OTTs
- masking (Designated Support)
- color choices/contrasting color (Designated Supports)
- mathematics stacked Spanish translation (Designated Support)
- text-to-speech (TTS):
  - ELA and mathematics TTS – items only (Designated Support)
  - ELA TTS – items and passages (Accommodation)
- Video Sign Language (VSL) (Accommodation)

Providing students with ample practice opportunities will ensure they are familiar with the test content, item types, navigation strategies, and system tools on test day.

Before Testing Checklist

- ☐ With the exception of the Test Directions for content you will **not** administer, Test Administrators are required to read this document in its entirety **before** administering any grade 11 M-STEP assessment.
- ☐ Complete the MDE Assessment Security online course **and/or** read the Assessment Integrity Guide (determined by the District or Building Coordinator)
- ☐ Sign the OEAA Assessment Security Compliance Form
- ☐ Verify INSIGHT software is installed on all testing devices
- ☐ Ensure you know how to launch INSIGHT on the device students will be using to test
- ☐ Ensure students have viewed the student tutorials and practiced using the OTTs
- ☐ Ensure student's Designated Supports and/or Accommodations (if applicable) have been set and/or that all materials necessary to administer assigned Designated Supports and/or Accommodations are available, such as headphones for TTS
- ☐ If administering using TTS—either for directions only or as a Designated Support—ensure that headphones are available
- ☐ Clearly understand the scheduled testing time, including planned breaks
- ☐ Prepare the classroom for testing:
  - ➢ Remove or cover all classroom instructional materials that may affect the validity of the assessment. All instructional materials must be removed or covered. This includes all information regarding the content area of the test being administered or test-taking strategies. Examples include, but are not limited to:
    - » tips for taking tests
    - » content displays
    - » word lists
    - » writing formulas
    - » definitions
    - » mathematical formulas/theorems
    - » multiplication tables
    - » charts or maps

    Note: The INSIGHT Tools poster is allowed if it is posted in the classroom (not at students' desks).
  - ➢ Ensure student testing devices are positioned in such a way that students cannot easily read another student's screen or interact with one another.
  - ➢ If using portable testing devices, such as a laptop, iPad, or Chromebook, ensure the devices are connected to a power source (preferred) or fully charged.
  - ➢ Check to make sure there are no test tickets or scratch paper left over from another testing session. If found, return to the Building Test Coordinator.
  - ➢ Verify the testing room will be free of distractions for the duration of the test session.
- ☐ Obtain a student test ticket for each student who will be testing. Test tickets are secure materials and should be securely stored until you are ready to pass them out. Students will require a separate ticket for each part of the test. See chart below on number of test tickets needed for each assessment.

Assessment	Number of Test Tickets Required
Social Studies	One
Science	One

- ☐ Make note on the test roster of the test tickets you are distributing. Use the test roster to verify you have collected all tickets after students have signed in.

Test Materials Needed for M-STEP

Materials Needed by Test Administrator	Materials Needed by Students
This booklet	Test ticket
Class set of test tickets and roster for the test session being administered	Testing device
	Pencil (optional—needed if scratch paper is used)
	Headphones for TTS as a Designated Support or TTS for Directions Only
	Blank scratch paper (optional—Universal Tool)
	Scientific calculator for science.

TIP! *Take a few minutes to review all the parts of this document you will need to read aloud during testing. Use sticky notes or sticky flags to give yourself a quick reference to the next set of directions to read.*

CHROMEBOOK: *If your students are testing on a Chromebook, there are a few additional tasks you'll need to be aware of. It is important to review the information on* *page 18* *BEFORE the first day of testing to ensure a smooth testing experience.*

Important Tasks During Testing

The following tasks should be performed in the order listed.

Managing Student Test Tickets

Test tickets and rosters are secure materials. Once printed, they must be kept in a secure location until the test session is scheduled to begin. Test Administrators are instructed to distribute test tickets just prior to student login, and to collect test tickets after all students have logged in and begun testing.

Only one test ticket should be distributed at a time; students should not have access to any test ticket other than the test the student is currently taking.

After a testing session is complete, the Test Administrator should return all test tickets (and rosters, if printed) to the Building M-STEP Coordinator for:

- destruction (if all students finished the test)

OR

- secure storage (if students have not completed the test)

Tip! *Some schools sort test tickets into envelopes for "complete", "in progress", and "not started" to help manage test tickets.*

Verifying Supports and Accommodations on Test Tickets

For students with Supports and Accommodations, some of those Supports/ Accommodations will be displayed at the bottom of their test ticket (see the bold text on the sample test ticket below).

M-STEP Spring 2021
Test Ticket - G11 SS - part 1

Student Name: Smith, John J.
Date of Birth: 11/3/20XX

Username: **JSMITH1**
Password: **234K79HQ**

(Note: Username and password are not case sensitive)
Universal Tools - Designated Supports - Accommodations: **MSK**
Test Session: gr 8 ss

Online Supports and Accommodations are abbreviated on the test tickets as follows:

Online Supports / Accommodations	Test Ticket Abbreviation
Abacus	A
Auditory Amplification	AA
Alt communication devices	ACD
Administered Individually/ Small Group	AISG
Sign Language ASL Video	ASL
Administrator Sign Test Content in ASL	ASTC
Administrator Sign Test Directions in ASL	ASTD
Bilingual word-to-word dictionary	BWWD
Color Choices	CC
Continuous Magnification	CM
Closed Captioning	CCAPTION
Contrasting Color	CTC
Masking	MSK
Noise Buffers	NB
Non-embedded Calculator	NEC

Online Supports / Accommodations	Test Ticket Abbreviation
OEAA Multiplication Table	OMT
Oral Translated Test Directions	OTTD
Read Aloud (Human Reader)	RAHR
Scribe (Non-Writing items)	SNWI
Spanish Translation (Stacked)	ST
Scribe (Writing items)	SWI
Text-To Speech (Items Only)	TTS
Text-to-Speech (Items & Passages)	TTSPASSAGE
Visual Aids	VA

Test Administrators need to know which Universal Tools, Designated Supports, and Accommodations are needed for all students prior to the test administration.

Students or Test Administrators will be required to turn on some Accommodations once the student has launched INSIGHT.

Permitted Items in Testing Room

Students may only have required testing materials and any Accommodations specified in the student's IEP, Section 504 Plan, and EL instruction documentation at their work spaces during testing.

Item	Permitted?
Pencil	YES – If students are provided scratch paper as a Universal Tool.
Highlighter	NO – A highlighting function is included within the test engine.
Additional paper (provided by School/ District)	YES – Blank scratch paper is *allowed* for ELA, social studies, science, and mathematics as a Universal Tool.
Calculator	YES – Scientific calculator is allowed for science only. All programmable calculators must be set to TEST mode during testing.
CD and DVD Players	NO – Not needed for online testing.
Headphones (provided by School/ District)	YES – For students using the TTS Designated Support or if TTS for Directions Only will be used. NO – For students not using the TTS Designated Support or TTS for Directions Only.
Non-academic reading material	YES – Non-academic reading material is allowed for student use **after** testing is completed. Electronic formats are **not** allowed. Reading material must be a traditional book or magazine. Reading material must be kept off work surface until the test has been submitted.

Providing Assistance

It is important to understand the difference between helping students understand test directions and online tools and helping them with their responses. With the exception of making sure students understand the directions and implementing any approved Universal Tools, Designated Supports, or Accommodations, test administrators and proctors **may not give help of any kind** to students during this test. This includes defining or pronouncing words, reading any part of the test aloud to students, or manipulating tools. These activities are not appropriate and will result in test scores being invalidated.

Student Log In and Questions

- **Assisting a student to log in:** if a student is struggling to log in, the Test Administrator should first verify that the student has selected the M-STEP assessment on the INSIGHT screen (and not the OTTs). Next, the Test Administrator can tell the student that login and password are not case sensitive and observe the student typing the login and password. If the student is still unable to login, the Test Administrator may type the student login and password with the student observing.
- **Answering student questions:** Test Administrators must not help students with any content of the test.
  - Prohibited practices include (but are not limited to):
    - providing hints
    - defining any words
    - helping to read or pronounce any word
    - pointing out important information in the question or suggesting a student read a certain section of the item or highlight any part of the question
    - in any way provide any verification of a correct/incorrect answer if asked by a student

    Any of these activities are inappropriate and violate ethical test administration practices and will result in test scores being invalidated.
  - Allowable practices include:
    - telling the student to "do their best work"
    - telling the student to select their best answer for a question

Procedures for Testing Breaks, Interruptions, or Pauses

If a student needs to pause their test for a few minutes, use the **blue Pause button** in the tool bar along the bottom of the screen. Once the **Pause** button is selected, the test questions are removed from the screen (for test security reasons), and the student has up to 20 minutes to return and resume testing before being logged out of the test.

If a student needs to exit the test to move to another workstation or to resume at a later time, select the **Pause** button, select the **Exit** button, and then select the **Yes, Exit** button on the pop-up screen. The student will need their test ticket to log in again. The test will remain "In Progress."

Test Directions – All M-STEP Grade 11 Assessments

Introduction

1. The Introduction section of Online Test Directions is the same for all online tests. Insert the test name in the appropriate blank as you read the directions to students. (Page 26 lists pages for subject-specific directions that are read after the Introduction for schools administering the M-STEP without TTS for Directions Only.)
2. Make sure that each student is sitting at a separate testing device and that each device is turned on and the desktop/home screen is visible.
3. Make sure that no student is in possession of a cell phone, camera, or other personal electronic device. Any electronic devices must be powered off and stored away from the students' work area at all times during a test session.

Instruct students that they should not open anything on their computers until they are told to do so. The device desktop/home screen should be visible until you instruct students to open INSIGHT. Distribute and ensure students have all allowed test materials.

TIP! *Make note on the test roster of the test tickets you are distributing. Use the test roster to verify you have collected all tickets after students have signed in.*

SAY: Welcome to the M-STEP (Insert Name of Test**) _____. We are now ready to begin. It is important that you give this test your best effort so that you can show yourself, your teachers, and your parents what you know and can do. Please carefully follow these directions. Do not select anything on your computer until I tell you to do so.**

I will now pass out your test ticket.

Pass out test tickets.

SAY: Each of you now has a test ticket. Check to make sure that your name and correct date of birth appear on the test ticket and it has the correct name of the assessment (Name of assessment) **_____. Raise your hand if your test ticket does not have your name, your correct date of birth, or the correct assessment name on it.**

Correct any ticket distribution errors. If a test ticket contains incorrect student information, report the issue to your Building Assessment Coordinator immediately.

M-STEP Spring 2021
Test Ticket - G11 SS - part 1

Student Name: Smith, John J.
Date of Birth: 11/3/20XX

Username: **JSMITH1**
Password: **234K79HQ**

(Note: Username and password are not case sensitive)
Universal Tools - Designated Supports - Accommodations: MSK
Test Session: gr 8 ss

TIP! *A list of Accommodations and the abbreviations used are available on* page 13.

If your school is using scratch paper as a Universal Tool, read the following section:

SAY: I will now pass out scratch paper for you to use during your test.

Pass out scratch paper.

If headphones are needed, read the following section:

SAY: I will now pass out headphones to use during your test.

Pass out headphones.

Test Sign-In

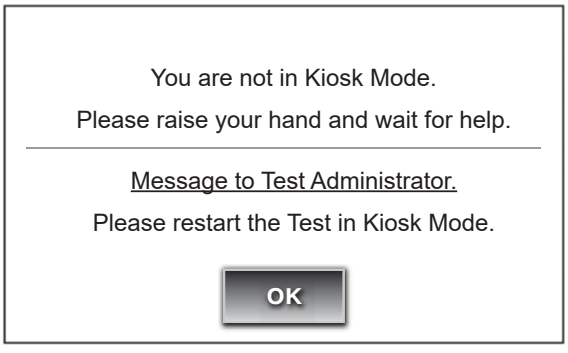
SAY: Now we are ready to begin. First, launch INSIGHT on your computer (or iPad). You should see the Michigan Department of Education screen with a picture for M-STEP, a picture for MI-Access, and a picture for Early Literacy and Mathematics. Is there anyone who does not see this screen?



Pause to assist students if necessary. If a student receives an error message, note the content of the error message and contact the M-STEP Technology Coordinator or M-STEP Building Assessment Coordinator. It is acceptable to move the student to another computer.

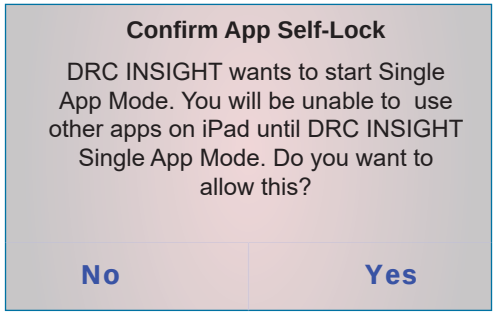
CHROMEBOOK: *Students can NOT be logged in to a Google account. As a guest, they should be directed to launch INSIGHT by selecting "apps" from the taskbar. This will launch INSIGHT in "kiosk mode." If the app is launched while signed in to a Google account, they will receive an error.*

Login steps are the same as for the desktop/laptop version, except that students will use their finger to move the cursor (instead of a mouse). MDE recommends that students use an external keyboard, and if they've already been taught, they can use the "tab" key to move the cursor between fields.



Chromebook Not in Kiosk Mode
Error Message

TIP! **Note about iPads:** When testing on iPads, after logging in to the test, students will receive the following message:



Students should be instructed to select "Yes" which will open the test sign-in screen.

When all students are ready,

SAY: On the left-hand side of the screen, under M-STEP, select Test Sign In. You should then see the sign-in screen appear. Is there anyone who does not see the sign-in screen?

Pause to assist students as necessary.



Welcome Screen

When all students are ready,

SAY: You may now enter your Username and Password in the spaces provided on the screen. Your Username and Password are found on your test ticket. If you need assistance, please raise your hand. When you have finished entering your Username and Password, select the Sign In button in the middle of the screen.

Please do not go ahead. We will do several screens together.

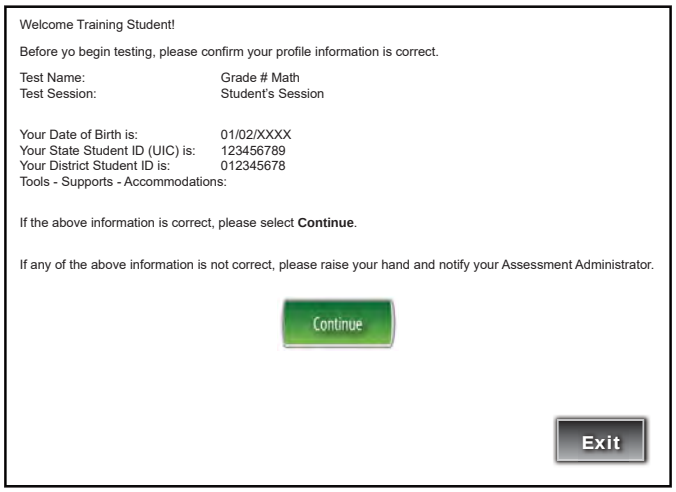
Pause while students enter their login credentials. Assist students as necessary to enter the information. Remember: Usernames and Passwords are unique to each student and to each grade/content/part; Usernames and Passwords are **not** case sensitive. The student's date of birth should be used to verify that the correct test ticket is given to a student.

TIP! *If a student receives an "invalid login," select the "back" button in the bottom left corner of the sign-in screen. Select Test Sign In below the M-STEP icon (be sure you are not selecting below the MI-Access or Early Literacy and Mathematics icons or the OTT) and try again. Verify correct Username and Password have been entered.*

When all students are ready,

SAY: When you have selected the Sign In button, a welcome screen with your name opens. Is there anyone who does not see the welcome screen with your name?

Pause to assist students as necessary.

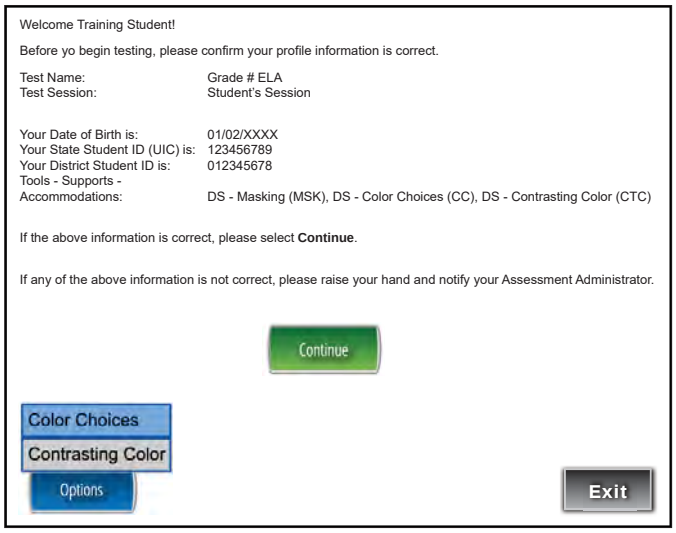


Welcome Screen with No Accommodations

When all students are ready,

SAY: Look at the information on the welcome screen and make sure that the following facts about you are correct:

- **Your first name, middle initial (if available), and last name**
- **Your test name**
- **Your test session**
- **Your date of birth**
- **Your State Student ID (also called your UIC)**
- **Your District Student ID (if available)**



Welcome Screen with Color Chooser Option

TIP! *This screen is the first opportunity to turn on the color Accommodations for **students with vision impairments that require one or more of these Accommodations**. Color Choices (CC) and Contrasting Color (CTC) are available using the Options button when assigned in the DRC INSIGHT Portal by the Building Assessment Coordinator. You may need to assist these students.*

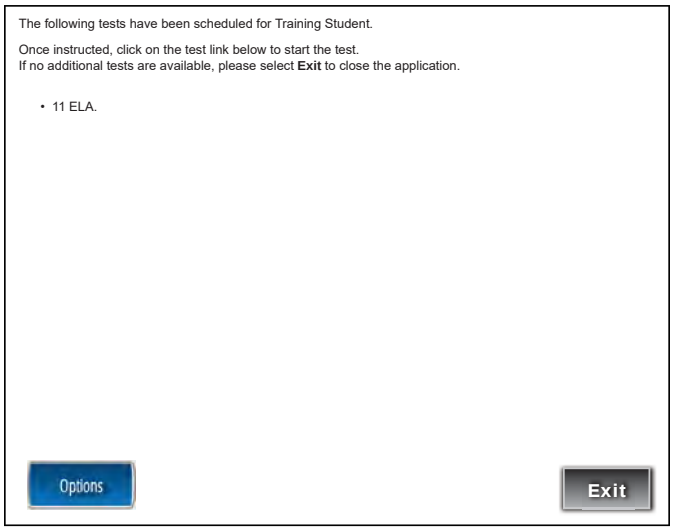
SAY: If the information about you is correct, select the Continue button. If the information is not correct, raise your hand.

Pause to assist students as necessary.

When students are ready,

SAY: After you have selected the Continue button, the test selection screen will open. Is there anyone who does not see the test selection screen?

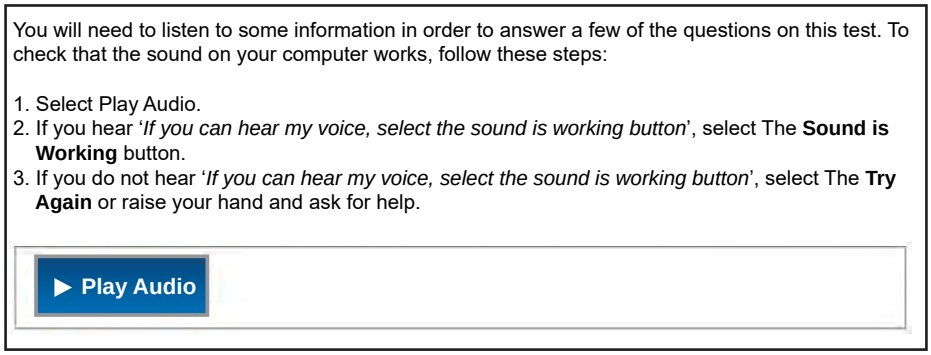
Pause to assist students as necessary.



- If you are administering this assessment with TTS for Test Directions Only, go to page 23.
- If you are administering this assessment without TTS for Test Directions Only, go to page 24.

For Administration with TTS Directions Only – All Grade 11 Tests

SAY: Use your pointer to select (test name). **Once you have selected the test name, the audio check screen should open. Is there anyone who does not see the audio check screen?**



SAY: You will need to listen to some information in order to answer a few of the questions on this test. To check that the sound on your computer works, follow these steps:

1. **Select Play Audio.**
2. **If you hear "If you can hear my voice, select The Sound is Working button," select "The Sound is Working" button.**
3. **If you do not hear "If you can hear my voice, select The Sound is Working button," select "Try Again" or raise your hand and ask for help.**

TIP! *If a student's headphones are plugged in and the volume on the headphones is turned up but the student does not hear the test, the student must log out, close INSIGHT, and verify that the computer volume is turned up and not muted.*

When all students are ready,

SAY: When you are listening to the test directions, you can increase the volume by selecting the Options button. You can pause by selecting the pause button or stop the directions by selecting the stop button.

You will listen to several directions screens that will tell you what you are allowed to do and what you are not allowed to do during the test. It will also show you the tools that are available to you during the test.

Be sure to listen to these directions carefully. Does anyone have any questions?

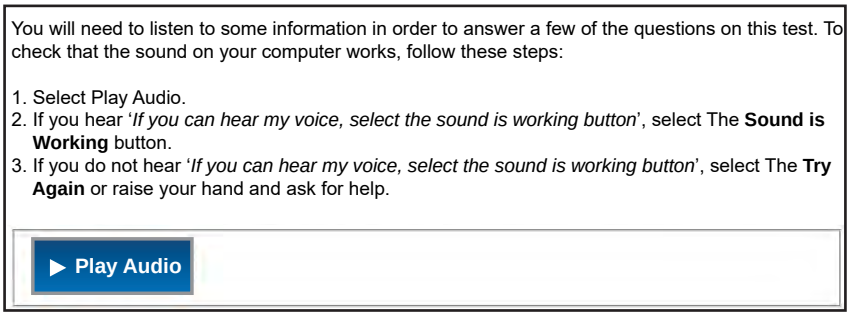
Answer any questions.

SAY: If you have any questions after listening to the directions, raise your hand and I will come over to answer your question.

Select the blue play button on your screen to listen to the directions.

For Administration without TTS Directions Only – All Grade 11 Tests

SAY: Use your pointer to select (test name). **Once you have selected the test name, the audio check screen should open. Is there anyone who does not see the audio check screen?**


You will need to listen to some information in order to answer a few of the questions on this test. To check that the sound on your computer works, follow these steps:

1. Select Play Audio.
2. If you hear '*If you can hear my voice, select the sound is working button*', select The **Sound is Working** button.
3. If you do not hear '*If you can hear my voice, select the sound is working button*', select The **Try Again** or raise your hand and ask for help.

▶ Play Audio

If you are administering the test without TTS for Directions and have **no students** using the TTS Designated Support:

SAY: This screen plays an audio check. You will not be using any audio on this test. Press the "Play Audio" button, you may not hear anything, but in a moment a green button that reads "The Sound is Working" will appear. When you see the green "The Sound is Working" button, select this button to move to the next page and wait for further instructions.

If you are administering the test without TTS for Directions and have **some students** using the TTS Designated Support:

SAY: This screen plays an audio check. If you have not been provided headphones, you will not be using any audio on this test. Press the "Play Audio" button, you may not hear anything, but in a moment a green button that reads "The Sound is Working" will appear. When you see the green "The Sound is Working" button, select this button to move to the next page.

If you have been provided headphones, you will need to listen to some information in order to answer a few of the questions on this test. To check that the sound on your computer works, follow these steps: select Play Audio. If you hear "If you can hear my voice, select the sound is working button", select "The Sound is Working" button. If you do not hear "If you can hear my voice, select the sound is working button", select "Try Again" or raise your hand and ask for help.

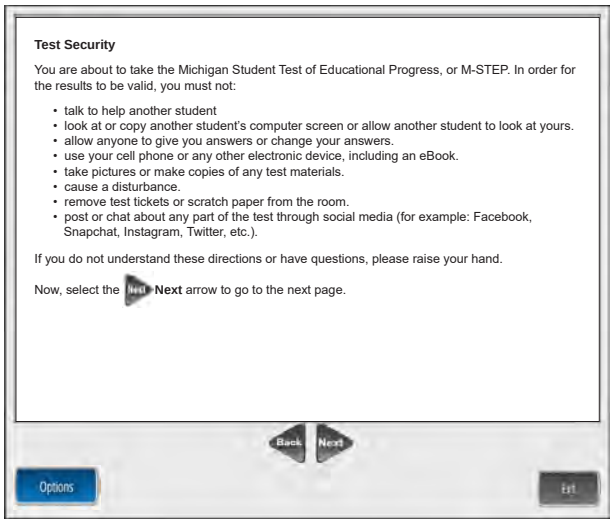
Tip! *If you have devices with volume turned on but no headphones, you may hear the audio play on these devices. Instruct students to select the Sound is Working button to go to the next screen.*

System Check and Test Security

SAY: I will now read the Test Directions. Read the Test Directions silently as I read them aloud. Use the Next button to move to the next page to follow along.

(Read Aloud for ALL ASSESSMENTS)

Check monitors to confirm that all students are now on the "Test Security" page.



SAY: You should now be on the Test Security screen.

You are about to take the Michigan Student Test of Educational Progress, or M-STEP. In order for the results to be valid, you must not:

- **talk to or help another student**
- **look at or copy another student's computer screen or allow another student to look at yours**
- **allow anyone to give you answers or change your answers**
- **use your cell phone or any other electronic device, including an eBook**
- **take pictures or make copies of any test materials**
- **cause a disturbance**
- **remove test tickets or scratch paper from the room**
- **post or chat about any part of the test through social media (for example: Facebook, Snapchat, Instagram, Twitter, etc.)**

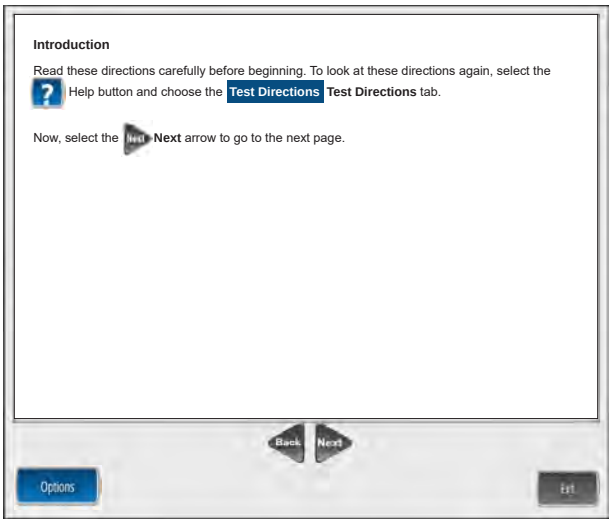
If you do not understand these directions or have questions, please raise your hand

Pause for questions.

SAY: Now, select the Next arrow to go to the next page.

Introduction Page

Check monitors to confirm that all students are on the Introduction page.



SAY: Read these directions carefully before beginning. To look at these directions again, select the Help button and choose the Test Directions tab. Now, select the Next arrow to go to the next page.

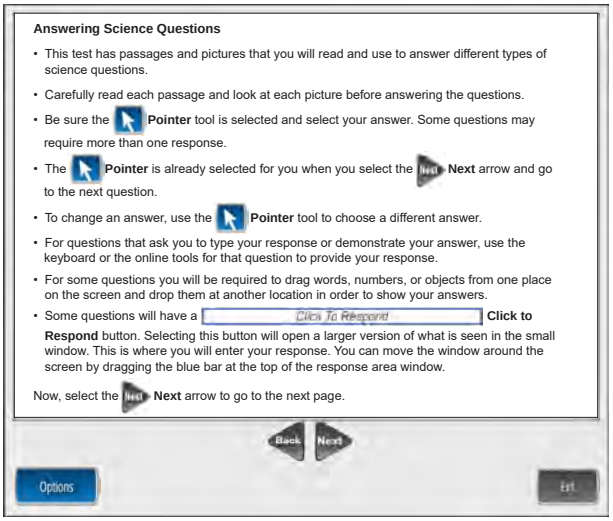
For the remainder of the test directions, the directions differ depending on which assessments you are administering. Be sure you read the correct directions for the specific test you are administering based on the chart below. The "Use These Pages" column indicates the pages in the manual where you should continue reading test directions for your specific test.

Assessment	Specific Test to Administer	Use These Pages
Science	• Science • Science with Text-to-Speech (TTS) enabled	Use pages 27 to 33
Social Studies	• Social Studies • Social Studies with Text-to-Speech (TTS) enabled	Use pages 34 to 39

Test Directions for Grade 11 Science Assessments

Answering Science Questions

Be sure you have completed the directions on pages 16–26 before you start this section.



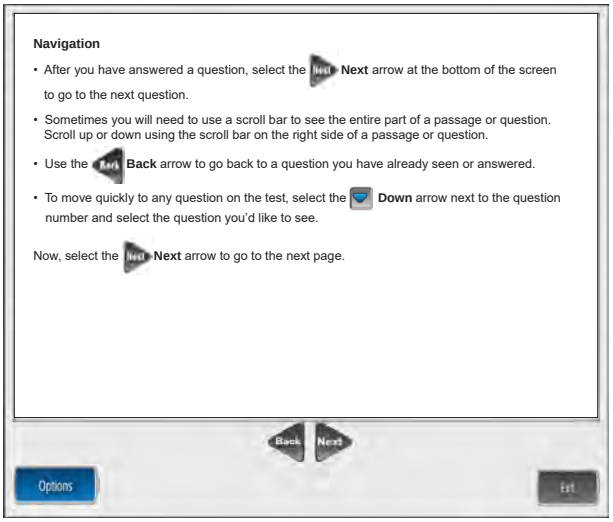
SAY: You should now be on the Answering Science Questions screen.

- **This test has passages and pictures that you will read and use to answer different types of science questions.**
- **Carefully read each passage and look at each picture before answering the questions.**
- **Be sure the Pointer tool is selected and choose your answer. Some questions may require more than one answer.**
- **The Pointer is already selected for you when you select the Next arrow and go to the next question.**
- **To change an answer, use the Pointer tool to choose a different answer.**
- **For questions that ask you to type your response or show your answer, use the keyboard or the online tools for that question to provide your response.**
- **For some questions you will be required to drag words, numbers, or objects from one place on the screen and drop them at another location in order to show your answers.**
- **Some questions will have a Click to Respond button. Selecting this button will open a larger version of what is seen in the small window. This is where you will enter your response. You can move the window around the screen by dragging the blue bar at the top of the response area window.**

Now, select the Next arrow to go to the next page.

Navigation—Science

Check monitors to confirm that all students are on the Navigation page.



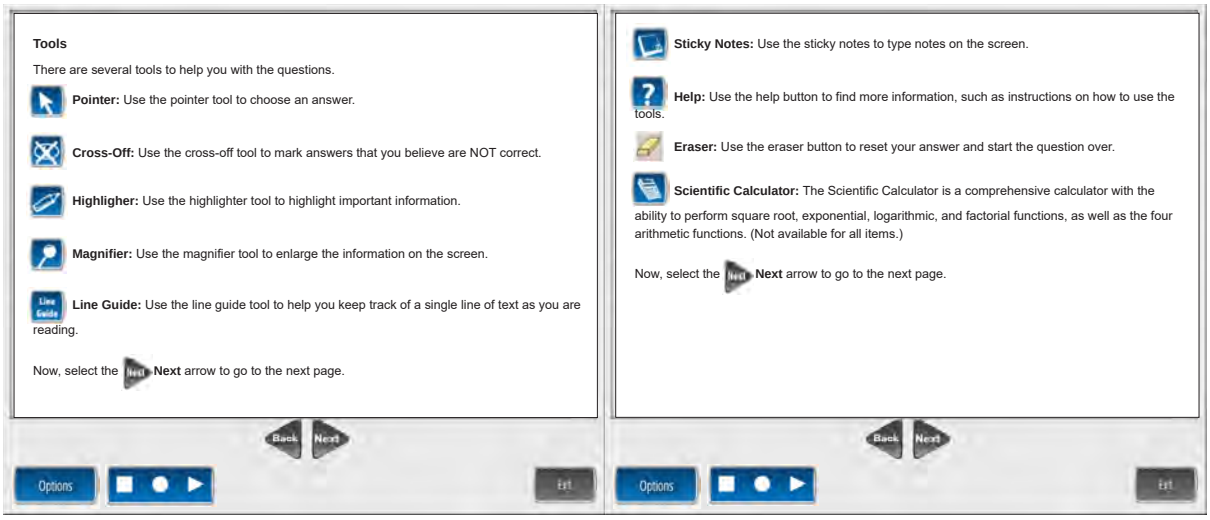
SAY: You should now be on the Navigation screen.

- **After you have answered a question, select the Next arrow at the bottom of the screen to go to the next question.**
- **Sometimes you will need to use a scroll bar to see the entire part of a passage or question. Scroll up or down using the scroll bar on the right side of a passage or question.**
- **Use the Back arrow to go back to a question you have already seen or answered. You can also go back to any picture or passage in the set using the Back arrow.**
- **To move quickly to any question on the test, select the Down arrow next to the question number and select the question you would like to see.**

Now, select the Next arrow to go to the next page.

Tools—Science

Check monitors to confirm that all students are on the Tools page.



SAY: You should now be on the Tools screen.

There are several tools to help you with the questions.

***Pointer*: Use the pointer tool to choose an answer.**

***Cross-Off*: Use the cross-off tool to mark answers that you believe are NOT correct.**

***Highlighter*: Use the highlighter tool to highlight important information.**

***Magnifier*: Use the magnifier tool to enlarge the information on the screen.**

***Line Guide*: Use the line guide tool to help you keep track of a single line of text as you are reading.**

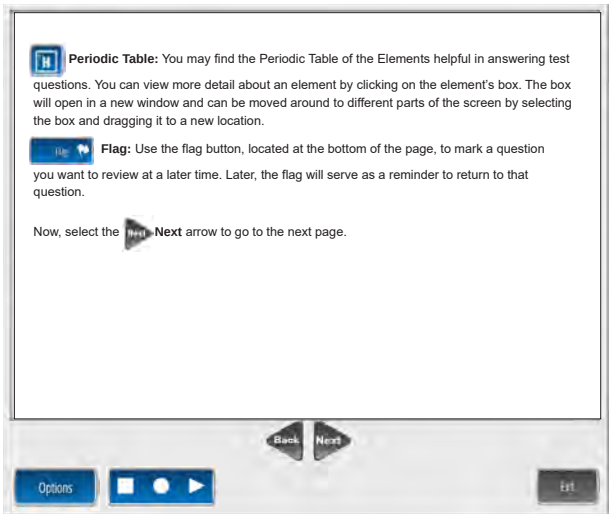
Now, select the Next arrow to go to the next page.

***Sticky Notes*: Use the sticky note tool to type notes on the screen.**

***Help*: Use the help button to find more information, such as instructions on how to use the tools.**

***Eraser*: Use the eraser button to reset your answer and start the question over.**

***Scientific Calculator:* The Scientific Calculator is a comprehensive calculator with the ability to perform square root, exponential, logarithmic, and factorial functions, as well as the four arithmetic functions.**



SAY: Now, select the Next arrow to go to the next page.

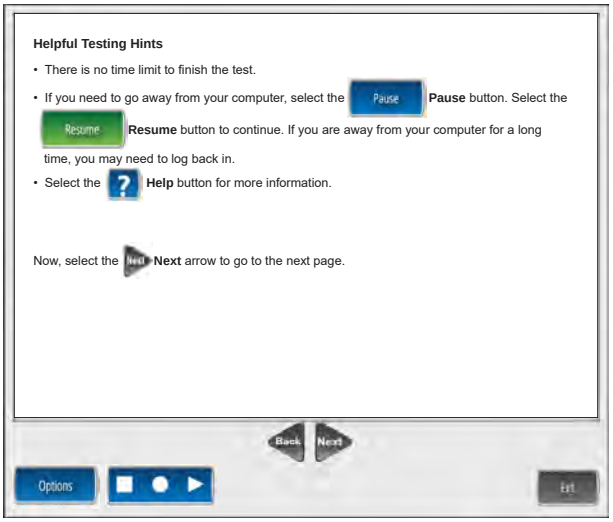
> ***Periodic Table*: You may find the Periodic Table of the Elements helpful in answering test questions. You can view more detail about an element by clicking on the element's box. The box will open in a new window and can be moved around to different parts of the screen by selecting the box and dragging it to a new location.**
>
> ***Flag*: Use the flag button, located at the bottom of the page, to mark a question you want to review at a later time. Later, the flag will serve as a reminder to return to that question.**

When you have read the tools section, prompt students to go on. Note that the tools are listed on multiple pages.

SAY: Now, select the Next arrow to go to the next page.

Helpful Testing Hints—Science

Check monitors to confirm that all students are on the Helpful Testing Hints page.



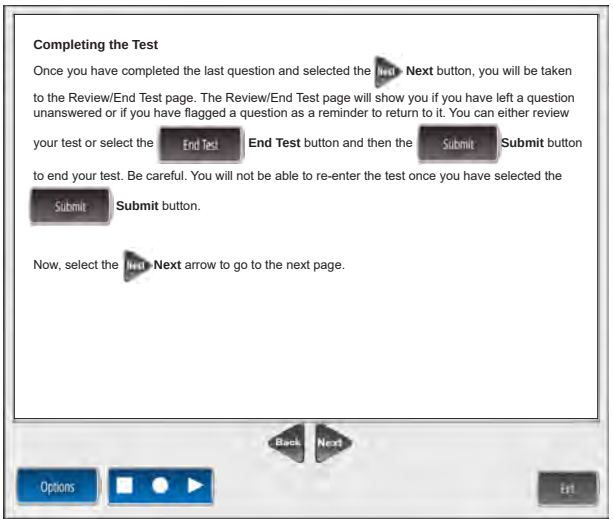
SAY: You should now be on the Helpful Testing Hints screen.

- **There is no time limit to finish the test.**
- **If you need to go away from your computer, select the Pause button. Select the Resume button to continue. If you are away from your computer for a long time, you may need to log back in.**
- **Select the Help button for more information.**

Now, select the Next arrow to go to the next page.

Completing the Test—Science

Check monitors to confirm that all students are on the Completing the Test page.



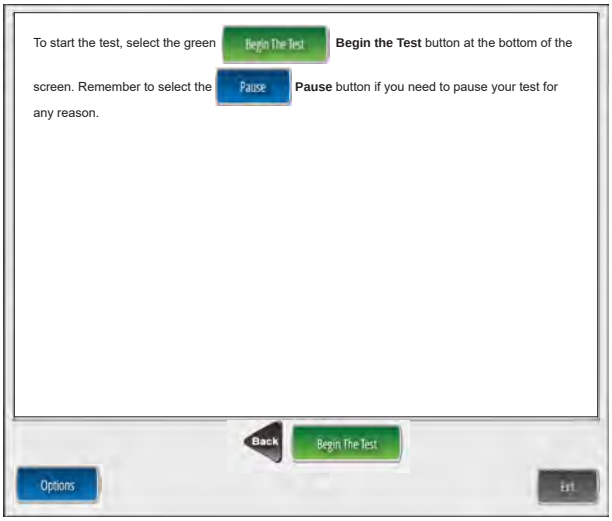
SAY: Once you have completed the last question and selected the Next button, you will be taken to the Review/End Test page. The Review/End Test page will show you if you have left a question unanswered or if you have flagged a question as a reminder to return to it. You can either review your test or select the End Test button and then the Submit button to end your test. Be careful. You will not be able to re-enter the test once you have selected the Submit button.

Are there any questions about the test directions?

Answer all questions.

SAY: Now, select the Next arrow to go to the next page.

Check monitors to confirm that all students are on the Begin the Test page.



When all students are ready,

SAY: To start the test, select the green Begin the Test button at the bottom of the screen. Remember to select the Pause button if you need to pause your test for any reason.

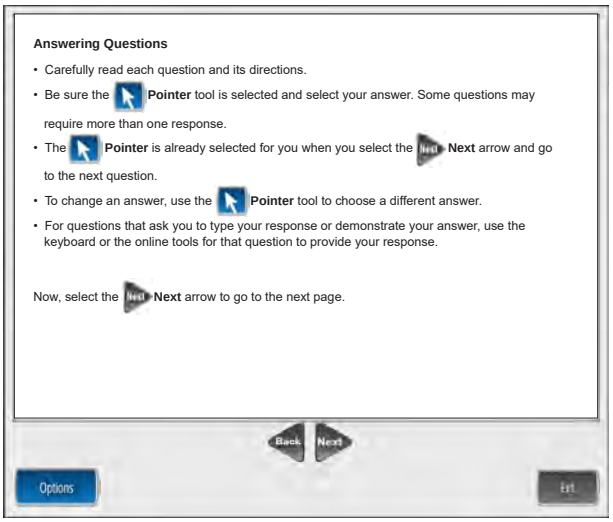
TIP! *Remind students using TTS as a Designated Support to put their headphones on and be sure they are working properly.*

Turn to page 40 for the Monitoring During Testing instructions.

Test Directions for Grade 11 Social Studies Assessments

Answering Questions—Social Studies

Be sure you have completed the directions on pages 16–26 before you start this section.



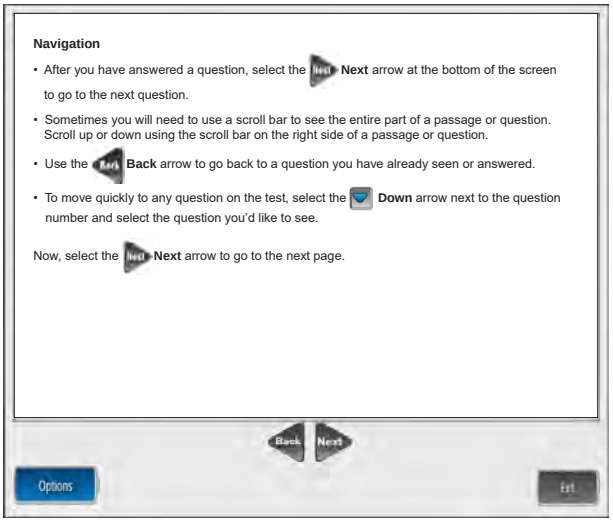
SAY: You should now be on the Answering Questions screen.

- **Carefully read each question and its directions.**
- **Be sure the Pointer tool is selected and select your answer. Some questions may require more than one response.**
- **The Pointer is already selected for you when you select the Next arrow and go to the next question.**
- **To change an answer, use the Pointer tool to choose a different answer.**
- **For questions that ask you to type your response or demonstrate your answer, use the keyboard or the online tools for that question to provide your response.**

Now, select the Next arrow to go to the next page.

Navigation—Social Studies

Check monitors to confirm that all students are on the Navigation page.



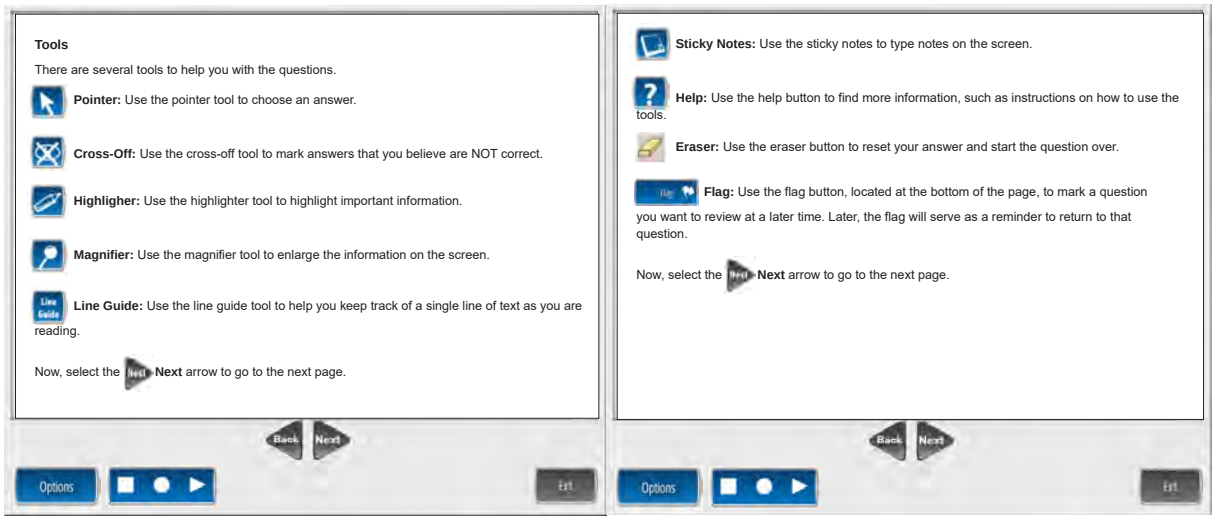
SAY: You should now be on the Navigation screen.

- **After you have answered a question, select the Next arrow at the bottom of the screen to go to the next question.**
- **Sometimes you will need to use a scroll bar to see the entire part of a question. Scroll up or down using the scroll bar on the right side of the question.**
- **Use the Back arrow to go back to a question you have already seen or answered.**
- **To move quickly to any question on the test, select the Down arrow next to the question number and select the question you'd like to see.**

Now, select the Next arrow to go to the next page.

Tools—Social Studies

Check monitors to confirm that all students are on the Tools page.



SAY: You should now be on the Tools screen.

There are several tools to help you with the questions.

***Pointer*: Use the pointer tool to choose an answer.**

***Cross-Off*: Use the cross-off tool to mark answers that you believe are NOT correct.**

***Highlighter*: Use the highlighter tool to highlight important information.**

***Magnifier*: Use the magnifier tool to enlarge the information on the screen.**

***Line Guide*: Use the line guide tool to help you keep track of a single line of text as you are reading.**

Now, select the Next arrow to go to the next page.

***Sticky Notes*: Use the sticky note tool to type notes on the screen.**

***Help*: Use the help button to find more information, such as instructions on how to use the tools.**

***Eraser*: Use the eraser button to reset your answer and start the question over.**

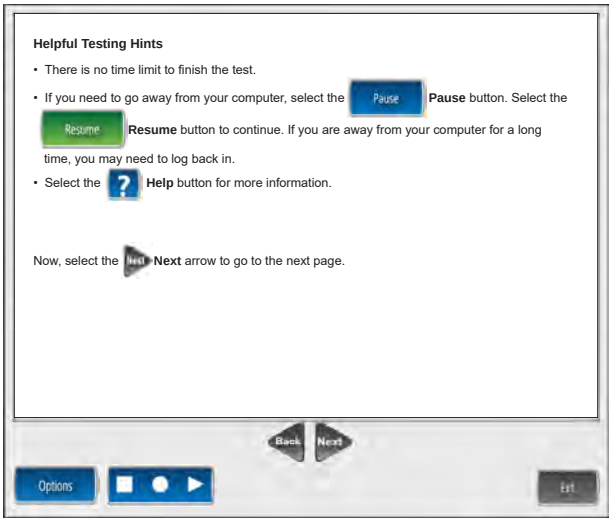
***Flag*: Use the flag button, located at the bottom of the page, to mark a question you want to review at a later time. Later, the flag will serve as a reminder to return to that question.**

When you have read the tools section, prompt students to go on. Note that the tools are listed on multiple pages.

SAY: Now, select the Next arrow to go to the next page.

Helpful Testing Hints—Social Studies

Check monitors to confirm that all students are on the Helpful Testing Hints page.



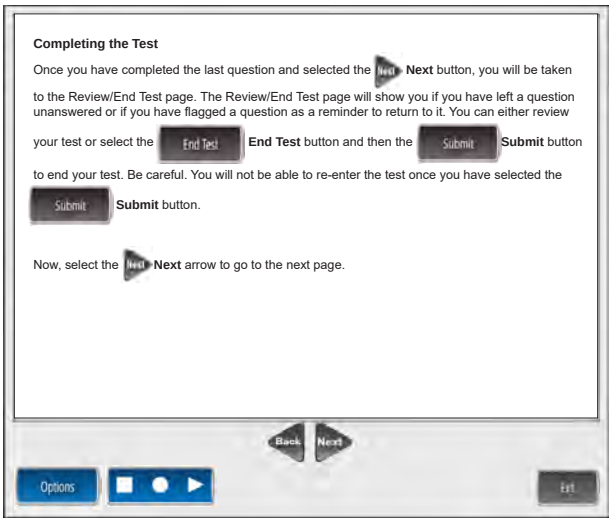
SAY: You should now be on the Helpful Testing Hints screen.

- **There is no time limit to finish the test.**
- **If you need to go away from your computer, select the Pause button. Select the Resume button to continue. If you are away from your computer for a long time, you may need to log back in.**
- **Select the Help button for more information.**

Now, select the Next arrow to go to the next page.

Completing the Test—Social Studies

Check monitors to confirm that all students are on the Completing the Test page.



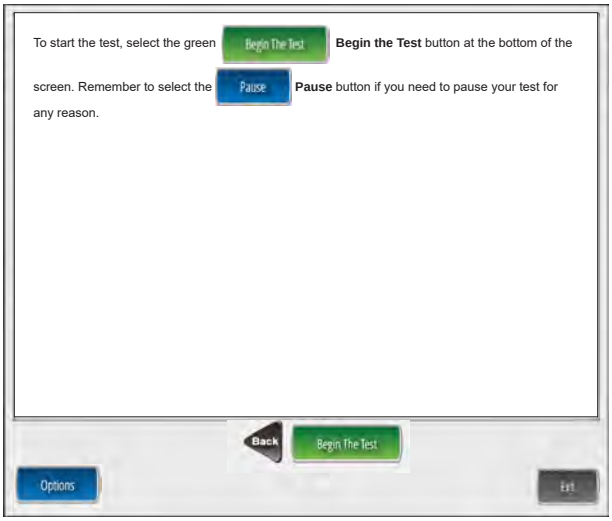
SAY: Once you have completed the last question and selected the Next button, you will be taken to the Review/End Test page. The Review/End Test page will show you if you have left a question unanswered or if you have flagged a question as a reminder to return to it. You can either review your test or select the End Test button and then the Submit button to end your test. Be careful. You will not be able to re-enter the test once you have selected the Submit button.

Are there any questions about the test directions?

Answer all questions.

SAY: Now, select the Next arrow to go to the next page.

Check monitors to confirm that all students are on the Begin the Test page.



When all students are ready,

SAY: To start the test, select the green Begin the Test button at the bottom of the screen. Remember to select the Pause button if you need to pause your test for any reason.

SAY: You may begin.

TIP! *Remind students using TTS as a Designated Support to put their headphones on and be sure they are working properly.*

Turn to page 40 for the Monitoring During Testing instructions.

Monitoring During Testing

Collect and recount all student test tickets after students have logged in. Ensure the number of tickets matches the number noted from before testing. Student test tickets are considered secure material. Save these tickets in case a student is logged off and needs it again. Each individual test session requires a different test ticket. **Test tickets must be returned to the Building Assessment Coordinator with all secure materials at the end of each testing session.**

As students are working, move around the room to ensure students are working on the correct part. If a student has selected an incorrect part, select the Pause button, the Exit button, and then the "Yes, Exit" button to return to the test sign-in screen; **do not select the "Review/End Test" button**.

Maintain a secure and distraction-free test environment.

Testing Irregularities

Refer to Appendix C.

Completing the Test Session

Collect and recount test tickets. All test tickets must be returned to the Building Assessment Coordinator unless the student did not complete the test and is being escorted to another location to complete test. **Note:** Students are not allowed to transport test materials from one location to another. If any students have **not** completed their test but will resume at a later time, return their test tickets to the Building Assessment Coordinator for secure storage until testing can resume. A new test ticket can be printed by the Building Coordinator, if necessary.

Exiting the Test Engine

Students using a desktop, laptop, iPad, or Chromebook can simply exit INSIGHT once they have finished. Ensure you can see the desktop or home screen of every testing device before a student is dismissed. This is particularly important for 1:1 devices that stay with the student (such as a Chromebook, laptop, or iPad).

TIP! *Some schools sort test tickets into envelopes for "complete" "in progress" and "not started" to help manage test tickets.*

APPENDIX A: M-STEP Calculator Policy

Online and Paper/Pencil Testers

Mathematics

Students in grades 3, 4, and 5 are **not** allowed to use a calculator on ANY item in the mathematics assessment, as the use of calculators at these grade levels changes the construct of the items and what they are intended to measure. All students must abide by this no-calculator-allowed policy, even students whose IEP or 504 Plan specifies otherwise. **The use of a calculator at grades 3, 4, or 5 is considered a nonstandard accommodation.** Nonstandard accommodations render the assessment invalid.

Science

Students in grade 5, 8, and 11 are allowed to use a calculator on any item in the science assessment.

Online Testers

On grades 6 and 7 mathematics and grades 5, 8, and 11 science assessments, students will use the calculator embedded within the online delivery engine. The calculator will appear in the toolbar when items allow its use; it will not appear when items do not allow its use.

There are two types of embedded online calculators:

- Basic calculator - science grade 5 and mathematics grade 6
- Scientific calculator - science grades 8 and 11 and mathematics grade 7

The Office of Educational Assessment and Accountability (OEAA) has developed resources for online testers to help prepare them for online testing. One of the resources is an online calculator practice tool. It is recommended that online testers visit the practice environment to see sample items and familiarize themselves with the online calculator tool. To practice using the M-STEP online calculators, go to the Online Tools Training (OTT) portal (https://wbte.drcedirect.com/MI/portals/mi/) using the Google Chrome browser.

Paper/Pencil Testers

On grades 6 and 7 mathematics and grades 5, 8 and 11 science assessments, students will use a handheld calculator.

Calculators are allowed on all items of the science assessments. Calculators are allowed only on Part 2 of the mathematics assessment.

Mathematics test booklets are divided into two parts. Part 1 of the paper/pencil mathematics assessment is considered non-calculator, and students must not have a calculator within reach. Part 2 of the paper/pencil mathematics assessment allows the use of a calculator. Once students start Part 2, they are not allowed to return to the non-calculator items on Part 1.

Since external hand-held graphing calculators are programmable, there is a potential of a security breach. All programmable calculators must be set to TEST mode during the testing session for both mathematics and science assessments.

Types of hand-held calculators:

- Basic calculator - science grade 5 and mathematics grade 6
- Scientific calculator - science grades 8 and 11 and mathematics grade 7

Important Notes

Alignment

The operational items on all of the assessments have been field-tested and are aligned to Michigan's standards.

Fairness

The issue of fairness between online testers and paper/pencil testers with regard to calculator usage has been raised. The OEAA decided not to burden schools by requiring them to purchase calculators specifically for this assessment as a possible one-time use. Some schools may not have the grade-specific calculators for their paper/pencil testers to use. The OEAA has reviewed every item to determine if the use of an above-grade-level calculator gives those students an advantage. Students will not be advantaged or disadvantaged based on using an above-grade calculator on the assessment.

Managing Online Testers and External Hand-held Calculators

The OEAA prohibits online testers from using external handheld calculators instead of the embedded online calculator. The only online testers who may use an external calculator are those students whose IEP or Section 504 Plan specifies the use of a special adaptive calculator.

APPENDIX B: M-STEP Scratch Paper Policy

Scratch paper is a Universal Tool that may be made available to students during testing. Used scratch paper is a secure material. District Coordinators should develop and disseminate procedures for the secure handling and disposal of used scratch paper.

Terms

Graph Paper: blank, gridded paper provided by MDE for use in grades 6-7 mathematics

Scratch Paper: blank, lined, or unlined paper

Graph paper and scratch paper are separated into two types:

Unused Scratch/Graph Paper: scratch paper that does not include any student markings; unused scratch/ graph paper may include a student's name written on it

Used Scratch/Graph Paper: scratch/graph paper that includes any student markings beyond the student's name

Online Testers: Mathematics

Scratch paper is allowed in all test sessions. For students in grades 6-7, blank graph paper is required and is provided in the online initial material order. The grades 3-5 tests do not include items that require graph paper. Additional graph paper can be downloaded from the M-STEP web page (www.michigan.gov/mstep).

For grades 3-5, scratch paper must be blank ruled or unruled, or (optionally) graph paper.

For grades 6-7 the graph paper must be blank.

Fresh scratch/graph paper must be distributed at the start of each new test session. That is, when a student receives a new test ticket for login, a fresh sheet of scratch paper must be provided at that time. Once a test session is completed, used scratch paper must be returned with the test tickets to the Building Coordinator for secure shredding.

Students must write their names on the scratch paper. When students are given a break, the scratch paper must be collected and securely stored with test tickets until testing resumes.

If a student's name is clearly written on the used scratch paper, it can be returned to that student to use when resuming an in-progress test.

Online Testers: English Language Arts, Science, and Social Studies

Scratch paper is allowed in all test sessions. For all grades this must be blank ruled or unruled paper.

Fresh scratch paper must be distributed at the start of each new test session. That is, when a student receives a new test ticket for login, a fresh sheet of scratch paper must be provided at that time. Once a test session is completed, used scratch paper must be returned with the test tickets to the Building Coordinator for secure shredding.

Students must write their names on the scratch paper. When students are given a break, the scratch paper must be collected and securely stored with test tickets until testing resumes.

If a student's name is clearly written on the used scratch paper, it can be returned to that student to use when resuming an in-progress test.

Paper/Pencil Testers: Mathematics

Scratch paper is allowed in all test sessions and test parts. For grades 3-5 this must be blank ruled or unruled, or (optionally) graph paper. Testers in grades 6-7 may be provided blank graph paper in place of blank ruled or unruled paper; however, students may also use the graphs in their test booklets to solve problems. Additional graph paper can be downloaded from the M-STEP web page (www.michigan.gov/mstep).

Fresh scratch paper must be distributed with each part of a test and students must write their names on the scratch paper. After students encounter a "stop" sign in the test booklets, scratch paper must be collected and securely stored until it can be returned with the rest of the test materials to the Building M-STEP Coordinator for shredding. If paper/pencil testers are provided a break not associated with a test part, then used scratch paper must be placed inside their closed test booklets.

Paper/Pencil Testers: English Language Arts, Science, and Social Studies

Scratch paper is allowed in all test sessions and test parts. For all grades this must be blank ruled or unruled paper.

Fresh scratch paper must be distributed with each part of a test and students must write their names on the scratch paper. After students encounter a "stop" sign in the test booklets, scratch paper must be collected and securely stored until it can be returned with the rest of the test materials to the Building M-STEP Coordinator for shredding. If paper/pencil testers are given a break not associated with a test part, then used scratch paper must be placed inside their closed test booklets.

Note: In order to prevent the use of an inappropriate writing utensil on the answer document, students should only have access to number 2 pencils during paper/pencil testing.

Mathematics: Online and Paper/Pencil

Grade	Graph Paper (required)	Graph Paper (optional)	Scratch Paper (available Universal Tool)
3		X	X
4		X	X
5		X	X
6	X		X
7	X		X

English Language Arts, Science, and Social Studies: Online and Paper/Pencil

Grade	Scratch Paper (available Universal Tool)
3	X
4	X
5	X
6	X
7	X
8*	X
11*	X

*Does not apply to English language arts.

APPENDIX C: M-STEP Incident Reporting Guide

Any testing irregularities that occur before, during, or after testing must be reported to the Office of Educational Assessment and Accountability (OEAA) within two school days. All incidents are required to be reported; do not neglect to report an incident if more than two school days have passed since you were aware of it. This table identifies the incident categories and sub-categories that are used in the Secure Site Incident Reporting tool and provides sample scenarios for each category or sub-category.

You will find detailed information on how to access and use the tool at the Secure Site Incident Reporting tool (www.michigan.gov/documents/mde/Incident_Reporting_520328_7.pdf).

Incident Category: Test Not Completed				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Test submitted prior to completion	Student accidentally ends/ submits the test without answering all questions	If 5 or fewer questions have been answered, contact the Call Center at 1-877-560-8378 Option 2. If more than 5 questions have been answered, an Incident Report is required.	N/A	Online: **Required** if more than 5 item responses Paper/ Pencil: N/A
Student became ill	Student becomes ill and goes home before finishing a test	Pause and Exit test (do not End test). Resume testing with the original test ticket in a makeup session.	Collect test materials and flag the last question answered. Students are not allowed to return to previously answered questions.	Online: **Optional** Paper/ Pencil: **Optional**
Student was removed from school by parent/ guardian	Student is removed from class by a parent or guardian during the test administration	Pause and Exit test (do not End test). Resume testing with the original test ticket in a makeup session.	Collect test materials and flag the last question answered. Students are not allowed to return to previously answered questions.	Online: No Incident Report Necessary Paper/ Pencil: **Optional**

Incident Category: Test Not Completed				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Student moved from school	Student transfers or moves from school with an incomplete content area test **NOTE:** Be prepared to accept a phone call from student's receiving school requesting information on test completion and needed accommodations or designated supports.	Submit an incident report with request for test to be marked **Do Not Score**.	Mark the answer document **Do Not Score** and return it in the Special Handling Envelope.	Online: **Required** Paper/ Pencil: **Required**
Do Not Score requested	Student has taken (or logged into) incorrect assessment (took M-STEP instead of MI-Access assessment) **NOTE:** A student who begins a test and subsequently becomes ill does not meet the requirements for the test to be marked **Do Not Score**.	Submit incident report with request for the test to be marked **Do Not Score.**	N/A	Online: **Required** Paper/ Pencil: N/A
Student does not complete test by end of day	Student does not complete testing by the end of the school day **NOTE:** Testing must be completed by the end of the grade-level testing window. There are no exceptions.	Pause and Exit test (do not End test). Resume testing with the original test ticket in a makeup session. (Schools should consider the ages and needs of their students and schedule intentionally planned breaks as appropriate.)	With proper planning and scheduling, this should be avoided. • Schedule all testing early in the day to allow students to complete required testing. The schedule must allow for students who require additional time. • Consider the multiple day testing designated support—this is allowable as **intentional** scheduling for some students who use additional supports. • Exceptions for individual students will be considered on a case-by-case basis.	Online: No Incident Report necessary Paper/ Pencil: **Optional**

APPENDIX C

Incident Category: Accommodation / Designated Support Issue				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Designated support/ required accommodation not provided	Student is not provided appropriate designated support or accommodations	Test misadministration. Submit an Incident Report. For students with an IEP or Section 504 plan that requires the missing designated support or accommodation: A new test with appropriate designated support or accommodation may be administered with: • notification to and approval of parents or guardians • documentation provided that identifies required designated support or accommodation (such as IEP plan) For students who do not have an IEP or Section 504 plan the requires the missing designated support: A new test with appropriate designated support may be administered with: • notification to and approval of parents or guardians • signed documentation from the person responsible for day-to-day instruction in the content area affirming the student's daily use of the designated support during regular instruction	Test misadministration. Submit an Incident Report. Emergency test with appropriate designated support or accommodation may be administered with notification to and approval of parents or guardians. Original answer document must be marked **Do Not Score** and returned in the orange Special Handling Envelope.	Online: **Required** Paper/ Pencil: **Required**

Incident Category: Accommodation / Designated Support Issue				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Nonstandard designated support/ accommodation provided	Nonstandard accommodation provided	The student's test is invalidated. Inform parents or guardians. Submit an Incident Report—working with the OEAA, in some cases students may be able to retest with the appropriate accommodation, if the student's parents and school agree it is in the best interest of the student. Perform an internal investigation as needed and keep the resulting documentation on file as Nonstandard Accommodations may be appealed during the Answer Document Verification window.	Mark the student's test as **Nonstandard Accommodation** on the answer document and return with scorable materials. The student's test is invalidated. Inform the parent or guardian. Submit an Incident Report—working with the OEAA, in some cases students may be able to retest with the appropriate accommodation, if the student's parents and school agree it is in the best interest of the student. Perform an internal investigation as needed and keep the resulting documentation on file as Nonstandard Accommodations may be appealed during the Answer Document Verification window.	Online: **Required** Paper/ Pencil: **Required**

APPENDIX C

Incident Category: Misadministration				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Wrong test administered	Student is administered the incorrect test (for example, an M-STEP test instead of a MI-Access test)	Inform parents or guardians. Students must be assigned to the correct test in the Secure Site and the appropriate test must be given in order to be included in accountability calculations. Submit an Incident Report—the test will be marked **Do Not Score**.	Inform parents or guardians. Mark the answer document with **Do Not Score** and return in the orange Special Handling Envelope. Student must be given the correct test in order to be included in accountability calculations — material orders should be ordered on the Secure Site using the normal additional material order process.	Online: **Required** Paper/ Pencil: **Required**
Wrong test ticket used	Student is issued wrong test ticket and begins the test	Stop the test as soon as the error is identified. Pause and Exit the test (do not End the test) Submit an Incident Report.	N/A	Online: **Required** Paper/ Pencil: N/A
Part missed or not administered	Student is not administered one part of a test	If it is identified within the testing window for the grade, administer the test. If it is past the testing window for the grade, submit an Incident Report. The test may not be administered.	If it is identified on the day of the administration or within the makeup window for the content area and grade, administer the test. If it is not identified on the test day or within the makeup window for the content area and grade, submit an Incident Report. **Important reminder:** This is for a Part missed in the test. It is not permissible to inspect answer documents for completion or to review student responses at this time.	Online: **Optional** Paper/ Pencil: **Optional**

Incident Category: Misadministration				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Wrong answer document used	Student uses wrong answer document when testing	N/A	If the wrong answer document is the correct grade and test, but has a wrong barcode label, then a new correct barcode label should be printed and affixed. An Incident Report is not required. If the answer document is the wrong grade and/or content, then mark the wrong answer document(s) used with **Do Not Score** and return in the orange Special Handling Envelope. Submit an Incident Report. (See **Answer document transcription required/ suggested** Incident Sub-Category on page 55 of this manual.)	Online: N/A Paper/ Pencil: **Optional**
Test not administered on scheduled day/time **For Spring 2021 only** use this sub-category for "Test not administered within scheduled testing window"	Test is administered outside of scheduled testing window	N/A	Mark student's answer document **Do Not Score** and return in the Orange Special Handling Envelope. Submit an Incident Report.	Online: N/A Paper/ Pencil: **Required**

APPENDIX C

Incident Category: Misadministration				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Other	Test administrator/proctor helps student by giving information other than test directions Test administrator/proctor indicating the correct answers to students Test administrator leaves students unattended during testing Secure materials are not kept secure before, during, or after test administration Test administrator/proctor or other building staff taking photos of test items or test environment Staff posting test items or content to social media during testing	Submit an Incident Report—working with the OEAA, the district may be able to quickly resolve issues.	Submit an Incident Report—working with the OEAA, the district may be able to quickly resolve issues.	Online: **Required** Paper/ Pencil: **Required**

Incident Category: Building Emergency				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Building emergency	Building emergency occurs during the test and requires student(s) to leave the room or otherwise interrupts testing	Address the building emergency—pause tests as appropriate/possible. Submit an Incident Report.	Address the building emergency—secure test materials as appropriate/possible. Submit an Incident Report.	Online: **Required** Paper/ Pencil: **Required**

Incident Category: Prohibited Behavior				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Electronics/ social media	Student(s) taking photos of test items, use of social media during testing.	The student's test will be marked Prohibited Behavior and invalidated. Inform parents or guardians. Perform internal investigation as needed and keep resulting documentation on file as Prohibited Behaviors may be appealed during the Answer Document Verification window. Submit an Incident Report.	Inform parents or guardians. Perform internal investigation as needed and keep resulting documentation on file as Prohibited Behaviors may be appealed during the Answer Document Verification window. Submit an Incident Report.	Online: **Required** Paper/ Pencil: **Required**
Other	Disruptive behaviors impacting testing session/ completion, cheating, use of calculator (mathematics) or dictionary/thesaurus (ELA) during non-permitted section of the test **NOTE:** The use of non-permitted tools results in test invalidation.	Students engaged in disruptive or egregious behavior must be removed from the testing room. Where feasible, students should be redirected and allowed to continue testing. Students engaged in prohibited behavior need not be removed from the testing room unless they are affecting other students. The student's test will be marked Prohibited Behavior and invalidated. Inform parents or guardians. Perform internal investigation as needed and keep resulting documentation on file as Prohibited Behaviors may be appealed during the Answer Document Verification window. Submit an Incident Report.	Students engaged in disruptive or egregious behavior must be removed from the testing room. Where feasible, students should be redirected and allowed to continue testing. Students engaged in prohibited behavior need not be removed from the testing room unless they are affecting other students. The student's test will be marked Prohibited Behavior and invalidated. Inform parents or guardians. Perform internal investigation as needed and keep resulting documentation on file as Prohibited Behaviors may be appealed during the Answer Document Verification window. Submit an Incident Report.	Online: **Required** Paper/ Pencil: **Required**

APPENDIX C

Incident Category: Technical Problems with Online Testing				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Repeated disconnections	Student(s) has repeated disconnections during testing session	Contact local tech support. Tech support can contact DRC Customer Support if they need additional help to resolve the matter. Submit an Incident Report.	N/A	Online: **Optional** Paper/Pencil: N/A
	Entire classroom has repeated disconnections during testing session	Contact local tech support. Tech support can contact DRC Customer Support if they need additional help to resolve the matter. Submit an Incident Report.	N/A	Online: **Optional** Paper/Pencil: N/A
INSIGHT freezing, crashing, or not advancing	INSIGHT stops working and the student(s) cannot continue testing	Contact local tech support. Tech support can contact DRC Customer Support if they need additional help to resolve the matter. Submit an Incident Report.	N/A	Online: **Optional** Paper/Pencil: N/A
Item functionality	An item on the test is not functioning as expected; for example, the student believes the correct answer cannot be selected	Instruct the student to answer as best they are able. Submit an Incident Report with the test and question number (if known), and computer used for testing (Windows PC, Mac, iPad, Chromebook).	N/A	Online: **Required** Paper/Pencil: N/A
Hardware failure	Power outage, internet connection interrupted through local error, stolen computers	If the problem is with just one computer, move the student to another computer and resume testing. If the problem will be resolved in sufficient time to complete testing (restore power or internet connection), continue testing another time or day. If online testing becomes impossible, file an Incident Report.	N/A	Online: **Required IF** it is necessary to move to emergency paper forms; otherwise optional Paper/Pencil: N/A

Incident Category: Technical Problems with Online Testing				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Other	Use this category if your technical problem does not conform to the listed technical issues.	Contact your local IT staff, or if further support is required, contact DRC Customer Support.	N/A	Online: **Optional** Paper/Pencil: N/A

Incident Category: Materials				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**IR Required/ Optional**
Answer document transcription required/ suggested	Students write in the wrong section of an assessment; wrong answer document used; a writing utensil other than a number 2 pencil is used on an answer document	N/A	Student must transcribe all responses exactly as recorded from the original answer document to a fresh answer document in a one-on-one proctored section. Print and affix a bar code label to the new answer document and return with the scorable materials. Original answer document must be marked **Do Not Score** and returned in the Orange Special Handling Envelope.	Online: N/A Paper/ Pencil: **Optional**
Answer document damaged, defective, or lost	Answer document becomes damaged in such a way that will impact scanning—ripped, torn; is defective upon arrival; or is lost during test administration.	N/A	Student must transcribe all responses exactly as recorded from the original answer document in a one-on-one proctored session. Print and affix a bar code label to the new answer document and return with the scorable materials. Original answer document must be marked **Do Not Score** and be returned in the Orange Special Handling Envelope. **NOTE:** Biohazards should not be returned. Any secure material with biohazardous material should be securely destroyed.	Online: N/A Paper/ Pencil: **Optional**

APPENDIX C

Incident Category: Other				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**IR Required/ Optional**
Other	Use this category only if an incident occurs that does not fit into the listed categories.	Varies	Varies	Online: **Optional** Paper/ Pencil: **Optional**

Incident Category: Staff Unethical				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**IR Required/ Optional**
Staff Unethical	District administration or management company needs to report an incident involving inappropriate test administration practices of District/Building Coordinators or Building Administration **Note:** When using this category, only the incident report submitter and anyone identified in the CC field of the report will receive notification of progress of this incident.	Submit an Incident Report; In working with the OEAA, the district may be able to quickly resolve issues.	Submit an Incident Report- In working with the OEAA, the district may be able to quickly resolve issues.	Online: **Required** Paper/ Pencil: **Required**

The Michigan Department of Education (MDE) has updated incident reporting requirements to ensure accurate and valid student-level assessment data for the specific situations described below; that is, if a student:

- becomes ill and leaves school early due to illness on the day that the test was completed and submitted
- spends fewer than 15 minutes testing and submits a test
- did not take prescribed medication prior to testing and completes and submits a test

These tests can be regenerated if the incident report is submitted on the date of the incident (by 11:59 PM) and parent permission is documented. If it is not possible to obtain documentation of parent permission on the date of the incident, the school must submit the incident report on the date of occurrence and provide documentation of parent permission subsequently.

Regeneration of any test for any of these listed reasons will only occur once; for example, if a student does not take his or her medication one day and the test is regenerated, and then the student subsequently tests without his or her medication a second time, a new test will not be regenerated. Or, if a student becomes ill and goes home on one test day, the test is regenerated, then if the student spends less than 15 minutes on the test on the next test day, the second test will not be regenerated.

Incidents Requiring Immediate Action (must be submitted by 11:59 PM on the date of occurrence)

Incident Category	Incident Sub-Category	Scenario	Response for Online Testers	Response for Paper/Pencil Testers	IR Required/ Optional
Test Not Completed	Student became ill	Student becomes ill, completes and submits test, and then goes home from school sick	Submit an Incident Report **on the date of occurrence by 11:59 PM** requesting regeneration Gather documentation that verifies: • Parental permission to retest (use form provided in OEAA Secure Site) • The student left school early due to illness	N/A	Online: **Optional** Paper/ Pencil: N/A

APPENDIX C

Incidents Requiring Immediate Action (must be submitted by 11:59 PM on the date of occurrence)					
Incident Category	**Incident Sub-Category**	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**IR Required/ Optional**
Misadministration	Other	Student submits test after spending fewer than 15 minutes testing	Submit an Incident Report **on the date of occurrence by 11:59 PM** requesting regeneration Gather documentation that verifies parent permission to retest (use form provided in OEAA Secure Site)	N/A	Online: **Optional** Paper/ Pencil: N/A
Misadministration	Other	Student takes test without prescribed medication	Submit an Incident Report **on the date of occurrence by 11:59 PM** requesting regeneration Gather documentation that verifies parent permission to retest (use form provided in OEAA Secure Site)	N/A	Online: **Optional** Paper/ Pencil: N/A

Incident Category: COVID-Related				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**IR Required/ Optional**
COVID-Related	Any COVID-related issue that does not conform to any other incident category **Note:** School closures should be submitted on the School Closings page of the OEAA Secure Site. Not Tested Issues should be submitted during the Accountable Students window.	varies	varies	Online: **Optional** Paper/ Pencil: **Optional**



Office of Educational Assessment and Accountability (OEAA)
E-mail: mde-oeaa@michigan.gov
Phone: 877-560-8378

Appendix A.5 M-STEP Test Administration Directions – Grade 8 Paper



M-STEP Paper/Pencil Test Administrator's Directions and Manual Grade 8

Michigan Student Test of Educational Progress

Spring 2021

Michigan Department of Education
Office of Educational Assessment and Accountability

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The M-STEP Grade 8 Test Administrator's Paper/Pencil Directions and Manual includes all information that a Test Administrator needs to know to administer any grade 8 M-STEP assessment. With the exception of the Test Directions for content you will **not** administer, Test Administrators are required to read this document in its entirety **before** administering any grade 8 M-STEP assessment.

The following sections are included in this document:

- Overview
- Before Testing
- During Testing
- Test Administration Directions
- After Testing

Assessments Covered

These test directions apply to the following Grade 8 assessments:

- Science
- Social Studies

Key

Icons	Descriptions
[SAY]	Speak the words in the shaded box.
TIP! TIP! Icon	This is a tip to help with a smooth testing experience.

Introduction

On January 25, 2021, the Michigan Department of Education (MDE) delivered a request to the U.S. Department of Education to waive certain assessment and accountability requirements of the federal Every Student Succeeds Act (ESSA) including the Spring 2021 M-STEP. To comply with current law, MDE and the Office of Educational Assessment and Accountability (OEAA) must continue to prepare for the required spring assessments in the event the USED does not grant our waiver request. Updates regarding the status of this request will be provided through the weekly Spotlight on Assessment and Accountability newsletter. Please know the health, safety, and well-being of students, educators, and their families is MDE's first priority.

M-STEP Assessments

The Spring 2021 Michigan Student Test of Educational Progress (M-STEP) includes summative assessments designed to measure student performance relative to the Michigan Academic Standards in English language arts (ELA), mathematics, science, and social studies. This overview will describe the unique characteristics of these content–area tests.

What's New

Updates to Spring 2021 M-STEP testing were planned for Spring 2020 but were not implemented due to the cancellation of testing. These updates will be applied in Spring 2021.

The M-STEP science test will be operational in Spring 2021. The M-STEP science test assesses the Michigan K-12 Science Standards in grades 5, 8, and 11.

The M-STEP social studies test will continue to measure the Michigan Academic Standards for social studies that were adopted in 2007. The social studies test will have only one part for all grades assessed (5, 8, and 11). Students are allowed to take breaks during testing. Schools and districts should work with Test Administrators to determine when breaks are necessary and in the best interest of students.

To simplify the materials Test Administrators are required to read before testing, MDE has created updated Test Administrator's Directions and Manual documents (this document) for each grade by test mode (online and paper/pencil). These updated documents include test administration directions and other materials that cover everything Test Administrators need to know regarding test administration. This updated information would otherwise have been included in the Test Administration Manual (TAM). Therefore, Test Administrators are no longer required to read the TAM; however, they are required to read the Test Administrator's Directions and Manual (this document) before administering any M-STEP test session.

In order to help with Test Schedule development, MDE has provided recommendations for test time estimates, test sessions, and breaks within sessions on page 5 of this manual. These are recommendations to assist districts and buildings in the development of testing schedules—they are not required.

Assessment Security training requirements have been updated for Spring 2021.

Test Administrators and Proctors are required to either

- complete either the MDE Assessment Security online course

OR

- to read the Assessment Integrity Guide.

Any educators who completed the Assessment Security training modules in the past are allowed to take the Assessment Security Refresher course in place of the full Assessment Security Training modules. More information

about the Assessment Security Refresher course is available on the M-STEP web page (www.michigan.gov/mstep) under the **Professional Development** section.

Science

The M-STEP science test is operational in Spring 2021. The M-STEP science test assesses the Michigan K-12 Science Standards in grades 5, 8, and 11. This is a fixed-form online or paper/pencil test. This year, the test will have:

- two parts to be completed in one day for paper/pencil testers in grades 5 and 8

The test will include seven clusters.

- **Cluster** – a stimulus (or context) about a phenomenon and a set of 5-8 related items designed to assess all performance expectations (standards) in one topic bundle
- **Topic Bundle** – a group of related performance expectations (standards) that are assessed as a group

Calculator Policy for Science Assessments

Students in grades 5, 8, and 11 are allowed to use calculators for both the online and paper/pencil science assessment.

Calculator Use for Paper/Pencil Testers

Students in grades 5, 8, and 11 taking a paper/pencil test will use a handheld calculator on the entire test. Students in grade 5 will use a basic calculator, and students in grades 8 and 11 will use a scientific calculator.

The state's full **Calculator Policy** can be found in Appendix A. Coordinators and/or Test Administrators may copy and share the policy in its entirety with others involved in testing.

Social Studies

Social studies is assessed in grades 5, 8, and 11 with a fixed-form online or paper/pencil test. The Spring 2021 M-STEP assessments are based on the 2007 Michigan K-12 Social Studies Standards and do not reflect any changes in the recently approved 2019 Social Studies Standards. The test will have:

- one part to be completed in one day for paper/pencil testers in grade 8

Required Grade 8 Testing

Students in grade 8 will take the M-STEP science and social studies tests, and the PSAT 8/9. Information on administering the PSAT 8/9 is found in the PSAT 8/9 Coordinator Manual and on the PSAT web page (www.michigan.gov/psat).

Scratch Paper Guidelines

Scratch paper use varies by test grade, and content area. Be sure to review the state's full **Scratch Paper Policy** in Appendix B.

Designated Supports and Accommodations

The Michigan Supports and Accommodations Guidance Document, which includes the **Supports and Accommodations Tables**, presents appropriate universal tools, designated supports, accommodations, identification processes, classroom considerations, and guidelines for all state assessments. The document can be found on the M-STEP web page (www.michigan.gov/mstep). Guidance in the documents pertains to general education students, as well as to English learners (ELs), students with disabilities (SWDs), and students who are considered ELs and are also identified as SWDs.

Call Center Contact Information

The Office of Educational Assessment and Accountability (OEAA) has a call center to answer questions related to M-STEP testing.

Agents are available to receive questions at the following toll-free phone number and email address during the specified hours.

- **Call:** 1-877-560-8378
- **Email:** mde-oeaa@michigan.gov
- **December 1, 2020 - April 12, 2021:** 8:00 AM–5:00 PM (M–F)
- **April 12, 2021 - May 28, 2021:** 7:00 AM–5:00 PM (M-F)

The following table shows the options related to the M-STEP that are available on the call center phone menu. Select the appropriate option when contacting the OEAA, either through our toll-free number (877-560-8378) or the Lansing-area local number (517-241-4102).

Topic	Option
Known or suspected cheating or unethical testing practices on any state assessment	1
DRC INSIGHT Portal, INSIGHT, Central Office Services (COS), or online assessment tools related to the online M-STEP	2
OEAA Secure Site, testing policies and paper/pencil materials regarding the M-STEP, MI-Access, and Accountability reporting	3

OEAA Communications with Schools and Districts

Keeping educators up to date regarding changes in assessment and accountability is critical. The OEAA communicates with the field in a number of different ways, including:

- **Spotlight on Student Assessment and Accountability weekly newsletter** – sign up to receive the newsletter and/or read archived copies on the Spotlight web page (www.michigan.gov/mde-spotlight)
- M-STEP web page (www.michigan.gov/mstep)
- DRC INSIGHT Portal (https://mi.drcedirect.com)
- the Announcement page on the OEAA Secure Site (www.michigan.gov/oeaa-secure)
- presentations at state conferences, including the Michigan School Testing Conference held each year in February

Check these sources regularly to stay up to date on assessment- and accountability-related issues and activities.

Standardized Testing

Uniform procedures are essential to a standardized testing program. To ensure comparable scores, all testing staff must follow the same testing procedures and give instructions exactly as they appear in this manual.

Ensure that you and all testing staff comply with all applicable laws, including those relating to discrimination. By strictly following policies and procedures, you give students the best guarantee of fair testing and the best possible test day experience.

Testing Schedules

Part 1 of the test should be administered before Part 2. However, when students miss a test Part(s), students should take the remaining Part(s) with the class, and complete the missed Part(s) in a makeup session. The test is **untimed** and student-paced. Students **must** be given as much time as needed during the same continuous session to complete each section of this test. Arrangements should be made before testing begins for any student who may need additional time to complete a part of the test.

Test Session Timings

Spring 2021 Estimated Test Session Timings Grade 8	
Content Area	**Grade 8**
M-STEP Science Part 1	:45
M-STEP Science Part 2	:45
M-STEP Social Studies	:60
PSAT 8/9 (ELA and Mathematics)	2:40
Estimated Total Hours	5:10

Assessment Security

The primary goals of test security are to protect the integrity of the assessment and to ensure that results are accurate and meaningful. Test security is integral in ensuring that no student has an unfair advantage or a disadvantage in assessment performance.

The Assessment Integrity Guide (AIG) was revised and updated in November 2020. This document, available for download on the M-STEP web page (www.michigan.gov/mstep), details how state-level assessments should be securely administered. The AIG also includes information on roles and responsibilities of testing staff, test preparation, administration irregularities, and security. District and Building Coordinators are required to read the AIG in its entirety. By following the guidelines in the Assessment Integrity Guide, schools ensure that:

- student test results are valid and reliable
- the testing context is equitable for all students
- all practices are ethical

Overview of Required Security Practices

For additional information on required security practices before, during, and after the test administration, refer to the checklists in Appendix G of the AIG.

Assessment Security Training

All staff members who participate in a state assessment must be fully trained in assessment security.

Test Administrators/Room Supervisors/ Proctors/ Training Requirements:

- complete the MDE Assessment Security online course **and/or** read the Assessment Integrity Guide (determined by the District or Building Coordinator)

Any educators who completed the Assessment Security training modules in the past are allowed to take the Assessment Security Refresher course in place of the full Assessment Security Training modules. More information about the Assessment Security Refresher course is available on the M-STEP web page (www.michigan.gov/mstep) under the **Professional Development** section.

Material Security

- All materials that allow access to or contain test questions or student responses are considered secure materials and must be handled in a way that maintains their security before, during, and after testing. This includes paper/pencil materials, accommodated materials, used scratch paper, online test tickets, and test rosters.
- All secure materials must be retained in one secure, locked location within the school. During the test administration window, the materials must be distributed and collected daily.
- Secure materials are bar-coded and recorded on the security checklists that accompany shipments, and must be returned to the scoring contractor. **Note:** Schools must account for every secure item recorded on the materials list.
- Unused answer documents must be securely shredded.
- All used scratch paper (including graph paper) must be collected and returned to the building M-STEP Coordinator immediately after testing, to be shredded. No used scratch or graph paper may be kept in the classroom. Used scratch paper must never be taken from one test session to another.
- No test materials that contain test questions or student responses may be copied at any time or retained in the schools.
- The use of cameras or cell phones and the posting of pictures to social media sites during testing is an enormous security risk. Therefore, students or testing personnel may not take photographs at any time during testing. If students violate this policy, their tests will be marked “Prohibited Behavior” and no emergency tests will be permitted.

Test Administration

All testing staff must adhere to these guidelines.

- Ensure an appropriate testing environment is maintained.
- Begin all standardized test administration procedures according to the explicit directions in the Test Administrator’s Directions and Manual.
- Read test directions to the students exactly as they are written, as required.
- Monitor student behavior closely for adherence to proper test-taking practices. Ensure that there are no distractions during the test administration period, including talking, noises, and other interactions among students; prevent students from viewing another student’s computer screen or answer document.
- Ensure that students whose IEP and or Section 504 plan requires them to use universal tools, designated supports, and accommodations have these available to them at the time of testing.
- Ensure that any student who needs an allowable universal tool or designated support has these resources available to them at the time of testing.
- Maintain material security.

Security Compliance

All staff involved in the administration of M-STEP tests must read and sign an Office of Educational Assessment and Accountability (OEAA) Assessment Security Compliance Form, affirming that they have read the required assessment materials related to their role in the M-STEP administration process, and that they understand their role and responsibilities.

Completed forms are required from Technology Coordinators, District and Building Test Coordinators, Test Administrators, proctors, and all other staff or volunteers with access to secure test materials or student responses. All OEAA Assessment Security Compliance Forms must be returned to the Building M-STEP Coordinator and kept on file for three years.

Anyone involved in the administration of the M-STEP is obligated to report any suspected violations of test security.

Training Requirements and Resources for Students

Resources for Students to Prepare for Testing

A number of resources and tools have been developed to help students gain valuable experience with testing. Sample items for paper/pencil testers are available on the M-STEP web page (www.michigan.gov/mstep).

Available resources include:

- grade-level Sample Item Sets
- sample essay prompts

It is highly recommended that schools provide students with opportunities to practice using these resources before they take the paper/pencil tests.

Providing students with ample practice opportunities will ensure they are familiar with the test content and item types on test day.

Before Testing Checklist

- ☐ With the exception of the Test Directions for content you will **not** administer, Test Administrators are required to read this document in its entirety **before** administering any grade 8 M-STEP assessment.
- ☐ Complete the MDE Assessment Security online course **and/or** read the Assessment Integrity Guide (determined by the District or Building Coordinator).
- ☐ Sign the OEAA Assessment Security Compliance Form.
- ☐ Ensure student's designated supports and/or accommodations (if applicable) have been set and/or that all materials necessary to administer assigned designated supports and/or accommodations are available.
- ☐ Clearly understand the scheduled testing time, including planned breaks.
- ☐ Prepare the classroom for testing:
  - ➢ Remove or cover all classroom instructional materials that may affect the validity of the assessment. All instructional materials must be removed or covered. This includes all information regarding the content area of the test being administered or test-taking strategies. Examples include, but are not limited to:
    - » tips for taking tests
    - » content displays
    - » word lists
    - » writing formulas
    - » definitions
    - » mathematical formulas/theorems
    - » multiplication tables
    - » charts or maps
  - ➢ Ensure students are positioned in such a way that students cannot easily read another student's test or interact with one another.
  - ➢ Check to make sure there are no test materials left over from another testing session. If found, return to the Building Test Coordinator.
  - ➢ Verify the testing room will be free of distractions for the duration of the test session.
- ☐ Ensure each student answer document has a barcode label attached. If an answer document does not have a barcode label, the student may test, then notify the Building Assessment Coordinator so a barcode label can be attached.

Assessment	Number of Test Parts
Social Studies	1 part; 1 day
Science	2 parts; 1 day

- ☐ Ensure all designated supports and accommodations are completed in the demographic portion of the answer documents.

Test Materials Needed for M-STEP

Materials Needed by Test Administrator	Materials Needed by Students
This booklet	Test booklet
Spare sharpened No. 2 pencils (recommended)	Answer document
	At least two sharpened No. 2 pencils per student
	Blank scratch paper (optional—universal tool)
	Scientific calculator for both parts of the science test. All programmable calculators must be set to TEST mode.

TIP! *Take a few minutes to review all the parts of this document you will need to read aloud during testing. Use sticky notes or sticky flags to give yourself a quick reference to the next set of directions to read.*

Important Tasks During Testing

The following tasks should be performed in the order listed.

Managing Student Test Materials

Test booklets, used answer documents, and used scratch/graph paper are secure materials. They must be kept in a secure location until the test session is scheduled to begin. Test Administrators are instructed to distribute test materials just prior to student testing.

After a testing session is complete, the Test Administrator should return all test materials to the Building M-STEP Coordinator for:

- destruction (if all students finished the test)

  OR
- secure storage (if students have not completed the test)

Test Administrators need to know which universal tools, designated supports, and accommodations are needed for all students prior to the test administration.

Permitted Items in Testing Room

Students may only have required testing materials and any accommodations specified in the student's IEP, Section 504 Plan, and EL instruction documentation at their work spaces during testing.

Item	Permitted?
Pencil	YES – If students are provided scratch paper as a universal tool.
Highlighter	YES
Additional paper (provided by School/ District)	YES – Blank scratch paper is *allowed* for ELA, social studies, science, and mathematics as a universal tool.
Calculator	YES – Scientific calculator is allowed for science only. All programmable calculators must be set to TEST mode during the test.
CD and DVD Players	NO
Headphones (provided by School/ District)	NO
Non-academic reading material	YES – Non-academic reading material is allowed for student use **after** testing is completed. Electronic formats are **not** allowed. Reading material must be a traditional book or magazine. Reading material must be kept off work surface until the test has been submitted.

Providing Assistance

It is particularly important to understand the difference between helping students understand test directions and online tools and helping them with their responses. With the exception of making sure students understand the directions and implementing any approved universal tools, designated supports, or accommodation, Test Administrators and proctors **may not give help of any kind** to students during this test. This includes defining or pronouncing words, reading any part of the test aloud to students, or manipulating tools. These activities are not appropriate and will result in test scores being invalidated.

Student Questions

Answering student questions: Test Administrators must not help students with any content of the test.

- Prohibited practices include (but are not limited to):
  - » providing hints
  - » defining any words
  - » helping to read or pronounce any word
  - » pointing out important information in the question or suggesting a student read a certain section of the item or highlight any part of the question
  - » in any way provide any verification of a correct/incorrect answer if asked by a student

Any of these activities are inappropriate and violate ethical test administration practices and will result in test scores being invalidated.

- Allowable practices include:
  - » telling the student to “do their best work”
  - » telling the student to select their best answer for a question

Test Directions for the Student Demographic Page – All M-STEP Grade 8 Assessments

Use the following information and script to assist students in completing the Student Data Grid on the front cover of each student answer document at the start of **every** test administration. Repeat these directions and script for all subjects.

All directions that a TA needs to read to students are in shaded boxes so they stand out from the regular text. They should be read exactly as they are written, using a natural tone and manner. (All other information is for the Test Administrator and should not be read to the students.) If the TA makes a mistake in reading a direction, the TA should stop and say, "I made a mistake. Listen again." Then the direction should be reread.

Administration Directions for Completing the Student Data Grid

Non-personal information the students will be entering on the Student Data Grid at the start of testing may be posted so that all students can see it (including a whiteboard, smartboard, chalkboard) prior to the start of test administration. This information can include:

- Teacher Name
- School Name
- District Name (leave blank for non-public schools)
- Assessment Date (today's date)
- Form Number
  (Standard forms are Form 1. Emergency forms are Form 2. For all subjects, the Braille forms are Form 88. Note that form numbers always appear on the front cover of the Test Booklet.)

Distribute test materials to students. Remind students not to open their test booklets until told to do so and to put away all materials that may not be used during the test. Scratch paper is allowed as a universal tool for students who need it. Test booklets are designed to have ample space for note-taking. If used, blank scratch paper must be distributed at the start of each test session or part, collected at the end of each part, and securely returned to the Building Assessment Coordinator for shredding. Scratch paper must be treated at all times as a secure material.

Make sure each student has his or her own answer document before the test begins. If a student's name is misspelled on the answer document, corrections can be made at a later date prior to the return of materials to the scoring contractor. Immediately notify the school M-STEP coordinator, who can help you resolve this problem after the test is completed.

Read aloud the directions in the shaded blocks.

[SAY] Do not open your test booklet until told to do so.

During this test, you must turn off and put away all electronic devices, including cell phones, tablets, smart watches and other wireless devices. The only items you may have on your desk or table are the materials necessary for the test.

All answers must be marked in your answer document using a No. 2 pencil only.

Make sure that you have a 2021 M-STEP (insert grade and subject) _____ **Test Booklet.**

Write your name on the line labeled "Student Name" on the front cover of your test booklet.

Pause.

DURING TESTING

[SAY] Look at your answer document. Make sure you have your own answer document. The box at the top of the page should contain a label with your name and other information.

Raise your hand if your name does not appear in this box or if the label is missing.

TIP! *If any students do not have a barcode label affixed, they can still test, but the Building M-STEP Assessment Coordinator must be notified.*

[SAY] Follow these steps to complete the Student Data Grid. Turn to the front cover of your answer document.

Write your name on the line that says, "Student Name."

Write (insert teacher name) _____ **on the line that says "Teacher Name."**

Write (insert school name) _____ **on the line that says "School."**

Write (insert district name) _____**on the line that says "District."**

Non-public schools may leave "District" blank.

Pause.

[SAY] Find the section labeled "Birth Date." In the column under "Month," fill in the bubble next to the month in which you were born.

Pause.

[SAY] In the space labeled "Day," print the digits of the day on which you were born. If there is only one digit in your day of birth, print a zero before the numeral. For example, if your day of birth is the seventh, you would print the digits zero and seven.

In the two columns below "Day," fill in the bubbles for the digits of the day on which you were born. Fill in only one bubble in each column.

Pause.

[SAY] In the space labeled "Year," print the last two digits of the year in which you were born.

In the two columns below "Year," fill in the bubbles for the last two digits of the year in which you were born. Fill in only one bubble in each column.

Pause.

Make sure each student has filled in the correct bubbles for the month, day, and year of birth.

[SAY] Next, find the section labeled "Assessment Date."

In the first column, fill in the bubble next to the current month.

The next two spaces are for today's date. Write the numbers for today's date in the spaces provided. If there is only one digit in today's date, print a zero before the numeral. For example, if the date is the seventh, you would print the digits zero and seven.

In the two columns below today's date, fill in the bubbles for the numerals of the date. Fill in only one bubble in each column.

The year is already filled in for you.

Pause to allow students to finish.

DURING TESTING

[SAY] Now find the section labeled "Form." Then check the front cover of your Test Booklet to find the correct form number. Bubble in that form number.

Check to make sure all students have bubbled the correct form number. It is critical that the correct form number is bubbled on the answer document in order to ensure the student's test is scored properly.

When the students have completed the Student Data Grid, turn to the appropriate page in this document for subject-specific test directions, and continue with test administration.

Test Directions for Grade 8 Science
Day 1: Part 1

Be sure you have completed the directions on pages 12–14 before you start this section.

[SAY] Now you will be taking Part 1 of the M-STEP Science Assessment.

Turn to page 3 in your answer document.

Open your test booklet to page 3.

Read the directions silently as I read them aloud.

You are about to take the Michigan Student Test of Educational Progress, or M-STEP. You have been given a test booklet and answer document.

In order for the results to be valid, you must NOT:

- **talk to or help another student**
- **look at or copy another student's answers**
- **ask for or accept any help from another student**
- **use your cell phone or any other electronic device including an eBook**
- **take pictures or make copies of any test materials**
- **cause a disturbance**
- **remove test booklet or answer document from the room**
- **post or chat about any part of the test through social media (example: Facebook, Snapchat, Instagram, Twitter, etc.)**

If you do not understand these requirements or have questions, please raise your hand.

[SAY] PART 1 DIRECTIONS

You will be taking Part 1 of the Science M-STEP. This part includes passages and pictures that you will read and use to answer different types of questions. Carefully read each passage and look at each picture before answering the questions that follow. Calculators are allowed for this part of the test.

You must mark all your answers in Part 1 of your answer document with a No. 2 pencil. You may underline, circle, or write in this test booklet to help you, but nothing marked in this test booklet will be scored. Completely fill in the corresponding circle on your answer document. If you erase an answer, be sure to erase it completely. Remember that if you skip a question in the test booklet, you need to skip the answer space for that question on the answer document. If you are not sure of an answer, mark your best choice.

A Periodic Table of the Elements has been provided for your reference on the next page.

When you come to the STOP sign, you have finished Part 1. If you finish early, you may go back and check your work. Check to make sure that you have answered every question. When you have finished, please close your test booklet and answer document and sit quietly.

It is important to do your best on this test so your teacher and school can know how much you have learned this school year.

Do you have any questions?

Pause to answer any questions, then continue.

DURING TESTING

[SAY] Make sure you are on page 3 in your answer document.

You may turn the page in your test booklet and begin.

When all students have finished,

[SAY] Okay. We will stop now. Please close your test booklet and answer document. Remain quietly in your seat until all materials are collected.

Before dismissing students (whether it's for a break, or between separate test sittings, or the end of testing) you must collect all materials, including scratch paper, from each student individually. Do not have students pass materials to the end of a row or aisle. Students may not be dismissed until it is verified that all test materials have been returned.

Securely store the test materials until you begin testing again. Used scratch paper must be returned to the Building Assessment Coordinator for secure shredding. (You will need to distribute new, blank scratch paper before each part.)

Test Directions for Grade 8 Science
Day 1: Part 2

Be sure you have completed the directions on pages 12–14 before you start this section.

[SAY] Turn to the front cover of your answer document. Make sure you have the answer document with *your* name on it and not another student's answer document. Please do not open your test booklet until I tell you to do so. Make sure you are using a No. 2 pencil with an eraser when taking this test. Pens are not allowed.

Pause to make sure the students have their own test booklet and answer document.

[SAY] Now you will be taking Part 2 of the M-STEP Science Assessment.

Turn to page 7 in your answer document.

Open your test booklet to page 55.

Read the directions silently as I read them aloud.

You will be taking Part 2 of the Science M-STEP. This part includes passages and pictures that you will read and use to answer different types of questions. Carefully read each passage and look at each picture before answering the questions that follow. Calculators are allowed for this part of the test.

You must mark all your answers in Part 2 of your answer document with a No. 2 pencil. You may underline, circle, or write in this test booklet to help you, but nothing marked in this test booklet will be scored. Completely fill in the corresponding circle on your answer document. If you erase an answer, be sure to erase it completely. Remember that if you skip a question in the test booklet, you need to skip the answer space for that question on the answer document. If you are not sure of an answer, mark your best choice.

[SAY] A Periodic Table of the Elements has been provided for your reference on the next page.

When you come to the STOP sign, you have finished the test. If you finish early, you may go back and check your work in Part 2 only. Check to make sure that you have answered every question. When you have finished, please close your test booklet and answer document and sit quietly.

Pause to answer any questions, then continue.

[SAY] Make sure you are on page 7 in your answer document.

You may turn the page in your test booklet and begin.

When all students have finished,

[SAY] Okay. We will stop now. Please close your test booklet and answer document. Remain quietly in your seat until all materials are collected.

Before dismissing students (whether it's for a break, or between separate test sittings, or the end of testing) you must collect all materials, including scratch paper, from each student individually. Do not have students pass materials to the end of a row or aisle. Students may not be dismissed until it is verified that all test materials have been returned.

Securely store the test materials until you begin testing again. Used scratch paper must be returned to the Building Assessment Coordinator for secure shredding. (You will need to distribute new, blank scratch paper before each part.)

Refer to the "After Testing" chapter on page 20 for specific instructions about assembly and return of materials.

Test Directions for Grade 8 Social Studies

Be sure you have completed the directions on pages 12–14 before you start this section.

[SAY] Now you will be taking the M-STEP Social Studies Assessment.

Turn to page 2 in your answer document.

Open your test booklet to page 3.

Read the directions silently as I read them aloud.

You are about to take the Michigan Student Test of Educational Progress, or M-STEP. You have been given a test booklet and answer document.

In order for the results to be valid, you must NOT:

- **talk to or help another student**
- **look at or copy another student's answers**
- **ask for or accept any help from another student**
- **use your cell phone or any other electronic device including an eBook**
- **take pictures or make copies of any test materials**
- **cause a disturbance**
- **remove test booklet or answer document from the room**
- **post or chat about any part of the test through social media (example: Facebook, Snapchat, Instagram, Twitter, etc.)**

If you do not understand these requirements or have questions, please raise your hand.

TEST DIRECTIONS

In this test, you will answer multiple-choice social studies questions. Some questions may include a passage, map, or other social studies-related information. Use that information with what you know to answer the questions.

[SAY] You must mark all of your answers on the answer document with a No. 2 pencil. You may underline, circle, or write in this test booklet to help you, but nothing marked in this test booklet will be scored.

Mark only one answer for each question. Completely fill in the corresponding circle on your answer document. If you erase an answer, be sure to erase it completely. Remember that if you skip a question in the test booklet, you need to skip the answer space for that question on the answer document. If you are not sure of an answer, mark your best choice.

A sample question is provided for you below.

Sample Multiple-Choice Question:
Which economic activity is most important in Florida today?

A logging

B trapping

C growing potatoes and apples

D growing grapefruits and oranges

For this sample question, the correct answer is D. Circle D is filled in for the sample question on your answer document.

When you come to the STOP sign you have finished the test. If you finish early, you may go back and check your work. Check to make sure you have answered every question. When you have finished, please close your test booklet and answer document and sit quietly.

It is important to do your best on this test so your teacher and school can know how much you have learned this school year.

Do you have any questions?

Pause to answer any questions, then continue.

DURING TESTING

[SAY] You may turn the page in your test booklet and begin.

When all students have finished,

[SAY] Okay. We will stop now. Please close your test booklet and answer document. Remain quietly in your seat until all materials are collected.

Before dismissing students (whether it's for a break, or between separate test sittings, or the end of testing) you must collect all materials, including scratch paper, from each student individually. Do not have students pass materials to the end of a row or aisle. Students may not be dismissed until it is verified that all test materials have been returned.

Securely store the test materials until you begin testing again. Used scratch paper must be returned to the Building Assessment Coordinator for secure shredding. (You will need to distribute new, blank scratch paper before each part.)

Refer to the "After Testing" chapter on page 20 for specific instructions about assembly and return of materials.

Assemble Materials for Return

After testing has been completed, prepare materials to be returned to the Building Assessment Coordinator.

Check to make sure that all student answer documents have been removed from inside the test booklets. In addition, make sure that no scratch paper was left inside the answer documents. Remove any extraneous material.

Only one answer document per student/content area may be submitted. If multiple answer documents for any students are identified, please ensure that all responses are transcribed into a single answer document.

Make sure that responses for students taking the braille version of the test have been transferred to standard answer documents with Form 88 bubbled on the front.

Checklist for Test Administrators

- Remember to affix the student bar code label, complete the requested information on the front of each student answer document, and return all test booklets and answer documents to the Building Assessment Coordinator.
- Bundle all unused materials together and return them to your Building Assessment Coordinator.
- Bundle together all of the scratch paper, and any L1 Glossary Reference Sheets and return to the Building Assessment Coordinator. This material is to be securely handled and destroyed. Do **not** dispose of the scratch paper or glossaries by placing it in the trash. This material must be securely destroyed.

APPENDIX A: M-STEP Calculator Policy

Online and Paper/Pencil Testers

Mathematics

Students in grades 3, 4, and 5 are **not** allowed to use a calculator on ANY item in the mathematics assessment, as the use of calculators at these grade levels changes the construct of the items and what they are intended to measure. All students must abide by this no-calculator-allowed policy, even students whose IEP or 504 Plan specifies otherwise. **The use of a calculator at grades 3, 4, or 5 is considered a nonstandard accommodation.** Nonstandard accommodations render the assessment invalid.

Science

Students in grade 5, 8, and 11 are allowed to use a calculator on any item in the science assessment.

Online Testers

On grades 6 and 7 mathematics and grades 5, 8, and 11 science assessments, students will use the calculator embedded within the online delivery engine. The calculator will appear in the toolbar when items allow its use; it will not appear when items do not allow its use.

There are two types of embedded online calculators:

- Basic calculator - science grade 5 and mathematics grade 6
- Scientific calculator - science grades 8 and 11 and mathematics grade 7

The Office of Educational Assessment and Accountability (OEAA) has developed resources for online testers to help prepare them for online testing. One of the resources is an online calculator practice tool. It is recommended that online testers visit the practice environment to see sample items and familiarize themselves with the online calculator tool. To practice using the M-STEP online calculators, go to the Online Tools Training (OTT) portal (https://wbte.drcedirect.com/MI/portals/mi/) using the Google Chrome browser.

Paper/Pencil Testers

On grades 6 and 7 mathematics and grades 5, 8 and 11 science assessments, students will use a handheld calculator.

Calculators are allowed on all items of the science assessments. Calculators are allowed only on Part 2 of the mathematics assessment.

Mathematics test booklets are divided into two parts. Part 1 of the paper/pencil mathematics assessment is considered non-calculator, and students must not have a calculator within reach. Part 2 of the paper/pencil mathematics assessment allows the use of a calculator. Once students start Part 2, they are not allowed to return to the non-calculator items on Part 1.

Since external hand-held graphing calculators are programmable, there is a potential of a security breach. All programmable calculators must be set to TEST mode during the testing session for both mathematics and science assessments.

Types of hand-held calculators:

- Basic calculator - science grade 5 and mathematics grade 6
- Scientific calculator - science grades 8 and 11 and mathematics grade 7

Important Notes

Alignment

The operational items on all of the assessments have been field-tested and are aligned to Michigan's standards.

Fairness

The issue of fairness between online testers and paper/pencil testers with regard to calculator usage has been raised. The OEAA decided not to burden schools by requiring them to purchase calculators specifically for this assessment as a possible one-time use. Some schools may not have the grade-specific calculators for their paper/pencil testers to use. The OEAA has reviewed every item to determine if the use of an above-grade-level calculator gives those students an advantage. Students will not be advantaged or disadvantaged based on using an above-grade calculator on the assessment.

Managing Online Testers and External Hand-held Calculators

The OEAA prohibits online testers from using external handheld calculators instead of the embedded online calculator. The only online testers who may use an external calculator are those students whose IEP or Section 504 Plan specifies the use of a special adaptive calculator.

APPENDIX B: M-STEP Scratch Paper Policy

Scratch paper is a Universal Tool that may be made available to students during testing. Used scratch paper is a secure material. District Coordinators should develop and disseminate procedures for the secure handling and disposal of used scratch paper.

Terms

Graph Paper: blank, gridded paper provided by MDE for use in grades 6-7 mathematics

Scratch Paper: blank, lined, or unlined paper

Graph paper and scratch paper are separated into two types:

Unused Scratch/Graph Paper: scratch paper that does not include any student markings; unused scratch/ graph paper may include a student's name written on it

Used Scratch/Graph Paper: scratch/graph paper that includes any student markings beyond the student's name

Online Testers: Mathematics

Scratch paper is allowed in all test sessions. For students in grades 6-7, blank graph paper is required and is provided in the online initial material order. The grades 3-5 tests do not include items that require graph paper. Additional graph paper can be downloaded from the M-STEP web page (www.michigan.gov/mstep).

For grades 3-5, scratch paper must be blank ruled or unruled, or (optionally) graph paper.

For grades 6-7 the graph paper must be blank.

Fresh scratch/graph paper must be distributed at the start of each new test session. That is, when a student receives a new test ticket for login, a fresh sheet of scratch paper must be provided at that time. Once a test session is completed, used scratch paper must be returned with the test tickets to the Building Coordinator for secure shredding.

Students must write their names on the scratch paper. When students are given a break, the scratch paper must be collected and securely stored with test tickets until testing resumes.

If a student's name is clearly written on the used scratch paper, it can be returned to that student to use when resuming an in-progress test.

Online Testers: English Language Arts, Science, and Social Studies

Scratch paper is allowed in all test sessions. For all grades this must be blank ruled or unruled paper.

Fresh scratch paper must be distributed at the start of each new test session. That is, when a student receives a new test ticket for login, a fresh sheet of scratch paper must be provided at that time. Once a test session is completed, used scratch paper must be returned with the test tickets to the Building Coordinator for secure shredding.

Students must write their names on the scratch paper. When students are given a break, the scratch paper must be collected and securely stored with test tickets until testing resumes.

If a student's name is clearly written on the used scratch paper, it can be returned to that student to use when resuming an in-progress test.

Paper/Pencil Testers: Mathematics

Scratch paper is allowed in all test sessions and test parts. For grades 3-5 this must be blank ruled or unruled, or (optionally) graph paper. Testers in grades 6-7 may be provided blank graph paper in place of blank ruled or unruled paper; however, students may also use the graphs in their test booklets to solve problems. Additional graph paper can be downloaded from the M-STEP web page (www.michigan.gov/mstep).

Fresh scratch paper must be distributed with each part of a test and students must write their names on the scratch paper. After students encounter a "stop" sign in the test booklets, scratch paper must be collected and securely stored until it can be returned with the rest of the test materials to the Building M-STEP Coordinator for shredding. If paper/pencil testers are provided a break not associated with a test part, then used scratch paper must be placed inside their closed test booklets.

Paper/Pencil Testers: English Language Arts, Science, and Social Studies

Scratch paper is allowed in all test sessions and test parts. For all grades this must be blank ruled or unruled paper.

Fresh scratch paper must be distributed with each part of a test and students must write their names on the scratch paper. After students encounter a "stop" sign in the test booklets, scratch paper must be collected and securely stored until it can be returned with the rest of the test materials to the Building M-STEP Coordinator for shredding. If paper/pencil testers are given a break not associated with a test part, then used scratch paper must be placed inside their closed test booklets.

Note: In order to prevent the use of an inappropriate writing utensil on the answer document, students should only have access to number 2 pencils during paper/pencil testing.

Mathematics: Online and Paper/Pencil

Grade	Graph Paper (required)	Graph Paper (optional)	Scratch Paper (available Universal Tool)
3		X	X
4		X	X
5		X	X
6	X		X
7	X		X

English Language Arts, Science, and Social Studies: Online and Paper/Pencil

Grade	Scratch Paper (available Universal Tool)
3	X
4	X
5	X
6	X
7	X
8*	X
11*	X

*Does not apply to English language arts.

APPENDIX C: M-STEP Incident Reporting Guide

Any testing irregularities that occur before, during, or after testing must be reported to the Office of Educational Assessment and Accountability (OEAA) within two school days. All incidents are required to be reported; do not neglect to report an incident if more than two school days have passed since you were aware of it. This table identifies the incident categories and sub-categories that are used in the Secure Site Incident Reporting tool and provides sample scenarios for each category or sub-category.

You will find detailed information on how to access and use the tool at the Secure Site Incident Reporting tool (www.michigan.gov/documents/mde/Incident_Reporting_520328_7.pdf).

Incident Category: Test Not Completed				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Test submitted prior to completion	Student accidentally ends/ submits the test without answering all questions	If 5 or fewer questions have been answered, contact the Call Center at 1-877-560-8378 Option 2. If more than 5 questions have been answered, an Incident Report is required.	N/A	Online: **Required** if more than 5 item responses Paper/Pencil: N/A
Student became ill	Student becomes ill and goes home before finishing a test	Pause and Exit test (do not End test). Resume testing with the original test ticket in a makeup session.	Collect test materials and flag the last question answered. Resume testing in an individual one-on-one proctored makeup session. Students are not allowed to return to previously answered questions.	Online: **Optional** Paper/Pencil: **Required**
Student was removed from school by parent/ guardian	Student is removed from class by a parent or guardian during the test administration	Pause and Exit test (do not End test). Resume testing with the original test ticket in a makeup session.	Collect test materials and flag the last question answered. Resume testing in an individual one-on-one proctored makeup session. Students are not allowed to return to previously answered questions.	Online: No Incident Report Necessary Paper/Pencil: **Required**

Incident Category: Test Not Completed				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Student moved from school	Student transfers or moves from school with an incomplete content area test **NOTE:** Be prepared to accept a phone call from student's receiving school requesting information on test completion and needed accommodations or designated supports.	Submit an incident report with request for test to be marked **Do Not Score**.	Mark the answer document **Do Not Score** and return it in the Special Handling Envelope.	Online: **Required** Paper/Pencil: **Required**
Do Not Score requested	Student has taken (or logged into) incorrect assessment (took M-STEP instead of MI-Access assessment) **NOTE:** A student who begins a test and subsequently becomes ill does not meet the requirements for the test to be marked **Do Not Score**.	Submit incident report with request for the test to be marked **Do Not Score.**	N/A	Online: **Required** Paper/Pencil: N/A
Student does not complete test by end of day	Student does not complete testing by the end of the school day **NOTE:** Testing must be completed by the end of the grade-level testing window. There are no exceptions.	Pause and Exit test (do not End test). Resume testing with the original test ticket in a makeup session. (Schools should consider the ages and needs of their students and schedule intentionally planned breaks as appropriate.)	With proper planning and scheduling, this should be avoided. • Schedule all testing early in the day to allow students to complete required testing. The schedule must allow for students who require additional time. • Consider the multiple day testing designated support—this is allowable as **intentional** scheduling for some students who use additional supports. • Exceptions for individual students will be considered on a case-by-case basis. The required Incident Report must demonstrate student was provided ample time to complete the test.	Online: No Incident Report necessary Paper/Pencil: **Required**

Incident Category: Accommodation / Designated Support Issue				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Designated support/ required accommodation not provided	Student is not provided appropriate designated support or accommodations	Test misadministration. Submit an Incident Report. For students with an IEP or Section 504 plan that requires the missing designated support or accommodation: A new test with appropriate designated support or accommodation may be administered with: • notification to and approval of parents or guardians • documentation provided that identifies required designated support or accommodation (such as IEP plan) For students who do not have an IEP or Section 504 plan the requires the missing designated support: A new test with appropriate designated support may be administered with: • notification to and approval of parents or guardians • signed documentation from the person responsible for day-to-day instruction in the content area affirming the student's daily use of the designated support during regular instruction	Test misadministration. Submit an Incident Report. Emergency test with appropriate designated support or accommodation may be administered with notification to and approval of parents or guardians. Original answer document must be marked **Do Not Score** and returned in the orange Special Handling Envelope.	Online: **Required** Paper/ Pencil: **Required**

APPENDIX C

Incident Category: Accommodation / Designated Support Issue				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Nonstandard designated support/ accommodation provided	Nonstandard accommodation provided	The student's test is invalidated. Inform parents or guardians. Submit an Incident Report—working with the OEAA, in some cases students may be able to retest with the appropriate accommodation, if the student's parents and school agree it is in the best interest of the student. Perform an internal investigation as needed and keep the resulting documentation on file as Nonstandard Accommodations may be appealed during the Answer Document Verification window.	Mark the student's test as **Nonstandard Accommodation** on the answer document and return with scorable materials. The student's test is invalidated. Inform the parent or guardian. Submit an Incident Report—working with the OEAA, in some cases students may be able to retest with the appropriate accommodation, if the student's parents and school agree it is in the best interest of the student. Perform an internal investigation as needed and keep the resulting documentation on file as Nonstandard Accommodations may be appealed during the Answer Document Verification window.	Online: **Required** Paper/ Pencil: **Required**

Incident Category: Misadministration				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Wrong test administered	Student is administered the incorrect test (for example, an M-STEP test instead of a MI-Access test)	Inform parents or guardians. Students must be assigned to the correct test in the Secure Site and the appropriate test must be given in order to be included in accountability calculations. Submit an Incident Report—the test will be marked **Do Not Score**.	Inform parents or guardians. Mark the answer document with **Do Not Score** and return in the orange Special Handling Envelope. Student must be given the correct test in order to be included in accountability calculations — material orders should be ordered on the Secure Site using the normal additional material order process.	Online: **Required** Paper/ Pencil: **Required**
Wrong test ticket used	Student is issued wrong test ticket and begins the test	Stop the test as soon as the error is identified. Pause and Exit the test (do not End the test) Submit an Incident Report.	N/A	Online: **Required** Paper/ Pencil: N/A
Part missed or not administered	Student is not administered one part of a test	If it is identified within the testing window for the grade, administer the test. If it is past the testing window for the grade, submit an Incident Report. The test may not be administered.	If it is identified on the day of the administration or within the makeup window for the content area and grade, administer the test. If it is not identified on the test day or within the makeup window for the content area and grade, submit an Incident Report. **Important reminder:** This is for a Part missed in the test. It is not permissible to inspect answer documents for completion or to review student responses at this time.	Online: **Optional** Paper/ Pencil: **Optional**

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Incident Category: Misadministration				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Wrong answer document used	Student uses wrong answer document when testing	N/A	If the wrong answer document is the correct grade and test, but has a wrong barcode label, then a new correct barcode label should be printed and affixed. An Incident Report is not required. If the answer document is the wrong grade and/or content, then mark the wrong answer document(s) used with **Do Not Score** and return in the orange Special Handling Envelope. Submit an Incident Report. (See **Answer document transcription required/ suggested** Incident Sub-Category on page 34 of this manual.)	Online: N/A Paper/ Pencil: **Optional**
Test not administered on scheduled day/time	Test is administered outside of scheduled testing window, or a paper/pencil test is administered in a day that is not assigned for the content/part or not administered during scheduled makeup dates	N/A	Mark student's answer document **Do Not Score** and return in the Orange Special Handling Envelope. Submit an Incident Report.	Online: N/A Paper/ Pencil: **Required**

Incident Category: Misadministration				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Other	Test administrator/proctor helps student by giving information other than test directions Test administrator/proctor indicating the correct answers to students Test administrator leaves students unattended during testing Secure materials are not kept secure before, during, or after test administration Test administrator/proctor or other building staff taking photos of test items or test environment Staff posting test items or content to social media during testing	Submit an Incident Report—working with the OEAA, the district may be able to quickly resolve issues.	Submit an Incident Report—working with the OEAA, the district may be able to quickly resolve issues.	Online: **Required** Paper/ Pencil: **Required**

Incident Category: Building Emergency				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Building emergency	Building emergency occurs during the test and requires student(s) to leave the room or otherwise interrupts testing	Address the building emergency—pause tests as appropriate/possible. Submit an Incident Report.	Address the building emergency—secure test materials as appropriate/possible. Submit an Incident Report.	Online: **Required** Paper/ Pencil: **Required**

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Incident Category: Prohibited Behavior				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Electronics/ social media	Student(s) taking photos of test items, use of social media during testing.	The student's test will be marked Prohibited Behavior and invalidated. Inform parents or guardians. Perform internal investigation as needed and keep resulting documentation on file as Prohibited Behaviors may be appealed during the Answer Document Verification window. Submit an Incident Report.	Inform parents or guardians. Perform internal investigation as needed and keep resulting documentation on file as Prohibited Behaviors may be appealed during the Answer Document Verification window. Submit an Incident Report.	Online: **Required** Paper/ Pencil: **Required**
Other	Disruptive behaviors impacting testing session/ completion, cheating, use of calculator (mathematics) or dictionary/thesaurus (ELA) during non-permitted section of the test **NOTE:** The use of non-permitted tools results in test invalidation.	Students engaged in disruptive or egregious behavior must be removed from the testing room. Where feasible, students should be redirected and allowed to continue testing. Students engaged in prohibited behavior need not be removed from the testing room unless they are affecting other students. The student's test will be marked Prohibited Behavior and invalidated. Inform parents or guardians. Perform internal investigation as needed and keep resulting documentation on file as Prohibited Behaviors may be appealed during the Answer Document Verification window. Submit an Incident Report.	Students engaged in disruptive or egregious behavior must be removed from the testing room. Where feasible, students should be redirected and allowed to continue testing. Students engaged in prohibited behavior need not be removed from the testing room unless they are affecting other students. The student's test will be marked Prohibited Behavior and invalidated. Inform parents or guardians. Perform internal investigation as needed and keep resulting documentation on file as Prohibited Behaviors may be appealed during the Answer Document Verification window. Submit an Incident Report.	Online: **Required** Paper/ Pencil: **Required**

Incident Category: Technical Problems with Online Testing				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Repeated disconnections	Student(s) has repeated disconnections during testing session	Contact local tech support. Tech support can contact DRC Customer Support if they need additional help to resolve the matter. Submit an Incident Report.	N/A	Online: **Optional** Paper/Pencil: N/A
	Entire classroom has repeated disconnections during testing session	Contact local tech support. Tech support can contact DRC Customer Support if they need additional help to resolve the matter. Submit an Incident Report.	N/A	Online: **Optional** Paper/Pencil: N/A
INSIGHT freezing, crashing, or not advancing	INSIGHT stops working and the student(s) cannot continue testing	Contact local tech support. Tech support can contact DRC Customer Support if they need additional help to resolve the matter. Submit an Incident Report.	N/A	Online: **Optional** Paper/Pencil: N/A
Item functionality	An item on the test is not functioning as expected; for example, the student believes the correct answer cannot be selected	Instruct the student to answer as best they are able. Submit an Incident Report with the test and question number (if known), and computer used for testing (Windows PC, Mac, iPad, Chromebook).	N/A	Online: **Required** Paper/Pencil: N/A
Hardware failure	Power outage, internet connection interrupted through local error, stolen computers	If the problem is with just one computer, move the student to another computer and resume testing. If the problem will be resolved in sufficient time to complete testing (restore power or internet connection), continue testing another time or day. If online testing becomes impossible, file an Incident Report.	N/A	Online: **Required IF** it is necessary to move to emergency paper forms; otherwise optional Paper/Pencil: N/A

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Incident Category: Technical Problems with Online Testing				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**Incident Report Required/ Optional**
Other	Use this category if your technical problem does not conform to the listed technical issues.	Contact your local IT staff, or if further support is required, contact DRC Customer Support.	N/A	Online: **Optional** Paper/Pencil: N/A

Incident Category: Materials				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**IR Required/ Optional**
Answer document transcription required/ suggested	Students write in the wrong section of an assessment; wrong answer document used; a writing utensil other than a number 2 pencil is used on an answer document	N/A	Student must transcribe all responses exactly as recorded from the original answer document to a fresh answer document in a one-on-one proctored section. Print and affix a bar code label to the new answer document and return with the scorable materials. Original answer document must be marked **Do Not Score** and returned in the Orange Special Handling Envelope.	Online: N/A Paper/ Pencil: **Optional**
Answer document damaged, defective, or lost	Answer document becomes damaged in such a way that will impact scanning—ripped, torn; is defective upon arrival; or is lost during test administration.	N/A	Student must transcribe all responses exactly as recorded from the original answer document in a one-on-one proctored session. Print and affix a bar code label to the new answer document and return with the scorable materials. Original answer document must be marked **Do Not Score** and be returned in the Orange Special Handling Envelope. **NOTE:** Biohazards should not be returned. Any secure material with biohazardous material should be securely destroyed.	Online: N/A Paper/ Pencil: **Optional**

Incident Category: Other				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**IR Required/ Optional**
Other	Use this category only if an incident occurs that does not fit into the listed categories.	Varies	Varies	Online: **Optional** Paper/ Pencil: **Optional**

Incident Category: Staff Unethical				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**IR Required/ Optional**
Staff Unethical	District administration or management company needs to report an incident involving inappropriate test administration practices of District/Building Coordinators or Building Administration **Note:** When using this category, only the incident report submitter and anyone identified in the CC field of the report will receive notification of progress of this incident.	Submit an Incident Report; In working with the OEAA, the district may be able to quickly resolve issues.	Submit an Incident Report- In working with the OEAA, the district may be able to quickly resolve issues.	Online: **Required** Paper/ Pencil: **Required**

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The Department of Education (MDE) has updated incident reporting requirements to ensure accurate and valid student-level assessment data for the specific situations described below; that is, if a student:

- becomes ill and leaves school early due to illness on the day that the test was completed and submitted
- spends fewer than 15 minutes testing and submits a test
- did not take prescribed medication prior to testing and completes and submits a test

These tests can be regenerated if the incident report is submitted on the date of the incident (by 11:59 PM) and parent permission is documented. If it is not possible to obtain documentation of parent permission on the date of the incident, the school must submit the incident report on the date of occurrence and provide documentation of parent permission subsequently.

Regeneration of any test for any of these listed reasons will only occur once; for example, if a student does not take his or her medication one day and the test is regenerated, and then the student subsequently tests without his or her medication a second time, a new test will not be regenerated. Or, if a student becomes ill and goes home on one test day, the test is regenerated, then if the student spends less than 15 minutes on the test on the next test day, the second test will not be regenerated.

Incidents Requiring Immediate Action (must be submitted by 11:59 PM on the date of occurrence)

Incident Category	Incident Sub-Category	Scenario	Response for Online Testers	Response for Paper/Pencil Testers	IR Required/ Optional
Test Not Completed	Student became ill	Student becomes ill, completes and submits test, and then goes home from school sick	Submit an Incident Report **on the date of occurrence by 11:59 PM** requesting regeneration Gather documentation that verifies: • Parental permission to retest (use form provided in OEAA Secure Site) • The student left school early due to illness	N/A	Online: **Optional** Paper/ Pencil: N/A

Incidents Requiring Immediate Action (must be submitted by 11:59 PM on the date of occurrence)					
Incident Category	**Incident Sub-Category**	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**IR Required/ Optional**
Misadministration	Other	Student submits test after spending fewer than 15 minutes testing	Submit an Incident Report **on the date of occurrence by 11:59 PM** requesting regeneration Gather documentation that verifies parent permission to retest (use form provided in OEAA Secure Site)	N/A	Online: **Optional** Paper/ Pencil: N/A
Misadministration	Other	Student takes test without prescribed medication	Submit an Incident Report **on the date of occurrence by 11:59 PM** requesting regeneration Gather documentation that verifies parent permission to retest (use form provided in OEAA Secure Site)	N/A	Online: **Optional** Paper/ Pencil: N/A

Incident Category: COVID-Related				
Incident Sub-Category	**Scenario**	**Response for Online Testers**	**Response for Paper/Pencil Testers**	**IR Required/ Optional**
COVID-Related	Any COVID-related issue that does not conform to any other incident category **Note:** School closures should be submitted on the School Closings page of the OEAA Secure Site. Not Tested Issues should be submitted during the Accountable Students window.	varies	varies	Online: **Optional** Paper/ Pencil: **Optional**

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Office of Educational Assessment and Accountability (OEAA)
E-mail: mde-oeaa@michigan.gov
Phone: 877-560-8378

Appendix A.6 Student Supports and Accommodations Table

MICHIGAN Department of Education

Supports and Accommodations Guidance Document

Universal Tools • Designated Supports • Accommodations

M-STEP

MI-Access

WIDA

PSAT

SAT

ACT WorkKeys

Updated: January 26, 2021

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Introduction

This guidance document provides the vast majority of all information related to making decisions for any student about appropriate Universal Tools, Designated Supports, and accommodations for assessments; the documents also provide specific guidelines for the use of many of these accessibility options. This document is a must-have for any educator looking for more information about options and requirements for state summative assessment accessibility options.

Legislation

The Every Student Succeeds Act (ESSA) 2015 and additional legislation and guidance from the United States Department of Education requires that all English Learners (ELs) and Students with Disabilities (SWDs) take assessments that measure their English language acquisition and/or their content knowledge in the core subject areas of mathematics, English language arts (ELA), science, and social studies. The federal legislation not only includes these testing requirements, but also aims to ensure equal access to these assessments, by requiring states to offer appropriate supports and accommodations that do not violate the constructs of the assessments for the inclusion of the widest possible range of students.

Title III

Title III of the Every Student Succeeds Act (ESSA) 2015 mandates that all ELs receive quality instruction for learning both English and grade-level academic content (U.S. Department of Education, 2002). According to ESSA, ELs are required to participate in statewide assessments that measure students' English language and academic progress. Educators must ensure that students work toward grade-level content standards by using a range of instructional strategies based on the varied strengths and needs of the students. For ELs, supports and accommodations are provided during instruction and on assessments to guarantee equal access to grade-level content.

IDEA Description

The Individuals with Disabilities Education Act (IDEA) is a federal law enacted in 1990 and reauthorized in 1997 and 2004. It is designed to protect the rights of SWDs by ensuring that everyone receives a free appropriate public education (FAPE), regardless of ability. Furthermore, IDEA strives not only to grant equal access to SWDs, but also to provide additional special education services and procedural safeguards for these students.

Special education services are individualized to meet the unique needs of SWDs and are provided in the least restrictive environment. Special education may include individual or small group instruction, curriculum or teaching modifications, assistive technology, and transition services; other specialized services include physical, occupational, and speech therapy. These services are provided in accordance with an Individualized Education Program (IEP), specifically tailored to the unique needs of each student.

Michigan's Conceptual Model for Assessment Supports

Michigan meets these legislative requirements by offering a wide array of supports and accommodations for students across all of its assessments. The conceptual model for understanding Michigan's assessment supports and accommodations is now broken down into three levels:

- Universal Tools – available for all students
- Designated Supports – available when indicated by an adult or team
- Accommodations – requires documentation by an IEP or section 504 plan

This model portrays the additive and sequentially inclusive nature of these three aspects. Universal Tools are available to all students, including those receiving Designated Supports and those receiving Accommodations. Designated Supports are available only to students who an adult or team has indicated has need for these accommodations; these supports are available as well for students for whom the need is documented. Accommodations are available only to those students who have documentation of the need through a formal plan (IEP or 504). These students also may use Designated Supports and Universal Tools. Universal Tools and Designated Supports are not intended to limit what is included in a student's IEP or section 504 plan. Such plans outline student need and how those needs are met. If a student, based on need, requires any support (Universal Tool, Designated Support, or Accommodation), it should be identified within the IEP or 504 plan.

It's important to note that something designated as a "Universal Tool" for one content area (for example, a calculator) may be designated as an "Accommodation" for another content area. Similarly, a Designated Support may also be an accommodation, depending on the content target (for example, use of a scribe). This approach is consistent with the emphasis that Michigan's assessment programs have placed on the validity of assessment results coupled with access. Allowable Universal Tools, Designated Supports, and Accommodations all yield valid scores that count as participation in statewide assessments when used in a manner consistent with the guidelines in this document.

Selecting Appropriate Universal Tools, Designated Supports, and Accommodations

Making Decisions on an Individual Student Basis

For all students, the selection of appropriate Universal Tools, Designated Supports, and Accommodations must be done for students' experiences in the classroom as well as for the assessment. The Universal Tools, Designated Supports, and Accommodations used on the assessments must be ones the student is already familiar with using or are used during regular instruction. A mismatch in the types of supports offered can cause significant difficulties for students at the time of testing and could potentially impact students' test scores negatively. For example, if a student is given the opportunity to take a mathematics assessment in Spanish but does not have sufficient literacy skills in the Spanish language, the student may struggle more than if he or she had taken the English version of the assessment. It would also be inappropriate for districts to make blanket decisions about assessment supports for particular student groups. Again, because all students have different needs, this could have a similar negative impact on test scores.

Making Team-Based Decisions

Considerations for English Learners (ELs)

Although there is no mandatory planning document for EL students' needs, the act of planning needed supports for an assessment is necessary. Michigan strongly recommends the following individuals be included when decisions are made about supports EL students may need:

- General education teachers (such as mathematics, science)
- Language educators (including ESL/bilingual teachers)
- School and district staff such as counselors, reading specialists, school administrators
- Parents or guardians
- Students

It is particularly important for general education teachers to work with English as a Second Language staff to meet the linguistic needs of this student group.

To ensure that ELs are receiving appropriate supports for the classroom and the assessment, school personnel should consider the following when making decisions:

- Student characteristics such as:
  - » oral English language proficiency level
  - » English language proficiency literacy level
  - » formal education experiences
  - » native language literacy skills
  - » current language of instruction

- Instructional tasks expected of students to demonstrate proficiency in grade level content in state standards
- Appropriateness of accommodations for particular content areas

Considerations for Students with Disabilities (SWDs)

For SWDs, it is important for IEP teams to identify what Universal Tools, Designated Supports, and Accommodations are necessary to address a specific student need, and to document those needs on the student's IEP. When selecting Universal Tools, Designated Supports, and Accommodations for students, care must be taken to ensure that what is chosen for use on state summative assessments mirrors what the student requires to access their regular instructional program. Not using a required support could disadvantage a student who needs such a support to access the material presented on an assessment. Likewise, introducing a new support (one not used otherwise during the student's educational experience), could disadvantage a student by adding a learning curve at the time their skills are being assessed.

Decisions regarding the Universal Tools, Designated Supports, and Accommodations needed for instruction and assessment for students with disabilities are made by the IEP team. **Note:** Many accommodations must be outlined as a need on the student's IEP in order for the accommodations to be accessed and used during state assessment administration. It is also important to note that while it is not required for some supports to be listed on an IEP for the student to access them, if they are required to meet a student's need based on disability, they should be documented on the IEP.

Considerations for 504

Similar to students with disabilities who have an IEP, some students who have a disabling condition that affects a major life function might require supports to appropriately access their educational experience (including assessment), but do not otherwise qualify for or require special education services. Supports for these students should be determined by a team and documented in the student's Section 504 plan, which should be revisited and updated at least annually.

Preparing for the Assessments

Once the appropriate Universal Tools, Designated Supports, and Accommodations for students have been selected, additional steps have to be completed.

Mode Options for Individual Students

In schools testing online:

- Some supports require specific tools within the online delivery system to be turned on, so that the supports are available for individual students. Schools may be required to download materials from a secure website or to order additional materials.
- In the case of some supports, students would be required to take a paper/pencil version of the assessment, such as braille or enlarged print. A request for a paper/pencil version of the assessment can be made through the Office of Educational Assessment and Accountability (OEAA) Secure Site.

In schools offering paper/pencil testing:

- Paper/pencil schools may need to order specific materials for students, such as a braille or enlarged print form. Refer to the appropriate content and assessment table in this document to determine how to access these materials.
- Some supports require that a student take the computer-based version of the test, such as video sign language. Identifying individual students to take the online version of the assessment can be done through the Secure Site. For more information on accommodated materials, call 877-560-8378 and select the appropriate menu option, or send an email to mde-oeaa@michigan.gov.

Selected Universal Tools, Designated Supports, and Accommodations

To ensure proper administration of the assessments is provided, it is strongly recommended that districts create a list of students and their needed supports, including ordering and turning on supports. To aid districts in their organizational efforts, the OEAA has created a Tracking Sheet available on the M-STEP web page (www.michigan.gov/mstep), under **Student Supports and Accommodations**.

Evaluating the Use of Universal Tools, Designated Supports, and Accommodations

After completion of testing, schools should plan to evaluate their experience with the Universal Tools, Designated Supports, and Accommodations used on assessments. The evaluation can be done in a variety of ways, including:

- Observation notes from a test administrator about a student's use of these supports to inform future use
- A student interview conducted after the assessment (see page 16)

Support Descriptions

This document contains in-depth descriptions of all supports provided to students. However, to make appropriate decisions about what supports can be offered to students for each assessment, educators must refer to the Supports and Accommodations Tables available within this document.

Non-Standard Supports and Accommodations

The Supports and Accommodations Tables and other guidance found in this document, only include lists of **allowable** and **standard** supports and accommodations for students. Supports that are not listed are likely to be considered non-standard, and should be marked as such in the DRC INSIGHT Portal or bubbled on the student answer documents. If a support not identified in these documents is needed, contact the OEAA for directions on the use of the support by sending an email to mde-oeaa@michigan.gov.

Universal Tools For M-STEP

Breaks

The number of assessment items a student will address in each testing session can be flexibly defined within the same day per test session, based on the student's need. **For online testers:** if a student takes a break lasting less than 20 minutes, the student will not need his/her original login ticket to restart the online test session. If the student's break lasts longer than 20 minutes, the student must use the original login ticket to resume his/her test session. Refer the assessment's Test Administrator Manual for more information about system time-out rules. **Note:** There is no limit on the number of breaks that a student might be given in a single day. The use of this universal "break" tool may result in the student needing additional overall time to complete the assessment.

Administration of the assessment in an alternate education setting (in school) with appropriate supervision

- Bilingual/English as a Second Language setting
- Special education setting
- In a distraction-free space or alternate location, such as a separate room or location within the room

Many students might attend classes in specially designated classrooms within the school. Because of familiarity or other logistical scheduling considerations by schools, these rooms may also be used for testing students.

Administration of the assessment individually or in a small group (no more than five students)

Some students may benefit from testing in a small group or may be using additional supports that would cause a distraction for other students. For example, students utilizing the read-aloud option for the M-STEP paper/pencil assessments or MI-Access Functional Independence (FI) assessments can have appropriate portions of the test read aloud to them in a small group of no more than five students, or in one-on-one assessment situations.

Assessment directions

- Teacher may emphasize key words in directions
- Teacher may repeat directions exactly as worded in administrator manual
- Student may restate directions in his/her own words
- Student may ask for clarification of directions

To ensure that students are not disadvantaged on the actual test questions, directions can be repeated or restated; also, students may ask for clarification, if needed.

Highlighter

Depending on the mode of the assessment being administered (online or paper/pencil), the highlighter may be a digital or physical tool for marking desired text, item questions, or item answers with a yellow color. When

taking the paper/pencil assessment, students may use a non-embedded highlighter only in the test booklets and never on the answer documents. This tool may help students retain focus on a particular segment of text, or can be used to mark specific text in order to return to it later.

Cross-Off (Answer Eliminator)

Used in online assessments, this digital tool allows students to cross out answer options. This can help students more easily narrow their options for answering a test question. Students taking the paper/pencil tests have the option to mark on their test booklets, simulating the online tool's functionality (stray marks on a student's Answer Document can present an unintended response).

Sticky Notes

This digital tool can be used by students taking the online assessment to make digital notes about a test question.

Scratch Paper

Students can use scratch paper during the assessment, whether they are taking paper/pencil or online tests. Scratch paper must be collected by the Test Administrator and securely destroyed after each testing session. For students taking a paper/pencil form of the M-STEP ELA assessment, space for planning has been built into the structure of the booklets.

Graph Paper

Students in grades 6 and 7 taking the online M-STEP mathematics assessments will be provided with graph paper to use during testing (the graph paper will be shipped to online-testing schools). This tool can aid students in their calculations for determining elements such as coordinates on an axis. Graph paper must be collected by the Test Administrator and securely destroyed after each testing session.

Mark for Review (Flag)

Students may want to return to an item at a later point during the testing session. For online testers, this tool may not be available for all parts of an assessment. Its availability is dependent on the adaptive nature of the assessment. This support allows students to mark an item in the online test or to mark a test item with their pencil on the paper/pencil form. Students taking paper/pencil tests should be very careful not to mark on their answer document bubbles. Such marks may interfere with the scanning process, potentially indicating an unintended response. It is recommended that students make any review notations in the Test Booklets.

Use of Page Flags and Reading Guides on test booklets

Students may want to return to an item at a later point during the testing session or may want to use a manipulative as a reading guide to aid in reading text.

Line Guide

This is an embedded digital tool students taking the online assessment may use to read text line-by-line. Students may use it at their discretion, by sliding it vertically across the text within a test item.

Writing Tools (bold, italic)

These selected writing tools are available on the Passage-based Writing Prompt responses in the online M-STEP ELA assessments. Students taking a paper/pencil test have full control with their own writing utensils to enhance their writing responses in similar ways.

Use of special adaptive writing tools such as pencil grip or larger pencil

Due to a physical disability or injury, some students may need adaptive writing tools for taking notes or for taking the paper/pencil form of the assessments.

Magnifier

In online testing, students may use this embedded tool to enlarge all assessment content on the computer screen (one- or two-times magnification). This support may meet the needs of students with visual impairments and other print disabilities. Use of the magnifier tool is controlled by the student; the student must re-select it on each test question for which they would like to use it. Students must be comfortable navigating the screen once the magnification option is selected. The frequent use of this tool may result in the student needing additional overall time to complete the assessments. A more beneficial option for the student may be to enable the Continuous Magnification option.

Another way to magnify the image for students, is to use a larger computer screen. The test engine will adjust the image to fit the screen being used. If a student uses a larger screen in the classroom due to a visual or cognitive disability, and the team determines that the student should be assessed using this equipment, the image will adjust to the size of that screen when the test engine is loaded. Educators having difficultly selecting appropriate magnification or enlargement options for students should contact email the OEAA at mde-oeaa@michigan.gov.

For paper/pencil testers, there is an Enlarged Print version of the assessment ordered for them and may use any magnification devices they typically use for instruction. Refer to Enlarged Print under **Accommodations** (page 13).

Continuous Magnification

This is similar to the standard Magnifier that is enabled by default for all students. However, this magnification option must be turned on for students in the online testing system. It magnifies the test questions and content by 200% and ensures that the student does not need to reselect the magnifier each time the student moves to a new question.

Designated Supports

Administration of the assessment in an alternate education setting (out of school) with appropriate supervision (in the home when student is homebound or in a care facility when it is medically necessary)

The very small number of students who currently spend the majority of their instructional time outside of the regular school environment may be tested with a paper/pencil form of the assessment, with appropriate supervision, by a trained administrator.

Administration of the assessment in an interim alternative education setting (out of school) with appropriate supervision (such as a juvenile facility)

The small number of students who spend the majority of their instructional time outside of the regular school environment may be tested with a paper/pencil form of the assessment, with appropriate supervision, by a trained administrator. For some assessments, this may require a formal off-site request.

Noise Buffers (ear mufflers, white noise, and/or other equipment to block external sounds)

Noise buffers are appropriate for the small number of students who need to wear equipment to reduce environmental noise. Students may have this support if they regularly use such equipment in the classroom. Students will need headphones for this support unless they are tested individually in a separate setting.

Qualified translator to provide oral translations of test directions for students in language appropriate for student

This support is intended for use with students who need directions read in another language. This option is available for all M-STEP and MI-Access assessments, for both online and paper/pencil testers. Refer to the Recommended Qualifications for Translators section of this document for more information. For ELA, translators may only provide directions that are not specific to test questions (including general orientation directions to begin testing). Translating ELA questions, answer options, or passages is not allowed. For students taking the SAT and ACT WorkKeys, particular attention must be paid to whether or not the student receives a college-reportable score or National Career Readiness Certificate (NCRC) if utilizing this support. Refer to the Supports and Accommodations Table for more information on this topic.

Qualified translator to provide oral translations of test items for students in language appropriate for student

This support is intended for use with students who are **fluent** in a language other than English. **Note:** Educators are not allowed to produce written translations of test questions and test content for students. This option allows for students to have on-the-spot oral translations provided by a qualified staff member. Schools wanting to provide oral translations in one language to multiple students may do so using the paper/pencil assessment (in small groups of no more than five students) or may provide the support as an individual test administration for online test-takers.

This support is intended for students who may be in bilingual programs or who have more fluency in their native language than in English. Use of this support assumes that a student is better able to show their

knowledge of the content in a language other than English. Use of this support with students whose fluency in a language other than English is low may result in less valid assessment results.

Students with Spanish fluency should take the Spanish form of the assessment (when available) but may have the Spanish form read aloud to them. Use of the Spanish form ensures greater uniformity in the test translation and therefore ensures greater reliability of the resulting assessment of students using this support. A Spanish read-aloud support in small groups of no more than five students may be provided for the paper/pencil assessment only. Students utilizing the online stacked Spanish translation will have the Spanish text read-aloud to them by the computer using what is called "human voice audio". As such, students will need headphones if they are taking this form of the assessment. The students may replay the audio as many times as they would like.

Refer to the Recommended Qualifications for Translators section of this document for more information about who may be qualified to provide in-person oral translations to students. The use of this support may result in the student needing additional overall time to complete the assessment. District and building coordinators must ensure translators have also reviewed the M-STEP Spanish Read-Aloud Guidelines or the M-STEP Arabic Read-Aloud Guidelines.

For the M-STEP science and social studies assessments, test administrators **must** use the Reader Script in order to provide an oral translation if a paper/pencil assessment and corresponding DVDs are not used (Arabic DVD and Spanish DVD). **Note:** Reader Scripts are not available for all assessments and content areas. Refer to the Reader Script section in this document for more information on ordering and use of Reader Scripts. Translators for students taking MI-Access should use the Do Not Read Aloud table in the inside front cover of the test booklet to aid in translating correct portions of the assessment.

Text-to-Speech (TTS)

Note: There are two different types of Text-to-Speech options. One is a Designated Support and the other is an Accommodation and is therefore **only** available to students whose IEP or 504 plan identify that as a need for a student. The support described here is a Designated Support.

With this support, text is read aloud to the student through the use of embedded text-to-speech technology that provides a synthesized voice for students. The student is able to control the speed of the audio and can stop or start the audio at will. The follow-along feature additionally provides students a read-along guide (follow along) with words being highlighted on the screen as they are read aloud to the student. This option is defaulted to "on" but may be disabled by students who do not find this part of the TTS features useful.

Note: For M-STEP assessments, TTS must be enabled for students' by the test coordinator, or their designee, in the DRC INSIGHT Portal. This support may be needed by students who are struggling readers and need assistance to access the assessment, by having all or portions of the assessment read aloud. TTS support may also be needed by a variety of other students, including students with reading-related disabilities, or students who are blind and do not yet have adequate braille skills. **This support will likely impede the performance of students who do not regularly have the support during instruction.** Students who use TTS will need headphones unless tested individually in a separate setting. TTS is available for all M-STEP questions and answer options. TTS is a universal support for all MI-Access FI assessments.

Read-aloud (human reader)

Note: There are two different types of Read-aloud options. One is a Designated Support and the other is an Accommodation which is **only** available to students whose IEP or 504 plan identify that accommodation as a need for that student. The support described here is a Designated Support. This option does **not** include reading aloud the Reading passages for the M-STEP ELA test.

Text is read aloud to the student by a trained and qualified person (human reader) who follows the security and administration guidelines provided in the M-STEP Read-Aloud Guidelines. Students who struggle with reading for a variety of reasons (including visual, cognitive disabilities) may need assistance accessing the assessment, by having all or portions of the assessment read aloud. If read aloud

is not used regularly by a the student during classroom instruction, this support will likely be confusing and may impede his/her performance on the assessments.

For online test takers: this support is meant to be provided to students on an individual basis and not to a group of online test takers.

For paper/pencil schools that have students needing this support AND would like to group-administer: The support may be provided to students in groups of no more than five students. Follow the directions outlined in the Supports and Accommodations Table in this document.

A student should have the option of asking a reader to slow down or repeat text. The use of this support may result in the student needing additional overall time to complete the assessment. For M-STEP mathematics and ELA, using read aloud as a Designated Support means the questions and answer options may be read aloud to students. Reading aloud the reading passages for the M-STEP ELA assessment is allowable as an Accommodation **only in grades 6 and 7** (see Read-aloud for M-STEP ELA Reading Passages on page 13). For additional information, refer to the M-STEP Mathematics and ELA Read-Aloud Guidelines chapter of this document.

Reader Script (human reader)

The purpose of this support is detailed in the description for Read-Aloud. M-STEP science and social studies assessments utilize a paper document called a Reader Script to better ensure the accuracy and reliability of what is read to students. Paper/pencil test takers may use this support in an individual setting or as a part of a small group of no more than five students. Students will use a Form 1 test booklet while the test administrator reads aloud from the Reader Script. **Please note:** The school may be taking another form of the test. This Form 1 test booklet will automatically be ordered when an order is placed for a Reader Script (be sure to provide the correct student count when ordering materials).

English Audio CD

The purpose of this support for paper/pencil testers is detailed in the description for Read-Aloud (human reader). Some Michigan assessments and content areas offer an English Audio CD to better ensure the accuracy and reliability of what is read to students. This support may be used in an individual setting or as a part of a small group of no more than five students. Students may need headphones if the support is administered in an individual setting; the student should have personal control over the equipment. Students may be assisted in playing the CD but may not be given help with the answer to any test item.

Students using this support must also have a printed copy of the Form 1 test booklet to use during testing. The Form 1 test booklet will automatically be ordered when an order is placed for a CD (be sure to provide the correct student count when ordering materials).

Spanish or Arabic DVD

This support is available to paper/pencil testers for some state assessments and is intended for use with students who are fluent in Spanish or Arabic. Moreover, it is intended for use by students who may be in bilingual programs or whose native language fluency is greater than their English fluency, with the assumption the student is able to better show knowledge of the content in a language other than English. Use of this support with students with lower fluency in a language other than English may result in less valid assessment results. Also, the use of this support may result in the student needing additional overall time to complete the assessment. This support may be used in an individual setting or as a part of a small group of no more than five students.

DVDs are to be used with a television and DVD player, as this equipment will produce the highest quality results. Video DVDs correspond to a Form 1 test booklet and will use a standard answer document. The Form 1 test booklet will automatically be ordered when an order is placed for a DVD (be sure to provide the correct student count when ordering materials). The DVD visually presents each question in English to the student while the student hears a translated version of the test question. Presenting the questions to the student in English on the DVD assists the students in returning to the appropriate place on the DVD, if necessary.

English DVD

This support is available to paper/pencil testers for M-STEP science and social studies state assessments. It is intended for use with students who may be struggling readers and may need support in tracking the content of the

information presented to them. This support may be used in an individual setting or with a small group of no more than five students.

DVDs are to be used with a television and DVD player, as this equipment will produce the highest quality results. Video DVDs correspond to a Form 1 test booklet and will use a standard answer document. The Form 1 test booklet will automatically be ordered when an order is placed for an English DVD (be sure to provide the correct student count when ordering materials). The DVD visually presents each question in English to the student while the student hears a translated version of the test question. Presenting the questions to the student in English on the DVD assists students in returning to the appropriate place on the DVD, if necessary.

Use of translated Spanish form (with Spanish audio for online testers)

- Paper/pencil: Spanish and English text
- Online: Stacked translation, split screen with Spanish and English test items, human voice audio plays audio of Spanish text

New for 2021: The online stacked Spanish test form will include audio (by default) that provides students with a translation of the Spanish text. Students will need headphones to take this test form. Students may replay the audio as many times as they would like or may choose to not use the audio at all. This language support is only available for the M-STEP mathematics assessments and is intended for students whose primary language is not English and who use dual language supports in the classroom. **Students using the translated form of the assessment must still respond in English for constructed response items.**

Not only should this type of support be used on a regular basis in the classroom for these students, but ideally students using this support should be proficient and have high Spanish literacy skills. Students may use this support in conjunction with an oral translation, which effectively provides a read-aloud support to students who need it. Use of this support will increase reading load and cognitive load and may result in the student needing additional overall time to complete the assessment. As a reminder, students must participate in the M-STEP mathematics assessments regardless of the language they speak, the country they come from, or their length of residence in the United States. For students who have an online stacked Spanish form, both English and Spanish test directions will be presented, with the complete English version first and then the complete Spanish Version.

Use of L1 (1st language) glossary reference sheets

- available in Arabic, Burmese, Cantonese, Hmong, Ilokano, Korean, Mandarin, Punjabi (Eastern and Western), Somalie, Spanish, Tagalog, Russian, Ukrainian, and Vietnamese

Translated glossaries are a language support. This particular support is intended for students who have some proficiency in one of these languages and who are literate in the language as well. Students who may benefit from these sheets the most may be students who have an intermediate proficiency in the English language. The translated glossaries are provided for selected construct-irrelevant terms for mathematics. Only students taking the paper/pencil form of the assessment have access to this support, because the sheets provide terms question by question for each particular grade. This use of this support may result in the student needing additional overall time to complete the assessment. Refer to the **M-STEP Test Administration Manual** for more information on accessing this material.

Use of non-electronic word-to-word bilingual dictionaries

This support is intended for students who use such dictionaries on a regular basis in the classroom to aid in their understanding of content in their core subject areas. **Note:** Word-to-word dictionaries do not provide definitions of words for students but **only** provide a translation of individual words. Providing definitions of words to students is not an allowable support for any state assessment. Students may use this Designated Support if they are taking the paper/pencil or online tests for the M-STEP mathematics, science, or social studies assessments. Use of this support may result in the student needing additional overall time to complete the assessment. Unlike College Board and ACT, MDE does not provide an approved list of bilingual dictionaries for the

M-STEP and MI-Access assessments. Because of security issues, students can only use a paper-based form of these dictionaries.

Use of auditory amplification devices or special sound systems

Students may utilize this support if they need it to properly hear the directions or questions.

Use of visual aids (closed-circuit television, magnification devices)

Some students may need additional supports for visual enhancements due to specific vision disorders. The supports allow students to properly see the assessment directions and questions.

Masking

Masking involves blocking off content that is not immediately needed by the student to answer the question or that may be distracting to the student. With masking, students with attention difficulties are better able to focus their attention on a specific part of a test item during the assessment. This support may also be needed by students with a variety of disabilities (including learning disabilities) or visual impairments. In the online testing system, students must have this feature enabled for them by the test coordinator or their designee. Refer to the **Test Administration Manual** for more information.

Use of a Page Turner

Some students with limited hand function, or disabilities affecting reach, dexterity, fine motor, or other upper extremity functions, may use this support to aid in turning pages of books.

Use of a non-skid surface that will not damage the answer document or scanning equipment (DO NOT use tape or other adhesive)

Special surfaces may be used for administration of the assessment. However, great care must be taken in utilizing alternative surfaces, so as to not affect the paper of the answer documents themselves and to ensure proper scanning.

Color Choice

On the online test screen, the color chooser gives multiple background color options. Students with attention difficulties may need this support for viewing test content online. The color chooser also may be needed by some students with visual impairments or other print disabilities (including learning disabilities). The decision to utilize the color selection option for a student should be informed by evidence that color selections meet the student's needs. This feature must be enabled by the test coordinator or their designee for students to use it. Refer to the **Test Administration Manual** for more information. Once this feature is enabled for a student and a student has logged into the test, a proctor can then assist the student at the beginning of testing session in selecting the appropriate color.

Contrasting Color

The contrasting text option gives multiple background colors with contrasting text color options for the online test screen. Students with attention difficulties may need this support for viewing test content. It also may be needed by some students with visual impairments or other print disabilities (including learning disabilities). The decision for the color selection option for a student should be informed by evidence that color selections meet the student's needs. Students must have this feature enabled for them by the test coordinator or their designee. Refer to the Test Administrator Manual for more information. Once this feature is enabled for a student and a student has logged into the test, a proctor can then assist a student at the beginning of testing session in selecting the appropriate color.

Scribe – Non-writing (non-constructed response) Items

There are two different types of Scribing options. One is identified as a Designated Support, listed here, and the other is identified as an Accommodation. This Scribe Designated Support allows a student to have a human scribe record a student's **answer option selection or directive such as the identification of a multiple choice option**. With this support, students dictate their responses to a human who records verbatim what they

dictate. The scribe must be trained and qualified as a test administrator, and must follow the OEAA Scribing Protocol, which is found in this document. Scribes are necessary for students who have documented significant motor or processing difficulties, or who have had a recent injury (such as a broken hand or arm). Specifically, a scribe is an adult who writes down verbatim what a student dictates through speech, American Sign Language, or an assistive communication device. The use of this support may result in the student needing additional overall time to complete the assessment.

Multi-day Testing

For some state assessments, students may have the option to test across multiple days. If a student will require more than one day to complete any single section of an assessment, their test may be paused and exited at any point in the test. The student will be able to log back into their test at any subsequent point within the testing window to complete the session. It is important that the student's test be paused and exited and not submitted. Refer to the **Student Supports and Accommodations Tabl**e (found in this document), **Testing Schedule for Summative Assessments**, and **Test Administration Manuals** for more information.

Accommodations

Braille

Students with visual impairments may read text via braille. The M-STEP assessments are offered in a paper/pencil braille format. More information about the type of braille can be found in the Braille Assessment Plan section of this document. Students who use a braille form must have their answers transcribed onto a regular scannable answer document for the appropriate grade/subject area. When an M-STEP and MI-Access braille test is ordered for a student, the district will be shipped a Braille Kit that will include the Assessment Administrator Booklet for Braille (AABB). The AABB is a guide for the test administrator to use while they are administering the assessment. The Print-to-Braille Correspondence document is available on the M-STEP (www.michigan.gov/mstep) and MI-Access (www.michigan.gov/mi-access) web pages. For some content areas a contracted and uncontracted form of the braille assessment are available.

Text-To-Speech Passage for M-STEP ELA

This Accommodation is only available for students in grades 6 and 7, This accommodation will give the students an opportunity to hear test questions, answer options, and Reading passages. This Accommodation is appropriate for a very small number of students (estimated to be approximately up to two percent of students with disabilities participating in a general assessment). However, **this percentage is not intended as a cap** for the number of students who may utilize this support. It is available as an Accommodation for students whose need is documented in an IEP or 504 plan. Students who use text-to-speech will need headphones, unless tested individually in a separate setting. Students will also have the follow-along feature enabled if this option is turned on for them in the DRC INSIGHT Portal.

Read-aloud for M-STEP ELA Reading Passages

Students in grades 6 and 7 may have Reading passages within the M-STEP ELA assessment read aloud to them. They could use this in conjunction with having test questions and answer options read aloud to them. Having Reading passages read aloud is appropriate **only for a very small number of students** (estimated to be up to two percent of students with disabilities participating in a general assessment). However, this percentage is not intended as a cap for the number of students who may utilize this support. It is available as an accommodation for students whose need is documented in an IEP or 504 plan.

Note: For online test takers, this Accommodation is intended to be provided to students on an individual basis and not in group settings. For paper/pencil schools that have students needing this support **and** would like to group-administer, the Accommodation may be provided to students in groups of no more than five students. Refer to the M-STEP Mathematics and ELA Read-aloud Guidelines chapter for more information.

While using this support, a student should have the option of asking a reader to slow down or repeat text. The use of this support may result in the student needing additional overall time to complete the assessment.

Enlarged Print

Students with visual impairments and other print disabilities may use an enlarged version of the paper/pencil assessment. The use of this support may result in the student needing additional overall time to complete the assessment. Refer to the Test Administrator Manual for information related to transcribing and returning these materials.

Form 1 is used as the basis for the enlarged print version of the M-STEP and MI-Access assessments. Students who use this form of the assessment must have their answers transferred onto a regular answer document. If a student uses an enlarged print version as an Accommodation, a test administrator, proctor, or accommodations provider may need to transcribe the student's response from the enlarged print test booklet onto a regular answer document that is returned along with other scorable materials. Spelling, punctuation, indentation, etc., must be transcribed exactly as presented in the student's original response.

Once student responses have been transcribed to a regular answer document, the original document can be returned in a non-scorable box. Refer to the relevant Test Administration Manuals for additional details.

Use of OEAA's Multiplication Table (grade 4 and above only)

The multiplication table is allowed for use by online or paper/pencil M-STEP mathematics test takers in grades 4–7. For some assessments, this paper-based single-digit (1-9) multiplication table will be available for students who have a documented need in their IEP or 504 Plan, such as a persistent calculation disability (such as dyscalculia).

Abacus

Some students with visual impairments who typically use an abacus may use an abacus in place of using scratch paper during the assessment.

Non-embedded Calculator (grades 6 and 7 only)

While taking the online test, students in grades 6 and 7 with visual or other impairments who are unable to use the embedded calculator for **calculator-allowed items** will be able to use the device they typically use, such as a braille calculator or talking calculator. Calculators **are not** allowed as a Designated Support or Accommodation for students taking the M-STEP mathematics tests in grades 3 – 5.

Note: Test administrators must ensure that the calculator is available for students to use only for designated calculator items. This can be identified by whether or not the calculator is displaying for a question in the online system or not.

Directions provided using American Sign Language (ASL) or Signed Exact English (SEE)

Some students who are deaf or hard of hearing and who typically use ASL or SEE may need this Accommodation when accessing directions in the assessment. Additionally, for many of these students, viewing signs is the only way to access information presented orally. It is important to note, however, that some students who are hard of hearing will be able to listen to directions presented orally if they are provided with appropriate amplification and are in a setting where extraneous sounds do not interfere with the clear presentation of the audio in a listening test. The use of this Accommodation may result in the student needing additional overall time to complete the assessment.

Test content provided in American Sign Language (ASL) or Signed Exact English (SEE)

Some students who are deaf or hard of hearing and who typically use ASL or SEE may need this Accommodation when accessing text-based content in the assessment or content that assesses Listening. For many of these students, viewing signs is the only way to access information presented orally. It is important to note, however, that some students who are hard of hearing will be able to listen to directions presented orally in a listening test with appropriate amplification, in a setting where extraneous sounds do not interfere with the clear presentation of the audio. The use of this accommodation may result in the student needing additional overall time to complete the assessment.

One option for students taking the M-STEP mathematics or ELA tests for which this support might be needed, is to enable the embedded sign language videos (VSL – Video Sign Language) for all mathematics items or for ELA Listening items. These students could also use a human signer for mathematics items. It is possible that due to regional differences in signing, a student may come across a word in the VSL with which they are unfamiliar. Students may ask for an interpreter to sign individual words that they may not have understood. Interpreters **must** not include additional descriptions or explanations, but must provide an appropriate and equal term-to-term sign. A human signer could also use the Listening Script for ELA listening items for paper/pencil testers only.

Closed captioning

Students with hearing disabilities may benefit from having the content of the ELA listening passages and questions captioned. This support functions by displaying text on the screen for students.

Scribe – Writing test questions (constructed responses)

There are two different types of Scribing options. One is identified as a Designated Support and the other, listed here, is identified as an Accommodation. The Scribe Accommodation allows a student to have a human scribe record a student's **sentence or phrase**. With this Accommodation, students dictate their responses to a human scribe who records verbatim what they dictate. The scribe must be trained and qualified, and must follow the OEAA Scribing Protocol found in this document. Scribes are necessary for students who have documented significant motor or processing difficulties, or who have had a recent injury (such as a broken hand or arm) that makes it difficult for them to produce responses. The use of this support may result in the student needing additional overall time to complete the assessment.

Use of adapted paper, additional paper, lined or grid paper for recording answers

Students with visual or perceptual disabilities may require the use of adaptive paper for recording answers or expressing ideas in writing. This might include specially lined paper or tactile paper with raised lines or line cues. When additional paper is used, the student is allowed to write the equivalent of what could be written in the original space provided.

Alternative Communication Device

- switches, alternative keyboards, eye-gaze motion sensors, voice recognition software, head or mouth pointer, specialized trackballs or mouses

Online testing schools with students needing these supports must contact the Office of Assessment and Accountability at mde-oeaa@michigan.gov or 877-560-8378 and select the appropriate menu option.

Speech-to-Text

This is a type of software that takes audio content and transcribes it into written words in a word processor or other display. This may be useful for students with disabilities who have difficulties writing by hand or using a keyboard. This support can be used with paper/pencil assessments. At this time, third-party software has not been verified as compatible with Michigan's current online testing engines.

Use of counters, coins, base-10 blocks or other manipulatives for solving mathematics problems.

Some students may find that visual or physical objects are helpful for them in providing concreteness of mathematical concepts.

Use of word processors for constructed-response items

Students who ordinarily use a word processor in conjunction with other tools (such as JAWS) for their written communication needs may do so for the paper/pencil assessments. Use of this accommodation requires that word prediction, autocorrect, and other grammatical software is not activated.

Questions for Post-Testing Supports and Accommodations Student Interview

After an assessment, use this form to interview a student about the support(s) provided, to determine if the support was useful and if the student would use it again. Also note any adjustments or difficulties the student experienced, either in how the support was administered or when using the support during the assessment.

Student: _____

Date: _____

Support(s) Used: _____

Questions	Assessment Taken			
Was the support/accommodation useful?	Yes/No Comments:	Yes/No Comments:	Yes/No Comments:	Yes/No Comments:
Did you have any difficulties while using this support?	Yes/No Comments:	Yes/No Comments:	Yes/No Comments:	Yes/No Comments:
Would you want use this/these support(s) again?	Yes/No Comments:	Yes/No Comments:	Yes/No Comments:	Yes/No Comments:

Text-to-Speech and Read-Aloud Decision Guidance for M-STEP

MICHIGAN Department of Education

Grade: _____ Student Name: _____ UIC: _____

Use this checklist to help determine which students may need text-to-speech (TTS), text-to-speech passage (TTSPASSAGE) Designated Support or Accommodation, or the read-aloud Designated Support or Accommodation for the M-STEP assessments. Keep this checklist up to date in a student's permanent record file so it can be used to assist in making the best possible assessment decisions from year to year. Keep in mind that any student in grades 6 –7 using the TTS Passage Accommodation or Read-Aloud Passage MUST have the need for this Accommodation identified in their IEP/504 plan.

A **preponderance of evidence** should exist in the appropriate section rather than a few marks in boxes for the student to be provided this level of support. Educators writing IEPs/504s may still find questions 4-9 helpful in determining supports for students. For more information on TTS and read-aloud, refer to the Student Supports and Accommodations Table on page 55 of this document.

Student has an IEP/504 section	**Yes**	**No**
1. Does the student's disability or disabling condition impact the student's ability to access printed text?		
a. Is this represented as a need on the student's IEP or Section 504 plan?		
b. Is this student blind or have a significant visual impairment?		
2. If the student is blind or has a significant visual impairment, is the student learning to read braille?		
3. Does this student have an identified reading-based disability that affects the student's decoding, fluency, or comprehension skills?		

Student does NOT have an IEP/504 section (these students are not eligible to use the TTS Passage or Read-Aloud Passage Accommodations)		**No**
4. Does the student currently use text-to-speech, assistive technology software, or audio books support during instruction to access digital print?		
5. Does the student belong to Bookshare (or similar organization)?		
6. Does someone (teacher, paraprofessional, another student, parent) regularly read aloud to the student in school as an instructional support?		
7. Have interventions been used to improve the student's decoding, fluency, or comprehension skills? Please describe.		
8. Does the student currently use text-to-speech or receive a read-aloud support during state assessments or other class/district assessments?		
9. When given the choice, does the student indicate he or she would prefer to read tests to himself/herself?		

Read-Aloud Guidelines M-STEP Mathematics and English Language Arts

The Read-Aloud support is administered by a person (human reader) who provides an oral presentation of the assessment text to an eligible student. The student depends on the reader to read the test questions accurately, pronounce words correctly, and speak in a clear voice throughout the test. The reader must be trained and qualified and must follow the **M-STEP Read-Aloud Guidelines** presented here. The guiding principle in reading aloud is to ensure that the student has access to test content.

Readers are allowed across all grades as a **Designated Support** for M-STEP mathematics and ELA assessment test questions and answer options. Readers are also allowed for ELA reading passages as a **documented Accommodation** in grades 6-7. This means that ONLY students who have a need to have reading passages read out loud to them on their IEP or 504 Plan can use this Accommodation. Note that this Accommodation is appropriate for a very small number of students (estimated to be approximately 1-2 percent of students with disabilities participating in a general assessment; this number is not a cap but an anticipated percentage of student need). For information on documentation requirements and decision-making criteria for using readers, see the Text-to-Speech and Read-Aloud Decision Guidelines provided in this document.

Please note: There are no Reader Scripts for the M-STEP mathematics and ELA assessments, which means that educators must review and use these guidelines. For students taking the science and social studies M-STEP, a read-aloud option is allowable for the paper/pencil form of the assessment using the Reader Script **only**.

The M-STEP mathematics, English language arts (ELA), science, and social studies assessments have a text-to-speech Designated Support and accommodation option for online test administrations. Students who take a paper/pencil test may utilize the Read-Aloud Designated Support.

For additional questions, contact the Office of Educational Assessment and Accountability (OEAA) at 877-560-8378.

Reader Qualifications

Readers must be:

- an adult who is familiar with the student, and who is typically responsible for providing this support during educational instruction and assessments
- trained on the administration of the assessment in accordance with state policy, and familiar with the terminology and symbols specific to the test content and related conventions for standard oral communication
- trained in accordance with M-STEP state administration and security policies and procedures, as articulated in Michigan's test administration manuals, guidelines, and related documentation

Preparation

Readers must:

- read and sign the OEAA Assessment Security Compliance Form prior to test administration; this form is packaged with assessment materials but is also available on the OEAA Secure Site and M-STEP web page
- familiarize themselves with the test environment and format in advance of the testing session; having a working familiarity with the test environment and format will help facilitate reading of the test
- have a strong working knowledge of the embedded and non-embedded accessibility and accommodations options and features available on M-STEP assessments

- be familiar with any assistive technology or approved supports the student requires; in addition to having a reader, the student may make use of any other approved specialized tools or equipment during the test as appropriate and in accordance with the Supports and Accommodations Table
- have extensive practice in providing read-aloud support and must be familiar and comfortable with the process before working directly with a student
- be knowledgeable of procedures for reading aloud text by content area (see Tables 1-3: Reader Guidance to Mathematics)

The reader should meet with the student in advance and inform the student of the parameters of the support. A suggested test preparation script is included at the end of these M-STEP Read-Aloud Guidelines.

Unless otherwise specified by a student's IEP or 504 plan, the reader does not have a role in manipulating the test or assisting with any other support tools.

General Guidelines

- The test reader's support should ideally be provided in a separate setting so as not to interfere with the instruction or assessment of other students.
- Each question should be read exactly as written, as clearly as possible.

Throughout the exam, readers should:

- strive to communicate in a neutral tone and maintain a neutral facial expression and posture
- spell any words requested by the student
- adjust the reading speed and volume if requested by the student
- avoid gestures, head movements, or any verbal or non-verbal emphasis on words not otherwise emphasized in text
- avoid conversing with the student about test questions, as this would be a violation of test security; respond to the student's questions by repeating the item, words or instructions verbatim as needed

Readers should not:

- paraphrase, interpret, define, or translate any items, words, or instructions, as this would be a violation of test security

Post-Administration

- The test reader must collect scratch paper, rough drafts, and login information immediately at the end of the testing session and deliver it to the test administrator in accordance with M-STEP mathematics and ELA state policies and procedures. Refer to the Test Administrator Manual for more information related the administration requirements of the assessments.
- The test reader must not discuss any portion of the test with others.

English Usage/Conventions

Punctuation: (Read all text as punctuated)

- **Ellipses:** When an ellipsis is used to signify missing text in a sentence, pause briefly, and read as "dot, dot, dot."
- **Quotations:** Quotation marks should be verbalized as "quote" and "end quote" at the beginning and end of quoted material, respectively.
- **Emphasis:** When words are printed in boldface, italics, or capitals, tell the student that the words are printed that way. So as not to provide an unfair advantage to students receiving this support, test readers should be cautious and not emphasize words not already emphasized in print. Emphasis is appropriate when italics, underlining, or boldface is used in the prompt, question, or answers.
- **Misspellings:** In some cases, a test item may present a word or phrase that is intentionally misspelled as part of the assessment. In these instances the student is required to respond in a specific way. When presented with intentionally misspelled words, test readers should not attempt to read the word(s) aloud, as pronunciation is somewhat subjective.

Images / Graphics

- Before describing a picture or graphic, the reader should determine whether the details of the picture are necessary to the student's understanding of and response to the item(s). In many cases, an image accompanying a passage or reading excerpt is included as a piece of visual interest and is not essential in the understanding of/response to the item.
- Describe the image/graphic as concisely as possible following a logical progression. Focus on providing necessary information and ignore the superfluous. Use grade-appropriate language when describing the image/graphic.
- Read aloud the title or caption, if available.
- Any text that appears in the body of an image may be read to a student. Read text in images in the order most suited for the student's needs. The reader may move along the text in images from top to bottom, left to right, or from general to specific in accordance with teaching practices.

Passages

For students in grades 6-8 whose IEP has "read-aloud" as an accommodation for the M-STEP ELA test, the following guidelines must be followed when reading passages are read aloud.

- Read the passage in its entirety as punctuated (including pauses at periods, raised intonation for questions). Do not verbalize punctuation marks other than ellipsis and quotation marks, as noted above.
- If the student asks for a specific section of the source material passage to be re-read with the punctuation indicated, the test reader should re-read those specific lines of the source material passage and indicate all punctuation found within those lines as many times as requested by the student.
- When test questions refer to particular lines of a source material or passage, read the lines referenced as though they are part of the stem.

Graphic Organizers

- Before reading a graphic organizer, the test reader should discern the most appropriate and logical manner in which to present the information. In general, information should be presented from broad to specific, as indicated by the visual components of the document.
- The reader should read the terms exactly as presented in the graphic organizer. No other information should be articulated. For example, the reader should not create sentences if information is bulleted or appears in a title or label.
- Common grade-appropriate language should be used throughout the reading of the item and the test when referring to graphic organizers and their attributes (including labels, blank cells, stems).

Mathematical Expressions

- Mathematical expressions must be read precisely and with care for a student who has no visual reference, to avoid misrepresentation. For mathematics items involving algebraic expressions or other mathematical notation, it may be preferable for the reader to silently read the mathematical notations or the entire question before reading it aloud to the student.
- Readers should read mathematical expressions with technical accuracy. Similar expressions should be treated consistently.
- In general, numbers and symbols can be read according to their common English usage for the student's grade level.
- Numbers greater than 99, however, should be read as individual numbers.
- Abbreviations and acronyms should be read as full words. For example, "10 cm" needs to be read as "ten centimeters." Some abbreviations may be read differently by different readers. For example, "cm^3" may be read as "cubic centimeters" or "centimeters cubed".
- Additional examples may be found in Tables 1-3.

Table 1: Test Reader Guidance for Mathematics - Numbers		
Description	**Example(s):**	**Read as:**
Large whole numbers	632,407,981	"six hundred thirty-two million, four hundred seven thousand, nine hundred eighty-one"
	45,000,689,112	"forty-five billion, six hundred eighty-nine thousand, one hundred twelve"
Decimal numbers	0.056	"zero point zero five six"
	4.37	"four point three seven"
Fractions – common	½, ¼, ⅔, ⅘	"one-half, one-fourth, two-thirds, four-fifths" Other common fractions include "sixths, eighths, tenths"
	$^{14}/_{25}$	"fourteen over twenty-five"
	$^{487}/_{6972}$	"four hundred eighty-seven over six thousand nine hundred seventy-two"
Mixed numbers – read aloud "and" between whole numbers and fractions	3 ½	"three and one-half"
	57 ¾	"fifty-seven and three-fourths"
Percent	62%	"sixty-two percent"
	7.5%	"seven point five percent"
	0.23%	"zero point two three percent"
Money - if the amount contains a decimal point, read as "dollars AND cents"	$4.98	"four dollars and ninety-eight cents"
	$0.33	"thirty-three cents"
	$5,368.00	"five thousand, three hundred, sixty-eight dollars"
Negative numbers - do NOT read negative sign as "minus"	-3	"negative three"
	$-\frac{5}{8}$	"negative five-eighths"
	-7.56	"negative seven point five six"
Dates (years)	1987	"nineteen eighty-seven"
	2005	"two thousand five"
Roman Numerals	I II III IV	"Roman Numeral one" "Roman Numeral two" "Roman Numeral three" "Roman Numeral four"

Table 1: Test Reader Guidance for Mathematics - Numbers		
Description	**Example(s):**	**Read as:**
Ratios	*x:y*	“x to y”

Table 2: Test Reader Guidance for Mathematics - Operations		
Description	**Example(s):**	**Read as:**
Addition	13 + 27 13 + 27 =	“thirteen plus twenty-seven equals”
	13 + 27 = ?	“thirteen plus twenty-seven equals question mark”
Subtraction	487 – 159 487 – 159 =	“four hundred eighty-seven minus one hundred fifty-nine equals”
	487 - 159 =?	“four hundred eighty-seven minus one hundred fifty-nine equals question mark”
Multiplication	63 x 49 63 X 49 =	“sixty-three times forty-nine equals”
	63 X 49 =?	“sixty-three times forty-nine equals question mark”
Division – Vertical or Horizontal	$\frac{120}{15} = 8$ 120 ÷ 15 = 8	“one hundred twenty divided by fifteen equals eight”
Operations with boxes	3 + □ = 8	“three plus box equals eight”

Table 3: Test Reader Guidance for Mathematics - Expressions

Description	Example(s):	Read as:
Expressions containing variables (any letter may be used as a variable)	N + 4	"'N' plus four"
	8x – 3	"eight 'x' minus three"
	4(y – 2) + 5 = 7	"four open parenthesis 'y' minus two close parenthesis plus five equals seven"
	$V = \frac{4}{3}\pi r^3$	"'V' equals four-thirds pi 'r' cubed"
	$\frac{t-2}{t+8}$	"'t' minus two (pause) over 't' plus eight"
	$x^2 y^3 = -36$	"'x' squared 'y' cubed equals negative thirty- six" or "'x' to the second power times 'y' to the third power equals negative thirty-six"
	$156x \geq 4$	"one five six 'x' is greater than or equal to four"
Coordinate pairs answer choices with no other text	the point (–1, 2)	"the point (pause) negative one comma two"
	the point A is at (6, 3)	"the point 'A' is at (pause) six comma three"
	A. (–3, –4)	"'A' (pause) negative three comma negative four"
Parallels	$\overline{AB} \parallel \overline{CD}$	"line segment AB is parallel to line segment CD"
Perpendiculars	$\overline{AB} \perp \overline{CD}$	"line segment AB is perpendicular to line segment CD"

Suggested Test Preparation Script

(used with student in advance of the day of testing)

Hi, _____,

I will be reading your test to you when you take your M-STEP Assessment next week in [mathematics/English language arts]. I wanted to let you know how we'll work together. When I'm reading a test to you, it's very different from when I'm reading to you during class time. I have to follow certain rules.

- I cannot help you with any answers.
- I cannot click on anything on the screen.[1]
- I will not be using different character voices or changes in my tone when I read. I will be using a very direct voice that does not change very much, no matter how exciting the story or test item gets.
- If there is a picture that has words in it, I will read those words. If you ask, I will re-read the words as well.
- Sometimes there may be something about a word or phrase that might give you a hint if I read it out loud. In those cases, I will skip the word, point to it on screen [or on your booklet if braille or print on demand], and continue to read.
- I can still help you with your [list any assistive technology that the student may require that would need support].
- You can ask me to re-read parts of the test if you didn't hear me or need more time to think.
- You can ask me to slow down or speed up my reading, or read louder or softer if you are having trouble understanding what I read.
- I will only read certain types of punctuation, but if you need me to re-read a sentence and tell you how it was punctuated, I can do that.
- If you ask me a question about the test all I will say is: "Do your best work. I cannot help you with that."
- Do you have any questions for me about how we'll work together during the test?

1 A reader may click on something on the screen only if this is an identified need in the student's IEP or 504 plan and the reader has received appropriate training on when and how to do so.

References

Educational Testing Service (2002)

Guidelines for a Test Reader (https://www.ets.org/disabilities/test_reader/)

Retrieved from the ETS web page (https://www.ets.org/disabilities)

Oregon Department of Education Office of Student Learning and Partnerships (2012, December)

Guidelines for the Read Aloud Accommodation (http://www.ode.state.or.us/teachlearn/testing/admin/alt/ea/2-guidelines-for-the-math-read-aloud-accommodation-for-2012-2013-(3).pdf)

State of Washington Office of Superintendent of Public Instruction (2013, September)

Access Supports and Accommodations Guidelines for State Assessments (http://www.k12.wa.us/assessment/statetesting/pubdocs/AccommodationManual.pdf)

West Virginia Department of Education (December, 2013)

Guidelines for Participation in State Assessments, 2013-2014 (http://wvde.state.wv.us/osp/ParticipationGuidelines-2013-2014.pdf) Guidance on Accommodations for Students with Disabilities and/or Limited English Proficiency in State and District-Wide Testing

Recommended Qualifications and Guidelines for Use of Translators (non-ASL)

The Michigan Student Supports and Accommodations Table (see page 55) provides information regarding allowable second language supports for many students. This document is intended to help districts in selecting highly-qualified translators to administer the Michigan assessments.

The following is a list of available supports related to the use of interpreters and translators.

M-STEP

Mathematics: Directions, questions, and answer options may be translated. Students needing a Spanish form of the assessment (even if someone is orally translating into Spanish) should be provided the Stacked Spanish test booklet or have the Stacked Spanish form turned on in the DRC INSIGHT Portal. Use of the Stacked Spanish form of the assessment can allow translators to use the translations as their reader script. Educators must refer to and utilize the Spanish Read-Aloud Guidelines included in this document, if translating into Spanish; or the Arabic Read-Aloud Guidelines document, if translating into Arabic.

ELA: Directions **only** may be translated (that is, general test orientation directions; no content related to test questions or answer options themselves may be translated).

Science: Directions, questions, and answer options may be translated. However, students must take the paper/pencil form of the assessment. Students needing a Spanish or Arabic form of the assessment should be provided the Spanish or Arabic DVD. Translators **must** use the Reader Script for the oral translation.

Social Studies: Directions, questions, and answer options may be translated. However, students must take the paper/pencil form of the assessment. Students needing a Spanish or Arabic form of the assessment should be provided the Spanish or Arabic DVD. Translators **must** use the Reader Script for the oral translation.

PSAT 8/9, PSAT 10, and SAT

Refer to the Supports and Accommodations Table to find out if the supports listed below result in college-reportable scores.

Directions may be translated into a second language used by the students. Directions cannot be elaborated upon. Languages offered in 2021 include Albanian, Arabic, Bengali, Bosnian, Burmese, Cambodian (Khmer), Chinese (Mandarin), French, Gujarati, Haitian Creole, Hindi, Hmong, Italian, Polish, Portuguese, Russian, Somali, Spanish, Urdu, and Vietnamese. Additional languages are being considered.

Go to the College Board Michigan website (www.collegeboard.org/Michigan) to download the translated directions when available.

The translated directions may be printed for distribution to students on test day as needed. No accommodation request is required. Scores will be college and scholarship reportable.

For students whose language is not one of these provided, the content and questions of the mathematics section may be translated into the student's most familiar language, but are not college reportable. Refer to the Supports and Accommodations Table for more information. Students receiving a translation should be administered the test individually or may have the assessment administered in small groups of no more than five students, if all students are receiving the same language of translation.

MI-Access Functional Independence

Only items or portions of items designated as "readable" may be translated. Refer to the Do Not Read Aloud tables for each content area.

Mathematics: Directions and items may be translated.

ELA: Directions only may be translated.

Science: Directions and items may be translated.

Social Studies: Directions and items may be translated.

WIDA

WIDA assessments (W-APT, ACCESS for ELLs, Alternate ACCESS for ELLs) directions and content **must not** be translated.

ACT WorkKeys

Refer to the Supports and Accommodations Table for more information on appropriate content areas and assessment parts that may be translated for these assessments. However, these recommended guidelines may be followed for use with those appropriate sections and parts.

Recommended Qualifications for Translators and Language Interpreters (non-American Sign Language)

Preference should be given to individuals who have bachelor's degrees in languages other than English or who hold a formal certification in either translation or interpretation. When this is not possible, interpreters should have the following qualifications:

1. mastery of the target language and dialect
2. familiarity with both American culture and the culture of the target language
3. extensive general and academic vocabulary in both languages
4. ability to express thoughts clearly and concisely in both languages
5. familiarity with the Michigan education system
6. attendance at school/district/statewide trainings regarding how to administer the assessments
7. a signed OEAA Assessment Security Compliance Form

Individuals selected as interpreters must also adhere to all aspects of Michigan's test security guidelines.

Guidelines for Translators and Language Interpretation (non-ASL)

Test directions, questions, and answer choices should be read to students using direct interpretation. Care should be taken not to alter the intended meaning of the text.

Common False Assumptions and Risks

1. **Many people incorrectly assume that a bilingual person can also be an effective interpreter by virtue of knowing two languages.**

   Research shows that bilingual individuals who have not received interpreter-specific training are more likely to add or omit information, as well as interject their own opinions and assumptions, which has the result of changing the actual content of the assessment. They may also speak too quickly, making the content too difficult to process. These actions would affect the validity of the student's assessment results.

2. **Parents for the student and family members of the students are not the best choice to help administer the assessment.**

   Using interpreters or translators with whom the student has familiar relationships may pose a risk in by creating a situation where the translator or interpreter is more willing to provide additional, non-authorized help to the student for the test.

Often in districts where there is a low population of language-speaking students, districts may believe it would be acceptable to use a student's older sibling to aid in the translation process. This would actually result in a security breach as no students should be involved in the testing of other students.

3. **Side conversations**

   It is possible that because of the one-on-one nature of this testing scenario, coupled with the potential relief some students may feel by having someone speak to them in their native language, additional topics may arise for discussion between the student and the interpreter. Although it is acceptable for the student to ask for clarification on directions, other non-test related topics should be avoided.

References

Bridging the Gap: A Basic Training for Medical Interpreters. Interpreter's Handbook, Third Edition, Jan. 1999.

ITC Guidelines for Translating and Adapting Tests, International Test Commission, Jul. 2005.

Medical Interpreter Training. Arlington Free Clinic, Arlington, VA, Jan., 2000.

National Health and Nutrition Examination Survey (NHANES) Interpretation Guidelines, Center for Disease Control (CDC), Nov. 2006.

Standards for Educational and Psychological Testing, American Educational Research Association, American Psychological Association, National Council on Measurement in Education, 2014.

Arabic Read-Aloud Guidelines
M-STEP Mathematics

Some students may benefit from an in-person oral translation of the online or paper/pencil M-STEP mathematics assessment. This support is intended for students who may be in bilingual programs or whose native language fluency is greater than their English fluency. Use of this support assumes that a student is able to better show their knowledge of the content in a language other than English. Use of this support with students whose fluency in a language other than English is low may result in less valid assessment results.

For M-STEP mathematics, this option is ONLY available for students testing online as an individual administration option. This is necessary because of the computer adaptive nature of the test. Each student may be on a different question with no way for the test administrator to provide the same question-by-question translation to multiple students. Doing so would result in unnecessary distractions for students. Students testing paper/pencil may be administered the assessment with an oral translation individually or in small groups of no more than five students.

Reader Qualifications

- The test reader should be a biliterate adult who is familiar with the student, and who is typically responsible for providing a read-aloud support in Arabic during educational instruction and assessments.
- Test readers must be trained on the administration of the assessment in accordance with state policy, and familiar with the terminology and symbols specific to the test content and related conventions for standard oral communication.
- Test readers must be trained in accordance with Michigan's state administration and security policies and procedures as articulated in Michigan's test administration manuals, guidelines, and related documentation.

Preparation

- Test coordinators should know in advance of testing the students' language for mathematics instruction and what the students' comfort level is with receiving the assessment content in a language other than English. For example, many Arabic-speaking students, depending on their country of origin, may have learned mathematics in French or in English.
- Test readers should read and sign a test security/confidentiality agreement prior to test administration.
- Test readers are expected to familiarize themselves with the test environment and format in advance of the testing session. Having a working familiarity with the test environment and format will help facilitate reading of the test. Increased knowledge of the test format can be gained through review of the practice tests.
- Test readers should have a strong working knowledge of the embedded and non-embedded accessibility and accommodations options and features available on M-STEP assessments. This includes having a strong working knowledge of Designated Support options specific to English Learners (ELs).

- Test readers should be familiar with the student's Individualized Education Program (IEP) or 504 plan if the student for whom they are reading has access to additional Designated Supports and/or accommodations. This will ensure that there are plans in place for providing all needed Designated Supports and accommodations.
- In addition to a test reader, students may make use of any other approved specialized tools or equipment during the test as appropriate and in accordance with the Supports and Accommodations Table. Test readers should be familiar with any assistive technology or approved supports the student requires.
- Test readers in Arabic should have extensive practice in providing read aloud support in Arabic and must be familiar and comfortable with the process before working directly with a student.
- The reader should be knowledgeable of procedures for reading aloud text by content area.
- The test reader should meet with the student in advance and inform the student of the parameters of the support. A suggested test reader script is included at the end of this guidance.
- Unless otherwise specified by a student's IEP or 504 plan, the test reader does not have a role in manipulating the test or assisting with any other support tools. Test readers should be ready with appropriate script that reinforces the parameters during the test session.

General Guidelines

- The test reader's support should ideally be provided in a separate setting so as not to interfere with the instruction or assessment of other students.
- Read each question exactly as written as clearly as possible.
- Throughout the exam, strive to communicate in a neutral tone and maintain a neutral facial expression and posture.
- Avoid gesturing, head movements, or any verbal or non-verbal emphasis on words not otherwise emphasized in text.
- Avoid conversing with the student about test questions as this would be a violation of test security; respond to the student's questions by repeating the item, words, or instructions verbatim as needed.
- Do not paraphrase, explain, or define any items, words, or instructions as this would be a violation of test security. However, you may spell any words requested by the student or write the translated word in Arabic.
- Adjust your reading speed and volume if requested by the student. In order to lessen the impact of different Arabic dialects on student's understanding, it is important to read clearly to the student at a slow to moderate pace.

Post-Administration

- The test reader must collect scratch paper, rough drafts, and login information immediately at the end of the testing session and deliver it to the test administrator in accordance with Michigan Department of Education state policies and procedures.
- The test reader must not discuss any portion of the test with others.

Arabic Usage / Conventions

- **Punctuation:** Read all text as punctuated.
- **Ellipses:** When an ellipsis is used to signify missing text in a sentence, pause briefly, and read as 'طاقن ثالث.'
- **Quotations:** Quotation marks should be verbalized as "سابقات علامة" at the beginning and end of quoted material, respectively.

- **Emphasis:** When words are printed in boldface, italics, or capitals, tell the student that the words are printed that way. In order not to provide an unfair advantage to students receiving this support, test readers should be cautious not to emphasize words not already emphasized in print. Emphasis is appropriate when italics, underlining, or bold is used in the prompt, question, or answers.
- **Misspellings:** In some cases a test item may present a word or phrase that is intentionally misspelled as part of the assessment. In these instances the student is required to respond in a specific way. When presented with intentionally misspelled words test readers should not attempt to read the word(s) aloud as pronunciation is somewhat subjective.

Images / Graphics

- Before describing a picture or graphic, the test reader should determine whether the details of the picture are necessary to understanding and responding to the item(s). In many cases, an image will be used to accompany a passage or reading excerpt as a piece of visual interest that is not essential in responding to the item.
- Describe the image/graphic as concisely as possible following a logical progression. Focus on providing necessary information and ignoring the superfluous. Use grade-appropriate language when describing the image/graphic.
- Read the title or caption, if available.
- Any text that appears in the body of an image may be read to a student. Read text in images in the order most suited for the student's needs. Often the reader moves top to bottom, left to right, or general to specific in accordance with teaching practices.

Graphic Organizers

- Before reading a graphic organizer, the test reader should discern the most appropriate and logical manner in which to present the information. In general, information should be presented from broad to specific as indicated by the visual components of the document. The test reader should read the terms exactly as indicated in the graphic organizer. No other information about the graphic organizer, test question, or terms should be articulated. For example, the test reader should not create sentences if information is bulleted or appears in a title or label.
- Use common grade-appropriate language throughout the item and the test when referring to graphic organizers and their attributes (including labels, blank cells, stems).

Mathematical Expressions

- Mathematical expressions must be read precisely and with care to avoid misrepresentation by a student who has no visual reference. For mathematics items involving algebraic expressions or other mathematical notation, it may be preferable for the reader to silently read the mathematical notations or the entire question before reading it aloud to the student.
- Test readers read mathematical expressions with technical accuracy. Similar expressions should be treated consistently.
- In general, numbers and symbols can be read according to their common Arabic usage for the student's grade level.
- Additional examples may be found in the tables on the following pages.
- Abbreviations and acronyms should be read as full words. For example, 10 cm needs to be read as "عشرة سنتيمترات." Some abbreviations may be read differently by different readers. For example, cm3 may be read as "بّعكم رتمي تنس".

Table 1: Test Reader Guidance for Mathematics - Numbers

Description	Example(s):	Read as:
Large whole numbers	632,407,981	"ست مائة واثنان وثلاثون مليون، وأربع مائة وسبعة آلاف، وتسع مائة وواحد وثمانون"
	45,000,689,112	"خمسة وأربعون مليار (بليون)، وست مائة وتسعة وثمانون ألفاً، ومائة وإثنا عشر"
Decimal numbers	0.056	"صفر فاصلة صفر خمسة ستة" OR "صفر علامة عشرية صفر خمسة ستة"
	4.37	"أربعة فاصلة ثلاثة سبعة" OR "أربعة علامة عشرية ثلاثة سبعة"
Fractions – common	½, ¼, ⅔, ⅘	"واحد على إثنين، واحد على أربعة، إثنان على ثلاثة، أربعة على خمسة"
	$\frac{14}{25}$	"أربعة عشر على خمسة وعشرين"
	$\frac{487}{6972}$	"أربع مائة وسبعة وثمانون على ستة آلاف وتسع مائة واثنان وسبعون"
Mixed numbers – read aloud "and" between whole numbers and fractions	3 ½	"ثلاثة ونصف"
	57 ¾	"سبعة وخمسون وثلاثة أرباع"
Percent	62%	"إثنان وستون بالمائة"
	7.5%	"سبعة فاصلة خمسة بالمائة" OR "سبعة علامة عشرية خمسة بالمائة"
	0.23%	"صفر فاصلة إثنان ثلاثة بالمائة" OR "صفر علامة عشرية إثنان ثلاثة بالمائة"
Money - if the amount contains a decimal point, read as "dollars AND cents"	$4.98	"أربع دولارات وثمانية وتسعون سنت"
	$0.33	"ثلاثة وثلاثون سنت"
	$5368.00	"خمسة آلاف وثلاث مائة وثمانية وستون دولار فقط"
Negative numbers - do NOT read negative sign as "minus"	-3	"ناقص ثلاثة" OR "سالب ثلاثة"
	$-\frac{5}{8}$	"ناقص خمسة على ثمانية" OR "سالب خمسة على ثمانية"
	-7.56	"ناقص سبعة فاصلة ستة وخمسون" OR "سالب سبعة علامة عشرية ستة وخمسون"
Dates (years)	1987	"ألف وتسع مائة وسبعة وثمانون"
	2005	"ألفان وخمسة"
Roman Numerals	I	"الرقم الروماني واحد"
	II	"الرقم الروماني إثنان"
	III	"الرقم الروماني ثلاثة"
	IV	"الرقم الروماني أربعة"
Ratios	*x: y*	"x إلى y"

Table 2: Test Reader Guidance for Mathematics - Operations

Description	Example(s):	Read as:
Addition	13 + 27 13 + 27 =	"ثلاثة عشر زائد سبعة وعشرون تساوي"
	13 + 27 = ?	"ثلاثة عشر زائد سبعة وعشرون تساوي ماذا"
Subtraction	487 – 159 487 – 159 =	"أربع مائة وسبعة وثمانون ناقص مائة وتسعة وخمسون تساوي"
	487 - 159 =?	"أربع مائة وسبعة وثمانون ناقص مائة وتسعة وخمسون تساوي ماذا"
Multiplication	63 x 49 63 X 49 =	"ثلاثة وستون ضرب تسعة وأربعون تساوي"
	63 X 49 =?	"ثلاثة وستون ضرب تسعة وأربعون تساوي ماذا"
Division – Vertical or Horizontal	120 = 8 15 120 ÷ 15= 8	"مائة وعشرون قسمة خمسة عشر تساوي ثمانية"
Operations with boxes	3 + □ = 8	"ثلاثة زائد مربّع تساوي ثمانية"

Table 3: Test Reader Guidance for Mathematics - Expressions

Description	Example(s):	Read as:
Expressions containing variables (any letter may be used as a variable)	N + 4	"N زائد أربعة"
	8x – 3	"ناقص ثلاثة x ثمانية"
	4(y – 2) + 5 = 7	"ناقص إثنان، أغلق القوس، زائد خمسة تساوي سبعة y ،أربعة، إفتح القوس"
	$V = \frac{4}{3}\pi r^3$	"مكعّبة π r تساوي أربعة على ثلاثة V"
	$t - 2$ t + 8	"ناقص إثنان t"
	$x^2\ y^3 = -36$	"زائد ثمانية t"
	$156x \geq 4$	"مكعّب تساوي ناقص 36 y مربع x" OR "مكعّب تساوي سالب 36 y مربع x"
Coordinate pairs answer choices with no other text	the point (–1, 2)	"أكبر أو تساوي أربعة x واحد خمسة ستة"
	the point A is at (6, 3)	"(النقطة (ناقص واحد وإثنان" OR "(النقطة (سالب واحد وإثنان"
	A. (–3, –4)	(على (ستة وثلاثة A النقطة"
Parallels	$\overline{AB} \parallel \overline{CD}$	"(على (ناقص ثلاثة وناقص أربعة .A" OR "(على (سالب ثلاثة وسالب أربعة .A"
Perpendiculars	$\overline{AB} \perp \overline{CD}$	"CD موازية للقطعة المستقيمة AB القطعة المستقيمة "CD عمودية على القطعة المستقيمة AB القطعة المستقيمة

Suggested Test Preparation Script

(used with student in advance of the day of testing)

مرحبا بكم_____،

الأسبوع القادم في مادة الرياضيات. أريدكم أن تعرفوا كيف سنعمل سوية. حين أقرأ الإمتحان لكم، سوف يكون ذلك مختلفاً كثيراً عما قرأته M-STEP سوف أقرأ لكم اللإختبار حين تأخذون امتحان لكم أثناء الصف. عليّ أن أتّبع بعض القواعد:

- لا يمكنني مساعدتكم في أية إجابات
- لا يمكنني نقر أي شيء على الشاشة
- لن أغير نبرة صوتي أثناء القراءة. سوف أستعمل نفس نبرة الصوت بغض النظر عن أحداث القصة أو السؤال المطروح
- إذا كان هناك صورة مرفقة بكلمات، سوف أقرأ تلك الكلمات. إذا طلبتم مني إعادة قراءة تلك الكلمات، سأفعل ذلك
- أحياناً، بعض الكلمات أو العبارات قد تدل على الإجابة. في تلك الحالات لن أقرأ تلك الكلمات بل سأشير إليها على الشاشة ثم أكمل القراءة
- يمكنك أن تطلب إعادة قراءة أجزاء من الإختبار إذا لم تسمعني جيداً أو تريد وقتاً إضافياً للتفكير
- يمكنك أن تطلب مني أقرأ بشكل أبطأ أو أسرع، أو بصوت أعلى أو أخفض، إذا كنتم تواجهون صعوبة في فهم ما أقرأه
- سوف أقرأ بعض أحرف التنقيط (مثل الفاصلة والنقطة)، لكن إذا كنتم بحاجة إلى أن أعيد قراءة الجملة وأخبركم كيف تم تنقيطها، سأفعل ذلك
- "إذا سألتني سؤالاً حول الإختبار، كل ما سأقوله هو "إفعل أفضل ما تستطيع. لا يمكنني أن أساعدك
- هل لديك أية أسئلة تود أن تسألني حول طريقة عملنا سوياً خلال الإختبار؟
- ذلك
- "إذا سألتني سؤالاً حول الإختبار، كل ما سأقوله هو "إفعل أفضل ما تستطيع. لا يمكنني أن أساعدك
- هل لديك أية أسئلة تود أن تسألني حول طريقة عملنا سوياً خلال الإختبار؟

References

Educational Testing Service (2002)

Guidelines for a Test Reader (https://www.ets.org/disabilities/test_reader/)

Retrieved from the ETS web page (https://www.ets.org/disabilities)

Oregon Department of Education Office of Student Learning and Partnerships (2012, December)

Guidelines for the Read Aloud Accommodation (http://www.ode.state.or.us/teachlearn/testing/admin/alt/ea/2-guidelines-for-the-math-read-aloud-accommodation-for-2012-2013-(3).pdf)

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Manal Assi

Khalil El-Saghir

Mohammed Ghaleb

Spanish Read-Aloud Guidelines
M-STEP Mathematics

Some students may benefit from an in-person oral translation of the stacked Spanish test form available for online and paper/pencil M-STEP mathematics. This support is intended for students who may be in bilingual programs or whose native language fluency is greater than their English fluency. Use of this support assumes that a student is able to better show their knowledge of the content in a language other than English. Use of this support with students whose fluency in a language other than English is low may result in less valid assessment results.

This option is available for students in small groups of no more than five students or to students testing individually. Students receiving a Spanish read-aloud from an in-person translator cannot take the assessment with students not receiving this support. The oral translation will create unnecessary distraction for students not needing this support.

Reader Qualifications

- The test reader should be a biliterate adult who is familiar with the student, and who is typically responsible for providing a read-aloud support in Spanish during educational instruction and assessments.
- Test readers must be trained on the administration of the assessment in accordance with state policy, and familiar with the terminology and symbols specific to the test content and related conventions for standard oral communication.
- Test readers must be trained in accordance with Michigan's state administration and security policies and procedures as articulated in Michigan's test administration manuals, guidelines, and related documentation.

Preparation

- Test readers should read and sign a test security/confidentiality agreement prior to test administration.
- Test readers are expected to familiarize themselves with the test environment and format in advance of the testing session. Having a working familiarity with the test environment and format will help facilitate reading of the test.
- Test readers should have a strong working knowledge of the embedded and non-embedded accessibility and accommodations options and features available on M-STEP assessments.
- Test readers should be familiar with the student's Individualized Education Program (IEP) or 504 plan if the student for whom they are reading has access to additional Designated Supports and/or accommodations. This will ensure that there are plans in place for providing all needed Designated Supports and accommodations.
- In addition to a test reader, students may make use of any other approved specialized tools or equipment during the test as appropriate and in accordance with the Supports and Accommodations Table. Test readers should be familiar with any assistive technology or approved supports the student requires.
- Test readers in Spanish should have extensive practice in providing read aloud support in Spanish and must be familiar and comfortable with the process before working directly with a student.
- The reader should be knowledgeable of procedures for reading aloud text by content area.

- The test reader should meet with the student in advance and inform the student of the parameters of the support. A suggested test reader script is included on page 41.
- Unless otherwise specified by a student's IEP or 504 plan, the test reader does not have a role in manipulating the test or assisting with any other support tools. Test readers should be ready with appropriate script that reinforces the parameters during the test session.

General Guidelines

- The test reader's support should ideally be provided in a separate setting so as not to interfere with the instruction or assessment of other students.
- Read each question exactly as written as clearly as possible.
- Throughout the exam, strive to communicate in a neutral tone and maintain a neutral facial expression and posture.
- Avoid gesturing, head movements, or any verbal or non-verbal emphasis on words not otherwise emphasized in text.
- Avoid conversing with the student about test questions as this would be a violation of test security; respond to the student's questions by repeating the item, words, or instructions verbatim as needed.
- Do not paraphrase, interpret, or define any items, words, or instructions as this would be a violation of test security.
- Spell any words requested by the student.
- Adjust your reading speed and volume if requested by the student.

Post-Administration

- The test reader must collect scratch paper, rough drafts, and login information immediately at the end of the testing session and deliver it to the test administrator in accordance with Michigan Department of Education state policies and procedures.
- The test reader must not discuss any portion of the test with others.

Spanish Usage/Conventions

- **Punctuation:** Read all text as punctuated.
- **Ellipses:** When an ellipsis is used to signify missing text in a sentence, pause briefly, and read as 'punto, punto, punto.'
- **Quotations:** Quotation marks should be verbalized as "comillas" and "fin de comillas" at the beginning and end of quoted material, respectively.
- **Emphasis:** When words are printed in boldface, italics, or capitals, tell the student that the words are printed that way. In order not to provide an unfair advantage to students receiving this support, test readers should be cautious not to emphasize words not already emphasized in print. Emphasis is appropriate when italics, underlining, or bold is used in the prompt, question, or answers.
- **Misspellings:** In some cases a test item may present a word or phrase that is intentionally misspelled as part of the assessment. In these instances the student is required to respond in a specific way. When presented with intentionally misspelled words test readers should not attempt to read the word(s) aloud as pronunciation is somewhat subjective.

Images / Graphics

- Before describing a picture or graphic, the test reader should determine whether the details of the picture are necessary to understanding and responding to the item(s). In many cases, an image will be used to accompany a passage or reading excerpt as a piece of visual interest that is not essential in responding to the item.

- Describe the image/graphic as concisely as possible following a logical progression. Focus on providing necessary information and ignoring the superfluous. Use grade-appropriate language when describing the image/graphic.
- Read the title or caption, if available.
- Any text that appears in the body of an image may be read to a student. Read text in images in the order most suited for the student's needs. Often the reader moves top to bottom, left to right, or general to specific in accordance with teaching practices.

Graphic Organizers

- Before reading a graphic organizer, the test reader should discern the most appropriate and logical manner in which to present the information. In general, information should be presented from broad to specific as indicated by the visual components of the document. The test reader should read the terms exactly as indicated in the graphic organizer. No other information about should be articulated. For example, the test reader should not create sentences if information is bulleted or appears in a title or label.
- Use common grade-appropriate language throughout the item and the test when referring to graphic organizers and their attributes (including labels, blank cells, stems).

Mathematical Expressions

- Mathematical expressions must be read precisely and with care to avoid misrepresentation by a student who has no visual reference. For mathematics items involving algebraic expressions or other mathematical notation, it may be preferable for the reader to silently read the mathematical notations or the entire question before reading it aloud to the student.
- Test readers should read mathematical expressions with technical accuracy. Similar expressions should be treated consistently.
- In general, numbers and symbols can be read according to their common Spanish usage for the student's grade level.
- Additional examples may be found in the following tables.
- Abbreviations and acronyms should be read as full words. For example, 10 cm needs to be read as "diez centímetros." Some abbreviations may be read differently by different readers. For example, cm^3 may be read as "centímetros cúbicos" or "centímetros al cubo".

Table 1: Test Reader Guidance for Mathematics - Numbers

Description	Example(s):	Read as:
Large whole numbers	632,407,981	"seiscientos treinta y dos millones cuatro cientos siete mil novecientos ochenta y uno"
	45,000,689,112	"cuarenta y cinco mil millones seis cientos ochenta y nueve mil ciento doce"
Decimal numbers	0.056	"cero punto cero cinco seis"
	4.37	"cuatro punto tres siete"

Table 1: Test Reader Guidance for Mathematics - Numbers		
Description	**Example(s):**	**Read as:**
Fractions – common	½, ¼, ⅔, ⅘	“un medio, un cuarto, dos tercios, cuatro quintos”
	$\frac{14}{25}$	“catorce sobre veinticinco”
	$\frac{487}{6972}$	"cuatrocientos ochenta y siete sobre seis mil novecientos setenta y dos"
Mixed numbers – read aloud “and” between whole numbers and fractions	3 ½	“tres y un medio”
	57 ¾	“cincuenta y siete y tres cuartos”
Percent	62%	“sesenta y dos por ciento”
	7.5%	“siete punto cinco por ciento”
	0.23%	“cero punto dos tres por ciento”
Money - if the amount contains a decimal point, read as “dollars AND cents”	$4.98	“cuatro dólares y noventa y ocho centavos”
	$0.33	“treinta y tres centavos”
	$5,368.00	"cinco mil tres cientos sesenta y ocho dólares”
Negative numbers - do NOT read negative sign as “minus”	-3	“negativo tres”
	$-\frac{5}{8}$	“negativo cinco octavos”
	-7.56	“negativo siete punto cinco seis”
Dates (years)	1987	“mil novecientos ochenta y siete”
	2005	“dos mil cinco”
Roman Numerals	I II III IV	“número romano uno” “número romano dos” “número romano tres” “número romano cuatro”
Ratios	*x: y*	“x a y”

Table 2: Test Reader Guidance for Mathematics - Operations		
Description	**Example(s):**	**Read as:**
Addition	13 + 27 13 + 27 =	“trece más veintisiete es igual a”
	13 + 27 = ?	"cuatro cientos ochenta y siete menos ciento ciencuenta y nueve es igual a signo de interrogación”
Subtraction	487 – 159 487 – 159 =	“cuatro ocho siete menos uno cinco nueve es igual a”
	487 - 159 =?	“cuatro ocho siete menos uno cinco nueve es igual a signo de interrogación”
Multiplication	63 x 49 63 X 49 =	“sesenta y tres por cuarenta y nueve es igual a”
	63 X 49 =?	“sesenta y tres por cuarenta y nueve es igual a signo de interrogación”
Division – Vertical or Horizontal	$\frac{120}{15} = 8$ 120 ÷ 15 = 8	"Ciento veinte dividido entre quince es igual a ocho"
Operations with boxes	3 + □ = 8	“tres más casilla es igual a ocho”

Table 3: Test Reader Guidance for Mathematics - Expressions		
Description	**Example(s):**	**Read as:**
Expressions containing variables (any letter may be used as a variable)	N + 4	“‘N’ más cuatro
	8x – 3	“ocho ‘x’ menos tres"
	4(y – 2) + 5 = 7	“cuatro abre paréntesis ‘y’ menos dos cierra paréntesis más cinco es igual a siete”
	$V = \frac{4}{3} \pi r^3$	“‘V’ es igual a cuatro tercios pi ‘r’ al cubo"
	$\frac{t - 2}{t + 8}$	“‘t’ menos dos (pause) sobre ‘t’ más ocho”
	$x^2 y^3 = -36$	“‘x’ al cuadrado ‘y’ al cubo es igual a negativo treinta y seis” o “‘x’ a la segunda potencia por ‘y’ a la tercera potencia es igual a negativo treinta y seis”
	$156x \geq 4$	“uno cinco seis ‘x’ es mayor o igual a cuatro”

Table 3: Test Reader Guidance for Mathematics - Expressions		
Description	**Example(s):**	**Read as:**
Coordinate pairs answer choices with no other text	the point (–1, 2)	"el punto (pause) negativo uno coma dos"
	the point A is at (6, 3)	"El punto A está en (pause) seis coma tres."
	A. (–3, –4)	"'A' (pause) negativo tres coma negativo cuatro"
Parallels	$\overline{AB} \parallel \overline{CD}$	"el segmento de línea AB es paralela al segmento de línea CD"
Perpendiculars	$\overline{AB} \perp \overline{CD}$	"el segmento de línea AB es perpendicular al segmento de línea CD"

Suggested Test Preparation Script

(used with student in advance of the day of testing)

Hola, _____,

Soy la persona asignada para leerte el examen que tomarás la próxima semana durante M-STEP. Me gustaría informarte cómo estaremos trabajando juntos. Cuando te esté leyendo la prueba, será de manera muy distinta a cuando te estoy leyendo durante la clase. Necesito seguir ciertas reglas.

- No te puedo ayudar con ninguna respuesta.
- No puedo hacer clic sobre nada en la pantalla.[2]
- No estaré usando diferentes voces de personajes o cambiando mi tono de voz cuando lea. Estaré usando una voz muy directa que no cambie mucho, no importa qué tan emocionante sea la historia o ítem de la prueba.
- Si hay una imagen con palabras, leeré esas palabras. Si lo pides, leeré nuevamente las palabras.
- Algunas veces puede haber algo sobre una palabra o frase que te puede dar una clave si lo leo en voz alta. En esos casos, no leeré esa la palabra, la señalaré en la pantalla [o en el cuadernillo de impreso al momento] y continuaré leyendo.
- Todavía puedo ayudarte con tus [***list any assistive technology that the student may require that would need adult support—if that support is provided by you].
- Me puedes pedir que lea nuevamente partes de la prueba si no me escuchaste o necesitas más tiempo para pensar.
- Me puedes pedir que haga una pausa en la lectura si necesitas tomar un descanso.
- Me puedes pedir que lea más despacio o más rápido, o leer más alto o más bajo si tienes problema entendiendo lo que leo.

[2] A reader may click on something on the screen only if this is an identified need in the student's IEP or 504 plan and the reader has received appropriate training on when and how to do so.

- Leeré ciertos signos de puntuación, pero si necesitas que lea nuevamente una oración y que te diga la puntuación, puedo hacerlo.
- Si me haces una pregunta sobre la prueba lo único que te voy a decir es: “Haz tu mejor trabajo. No te puedo ayudar en eso.
- ¿Tienes alguna pregunta sobre cómo vamos a trabajar juntos durante la prueba?

References

Educational Testing Service (2002)

Guidelines for a Test Reader (https://www.ets.org/disabilities/test_reader/)

Retrieved from the ETS web page (https://www.ets.org/disabilities)

Oregon Department of Education Office of Student Learning and Partnerships (2012, December)

Guidelines for the Read Aloud Accommodation (http://www.ode.state.or.us/teachlearn/testing/admin/alt/ea/2-guidelines-for-the-math-read-aloud-accommodation-for-2012-2013-(3).pdf)

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West Virginia Department of Education (December, 2013)

Guidelines for Participation in State Assessments, 2013-2014 (http://wvde.state.wv.us/osp/ParticipationGuidelines-2013-2014.pdf) Guidance on Accommodations for Students with Disabilities and/or Limited English Proficiency in State and District-Wide Testing

ACT WorkKeys in Spanish

ACT offers the ACT WorkKeys assessment in Spanish. Students taking this form of the assessment are eligible to receive a National Career Readiness Certificate en Español. For the state-required administration of WorkKeys, students must opt to take only one form of the assessment and cannot take both forms during the state-administered window.

This guidance should be used to help educators decide which students might benefit from taking the Spanish form of the assessment.

Educators should consider the following questions when making a determination as to whether or not to assess the student:

- **Can the student read in Spanish?** Not all students who can speak Spanish fluently have a strong command of the written language. Without high literacy in the language, students will not benefit from taking this form of the test.
- **Is the student best able to show what they know to a potential employer by receiving a National Career Readiness Certificate en Español?** Remember that the purpose of the ACT WorkKeys is to show a students' skills and abilities for the use in multiple career pathways.

SAT and PSAT Grade 8 – 50% Extended Time for ELs Guidance

Educators must use this document to aid in the determination of current students identified as English Learners (ELs) who may benefit from the use of the 50% Extended Time support on the SAT or PSAT assessments. Below you will find a list of questions that will help you determine if a student is eligible to use this support.

It is important to keep in mind that not **all** students and certainly not **all** ELs will benefit from extended time.

Additionally, MDE is committed to monitoring the use of supports on state assessments and will contact schools and districts with high numbers of students utilizing this support.

A **preponderance of evidence** should exist rather than a few marks in boxes for the student to be provided this level of support.

	Yes	No
Is the student formally identified as an English Learner in MSDS? *If the answer to this question is no, then this student is not eligible for this support.*		
Does the student typically receive additional time to complete assignments?		
Does the student typically receive additional time to complete in-class assessments?		
Is the student a recently arrived student (attended U.S. schools for 12 months or less)?		
Does the student typically use a bilingual word-to-word dictionary in the classroom?		
Does the student use additional or different linguistic supports in the classroom?		
Does the student need additional time to process written text in English?		
When given the choice, does the student indicate he or she would prefer to have extra time for assignments?		

Testing Policy for Recently Arrived, First Year English-Learner Students

ELA Exception Criteria

The Michigan Department of Education is able to provide a one time exception to the testing requirement in English language arts (ELA) for first year, English learner (EL) students. To be eligible for this exception, students must meet ALL of the following criteria:

- the student has been enrolled in U.S. schools (excluding Puerto Rico) for 12 months or less at the time of taking a state assessment
- the student is reported as an English Learner in the Michigan Student Data System (MSDS)
- in the Office of Educational Assessment and Accountability (OEAA) Secure Site, the student has at least one of the following for the current year:
  - » A WIDA ACCESS Placement Test (W-APT) / WIDA Screener score
  - » A valid WIDA ACCESS for ELLs or WIDA Alternate ACCESS for ELLs score

Expectations for ALL EL Students

Regardless of the length of time enrolled in a U.S. school, it is required that each EL student is:

- administered the WIDA ACCESS Placement Test (W-APT) or WIDA Screener during the EL identification process AND that the W-APT/WIDA Screener score is entered in the OEAA Secure Site.
- annually administered the summative WIDA ACCESS for ELLs or Alternate ACCESS for ELLs until proficiency is achieved, including in their first year if the student is enrolled prior to the close of that year's test administration period.

Students are not exempt from WIDA assessments because these assessments test students' English language development and not knowledge of English language arts.

ELA Exception Notes: ALL Assessments (Except WIDA assessments)

Note: The following aspects of the ELA Exception for First Year EL students apply to all state assessments (except WIDA assessments).

- The ELA Exception for First Year EL students only applies to ELA.
- Requests for an exception are submitted in the OEAA Secure Site.
- Requests for an exception are submitted AFTER an assessment's testing window, during that assessment's Answer Documents Received and Not Tested Students window.
- Requests for an exception must be submitted separately for each applicable student.
- If the request is accepted, the student will be:
  - » counted as participating for the school's accountability ELA participation calculations
  - » excluded from the school's accountability ELA proficiency and growth calculations
  - » included in the school's accountability participation, proficiency, and growth calculations for all other content areas.
- If the request is rejected, the student will be included in the school's accountability participation, proficiency, and growth calculations for ELA and all other content areas.

ELA Exception Notes: By Assessment

The following is additional information on the ELA Exception specific to each state assessment.

M-STEP Assessments

- For dates of the M-STEP Answer Documents Received and Not Tested Students window, see the **M-STEP List of Important Dates** document on the M-STEP web page (www.mi.gov/mstep)

MI-Access Assessments

- For dates of the MI-Access Answer Documents Received and Not Tested Students window, see the **List of Important Dates** document on the MI-Access web page (www.mi.gov/mi-access)
- The Functional Independence ELA assessments are:
  - » ELA Accessing Print and Using Language
  - » ELA Expressing Ideas
- The Supported Independence and Participation ELA assessments are "ELA"

For Any College Board Assessment

(SAT, PSAT 8, PSAT 9, or PSAT 10)

- In order for students using the ELA exception to receive a valid math score, **before** testing, schools must request a "Math Only" accommodation by the following process.
  - » Ensure the student is listed on the Pre-ID Student Report.
  - » Log into College Board's Services for Students with Disabilities (SSD) Online System.
  - » Start a new request for the student and enter student information.
  - » Select "State Allowed Accommodation" as the accommodation type.
  - » Choose "EL – Math Only" from the list of state-allowed accommodations.
  - » Submit the request (it will be automatically approved).
- Students with approved "EL – Math Only" accommodations will test with a lime-colored test book. This will ensure the eligible EL exception students are tested with materials that will still yield their required valid mathematics score.
- The Services for Students with Disabilities (SSD) Coordinator will only use the scripts for the mathematics test in the SSD Coordinator manual when administering the assessment.
- **Note:** The test book shipped for these students will still include the ELA and mathematics sections.
- For questions about the SSD system call the College Board Michigan Educator Hotline at 1-866-870-3127.

SAT Assessments

- For dates of the SAT Answer Documents Received and Not Tested Students window, see the **MME and PSAT List of Important Dates** document on the MME web page (www.mi.gov/mme)
- The SAT ELA assessment is "Evidenced Based Reading and Writing"
- Students not taking the ELA portion of the SAT will not receive a college-reportable SAT score.

PSAT 8 Assessments

- For dates of the PSAT 8 Answer Documents Received and Not Tested Students window, see the **Grade 8 List of Important Dates** document on the M-STEP web page (www.mi.gov/mstep)
- The PSAT 8 ELA assessment is "Evidenced-Based Reading and Writing"

PSAT 9 and PSAT 10 Assessments

- PSAT 9 and PSAT 10 are not currently used for accountability and do not have an Answer Documents Received and Not Tested Students window. Therefore, it is not necessary, nor possible, to request an ELA exception for accountability for PSAT 9 or PSAT 10. However, students meeting all the ELA exception criteria may still use a "EL – Math Only" accommodation.

Scribing Protocol for the M-STEP, MI-ACCESS, SAT, ACT, and WIDA Assessments

Scribing Protocol

In this section educators will find the required procedures a scribe must follow for the Michigan Student Test of Educational Progress (M-STEP), MI-Access, and WIDA assessments. Some information is also provided related to SAT and ACT WorkKeys. A scribe is an adult who writes down what a student dictates via speech, American Sign Language, or an assistive communication device. The guiding principle in scribing is to ensure that the student has access to test content and is able to respond to the content.

Scribes are allowable as a documented accommodation for English Language Arts (ELA), M-STEP essay questions, and MI-Access Functional Independence (FI) ELA Expressing Ideas. Scribing is additionally allowable as a Designated Support for M-STEP mathematics, ELA non-writing items, science, and social studies. For the WIDA assessments, scribes are allowable accommodations for the Reading, Writing, and Listening domains.

As you review this document, you will need to be aware of the following terms.

Item Types:

- **Selected Response:** Selected-response items present students with a question and several answer choices. These items may appear as traditional multiple-choice items. They may also appear as multiple-select items (choose more than one answer) or Hot Text items (choose one or more embedded correct response).
- **Passage-based Writing Prompt:** These item types ask students read a passage and then respond to a prompt by writing an essay.
- **Constructed/Equation Response:** These item types ask students to explain their responses, respond to a prompt with a short story, or create equations/expressions.
- **Embedded Accessibility Option:** This is a Universal Tool, Designated Support, or Accommodation for students within the online delivery system, such as a highlighter or American Sign Language videos. Refer to Michigan's Supports and Accommodations Table for more information related to allowable accessibility options.
- **Non-Embedded Accessibility Option:** This is a Universal Tool, Designated Support, or Accommodation provided for students outside of the online delivery system, such as a scribe or scratch paper. Refer to Michigan's Accommodations Table for more information related to allowable accessibility options.

Qualifications for Scribes

- The scribe should be an adult who is familiar with the student, such as the teacher or teaching assistant who is typically responsible for scribing during educational instruction and assessments.
- Scribes must have demonstrated knowledge and experience in the subject for which scribing will be provided.
- Scribes should have extensive practice and training in accordance with Michigan's administration and security policies and procedures, as articulated in Michigan's test administration manuals, guidelines, and related documentation.

Preparation

- Scribes should read the Michigan Assessment Integrity Guide (AIG) and sign the OEAA Assessment Security Compliance Form prior to test administration.
- If the student for whom they are scribing has a disability, scribes and test administrators should be familiar with the content of the student's Individualized Education Program (IEP) or 504 plan, specifically surrounding the use of a scribe as an accommodation, to ensure there are plans in place for providing all needed Designated Supports and accommodations.
- Scribes are expected to familiarize themselves with the test format in advance of the scribing session. A working familiarity with the test environment will facilitate the scribe's ability to record the student's answers.
- Scribes should also have a strong working knowledge of the available embedded and non-embedded accessibility and accommodations options and features.
- Scribes should review the Scribing Protocol for the student at least one to two days prior to testing.
- Scribes should practice the scribing process with the student at least once prior to the scribing session.

General Guidelines

- Scribing must be administered so that the interaction between a scribe and a student does not interrupt other test-takers, or inadvertently reveal the student's answers.
- If the scribing-assisted testing is not conducted with the student in a separate setting, the scribe should be situated close enough to the student to prevent their conversations from reaching other students in the room.
- For computer-based administrations, scribes must enter student responses directly into the test interface, making use of the embedded and non-embedded tools available for a given item and student.
- For computer-based administrations, scribes are expected to comply with student requests regarding use of all available features within the test environment.
- Scribes may respond to procedural questions asked by the student, such as test directions and navigation within the test environment.
- Scribes may not respond to student questions about test items if the responses would compromise the validity of the test. The student must not be prompted, reminded, or otherwise assisted in formulating his or her response during or after the dictation to the scribe.
- Scribes may ask the student to re-state words or parts of the answer as needed. Such requests must not be communicated in a manner suggesting that the student should make a change or correction.
- Scribes may not question or correct student choices, alert students to errors or mistakes, or prompt or influence students in any way that might compromise the integrity of student responses. A scribe may not edit or alter student work in any way, and must record exactly what the student has dictated.
- Students must be allowed to review and edit what the scribe has written. If necessary, the student can request the scribe to read aloud the completed text before final approval.

Post-Administration Procedures for All Assessments

- Immediately at the end of the testing session, the scribe will submit online or paper-based student responses; collect scratch paper, rough drafts, and login information; and deliver the materials to the test administrator in accordance with Michigan's state policies and procedures.

English Language Arts: M-STEP and MI-Access Functional Independence (FI) Selected-Response Items

Single and Multiple Answer, Matching Table interaction

- The student must point to or otherwise indicate his/her selection(s) from the options provided.
- Scribes are expected to comply with student directions regarding screen and test navigation and the use of test platform features available for a given item.
- The student will confirm the selected answer and indicate to the scribe when he/she is ready to move to the next item.

Passage-based Writing Prompt

- The scribe will write verbatim student responses on paper or on screen, in an area obstructed from other students' view.
- The scribe will spell all words as dictated.
- The scribe will not capitalize words or punctuate text in the student's response, unless directed to do so specifically by the student for specific words or to indicate the "what" and "where" for punctuation.
- The scribe will orally confirm the spelling of homonyms and commonly confused homophones, such as than and then; to, two, and too; there, their, and they're.
- The student will proofread the response to add punctuation, capitalization, spacing, and make other edits.
- The scribe will make student-requested changes, even if incorrect.
- The student will confirm the fidelity of the response.
- The student will indicate to the scribe when he/she is ready to move to the next item.
- Scribes should request clarification from the student about the use of capitalization, punctuation, and the spelling of words, and must allow the student to review and edit what the scribe has written.

Mathematics: M-STEP and MI-Access Functional Independence (FI) Selected-Response Items

Single and Multiple Answer, Matching Table interaction

- The student must point to or otherwise indicate his/her selection from the options provided.
- The scribe will comply with student directions, including requests regarding screen and test navigation and use of test platform features available for the question.
- The student will confirm his/her selections and indicate to the scribe when he/she is ready to move to the next item.

Constructed/Equation Response Items

- The student must point or otherwise direct the scribe in developing his/her response.
- The scribe will input student work directly onscreen and in view of the student.
- For responses requiring equations, the student must specify where to place figures and operands.
- For responses requiring text, the scribe will spell all content area words/academic vocabulary as dictated and conform to standard writing conventions.
- For responses requiring text, the student will proofread to add punctuation, capitalization, spacing, and other edits.
- The scribe will make student-requested changes, even if incorrect.
- The student will confirm the fidelity of the response.
- The student will indicate to the scribe when he/she is ready to move to the next item.
- Scribes should request clarification from the student about the use of capitalization, punctuation, and the spelling of words, and must allow the student to review and edit what the scribe has written.

Science and Social Studies: M-STEP and MI-Access Functional Independence (FI) Selected-Response Items

Single and Multiple Answer

- The student must point to or otherwise indicate his/her selection from the options provided.
- The scribe will comply with student directions, including requests regarding screen and test navigation and the use of test platform features available for the question.
- The student will confirm his/her selections and indicate to the scribe when he/she is ready to move to the next item.
- Scribes should request clarification from the student about the use of capitalization, punctuation, and the spelling of words, and must allow the student to review and edit what the scribe has written.

SAT, PSAT 8/9, and PSAT 10

Some students may be approved for personal assistants, such as readers, scribes/writers, or sign language interpreters. **Assistants must be assigned by the school** and may not be a relative of the student. Refer to the appropriate test's School Day Accommodated Manual as well as the School Day Coordinator Manual.

Scribe/writers:

Depending on the student's needs, a scribe may be required to:

- complete the student's identifying information on the answer sheet
- fill in the circles on the regular answer sheet corresponding to the answers chosen by the student and write the student's SAT Essay submission
- make any corrections indicated by the student
- write the student's name on the student's test book, write "Answers in book" on front cover, and ensure that the test book is returned with the answer sheet
- assist the student in turning pages
- test in a 1-to-1 setting

Other duties:

Some personal assistants may be required to:

- accompany students when they go to the restroom during testing time
- assist the test administrator in ensuring test material security

Qualifications:

- current or retired professional, administrative, secretarial or clerical staff, or graduate student
- able to follow oral and written instructions precisely
- a reader or writer should be experienced in special education, and should speak English clearly
- a sign-language interpreter must be able to effectively sign to the student and voice the student's signing to the administrator

ACT WorkKeys

For more information on appropriate practices for recording student responses refer to the ACT WorkKeys Administration Manual when available.

For questions related to any ACT WorkKeys accommodations call the ACT customer service line at 1-800-553-6244 x1788.

English Language Development (ELD) for English Learners (ELs): WIDA W-APT, ACCESS for ELLs, and Alternate ACCESS for ELLs

Individuals who provide the scribe accommodation to a student must be trained by the school or district on test administration procedures and security requirements prior to testing.

Students receiving the scribe accommodation may respond to assessment items in the following ways:

- orally
- by using an assistive technology device or software (such as speech-to-text and picture/symbol communication system)
- by gesturing/pointing

For ELs taking the computer-based ACCESS, it is advisable for the adult test administrator to keyboard the student's responses onscreen directly into the student's computer.

Scribing must take place as the student dictates or otherwise produces the response. If requested by the student, the scribe may read the scribed response back to the student. The student may dictate changes or edits to the scribe, and the scribe must make those changes exactly as dictated by the student, even if a change is incorrect. All edits must be made and all responses transcribed onto the paper-based test or on the computer screen during the test session. For constructed responses, the student is responsible for all capitalization and punctuation and should verbally instruct the scribe what letters are capitalized and where to add punctuation. The student should provide exact spelling the first time they use a key word (noun or verb relevant to the content); thereafter, the scribe can spell the word as the student first spelled it. If the student uses a non-English word or one that the scribe does not understand, the scribe should prompt the student to spell the word and write down the student's spelling of the word.

The following scribing practices are acceptable:

- The scribe may ask, "Are you finished?" or "Is there anything you want to add or delete?"
- The scribe may respond to procedural questions asked by the student, such as, "Do I have to use the entire space to answer the question?" (the scribe may say, "No.").
- If the student requests that the scribe read a response that was already dictated, the scribe must read what the student dictated previously, being careful not to cue the student to errors.
- The scribe may prompt and remind the student of instructions or dictation rules, as needed, such as "Please spell that word."
- The scribe may ask the student to slow down or repeat their dictated response.
- The student should review his or her response and dictate the changes or edits that he or she would like done.

The following scribing practices are unacceptable:

- The scribe may not influence the student's response in any way.
- The scribe may not coach the student by giving specific directions, clues, or prompts.
- The scribe may not tell the student if his/her answer is correct or incorrect, or alert the student to mistakes he/she made.
- The scribe may not answer a student's questions related to the content (such as, "Can you tell me what this word means?").
- The scribe may not suggest that the student write more or go back and check the responses.
- The scribe should not write down unrelated vocalizations (such as, "um") by the student.

Requirements for the Scribed Response Accommodation

Individuals who provide the scribe accommodation to a student must be trained by the school or district on test administration procedures and security requirements prior to testing. The scribe should know how to accurately provide the accommodation. Likewise, when determining accommodations for a student, the student should have experience with the given accommodation on an ongoing basis. It is not recommend that a new accommodation be introduced to the student for the first time during administration.

References

California Department of Education (February 2010)
California High School Exit Examination
(https://www.cde.ca.gov/ta/tg/hs/)

Delaware Department of Education (2013, 06 14)
Guidelines for Inclusion of Students with Disabilities and English Language Learners
(Retrieved in November 2017 from http://de.portal.airast.org/wp-content/uploads/2013/06/Guidelines_for_Inclusion_2013-14_V2.pdf)

New England Common Assessment Program (NECAP) (August 2010)
New England Common Assessment Program Accommodations Guide
(Retrieved in November 2017 from https://www.maine.gov/education/necap/1011materials/accommodations_guide_final.pdf)

State of Washington Office of Superintendent of Public Instruction (September 2013)
Access Supports and Accommodations Guidelines for State Assessments
(Retrieved in November 2017 from http://www.k12.wa.us/assessment/statetesting/pubdocs/AccommodationManual.pdf)

Utah State Office of Education (2013)

Scribe Accommodation Guidelines (https://schools.utah.gov/file/d20bd730-8fdd-4012-a84b-4424e487a735)

West Virginia Department of Education (December, 2013)
Guidelines for Participation in State Assessments, 2013-2014
(http://wvde.state.wv.us/osp/ParticipationGuidelines-2013-2014.pdf)
Guidance on accommodations for Students with Disabilities and/or Limited English Proficiency in State and District-Wide Testing

Braille

Office of Educational Assessment and Accountability (OEAA)

The M-STEP assessments are produced in UEB and UEB Nemeth when necessary. The assessments can also be ordered as contracted or uncontracted. Braille practice tests are available and can be ordered from the Low Incidence Outreach Office.

The WIDA ACCESS for ELLs assessment produces in UEB and UEB Nemeth when necessary. The assessments can also be ordered as contracted or uncontracted. A braille format is not available for kindergarten, and Michigan has made a decision to allow an exception for students in grades 1 and 2 who are visually impaired, because the assessment would be testing their knowledge of braille instead of the WIDA English Language Development (ELD) standards.

M-STEP and WIDA

Grade	M-STEP ELA	M-STEP Mathematics	M-STEP Science	M-STEP Social Studies	WIDA ACCESS for ELLs
3	UEB • Contracted • Uncontracted	UEB Nemeth • Contracted • Uncontracted			UEB (LRW) • Contracted • Uncontracted
4	UEB • Contracted • Uncontracted	UEB Nemeth • Contracted • Uncontracted			UEB (LRW) • Contracted • Uncontracted
5	UEB • Contracted • Uncontracted	UEB Nemeth • Contracted • Uncontracted	UEB Nemeth • Contracted • Uncontracted	UEB • Contracted • Uncontracted	UEB Nemeth (LRW) • Contracted • Uncontracted
6	UEB • Contracted • Uncontracted	UEB Nemeth • Contracted • Uncontracted			UEB Nemeth (LRW) • Contracted • Uncontracted
7	UEB • Contracted • Uncontracted	UEB Nemeth • Contracted • Uncontracted			UEB Nemeth (LRW) • Contracted • Uncontracted

Grade	M-STEP ELA	M-STEP Mathematics	M-STEP Science	M-STEP Social Studies	WIDA ACCESS for ELLs
8			UEB Nemeth • Contracted • Uncontracted	UEB • Contracted • Uncontracted	UEB Nemeth (LRW) • Contracted • Uncontracted
9					UEB Nemeth (LRW) • Contracted • Uncontracted
10					EUEB Nemeth (LRW) • Contracted • Uncontracted
11			UEB Nemeth • Contracted • Uncontracted	UEB • Contracted • Uncontracted	UEB Nemeth (LRW) • Contracted • Uncontracted
12					UEB Nemeth (LRW) • Contracted • Uncontracted

SAT, PSAT, and ACT WorkKeys

The College Board (SAT, PSAT 8/9, and PSAT 10) assessments are produced in UEB and UEB Nemeth when necessary. The assessments are produced as contracted braille. Braille practice tests are available with a Nemeth supplement by calling the College Board.

The ACT WorkKeys assessment is produced in UEB and UEB Nemeth when necessary. The assessments are produced as contracted braille.

M-STEP, MI-Access, SAT, ACT WorkKeys, and WIDA Student Supports and Accommodations Tables

MICHIGAN Department of Education

This document contains state-allowed Universal Tools, supports, and accommodations for the M-STEP, MI-Access, SAT, ACT WorkKeys, and WIDA assessments.

Special Notes

Screen Readers and Voice Recognition Software for M-STEP and MI-Access Assessments

Voice recognition software is incompatible with the INSIGHT system (M-STEP and MI-Access assessments). Screen readers may also be incompatible; however, educators are encouraged to test out the screen readers with the Online Training Tools (OTTs) prior to the assessment administration. Keep in mind that students who need oral presentation have other options available to them. For help in determining what might work well for students, send an email to mde-oeaa@michigan.gov. Refer to the tables included in this chapter for more information related to these supports. For additional supports questions and needs, contact the Office of Educational Assessment and Accountability (OEAA) at mde-oeaa@michigan.gov.

Use of Computers with Alternative Access for an Alternate Response Mode for M-STEP and MI-Access Assessments

(switches, alternative keyboards, eye-gaze motion sensors, voice recognition software, head or mouth pointer, specialized trackballs or mouses)

Online districts with students utilizing these supports should first attempt to ensure these devices are compatible with the INSIGHT system by testing them with the OTTs. It is possible that they may be incompatible with the system. If the devices are not compatible and educators need help in determining best next steps for assessing students, contact the OEAA by email mde-oeaa@michigan.gov, or call 1-877-560-8378.

Reading the Universal Tools, Designated Supports, and Accommodations Tables

As you review the tables showing available supports, refer to the following information.

- Supports are organized and shown by program, either as **Universal Tools** (available to all students), **Designated Supports** (a designation made by a teacher or administrator who works with the student), or **Accommodations** (requires designation by an Individualized Education Program [IEP] or Section 504 plan).
- The **Support Type** column provides a brief description of the support offered. This column also indicates whether a support is available within the online delivery system itself (**embedded – E**) or if it must be provided by the district as a resource external to what is available through Insight (**non-embedded – NE**). All paper/pencil supports are considered **non-embedded**.

However, for more detailed information regarding which student groups would best be served by those supports, and for additional information regarding the support's use, educators must refer to the Designated Supports section on page 8 of this document.

- The **Mode** column indicates the testing mode (online or paper-pencil) in which the support can be used. Pay particular attention to these designations, because not all supports are available for both modes.
- The **How to Access** column provides information regarding whether districts must order the support through the OEAA Secure Site, if they can download it, or if they must provide students' access to the support by setting the feature in the DRC INSIGHT Portal prior to the students' testing. The column also indicates whether or not the support or

accommodation must be "bubbled" on the answer document. Testing coordinators should also refer to a specific assessment's Test Administration Manual.

Explanation of Symbols in the How to Access Column

- ✓ This feature must be set by the Test Administrator in the DRC INSIGHT Portal prior to testing
- ⭘ This material must be ordered or downloaded through the MDE Secure Site
- ❖ This support must be recorded as something the student will be using in the DRC INSIGHT Portal
- **B** This support should be bubbled on the paper/pencil answer document when used

Standard Test Administration Practices

The following list shows Michigan supports previously identified as "accommodations," but now considered general Test Administration Practices for the M-STEP assessments (**note:** many districts will still need to assign their use at the individual student level):

- administration of the assessment at a time most beneficial to the student, with appropriate supervision
- extended assessment time
- use of special adaptive writing tools such as pencil grip or larger pencil
- use of accommodated seating, special lighting, or furniture
- placement of student where he/she is most comfortable (such as front of room, back of room)
- use of alternative writing position (including desk easel, student standing up)
- accommodation for student to move, stand, or pace during assessment in a manner where others' work cannot be seen and is not distracting to others (including kneeling, constant movement)
- use of concentration aids (including stress balls, T-stools)
- visual, auditory, or physical cues from the teacher to the student to begin, maintain, or finish an assessment task

Future Supports

A number of supports currently available for M-STEP assessments may be phased out in future years, due to potential risks and based on continuing research of their reliability and validity. It is the hope of the OEAA to replace these allowable supports with more reliable, comparable supports for students.

M-STEP Mathematics

A Note about Non-Standard Universal Tools/ Supports/Accommodations

If educators do not see a particular support listed in the table for each test and are interested in providing that support for a student, the educators **must** contact the OEAA to request its use. Educators would send their request in an email to mde-oeaa@michigan.gov; the request must include the following:

- in the Subject line: Example Accessibility Support Request for M-STEP Mathematics
- educator's name, school/district, and contact information
- a description of the desired accessibility support to be provided to a student
- an explanation of why the accessibility support may be needed for the assessment

Explanation of Symbols in the How to Access column

- ✓ This feature must be set by the Test Administrator in the DRC INSIGHT Portal prior to testing
- ⭘ This material must be ordered or downloaded through the MDE Secure Site
- ❖ This support must be recorded as something the student will be using in the DRC INSIGHT Portal
- **B** This support should be bubbled on the paper/pencil answer document when used

Additional Materials Required for Paper/Pencil and Online:

Students in grades 6 and above can have access to graph paper during the assessment. Refer to the M-STEP Test Administration Manual (TAM) for more information on accessing this material.

Universal Tools - M-STEP Mathematics

Universal Tools	Mode	
Breaks – within the same day per test session: If the text is **paused** and the break is less than 20 minutes, student does not need original login ticket to restart online test session; if more than 20 minutes, student must use original login ticket to resume test session	Paper/Pencil Online	
Administration of the assessment in an alternate education setting (in school) with appropriate supervision • Bilingual/English as a Second Language setting • Special education setting • In a distraction-free space or alternate location (such as a separate room or location within the room)	Paper/Pencil Online (NE)	
(AISG) Administration individually/small group (no more than five students)	Paper/Pencil Online (NE)	❖
Assessment directions • Teacher may emphasize key words in directions • Teacher may repeat directions exactly as worded in administrator manual • Student may restate directions in his/her own words • Student may ask for clarification of directions	Paper/Pencil Online (NE)	
Highlighter	Paper/Pencil Online (E/NE)	
Cross-Off (answer eliminator)	Paper/Pencil Online (E)	
Sticky Notes	Online (E)	
Scratch paper (collection and secure disposal required)	Paper/Pencil Online (NE)	
Graph paper – will be shipped to all online schools for students in grades 6-7	Online (NE)	
Mark for Review (flag) (Available only on Stacked Spanish and VSL tests)	Paper/Pencil Online (E)	
Use of page flags and reading guides on test booklets	Paper/Pencil	
Line guide	Online (E)	
Magnifier	Online (E)	
(CM) Continuous Magnification - Magnifies INSIGHT test content to 200% with magnification staying active from question to question	Online (E)	✓
Embedded Calculator (available on calculator enabled items only)	Online (E)	

Designated Supports - M-STEP Mathematics

Designated Supports	Mode	
Administration of the assessment in an alternate education setting (out of school) with appropriate supervision (such as at home when student is homebound, in care facility when it is medically necessary)	Paper/Pencil	
Administration of the assessment in an interim alternative education setting (out of school) with appropriate supervision (such as a juvenile facility)	Paper/Pencil	
(NB) Noise buffers (such as ear mufflers, white noise, and/or other equipment to block external sounds)	Paper/Pencil Online (NE)	**B** ❖
(OTTD) Oral translation of test directions and/or of test items for students in appropriate language by a qualified translator (review the Introduction, Spanish Read Aloud Guidelines, and the OEAA Recommendations for Translators Chapters of this document)	Paper/Pencil Online (NE)	**B** ❖
(TTS) Text-to-Speech (Items Only) for mathematics items including response options, includes Follow Along	Online (E)	✓
(RAHR) Read aloud (Human Reader) – test questions, response options read aloud by human reader – individual administration required when used with online testers (use of M-STEP Read-Aloud Guidelines required)	Paper/Pencil Online (NE)	**B** ❖
(ST) Stacked Spanish form with Spanish human voice audio (HVA): • Stacked translation, split screen/page with Spanish and English test items, may need to use with bilingual word-to-word dictionary (student responses must be in English regardless of mode), audio will play for students on all test questions that reads aloud all test questions and answer options in Spanish	Paper/Pencil Online (E)	⭘ **B** ✓
Use of L1 (1st language) reference sheets – available in: Arabic, Burmese, Cantonese, Hmong, Ilokano, Korean, Mandarin, Punjabi (Eastern and Western), Somali, Spanish, Tagalog, Russian, Ukrainian, and Vietnamese (L1 Glossary)	Paper/Pencil	⭘ **B**
(BWWD) Bilingual word-to-word dictionaries (non-electronic only) for students whose language is not currently available for the L1 glossing reference sheets (must not provide definitions)	Paper/Pencil Online (NE)	
(AA) Use of auditory amplification devices or special sound systems	Paper/Pencil Online (NE)	❖
(VA) Use of visual aids (such as closed circuit television, magnification devices)	Paper/Pencil Online (NE)	❖
(MSK) Masking	Paper/Pencil Online (E)	✓
Use of a page turner	Paper/Pencil	
Use of non-skid surface that will not damage the answer document or scanning equipment (NOT tape or other adhesive)	Paper/Pencil	
(CC) Color choices	Paper/Pencil Online (E)	✓
(CTC) Contrasting color	Paper/Pencil Online (E)	✓

Designated Supports	Mode	
(SNWI) Scribe (use of OEAA Scribing Protocol required)	Paper/Pencil Online (NE)	**B** ❖
Multiple-day testing – Allowable as intentional scheduling for some students who use additional supports	Paper/Pencil	**B**

Accommodations - M-STEP Mathematics

Accommodations	Mode	
Braille – Contracted and Uncontracted available for paper/pencil; refer to the M-STEP TAM for information on ordering paper/pencil materials	Paper/Pencil	⭘ **B**
Enlarged print	Paper/Pencil	⭘ **B**
(OMT) Use of OEAA's Multiplication Table (grade 4 and above only, available upon request only)	Paper/Pencil Online (NE)	⭘ ❖
(A) Abacus	Paper/Pencil Online (NE)	**B** ❖
Use of counters, coins, base-10 blocks or other manipulatives for solving mathematics problems	Paper/Pencil Online (NE)	
(NEC) Non-embedded calculator (grade 6 and above only) or specialized calculator such as enlarged buttons; allowable ONLY on calculator section/items with calculator	Online (NE)	❖
(ASTD) Administrator signs test directions using American Sign Language (ASL) or Signed Exact English (SEE)	Paper/Pencil Online (NE)	**B** ❖
(ASTC) Administrator signs test content using American Sign Language (ASL) or Signed Exact English (SEE) (Online: Sign Language ASL Video)	Paper/Pencil Online (E)	**B** ✓
(ACD) Alternative Communication Device – use of computers with alternative access for an alternate response mode (such as switches, alternative keyboards, eye-gaze motion sensors, voice recognition software, head or mouth pointer, specialized trackballs or mouses): contact OEAA	Paper/Pencil Online (NE)	**B** ❖
Use of word processor for constructed response items (word prediction/spell check turned off)	Paper/Pencil	

M-STEP English Language Arts (ELA)

A Note about Non-Standard Universal Tools/ Supports/Accommodations

If educators do not see a particular support listed in the table for each test and are interested in providing that support for a student, educators **must** contact the Office of Educational Assessment and Accountability (OEAA) to request its use. Educators would send their request in an email to mde-oeaa@michigan.gov; the request must include the following:

- in the Subject line: Accessibility Support Request for M-STEP ELA
- educator's name, school/district, and contact information
- a description of the desired accessibility support to be provided to a student
- an explanation of why the accessibility support may be needed for the assessment

Explanation of Symbols in the How to Access column

- ✓ This feature must be set by the Test Administrator in the DRC INSIGHT Portal prior to testing
- ⭘ This material must be ordered or downloaded through the MDE Secure Site
- ❖ This support must be recorded as something the student will be using in the DRC INSIGHT Portal
- **B** This support should be bubbled on the paper/ pencil answer document when used

Additional Materials/Resources Required for Online:

Headphones – All students will be assessed on Listening comprehension items that are embedded throughout the ELA assessment.

Universal Tools - M-STEP English Language Arts (ELA)

Universal Tools	Mode	How to Access
Breaks – within the same day per test session: If the text is **paused** and the break is less than 20 minutes, student does not need original login ticket to restart online test session; if more than 20 minutes, student must use original login ticket to resume test session	Paper/Pencil Online	
Administration of the assessment in an alternate education setting (in school) with appropriate supervision • Bilingual/English as a Second Language setting • Special education setting • In a distraction-free space or alternate location (such as a separate room or location within the room)	Paper/Pencil Online (NE)	
(AISG) Administration individually/small group (no more than five students)	Paper/Pencil Online (NE)	❖
Assessment directions • Teacher may emphasize key words in directions • Teacher may repeat directions exactly as worded in administrator manual • Student may restate directions in his/her own words • Student may ask for clarification of directions	Paper/Pencil Online (NE)	
Highlighter	Paper/Pencil Online (E)	

Universal Tools	Mode	How to Access
Cross-Off (answer eliminator)	Paper/Pencil Online (E)	
Sticky Notes	Online (E)	
Scratch paper (collection and secure disposal **required**)	Paper/Pencil Online (NE)	
Mark for Review (flag) (available only on Closed Captioning and VSL tests)	Paper/Pencil Online (E)	
Use of page flags and reading guides on test booklets	Paper/Pencil	
Line guide	Online (E)	
Writing tools (such as bold, italic)	Online (E)	
Use of special adaptive writing tools such as pencil grip or larger pencil	Paper/Pencil	
Magnifier	Online (E)	
(CM) Continuous Magnification - Magnifies INSIGHT test content to 200% with magnification staying active from question to question	Online (E)	✓

Designated Supports - M-STEP English Language Arts (ELA)

Designated Supports	Mode	How to Access
Administration of the assessment in an alternate education setting (out of school) with appropriate supervision (such as at home when student is homebound, in care facility when it is medically necessary)	Paper/Pencil	
Administration of the assessment in an interim alternative education setting (out of school) with appropriate supervision (such as a juvenile facility)	Paper/Pencil	
(NB) Noise buffers (such as ear mufflers, white noise, and/or other equipment to block external sounds)	Paper/Pencil Online (NE)	**B** ❖
(TTS) Text-to-Speech (Items Only) test questions and answer options in grades 3-8	Online (E)	✓
(RAHR) Read aloud (Human Reader) – test questions and answer options read aloud in grades 3-7 by human reader (Use of the Read-Aloud Guidelines required)	Paper/Pencil Online (NE)	**B** ❖
(AA) Use of auditory amplification devices or special sound systems	Paper/Pencil Online (NE)	❖
(VA) Use of visual aids (such as closed-circuit television, magnification devices)	Paper/Pencil Online (NE)	❖
(MSK) Masking	Online (E)	✓
Use of a page turner	Paper/Pencil	

Designated Supports	Mode	How to Access
Use of non-skid surface that will not damage the answer document or scanning equipment (NOT tape or other adhesive)	Paper/Pencil	
(CC) Color choices	Paper/Pencil Online (E)	✓
(CTC) Contrasting color	Paper/Pencil Online (E)	✓
(SNWI) Scribe – non-Writing (non-constructed response) test questions (use of M-STEP Scribing Protocol required)	Paper/Pencil Online (NE)	**B** ❖
Multiple-day testing – allowable as intentional scheduling for some students who use additional supports	Paper/Pencil	**B**

Accommodations - M-STEP English Language Arts (ELA)

Accommodations	Mode	
(TTSPASSAGE) Text-to-speech (Items and Passages) – test questions, answer options, and reading passages in grades 6 and 7	Online (E)	✓
(RAHR) Read aloud (Human Reader) – reading passages in grades 6 and 7 by human reader (use of M-STEP Read-Aloud Guidelines required)	Paper/Pencil Online (NE)	**B** ❖
Braille – Contracted and Uncontracted available for paper/pencil. Refer to the M-STEP TAM for information on ordering paper/pencil materials	Paper/Pencil	⭘ **B**
Enlarged print	Paper/Pencil	⭘ **B**
(ASTD) Administrator signs test directions using American Sign Language (ASL) or Signed Exact English (SEE)	Paper/Pencil Online (NE)	**B** ❖
(ASTC) Administrator signs test content using American Sign Language (ASL) or Signed Exact English (SEE) (Online: Sign Language ASL Video)	Paper/Pencil Online (E)	**B** ✓
(SWI) Scribe – Writing test questions (use of OEAA Scribing Protocol required)	Paper/Pencil Online (NE)	**B** ❖
(CCAPTION) Closed captioning	Online (E)	✓
Use of adapted paper, additional paper, lined or grid paper for recording answers (Alternate Response)	Paper/Pencil	
(ACD) Alternative Communication Device – use of computers with alternative access for an alternate response mode (such as switches, alternative keyboards, eye-gaze motion sensors, voice recognition software, head or mouth pointer, specialized trackballs or mouses): contact OEAA	Paper/Pencil Online (NE)	**B** ❖
Use of word processor for constructed response items (word prediction/spell check turned off)	Paper/Pencil	

M-STEP Science and Social Studies

A Note about Non-Standard Universal Tools/ Supports/Accommodations

If educators do not see a particular support listed in the table for each test and are interested in providing that support for a student, the educators **must** contact the Office of Assessment and Accountability (OEAA) to request its use. Educators would send their request in an email to mde-oeaa@michigan.gov; the request must include the following:

- in the Subject line: Example Accessibility Support Request for M-STEP Science (or Social Studies)
- educator's name, school/district, and contact information
- a description of the desired accessibility support to be provided to a student
- an explanation of why the accessibility support may be needed for the assessment

Explanation of Symbols in the How to Access column

- ✓ This feature must be set by the Test Administrator in the DRC INSIGHT Portal prior to testing
- This material must be ordered or downloaded through the MDE Secure Site
- ❖ This support must be recorded as something the student will be using in the DRC INSIGHT Portal
- **B** This support should be bubbled on the paper/ pencil answer document when used

Additional Materials Required for Paper/Pencil and Online: None

Universal Tools - M-STEP Science and Social Studies

Universal Tools	Mode	How to Access
Breaks – within the same day per test session: If the text is **paused** and the break is less than 20 minutes, student does not need original login ticket to restart online test session; if more than 20 minutes, student must use original login ticket to resume test session	Paper/Pencil Online	
Administration of the assessment in an alternate education setting (in school) with appropriate supervision • Bilingual/English as a Second Language setting • Special education setting • In a distraction-free space or alternate location (such as a separate room or location within the room)	Paper/Pencil Online (NE)	
(AISG) Administration individually/small group (no more than five students)	Paper/Pencil Online (NE)	❖
Assessment directions • Teacher may emphasize key words in directions • Teacher may repeat directions exactly as worded in administrator manual • Student may restate directions in his/her own words • Student may ask for clarification of directions	Paper/Pencil Online (NE)	
Highlighter	Paper/Pencil Online (E)	
Cross-Off (answer eliminator)	Paper/Pencil Online (E)	
Sticky Notes	Online (E)	

Universal Tools	Mode	How to Access
Mark for Review (flag)	Paper/Pencil Online (E)	
Use of page flags and reading guides on test booklets	Paper/Pencil	
Line guide	Online (E)	
Use of scratch paper (collection and secure disposal **required**)	Paper/Pencil Online (NE)	
Magnifier	Online (E)	
(CM) Continuous Magnification - Magnifies INSIGHT test content to 200% with magnification staying active from question to question	Online (E)	✓

Designated Supports - M-STEP Science and Social Studies

Designated Supports	Mode	How to Access
Administration of the assessment in an alternate education setting (out of school) with appropriate supervision (such as at home when student is homebound, in care facility when it is medically necessary)	Paper/Pencil	
Administration of the assessment in an interim alternative education setting (out of school) with appropriate supervision (such as a juvenile facility)	Paper/Pencil	
(NB) Noise buffers (such as ear mufflers, white noise, and/or other equipment to block external sounds)	Paper/Pencil Online (NE)	❖
(TTS) Text-to-speech (items and answer options), includes Follow Along	Online (E)	✓
Read aloud (Human reader) using the M-STEP Reader Script, with individual students or in small groups of no more than 5 students	Paper/Pencil	O B
Reading content and questions in the students' native language using the M-STEP Reader Script (Reading in Native Language)	Paper/Pencil	O B
Use of M-STEP English Audio CD (Audio) – Individual administration/Small groups of no more than five students required	Paper/Pencil	O B
Use of M-STEP English, Spanish, or Arabic DVD (Video) – Individual administration/small groups of no more than five students required	Paper/Pencil	O B
(AA) Use of auditory amplification devices or special sound systems	Paper/Pencil Online (NE)	❖
(VA) Use of visual aids (such as closed circuit television, magnification devices)	Paper/Pencil Online (NE)	❖
(MSK) Masking	Online (E)	✓
Use of a page turner	Paper/Pencil	

Designated Supports	Mode	
Use of non-skid surface that will not damage the answer document or scanning equipment (NOT tape or other adhesive)	Paper/Pencil	
(CC) Color choices	Paper/Pencil Online (E)	✓
(CTC) Contrasting color	Paper/Pencil Online (E)	✓
(BWWD) Bilingual word-to-word dictionary (must not provide definitions)	Paper/Pencil Online (NE)	❖
(SNWI) Scribe (use of OEAA Scribing Protocol required)	Paper/Pencil Online (NE)	❖
Use of augmentative/alternative communication devices (such as picture/symbol communication boards, speech generating devices)	Paper/Pencil Online (NE)	❖
Multiple-day testing – allowable as intentional scheduling for some students who use additional supports	Paper/Pencil	**B**

Accommodations - M-STEP Science and Social Studies

Accommodations	Mode	How to Access
Braille – Contracted and Uncontracted available for paper/pencil; refer to the M-STEP TAM for information on ordering paper/pencil materials	Paper/Pencil	⭘ **B**
Enlarged print	Paper/Pencil	⭘ **B**
(A) Abacus	Paper/Pencil Online (NE)	❖
(NEC) Non-embedded calculator	Paper/Pencil Online (NE)	❖
(ASTD) Administrator signs test directions using American Sign Language (ASL) or Signed Exact English (SEE)	Paper/Pencil Online (NE)	❖
(ASTC) Administrator signs test content using American Sign Language (ASL) or Signed Exact English (SEE)	Paper/Pencil Online (NE)	**B** ❖
Use of adapted paper, additional paper, lined or grid paper for recording answers (Alternate Response)	Paper/Pencil	
(ACD) Alternative Communication Device – use of computers with alternative access for an alternate response mode (such as switches, alternative keyboards, eye-gaze motion sensors, voice recognition software, head or mouth pointer, specialized trackballs or mice): contact OEAA	Paper/Pencil Online (NE)	**B** ❖
Use of word processor for constructed response items (word prediction/spell check turned off)	Paper/Pencil	

MI-Access

+ Available options for MI-Access mathematics, English language arts (ELA), science, and Functional Independence (FI) social studies.

NOTE: Participation (P) and Supported Independence (SI) are paper/pencil assessments for students, so all Universal Tools, Designated Supports, and Accommodations listed as available are for a paper/pencil administration.

A Note about Non-Standard Universal Tools/Supports/ Accommodations

Districts should assume that if the support is not explicitly listed in the table below, it is considered a non-standard support. However, when in doubt, educators should send their request in an email to mde-oeaa@michigan.gov; the request must include the following:

- in the Subject line: Accessibility Support Request for MI-Access
- educator's name, school/district, and contact information
- a description of the desired accessibility support to be provided to a student
- an explanation of why the accessibility support may be needed for the assessment

Explanation of Symbols in the How to Access Column

- ✓ This feature must be set by the Test Administrator in the DRC INSIGHT Portal prior to testing
- ⭘ This material must be ordered or downloaded through the MDE Secure Site
- ❖ This support must be recorded as something the student will be using in the DRC INSIGHT Portal
- **B** This support should be bubbled on the paper/ pencil answer document when used

Additional Materials/Resources Required for Online:
None

Universal Tools - MI-Access

Universal Tools	*P/SI	FI	Mode Available for FI	How to Access
Breaks – within the same day per test session; if the text is **paused** and the break is less than 20 minutes, student does not need original login ticket to restart online test session; if more than 20 minutes, student must use original login ticket to resume test session	+	+	Paper/Pencil Online (NE)	
Multiple-day testing	+	+	Paper/Pencil	
Administration of the assessment in an alternate education setting (in school) with appropriate supervision • Bilingual/English as a Second Language setting • Special education setting • In a distraction-free space or alternate location (such as a separate room or location within the room)	+	+	Paper/Pencil Online (NE)	
Administration of the assessment individually or in a small group	+	+	Paper/Pencil Online (NE)	

Universal Tools	*P/SI	FI	Mode Available for FI	How to Access
Assessment directions • Teacher may emphasize key words in directions • Teacher may repeat directions exactly as worded in administrator manual • Student may restate directions in his/her own words • Student may ask for clarification of directions	+	+	Paper/Pencil Online (NE)	
Highlighter	NA		Paper/Pencil Online (E)	
Mark for review	NA		Paper/Pencil Online (E)	
Use of page flags and reading guides on test booklets	+	+	Paper/Pencil	
Use of scratch paper (collection and secure disposal is required)	+	+	Paper/Pencil Online (NE)	
Magnifier		+	Online (E)	
(CM) Continuous Magnification - Magnifies INSIGHT test content to 200% with magnification staying active from question to question		+	Online (E)	✓
Text-to-speech (except for text designated as Do Not Read Aloud) – defaulted as "on" for all students, but can be turned off if needed by muting the computer's speakers or lowering the volume	NA	+	Online (E)	
Color choice	+	+	Paper/Pencil Online (E)	
Contrasting color	+	+	Paper/Pencil Online (E)	
Embedded calculator		+	Online (E)	
Non-embedded calculator	+	+	Paper/Pencil Online (NE)	

* P/SI is a paper/pencil assessment – all Universal tools, Designated Supports, and Accommodations listed as available are for a paper/pencil administration.

Designated Supports - MI-Access

Designated Supports	*P/SI	FI	Mode Available for FI	How to Access
Administration of the assessment in an alternate education setting (out of school) with appropriate supervision (such as at home when student is homebound, in care facility when it is medically necessary)	+	+	Paper/Pencil	
Administration of the assessment in an interim alternative education setting (out of school) with appropriate supervision (such as a juvenile facility)	+	+	Paper/Pencil	
Noise buffers (such as ear mufflers, white noise, and/or other equipment to block external sounds)	+	+	Paper/Pencil Online (NE)	
Read aloud (except for text designated as Do Not Read Aloud) with individual students or in small groups of no more than five students	NA	+	Paper/Pencil	**B**
Content and questions read aloud (except for text designated as Do Not Read Aloud) in the students' native language	+	+	Paper/Pencil	
Use of MI-Access English Audio CD	NA	+	Paper/Pencil	⭘ **B**
Use of auditory amplification devices or special sound systems	+	+	Paper/Pencil Online (NE)	
Use of visual aids (such as closed circuit television, magnification devices)	+	+	Paper/Pencil Online (NE)	
(MSK) Masking	+	+	Online (E)	✓
Use of a page turner	NA	+	Paper/Pencil	
Use of non-skid surface that will not damage the answer document or scanning equipment (NOT tape or other adhesive)	+	+	Paper/Pencil	
Use of non-electronic bilingual word-to-word dictionary	+	+	Paper/Pencil Online (NE)	
(S) Scribe (Use of M-STEP Scribing Protocol required)	+	+	Paper/Pencil Online (NE)	❖ **B**
Use of augmentative/alternative communication devices (such as picture/symbol communication boards, speech generating devices)	+	+	Paper/Pencil Online (NE)	
Use of adapted paper, additional paper, lined or grid paper for recording answers	NA	+	Paper/Pencil	

* P/SI is a paper/pencil assessment – all Universal tools, Designated Supports, and Accommodations listed as available are for a paper/pencil administration.

Accommodations - MI-Access

Accommodations	*P/SI	FI	Mode Available for FI	How to Access
Braille (contracted)	NA	+	Paper/Pencil	B
Enlarged print	NA	+	Paper/Pencil	B
Directions provided by test administrator using American Sign Language (ASL) or Signed Exact English (SEE)	+	+	Paper/Pencil Online (NE)	
Signing test content in American Sign Language (ASL) or Signed Exact English (SEE) – except for text designated as Do Not Read Aloud	+	+	Paper/Pencil Online (NE)	
Abacus	+	+	Paper/Pencil Online (NE)	
Use of counters, coins, base-10 blocks, or other manipulatives for solving mathematics problems	+	+	Paper/Pencil Online (NE)	
Alternative Communication Device – use of computers with alternative access for an alternate response mode (such as switches, alternative keyboards, eye-gaze motion sensors, voice recognition software, head or mouth pointer, specialized trackballs or mouses): contact OEAA	+	+	Online (NE)	
Use of word processor – FI Expressing Ideas only; this is an accommodation for students requiring it; standard administration for all Expressing Ideas questions will be paper only	NA	+	Paper/Pencil	B

* P/SI is a paper/pencil assessment – all Universal tools, Designated Supports, and Accommodations listed as available are for a paper/pencil administration.

ACT WorkKeys

Note: There is no request or approval form for supports or accommodations on ACT WorkKeys.

National Career Readiness Certificate (NCRC) Eligible Scores

ACT WorkKeys scores will not be issued for students using nonstandard supports or accommodations. However, a student utilizing a support or accommodation that is not National Career Readiness Certificate-eligible will still receive scores as a part of the Downloadable Data File. Printed score reports for these students will not be shipped to the school. Supports and accommodations designated with an 'N' in the National Career Readiness Certificate (NCRC) Eligible column are considered State-Allowable.

Testing with supports or accommodations is determined locally, based on a student's need and what they use on a regular instructional basis. All supports should be documented by the student's IEP, 504 plan, or EL instruction plan. Accommodated test materials must be ordered through ACT via the emailed link and secure password.

Supports for English Learners (EL)

The purpose of the ACT WorkKeys is to assess workplace skills of students; these include: performing basic mathematic operations relevant to the workplace, reading and understanding documents commonly found in the workplace, finding information presented in common workplace graphics, setting up and solving complex work-related mathematics problems, determining the relevance of written information to work-related tasks, and applying information derived from graphics to work-related problems. By and large, the majority of these skills require an independent proficiency in English or Spanish as well. ACT's NCRC in English certification (in English or Spanish) ensures employers that students are able to successfully and independently complete skills such as those noted above in the everyday workplace. However, because Michigan requires all grade 11 students to be assessed on the ACT WorkKeys, MDE must ensure ELs have appropriate supports on a required state assessment. It is for this reason that typical supports for ELs—such as full translations (directions and questions), in languages other than Spanish—are defined as state-allowable. Resulting scores will be marked as state-reportable only, and will not result in receipt of a NCRC. The exception to this is if students use the Spanish forms of the assessments provided from ACT. Use of these materials can result in a NCRC in Spanish. As a reminder, students testing with accommodations must use the ACT WorkKeys test books. Refer to the ACT WorkKeys Administration Manual State and District Testing – Accommodations and English Learner Supports for additional information.

Explanation of Symbols in the How to Access column

- **O** This material must be ordered through the OEAA Secure Site
- **B** This support should be bubbled on the paper/pencil answer document when used

For a list of allowable supports and accommodations that provide students with a National Career Readiness Certificate (NCRC) please refer to the ACT WorkKeys Accessibility Supports Guide (https://www.act.org/content/dam/act/unsecured/documents/WorkKeysAccessibilitySupportsGuide.pdf). The table below **only** shows state-allowed supports and accommodations which do not result in NCRC eligibility.

Supports and Accommodations* Testing with supports or accommodations is determined locally based on a student's need and what they use on a regular instructional basis. All supports should be supported by the student's IEP, 504 plan, or EL instruction plan.	**National Career Readiness Certificate (NCRC) Eligible**	**How to Access**
Use of Arabic video DVD	N	**B**
Reading content and questions in the student's native language	N	**B**
Test content provided in American Sign Language (ASL)	N	**B**

* For certain delivery formats and devices, there is not a corresponding accommodations administration code. However, the amount of time the examinee was allowed to use for testing must be documented.

WIDA ACCESS for ELLs and WIDA Alternate ACCESS for ELLs

Educators seeking information for the online and paper/pencil forms of the WIDA ACCESS for ELLs and the WIDA Alternate ACCESS for ELLs:

ACCESS for ELLs Accessibility and Accommodations Supplement (https://wida.wisc.edu/sites/default/files/resource/ACCESS-Accessibility-Accommodations-Supplement.pdf)



Office of Educational Assessment and Accountability (OEAA)
Phone: 1-877-560-8378
Website: www.michigan.gov/oeaa
Email: mde-oeaa@michigan.gov

Appendix B: Interpretive Guides

Appendix B.1 Interpretive Guide to M-STEP Reports

M-Step™

Michigan Student Test of Educational Progress

Spring 2021

Interpretive Guide to M-STEP Reports



September 2021

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Section 1: Introduction

Purpose

In 2021, the Michigan Student Test of Educational Progress (M-STEP) English language arts (ELA) and mathematics assessments was administered to students in grades 3-7; the science and social studies assessments were administered in grades 5, 8, and 11. The purpose of the M-STEP is to measure Michigan students' achievement on the Michigan Academic Standards.

The M-STEP is the assessment the Michigan Department of Education (MDE) uses to meet state and federal accountability requirements for students in grades 3 to 8 and 11. On Friday, March 26, 2021, the Michigan Department of Education (MDE) received approval to waive some federal high-stakes school accountability requirements, including the requirement that the state assess with a participation rate of at least 95 percent. Michigan districts were required to offer remote or virtual students the **opportunity** to come into school to take the appropriate assessments; however, remote-only students were not **required** to come into school for the sole purpose of taking the assessments. Students in grade 8 took the PSAT 8/9 for ELA and mathematic while 11th graders took the SAT with Essay for ELA and mathematics. More more information on these assessments, see the PSAT (www.michigan.gov/psat) and the MME (www.michigan.gov/mme) web pages. Eligible students with disabilities take the MI-Access assessment. For information about MI-Access assessments, see the MI-Access web page (www.michigan.gov/mi-access).

The COVID-19 pandemic created significant challenges to instruction during the 2020-21 school year. As a result, the data from the Spring 2021 M-STEP assessments should be used cautiously and in combination with other local assessment data (including benchmark assessment data) to identify the learning needs of students and to plan educational programming.

Aggregate report results may reflect non-random sampling disparities caused by changes in instructional programming during the 2020-21 school year. For example, schools across a district may have been provided different, and non-comparable, learning options, including remote, in-person, and/or hybrid programs. In addition, quarantine requirements may have created variations in instructional program offerings throughout the school year, leading to variations in instruction across a school or district. District leaders know best what the 2020-21 school year looked like for their district's students; for example, some districts' school years may have had fewer interruptions and higher test participation than others. Thus, comparisons among school, district, and state results are discouraged this year.

Aggregate report results will reflect only students who participated in the M-STEP assessments. As a result of the federal accountability waiver of the participation requirement, schools within a district may have variations in participation in statewide summative assessments. Additionally, schools or districts that had larger populations of students learning remotely may not have comparable quantities of students participating in assessments; these differences in participation are not random. Some communities or demographic subgroups of students may be underrepresented in reported results because of variations in assessment participation.

Approximately 70% of eligible students participated in Spring testing for ELA and Mathematics; approximately 61% participated in testing for Science and Social Studies. These rates are significantly lower than participation rates in previous years, making any comparison to previous years' data problematic.

With these cautions in mind, aggregated results from the M-STEP provide data local schools and districts can use to analyze curricular alignment to Michigan's Academic Standards, to inform educational program evaluation, and to inform curricular and school improvement decisions at the school and/or district level. M-STEP data also provide student academic progress information from year to year, to show school and district academic progress.

M-STEP individual student data provides a snapshot of what a student knows and is able to do based on Michigan's Academic Standards. Student level M-STEP data should also be used cautiously and in combination with local formative, benchmark, and summative assessment data to develop a complete picture of what the student knows and is able to do.

What's In this Guide?

This guide is intended to help educators understand and use the results from the Spring 2021 M-STEP (Michigan Student Test of Educational Progress). Reports available for the M-STEP include student level and aggregate level data reports.

Student level reports provide performance data for individual students. The Student Record Labels, Individual Student Report, Parent Report, Student Roster, Student Growth and Proficiency, and Student Overview reports all provide data at the individual student level.

Aggregate level reports provide performance data based on groups of students, grouped by grade, school, district, and state. The Aggregate level reports are the Comprehensive Report, Demographic Report, Demographic Subscore Report, and Expectation Analysis Report. The Target Analysis Report provides aggregate level assessment target data for English language arts (ELA) and mathematics.

This guide also includes the following sections.

- **Section 2** provides information on assessment item types and how scores are reported
- **Section 3** describes performance-level categories and ranges
- **Section 4** explains the appropriate uses and limitations of the data
- **Section 5** explains how to access reports
- **Section 6** provides detailed descriptions of each report
- **Section 7** includes other resources, both for additional information regarding sources of assessment results and general information on statewide assessments; users are encouraged to review these additional resources for further information on statewide assessment reporting
- **Section 8** includes a glossary of M-STEP data and reporting terms
- **Section 9** includes contact information for MDE staff involved in reporting of M-STEP data

Family Educational Rights and Privacy Act (FERPA)

Reports that provide student level data include federally protected student data. Some aggregate reports may contain score data representing small numbers of students. The Office of Educational Assessment and Accountability (OEAA) no longer suppresses aggregate data for fewer than ten students. Data representing small numbers of students should also be considered federally protected student data. It is imperative that report users understand the sensitive and confidential nature of the data presented on M-STEP reports and comply with all Family Educational Rights and Privacy Act (https://www2.ed.gov/policy/gen/guid/fpco/ferpa/index.html) regulations.

Invalid Tests

Students who attempted an M-STEP content area test in Spring 2021 but did not receive a valid test score are reported on the student level reports only. While the student's test score is not reported, the reason for the invalid test is provided. Students who do not receive a valid score are not included on aggregated reports. Tests may be flagged as invalid for the following reasons:

- Student Prohibited Behavior
- Tested in incorrect grade (Out of Level)

- Did not meet "attemptedness" criteria
  - the student did not answer enough questions to calculate an overall scale score
- Non-standard accommodation administered
- Other misadministrations
  - student not given correct test
  - student not provided appropriate designated support or accommodation
  - paper/pencil test materials not returned according to schedule

(See the M-STEP Test Administration Manual for more information.)

Report Descriptions

Report	Description	Aggregation	Distribution
Student Record Labels	Summarizes individual student achievement in each content area for inclusion in the student's Cumulative Student Record folder	• Individual Student	• Secure Site • Mailed to School
Individual Student Report (ISR)	Separated by content area, provides detailed information on individual student achievement, including overall scale score, performance level, growth score, growth target, target time frame, and summarized claim, domain, or discipline data	• Individual Student	• Dynamic Score Reporting Site • MiLearn – Educator
Parent Report	Summarizes individual student achievement in each content area, including overall scale score, performance level, and summarized claim, domain, or discipline data	• Individual Student	• MiLearn – Educator, Parent, Student • Dynamic Score Reporting Site • Mailed to School
Student Overview	Summarizes student achievement for all content areas, including scale score, performance level information, summarized claim, domain, and discipline data, growth score, growth target, and target time frame	• Individual Student	• MiLearn – Educator • Dynamic Score Reporting Site
Student Roster	Separated by content area, provides detailed information on student achievement for groups of students, including overall scale score, performance level, growth score, growth target, target time frame, and summarized claim, domain, and discipline data; summary proficiency information is also included for rostered students, school, district, and state aggregate groups	• Individual Student	• MiLearn – Educator • Dynamic Score Reporting Site
Student Growth and Proficiency Report	Provides detailed information about student achievement and student growth data; includes overall scale score, performance level, growth score, growth target, and target time frame; student scale score is shown plotted against growth data	• Individual Student	• Dynamic Score Reporting Site

Report	Description	Aggregation	Distribution
Expectation Analysis Report	Provides the percentage of points earned by grade and content area expectation in each discipline and the number of students scoring in each of four score ranges: 0-25%, 26-50%, 51-75%, and 76-100%; this report is available for social studies only and provides an overview of performance by content expectation	• School • District • State	• Dynamic Score Reporting Site
Demographic Report	Provides a comparison of students by grade and content, aggregated across selected demographic groups, showing mean scale scores and percentages of students in each performance level	• School • District • State	• Dynamic Score Reporting Site
Comprehensive Report	Provides a comparison of students by grade and content by schools within a district—mean scale scores and percentages of students in each performance level are reported	• District	• Dynamic Score Reporting Site
Target Analysis Report	For groups of students, identifies assessment targets that are relative strengths or weaknesses as compared to overall performance on an ELA or mathematics assessment	• School • District • State	• Dynamic Score Reporting Site
Demographic Subscore Report	Provides claim performance information by aggregate group for English language arts and mathematics; percentages of students earning each claim performance indicator is provided for the overall aggregate group and aggregated across selected demographic groups	• School • District • State	• Dynamic Score Reporting Site
Student Data File	Data file that includes all individual level student data, including scale score, performance level, summarized claim, domain data, discipline data, growth score, growth target, target timeframe, student demographic information, and valid/invalid reasons	• Individual Student	• Secure Site
Aggregate Data File	Data file that includes aggregated student performance information, including average scale score, count and percent of students in each performance level, and demographic subgroups	• School • District • State	• Secure Site



Continued on next page

Section 2: Scoring

Scoring by Item Type

All of the processes employed to assess overall student performance begin at the item level. There are three types of items on the M-STEP: Multiple Choice (MC) items, Constructed Response (CR) items, and Technology Enhanced (TE) items. Item scores are used in the statistical models and transformations that result in scale scores.

Multiple Choice Item Scores

In Spring 2021, all content area assessments—English language arts, mathematics, science, and social studies – included multiple choice (MC) items. When responding to multiple choice items, students select from the available options, only one of which is the correct response to the item. Students who select only the correct option receive a score of one (1) on the MC item. Students who select one of the incorrect options, multiple options, or did not respond receive a score of zero (0). The string of responses from the MC items (for example, 1,0,0,0,1,…,1) serves as input for the statistical models used to derive scale scores. MC items are scanned and scored by computer.

Constructed Response Item Scores

In Spring 2021, the ELA and mathematics tests included operational Constructed Response (CR) items. In ELA, all grades 3-7 were assessed for a portion of Claim 2 (writing) using a Passage-based Writing (PBW) Prompt item. Students were presented with either a literary or informational reading passage. Based on this passage, students received a writing prompt that required them to respond to the prompt using supporting evidence from the passage. The maximum points for PBW Prompt items ranged from one point to four points. In mathematics, the maximum points for CR items ranged from one point to three points.

ELA CR items requiring typed or written answers and PBW Prompt items are evaluated by human scorers. Guided by precise criteria, scorers review a response for accuracy and completeness and assign points based on how well the requirements of the prompt are fulfilled, according to a scoring rubric for the specific item. Extensive professional practice and research have refined and validated the critical steps that ensure consistency in scoring. Scorers are trained to ignore extraneous factors such as neatness and to focus on the comprehension demonstrated in the response.

In some cases, student responses to Passage-based Writing Prompts may not be scorable. If this occurs, the written response is reviewed by both a scorer and scoring supervisor. If the response is determined to not be scorable, it is assigned a condition code. Condition codes are assigned for responses that are blank (B), insufficient (I), written in a language other than English (L), off-topic (T), or off-purpose (M). See the table on the following page for more information about these condition codes.

PASSAGE-BASED WRITING	
CODE	**CONDITION CODE CATEGORY**
B	**Blank**
I	**Insufficient** The response is too brief to make a determination regarding whether it is on purpose or topic. For example: • Random keystrokes • Undecipherable text • "I hate this test" • "I don't know" • "I don't care"
L	**Non-Scorable for Language** The response is written in a language other than English.
T	**Off Topic** The response is unrelated to the task or the sources or shows no evidence that the student has read the task or the sources.
M	**Off Purpose** The student has clearly not written to the purpose designated in the task. • An off-purpose response addresses the topic of the task but not the purpose of the task. • Off-purpose responses are generally developed responses clearly not written to the designated purpose.

Technology Enhanced Item Scores

Technology Enhanced (TE) items are computer-delivered test questions that include specialized interactions; these items allow students to respond to tasks that go beyond what can be covered in traditional MC and CR items. TE items require students to produce information, as opposed to simply selecting a choice from answer options. The scoring for most TE items is automated (similar to MC items), eliminating the need for human scorers in the majority of cases. TE item types include the following:

Drag and Drop – students can drag pictures or words into boxes or "drop zones" to indicate an answer

Choice Interaction – similar to multiple-choice items, but the item can have more than four options, and any number of the options can be correct or incorrect

Hotspot (Count or Selection) – graphics are selectable; for Count, students can choose a particular number of hotspots to show their answer; for Selection, students select a specific hotspot to show their answer

Matching Interaction – an interaction grid that allows the students to select areas of matching between an option in the row with an option in the column

Keypad Input – a mathematics item type containing an embedded keyboard for mathematics functions that can be used to answer the question

Evidence Based Selected Response – an item consisting of two parts, with each part being multiple choice or a hot text paragraph with answers embedded in the paragraph

Hot Text Highlight (Line and Paragraph) – text is selectable, and once selected, will highlight for the students. For Line, the student can select one or more lines of text to answer the question. Hot text paragraph involves answers

embedded within a paragraph(s)—students select word(s), phrase(s), sentence(s), and/or paragraph(s) according to the instructions in the stem or question

Order – a list of items or sentences that can be arranged by the students in the correct order

Graphing – line graphs and coordinate graphs where students plot points and lines

Table – students fill in missing numbers

Drop Down – students select numbers or words from list

Table Interaction – students check appropriate boxes to match columns to rows

Differences between Online and Paper/Pencil Items

MC and CR items appear the same in both the online testing environment and in the paper/pencil print forms. Due to the computer interactions involved in the TE items, the paper/pencil print forms feature variations of the TE items, called companion items, that test the same concepts and skills as the corresponding TE items. The variations are modified for use in a print form.

The print variations of the TE items are created in various ways. Some TE items are converted to multiple-select items (similar to Choice Interaction but with more than four options and possibly more than one correct answer) or table interactions (where the student fills in portions of a table to complete the question). In all cases, the companion items maintain the same point values as their TE counterparts.

How Scores Are Reported

Scale Scores

Students receive an overall scale score in ELA, mathematics, science, and social studies for each valid test. Scale scores are the basic unit of reporting. A scaled score is calculated from a total number of points the student scores on the item, statistically adjusted and converted into a consistent, standardized scale that permits direct and fair comparisons of scores from different forms of a test, either within the same administration year or across years. Established psychometric procedures are used to ensure that a given scale score represents the same level of performance regardless of the test form. Scale scores are especially suitable for comparing the performance of different groups of students in the same grade from year to year and for maintaining the same performance standard across the years. While scale scores are comparable across tests in a given content area within the same grade, they are not comparable across content areas or grades. Each overall scale score is indicated by a single number. An error band is noted for each scale score. The error band indicates the range of scores that the student would be likely to achieve if he or she were to take the test multiple times.

Assessment Claims

Claims are broad statements about what students should know and be able to do. Claims apply to ELA and mathematics and domains apply to science. Claim performance indicators show student performance within each claim. The claim performance graph provides a visual representation of student performance relative to the range of possible performance within each claim.

The blue bar indicates the student is **above** standard

The yellow bar indicates **at/near** standard

The orange bar indicates the student is **below** standard

A complete test is required in order to calculate the claim performance indicators. In rare instances, a student may take a sufficient portion of the test to generate an overall scale score, but not complete the test sufficiently to fully evaluate claim-level performance in ELA and/or mathematics. In these instances, the claim performance indicators are not reported.

Claim / Domain Performance Indicator Clarification

It is possible for a student who scored at the "Advanced" proficiency level to also receive a claim indicator that states "At/Near Standard" in one or more of the claims in the content area.

This occurs because the claim performance indicator scoring is based on a different scoring scale; that is:

- claim performance indicators show student performance within a single claim
- overall proficiency levels show student performance within the entire content area

Claim performance indicators are reported in three categories, while four proficiency levels are reported for overall content. The claim performance indicators are based on items within the claims, resulting in fewer items per claim than the overall content area performance level. With fewer items in each claim, claims cannot be reported with the same level of specificity as a performance level. Claim performance indicator graphs are included in the reports to provide a visual representation of student performance relative to the range of possible performance within each claim. Claim performance indicators differ by claim or domain within content area and are not comparable across content areas or grades.

When a student has a claim performance indicator of "At/Near Standard", schools should use local assessment data to build a better understanding of the student's mastery of the content within the claim. This use of local data will help teachers and school staff gain a deeper understanding of what the student knows and is able to do in relation to Michigan's Academic Standards.

Student Growth Data

Student Growth Scores (SGPs, previously called Student Growth Percentiles), Growth Target Scores (AGP, previously called Adequate Growth Percentiles), and Growth Target Timeframe will appear on the Individual Student Report, Student Roster, Student Growth and Proficiency Report, Student Overview, and in the student data files accessed through the Secure Site.

Growth data are relative to students in Michigan who had comparable achievement scores on prior state-level tests. This means only those students who received valid scores on the most recent state assessment in a content area and have a valid score on this year's test will receive SGPs. It also follows that SGPs will not be available for:

- any grade 3 test
- any grade 4 test (this year only, because Spring 2020 testing was canceled; there are no prior year scores)
- any science test (prior science assessments were field tests)
- grade 5 social studies

Growth scores describe a student's learning over time compared to other students who took the same test and had similar prior test scores. Growth Scores are percentiles that range from one to 99, with 50 being the average and indicate the proportion of scores in the comparison group are below that score. For example, a Growth Score of 60 means the student had higher growth than 60 percent of comparable students.

Growth Target Scores also range from one to 99 and represent the amount growth above or below average a student needs to maintain year-over-year to reach or maintain proficiency by the end of the set number of years. For example, consider a Growth Target Score of 80. This means the student must maintain considerably above average growth year-over-year to reach or maintain proficiency by the end of the set number of years.

Growth Target Timeframes range from one to three years and are the number of years expected for a student to reach or maintain proficiency. Growth Target Timeframes are set based on how long it has historically taken similar students to reach or maintain proficiency.

Growth data add important context for understanding the growth of individual students and growth patterns within groupings of students. When combined with achievement scores and proficiency categories, growth data can help educators understand how students' achievement scores compare to their peers in the state who had comparable prior test scores. Growth data will be added to reports after the initial release of reports, due to the additional time required to calculate them. Visit the MDE Accountability website for more information on Student Growth Resources (www.michigan.gov/mde/0,4615,7-140-22709_59490-298094--,00.html).

Performance Levels

M-STEP scale scores within each subject area can be described in ranges. The labels applied to these ranges are known as Performance Levels. The M-STEP performance levels are Not Proficient, Partially Proficient, Proficient, and Advanced. The divisions between the levels are often referred to as cut scores. Scale score and performance level range tables are located on the following pages.

The cut scores are recommended by a panel comprised of educators and other stakeholders throughout the state in a process known as standard setting. To set these standards, the panel uses detailed descriptions of what students in each of the performance levels should know and be able to do. Based upon these detailed descriptions and actual assessment items, the panel recommends the score that best separates each performance level from the next; the recommendations are made to the Michigan State Superintendent of Public Instruction, who approves the final cut scores and performance level ranges. While the performance level descriptors necessarily differ by grade and subject area, student achievement—as defined by the obtained performance level—can be reasonably compared across subjects within a grade. Such a comparison can be used to indicate whether students are meeting Michigan Academic Standards in each subject and grade.



Section 3: Performance Level Descriptors and Ranges for Grades 3-8

Performance Level (PL) Descriptors

Not Proficient: The student's performance is not yet proficient and indicates minimal understanding and application of key academic content standards defined for Michigan students. The student needs intensive intervention and support to improve achievement.

Partially Proficient: The student's performance is not yet proficient, indicating a partial understanding and application of key academic content standards defined for Michigan students. The student needs assistance to improve achievement.

Proficient: The student's performance indicates understanding and application of key academic content standards defined for Michigan students. The student needs continued support to maintain and improve proficiency.

Advanced: The student's performance exceeds academic content standards and indicates substantial understanding and application of key concepts defined for Michigan students. The student needs support to continue to excel.

M-Step™
Michigan Student Test of Educational Progress

2021 M-STEP Performance Level Scale Score Ranges

Subject	Grade	Level 1 Not Proficient	Level 2 Partially Proficient	Level 3 Proficient	Level 4 Advanced
ELA	3	1203-1279	1280-1299	1300-1316	1317-1357
	4	1301-1382	1383-1399	1400-1416	1417-1454
	5	1409-1480	1481-1499	1500-1523	1524-1560
	6	1508-1577	1578-1599	1600-1623	1624-1655
	7	1618-1678	1679-1699	1700-1725	1726-1753

2021 M-STEP
Performance Level Scale Score Ranges

Subject	Grade	Level 1 Not Proficient	Level 2 Partially Proficient	Level 3 Proficient	Level 4 Advanced
Mathematics	3	1217-1280	1281-1299	1300-1320	1321-1361
	4	1310-1375	1376-1399	1400-1419	1420-1455
	5	1409-1477	1478-1499	1500-1514	1515-1550
	6	1518-1578	1579-1599	1600-1613	1614-1650
	7	1621-1678	1679-1699	1700-1715	1716-1752
Science	5	1416-1466	1467-1499	1500-1538	1539-1573
	8	1712-1772	1773-1799	1800-1832	1833-1869
	11	2011-2070	2071-2099	2100-2132	2133-2160
Social Studies	5	1395-1457	1458-1499	1500-1529	1530-1563
	8	1706-1770	1771-1799	1800-1830	1831-1867
	11	2021-2068	2069-2099	2100-2130	2131-2169

Section 4: Appropriate Use of the Data Provided in Assessment Reports

Important Note Regarding 2021 M-STEP Reports

The COVID-19 pandemic created significant challenges to instruction during the 2020-21 school year. As a result, the data from the Spring 2021 M-STEP assessments should be used cautiously and in combination with other local assessment data (including benchmark assessment data) to identify the learning needs of students and to plan educational programming.

Aggregate report results may reflect non-random sampling disparities caused by changes in instructional programming during the 2020-21 school year. For example, schools across a district may have provided different, and non-comparable, learning options, including remote, in-person, and/or hybrid programs. In addition, quarantine requirements may have created variations in instructional program offerings throughout the school year, leading to variations in instruction across a school or district. District leaders know best what the 2020-21 school year looked like for their district's students; for example, some districts' school years may have had fewer interruptions and higher test participation than others. Thus, comparisons among school, district, and state results are discouraged this year.

Reported results will reflect only students who participated in the M-STEP assessments. As a result of the federal accountability waiver of the participation requirement, schools within a district may have variations in participation in statewide summative assessments. Additionally, schools or districts that had larger populations of students learning remotely may not have comparable quantities of students participating in assessments; these differences in participation are not random. Some communities or demographic subgroups of students may be underrepresented in reported results because of variations in assessment participation.

Appropriate Uses and Limitations of Summative Assessment Data

M-STEP reports and data are an important part of a comprehensive assessment system that schools and districts should use in data-driven decision-making when considering curriculum development and instructional program evaluation. M-STEP assessment data should be shared with administrators, curriculum directors, instructional coaches, instructional leaders, and teachers. While reviewing the summative assessment data, educators should be aware of the appropriate uses – and limitations – of the data.

Individual Level Data

Uses: Summary information is provided for individual students. The student's scale score provides an indication of the student's proficiency at the time the test was taken. Scale scores represent what the student knows and is able to do in relation to Michigan's Academic Standards. Scale scores are sorted into ranges of Performance Levels, which are used to indicate student progress toward college and career readiness. The M-STEP Performance Levels are Not Proficient, Partially Proficient, Proficient, and Advanced. More information about Performance Levels and how cut scores are determined is available under "Performance Levels" in the How Scores are Reported section of this guide.

Limitations: The M-STEP is a summative assessment administered at the end of the student's instructional program. M-STEP results measure the standards that are assessed on the M-STEP; they do not reflect student skills and abilities that are not part of assessed content. Results of the M-STEP should be used together with other assessment and classroom performance information to provide a more complete picture of student performance.

Aggregated Data

Uses: Summary information about student performance is provided by aggregate groups. This includes:

- overall mean scale scores by school, district, and state
- overall mean scale scores for identified demographic groups by school, district, and state
  - This information can be used to compare the results of a demographic group within your school or district to the overall performance of students in your school or district if there are no variations in participation across the district. Comparisons among schools, district, and the state are discouraged in 2021 due to non-random sampling disparities that occurred during the Spring 2021 administration. District leaders understand their local context and participation rates and should make decisions about appropriate use based on local assessment participation.
- social studies percentages of points earned by expectation, aggregated at the school, district, and state levels
- English language arts (ELA) and mathematics relative strength/weakness information by assessment target, aggregated at the school, district, and state levels
  - Assessment target relative performance as compared to performance on the test as a whole is provided at the school, district, and state levels. You can identify areas of relative weakness by assessment target for the identified aggregate group. Educators should use the Crosswalk documents provided on the M-STEP web page (www.michigan.gov/mstep) under the **Content Specific Information** section to identify how assessment targets are grouped into claim information and to identify which content standards are assessed in each assessment target.
- Expectation (for social studies) and assessment target (for ELA and mathematics) subscores provide information about aggregate group performance on portions of the test. You can use differences in mean subscores, in conjunction with other formative and benchmark assessment data, to investigate the curriculum and instruction at the school or district levels.

Limitations: Overall aggregate mean scale scores provide a snapshot of information about a group of students' performance on the test. These results should be used within a comprehensive assessment system which includes formative and benchmark assessment data to provide a more complete picture of student achievement.

Claim and expectation subscore data may represent small numbers of items. Assessment targets are reported only when there are more than three items assessed, and when there are at least 15 students and 25 unique responses on the items for the assessment target. When these parameters are met, and the difference between the aggregate group's mean score on the test overall is above the desired statistical threshold, the target is reported as "relative strength". Similarly, when the differences are less than the desired statistical threshold, the target is reported as "relative weakness". Otherwise the target is reported as "neither strength nor weakness".

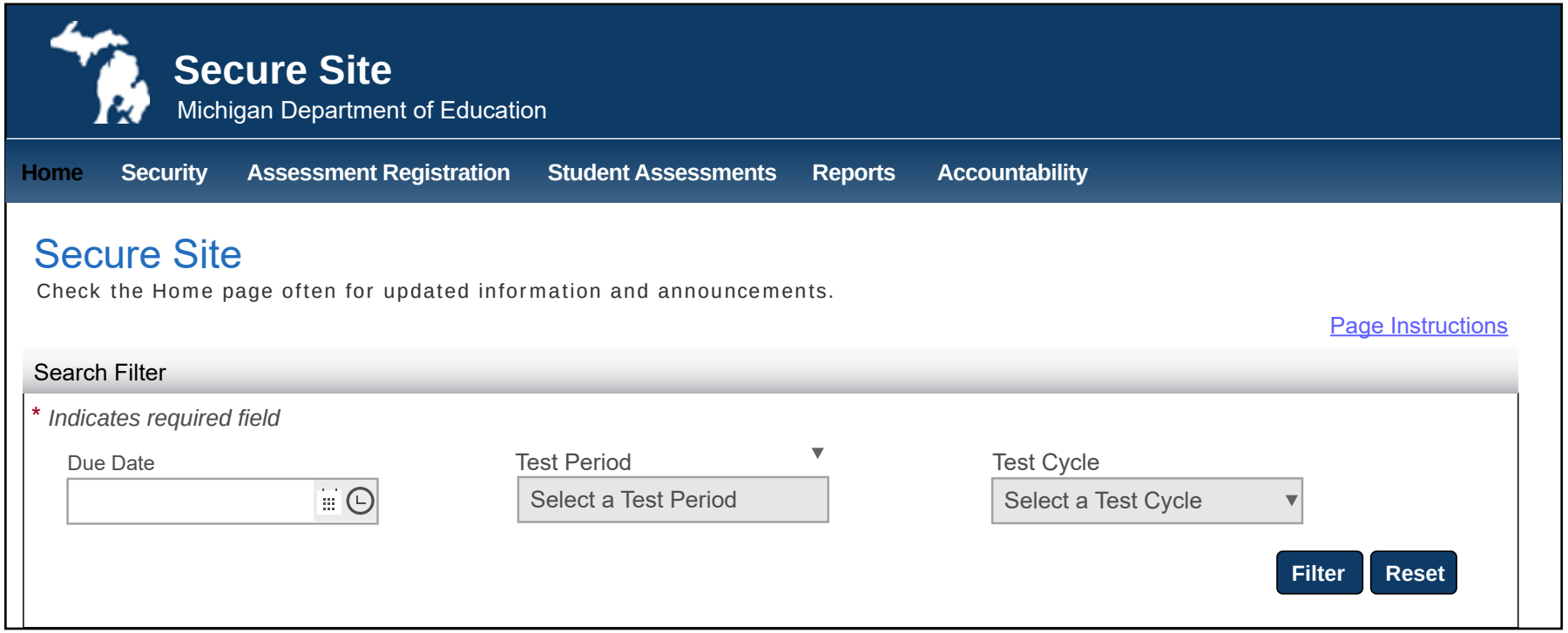
Some expectations are assessed using fewer than five items. Use caution when interpreting results based on a few items on the test. These results should be used within a comprehensive assessment system which include formative and benchmark assessment data.

Note About Longitudinal Assessment Data: Annual assessment data are usually cross-sectional. Caution should be used if making any historical (longitudinal) comparisons at any level of the student population as assessment scales may have changed over the years.

Section 5: The Dynamic Score Reporting System

M-STEP reports are available to school and district users through the Dynamic Score Reporting Site, which is accessible through the Office of Educational Assessment and Accountability (OEAA) Secure Site. Detailed directions for accessing the M-STEP reports are documented in **Michigan's Dynamic Score Reporting Site User Guide** located on the M-STEP web page (www.michigan.gov/mstep).

The Secure Site

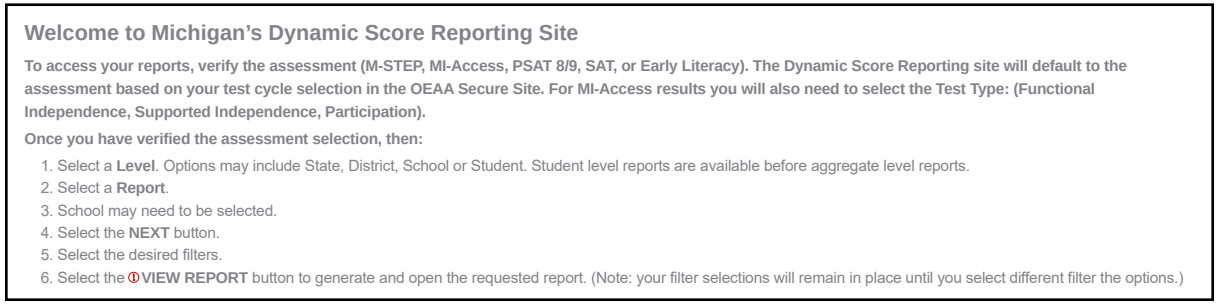


M-STEP reports are available through the OEAA Secure Site (www.michigan.gov/oeaa-secure). Secure Site access is only available to district and school employees with authorized user roles and permissions granted by their district. You must have a Michigan Education Information System (MEIS) login in order to access the Secure Site. For instructions on how to obtain a MEIS login, go to Secure Site Training web page (www.michigan.gov/securesitetraining) and click "How do I get access to the Secure Site?"

Functionality

Michigan's Dynamic Score Reporting Site provides data for a variety of reports. Regardless of the selected report, users will encounter the following components:

1. **Welcome Page:** provides detailed directions for accessing the reports based on user role



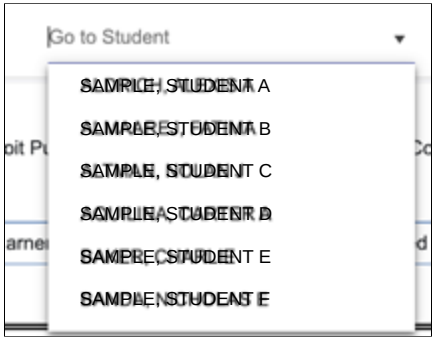
Welcome to Michigan's Dynamic Score Reporting Site

To access your reports, verify the assessment (M-STEP, MI-Access, PSAT 8/9, SAT, or Early Literacy). The Dynamic Score Reporting site will default to the assessment based on your test cycle selection in the OEAA Secure Site. For MI-Access results you will also need to select the Test Type: (Functional Independence, Supported Independence, Participation).

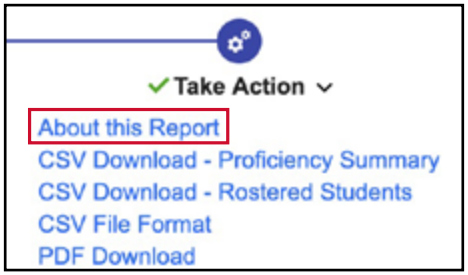
Once you have verified the assessment selection, then:

1. Select a **Level**. Options may include State, District, School or Student. Student level reports are available before aggregate level reports.
2. Select a **Report**.
3. School may need to be selected.
4. Select the **NEXT** button.
5. Select the desired filters.
6. Select the **VIEW REPORT** button to generate and open the requested report. (Note: your filter selections will remain in place until you select different filter the options.)

2. **Go to Student Quick Link:** allows user to jump to a student selected in the Filter Pane

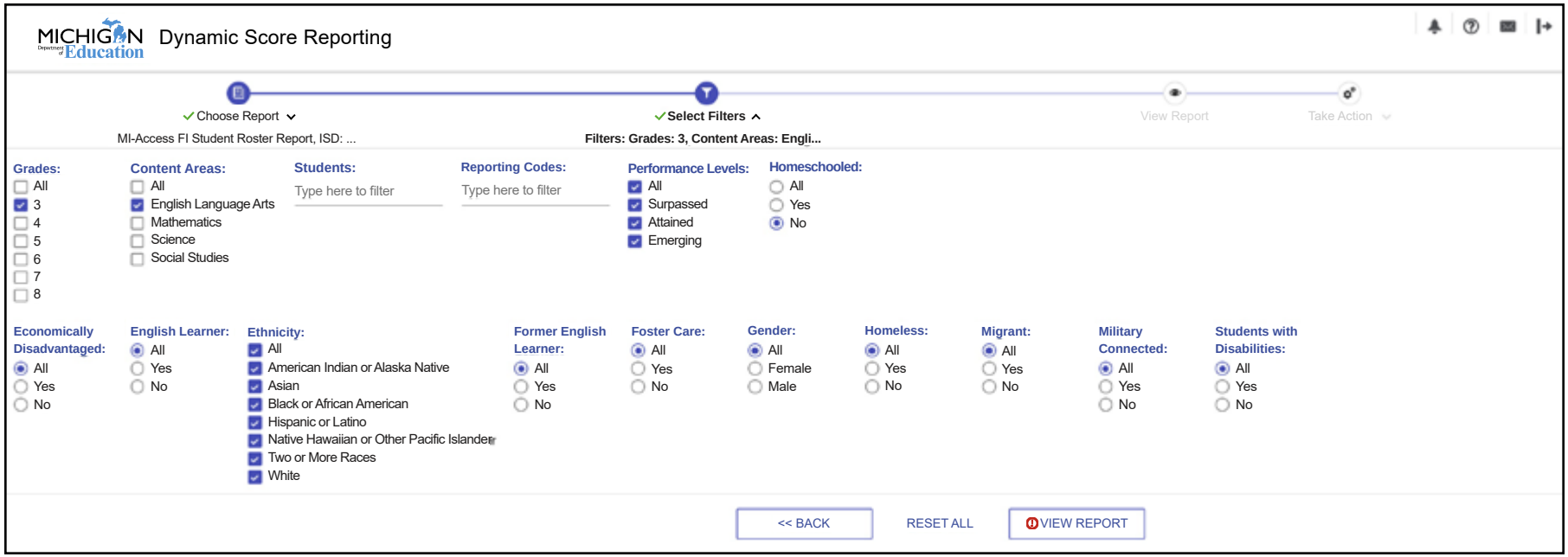


3. **The Take Action menu:** these options vary depending on the report



Options in the **Take Action** menu include:

- **About this Report** – document available in the Dynamic Score Reporting Site describes the data contained in the report
- **PDF Download** – to print reports
- **CSV File Download** – contains all student data found in the report
- **CSV File Format** – describes the data contained in the CSV file download



4. **Filter Options:** Allows the user to filter by grade, content area, reporting code, and individual students. The student filter has a predictive search feature. To filter the results, the user types the name of the student(s) into the search bar. The filter options available vary depending on the report. Filter options may include:

   - Grade
   - Content Area
   - Reporting Code
   - Performance Level
   - Homeschooled
   - Economically Disadvantaged
   - English Learner
   - Ethnicity
   - Former English Learner
   - Foster Care
   - Gender
   - Homeless
   - Migrant
   - Military Connected
   - Students with Disabilities

CSV Files: CSV files are available for the aggregate reports and the Student Roster Report. They are found under the Take Action menu on each report. More information is available about the CSV files in the Report sections and in the CSV File section of this document.

Section 6: Reports

Student Level Data Reports

IMPORTANT: Use student level data in all student level reports from the Spring 2021 M-STEP assessments with caution and in combination with other local assessment data (including benchmark assessment data) to confirm and interpret the results of individual students.

Appropriate Uses of Data in Student Level Data Reports

The COVID-19 pandemic created significant challenges to instruction during the 2020-21 school year. As a result, the data from the Spring 2021 M-STEP assessments should be used with caution and in combination with other local assessment data (including benchmark assessment data) to confirm and interpret the results of individual students.

Student Record Labels

The Student Record Labels provide summary student performance levels for individual students. The labels include district and school information, student demographic information, M-STEP administration cycle information, and overall student performance level for tested content areas.

Student Record Labels are provided for inclusion in the students' Cumulative Student Record or CA-60 folder. The labels are printed and shipped to the school where the student tested in late summer and are available through the Secure Site if schools need to print additional copies.

00000 ABC SCHOOL DISTRICT
00000 ABC ELEMENTARY-MIDDLE SCHOOL
DOE, JOHN A
UIC#: 0000000000

DOB: 00/00/0000
Gender: M
Grade: 5
Spring 20XX

M-Step™
Michigan Student Test of Educational Progress

Content	SS	Performance Level
ELA	1520	4-Advanced
Mathematic	1550	4-Advanced
Science	1533	4-Advanced
Social Studies	1525	3-Proficient

This report provides information about the student's overall scale score and performance level.

The report can help educators:

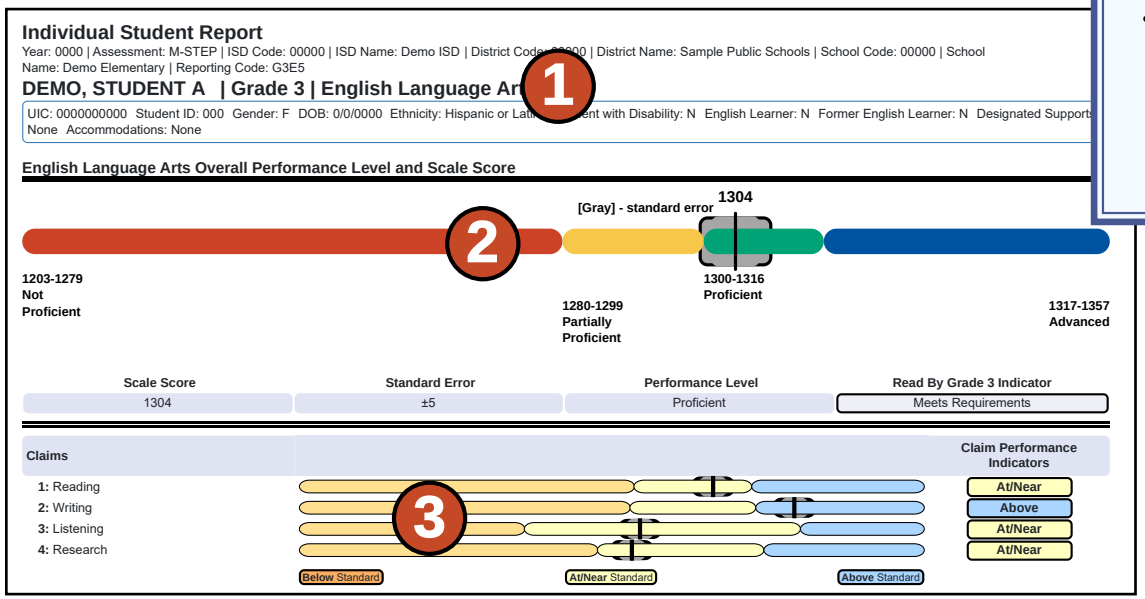
- view overall summary score and performance level information at a glance
- view on student record folder for snapshot at a-glance achievement information

Individual Student Report

The Michigan Student Test of Educational Progress (M-STEP) Individual Student Report (ISR) provides information about student performance by content area. Each student will have a separate ISR for English language arts (ELA), mathematics, and social studies.

The report is divided into three main sections:

1. Student demographic information
2. Overall content performance
3. Subscore (Claim, Domain, or Discipline) Performance



This report helps schools to:

- when used with other local assessment data, inform about student proficiency and progress based on Michigan's academic standards
- view overall summary score and performance-level information at a glance
- view a snapshot of individual student performance based on Michigan's academic standards
- analyze summary performance on ELA and mathematics claims
- view raw score data on social studies disciplines and science domains

Schools shouldn't use this report to:

- make program/placement decisions for individual students, unless required by law
- make day-to-day instructional decisions for individual students
- conduct item-level analysis or item-type reviews that encourage "teaching to the test" rather than to the content standards
- make decisions about continuous improvement goals and strategies for schools or districts

This report provides information about:

- individual student overall scale score and performance level
- ELA and mathematics claim scores
- Passage-based Writing (PBW) raw score
- social studies discipline raw scores
- growth data: growth score, growth target, and growth target timeframe

Student Demographic Information

This section provides identifying information about the student, including name, grade, gender, date of birth, race/ethnicity, Unique Identification Code (UIC), and, if provided by the school, the district student ID. The report will indicate if the student has been marked as a Student with Disability, English Learner, or Former English Learner in the Michigan Student Data System (MSDS). Additionally, any designated supports or accommodations the student received, as indicated by the DRC INSIGHT Portal or the paper/pencil Answer Document, are displayed.

Overall Content Performance

Overall content area scale scores, including standard error and the associated performance level, are provided as a graphic and as a table. Scale score ranges for each performance level are also shown on the graphic.

Growth Data are available after the initial release of assessment reports and includes:

- Growth Score (SGP)
- Growth Target Score (AGP)
- Growth Target Timeframe

Growth Scores range from one to 99, with 50 being average, and represent the percent of comparable students, those who took the same test and had similar prior test scores, that had growth lower than that student. For example, a Growth Score of 60 means the student had higher growth than 60 percent of comparable students.

Growth Target Scores also range from one to 99 and represent the amount growth above or below average a student needs to maintain year-over-year to reach or maintain proficiency by the end of the set number of years. For example, consider a Growth Target Score of 80. This means the student must maintain considerably above average growth year-over-year to reach or maintain proficiency by the end of the set number of years.

Growth Target Timeframes range from one to three years and are the number of years expected for a student to reach or maintain proficiency. Growth Target Timeframes are set based on how long it has historically taken similar students to reach or maintain proficiency. Growth data are not available for:

- all grade 3 tests
- all grade 4 tests in Spring 2021 only due to no prior year assessment data as a result of the cancellation of Spring 2020 testing
- grade 5 social studies tests
- all science tests due to no prior assessment data available (prior science testing was field-test only)

Michigan's Read by Grade 3 Law (MCL.2801.280.f) required 3rd grade M-STEP ELA results be used to flag students who are eligible for retention. Student tests are flagged as follows:

- **Meets** Requirements: Scale score 1272 or above—student meets the requirements of the Read by Grade 3 law for promotion to the 4th grade
- Needs **Supports**: Scale score between 1253 and 1271: student needs additional reading supports
- Eligible for **Retention**: Scale score 1252 or below: student is eligible for 3rd grade retention

Subscore (Claim, Domain, or Discipline) Performance

Claim performance indicators for ELA and mathematics are reported. Performance indicators show student performance within each claim.

Science domains and social studies disciplines are reported as Points Earned out of Points Possible (PE/PP) raw score data. Depending on the test form administered, students will have different points possible in science.

Performance indicators show student performance within each ELA or mathematics claim. The Performance Indicator graph provides a visual representation of student performance relative to the range of possible performance within each claim.

'Above Standard' indicates the student's performance on the standards that make up the claim is above the overall content standard or proficiency cut.

'At / Near Standard' indicates the student's performance on the standards that make up the claim is at or near the overall content standard or proficiency cut.

'Below Standard' indicates the student's performance on the standards that make up the claim is below the overall content standard or proficiency cut.

Note: Performance indicator labels have changed for Spring 2021. This is only a change in the labels; calculations of subscore performance have not changed from prior administrations.

For ELA only, the Passage-based Writing Prompt raw score is reported. The Passage-based Writing Prompt score is one portion of the writing claim score. The score is reported as Points Earned out of Points Possible (PE/PP). Scores range from 0-4. If a student response was determined to be non-scorable, the condition code category is reported. Condition code categories are:

- Blank – the response area is blank
- Insufficient – the response is too brief to make a determination regarding whether it is on purpose or topic
- Non-Scorable for Language – the response is written in a language other than English.
- Off-Topic – the response is unrelated to the task or the sources or shows no evidence that the student has read the task or the sources
- Off-Purpose – the student has clearly not written to the purpose designated in the task

In mathematics, Claim 2 (Problem Solving) and Claim 4 (Modeling and Data Analysis) are combined for reporting purposes because of content similarity. There are still four claims, but only three claim scores will be reported with the overall mathematics score.

To help understand assessment claims and targets, the Michigan Department of Education has produced ELA and mathematics crosswalk documents for each grade. Educators can use the crosswalks to see the alignment between claims, targets, and content standards. The crosswalks can be found on the M-STEP web page (http://www.michigan.gov/mstep).

In rare instances, a student may take a sufficient portion of the test to generate an overall scale score, but not complete the test sufficiently to fully evaluate claim-level performance. In these instances, performance indicators are not reported.

Science content standards are organized by domains. Raw scores, that is points earned out of total points possible, are reported for each science domain. Points possible may vary based on the science form the student was assessed with. Raw scores are not comparable across test forms.

Social studies content standards are organized by disciplines. Raw scores—that is, points earned out of total points possible—are reported for each discipline and Grade Level Content Expectation (GLCE) within the discipline. Raw scores are not comparable across test forms.

For ELA only, the Passage-based Writing raw score is reported.

Menu Options

Filter option information is available in the Dynamic Score Reporting Site User Guide.

Take Action

- **About this Report** – this document
- **PDF Download** – To view a PDF of the report, select "PDF Download". This will open a PDF document of the reports, according to your selected filters. You can print individual or small groups of reports from this option.
- **Zip (Bulk PDF) Download** – To print an entire large group of reports, select "Zip (Bulk PDF) Download". This selection will open a zip file that contains reports for all students in the school. This will allow you to download and print reports for large groups of students.

Help

- Dynamic Score Reporting User Guide – user guide that describes how to access and navigate the Dynamic Score Reporting Site
- Interpretive Guide to M-STEP Reports – provides information on the interpretation and use of M-STEP reports

Report Features

Features of the Individual Student Report are described below.

Go to Student

The Go to Student menu allows the user to go directly to the generated report for the selected student.

Parent Report

Parent Reports are printed and shipped to schools for distribution to parents. Parent Reports are also made available to schools in the Dynamic Score Reporting Site for reprinting or to provide additional copies to parents or guardians. Translated versions of the Parent Reports are available through the Dynamic Score Reporting Site in Spanish and Arabic.

The Parent Report provides information for parents about student performance in tested content areas.

This report includes four main sections:

1. Superintendent Letter and Resources
2. What Overall Scores Mean
3. Where to Find More Information
4. Overall Content Performance
5. Detailed Subscore Information

Superintendent Letter

A letter to parents from Michigan's State Superintendent of education is included on each report. This letter describes the M-STEP assessments and the content assessed.

There is a brief description of what the student scores mean and a resource section for parents/guardians to access more information.

Overall Content Performance

Overall content area scale scores, including standard error and the associated performance level, are provided in the student test score label and description, as well as a graphic. Ranges for each performance level are also shown on the graphic. In addition, the graphic includes the ranges of scale scores indicating scale scores that do and do not meet standards, labeled as "Does not meet standards" and "Meets standards."



DEMO, KELSEY | Grade 5
District: 00000 Demo Public Schools
School: 00000 Demo Elementary-Middle School

2021 | Parent Report

Dear Parent or Guardian

The 2020-2021 school year presented educators, students, and families with unprecedented challenges during a worldwide pandemic. Together, we found new and creative ways to help students learn. I am thankful to everyone who provided Michigan students with the best possible opportunities to continue their education during the pandemic.

The Michigan Academic Standards (www.michigan.gov/ac dards) set learning expectations for what students should learn and be able to do at each grade level. The standards ure that students are ready to graduate from high school and are prepared to pursue their chosen postsecondary opport

1

As required by state and federal law, your student took the Michigan Student Test of Educational Progress (M-STEP) this spring. The M-STEP measures student progress based on the standards for Grades 3-8. Students in Grade 5 were tested in English Language Arts, Math, Science and Social Studies. Your child's test results are included in this report.

Please remember that these assessments are simply a snapshot of a student's achievement. I encourage you to discuss these results with teachers who know your student personally. The M-STEP results should be used with classroom performance information from your child's teachers, benchmark assessment results, and other reflections of those who work closely with your child to provide the most complete picture of your child's progress. Under no circumstances should you or anyone else judge where your child is academically solely based on results on M-STEP, particularly when administered during a pandemic.

Parents/guardians have an important role in setting high expectations and supporting their child in meeting them. If your child needs additional help or wants to learn more about a subject, I encourage you to work with your local educator(s) to find helpful resources. Families, schools, and teachers succeed when they work together to support and inspire student achievement.

Sincerely,

Michael F. Rice, Ph.D.
State Superintendent
Michigan Department of Education

MICHIGAN Department of Education

What do my student's overall scores mean?

Student overall scores reflect what students know and can do in relation to Michigan's academic standards. Overall scores are reported in one of four performance levels.

Advanced The student's performance exceeds academic content standards and indicates substantial understanding and application of key concepts defined for Michigan students. The student needs support to continue to excel.

Proficient The student's perf dicates understanding and application of key academic dards defined for Michigan students. The student needs support to maintain and improve proficiency.

2

Partially Proficient The student's performance is not yet proficient, indicating a partial understanding and application of key academic content standards defined for Michigan students. The student needs assistance to improve achievement.

Not Proficient The student's performance is not yet proficient and indicates minimal understanding and application of key academic content standards defined for Michigan students. The student needs intensive intervention and support to improve achievement.

Students who are **Advanced** or **Proficient** have **met** the 5th grade proficiency standards for the content area. Students who are **Partially Proficient** or **Not Proficient** have **not yet met** the grade level proficiency standards for the content area.

Where can I find more information?

- Michigan's Starting Smarter web page provides parent-friendly information and resources for the M-STEP assessments and this parent report. Go to mi.startingsmarter.org.
- The M-STEP webpage at www.michigan.gov/mstep has a Parent/Stude with information r parents, guardians, a s, including:
  - Michigan's E on Assessment System: What It Is, What It Means, and What It Offers
  - What Parents Should Know About Assessments
  - M-STEP Parent Report Guide
  - Parent Report Video for Grades 3-8 and 11 outlining how to read this report
  - Online practice for M-STEP, which contains examples of the types of questions your student may have experienced while taking the M-STEP assessments

3

UIC: 9999999999

Parent Report

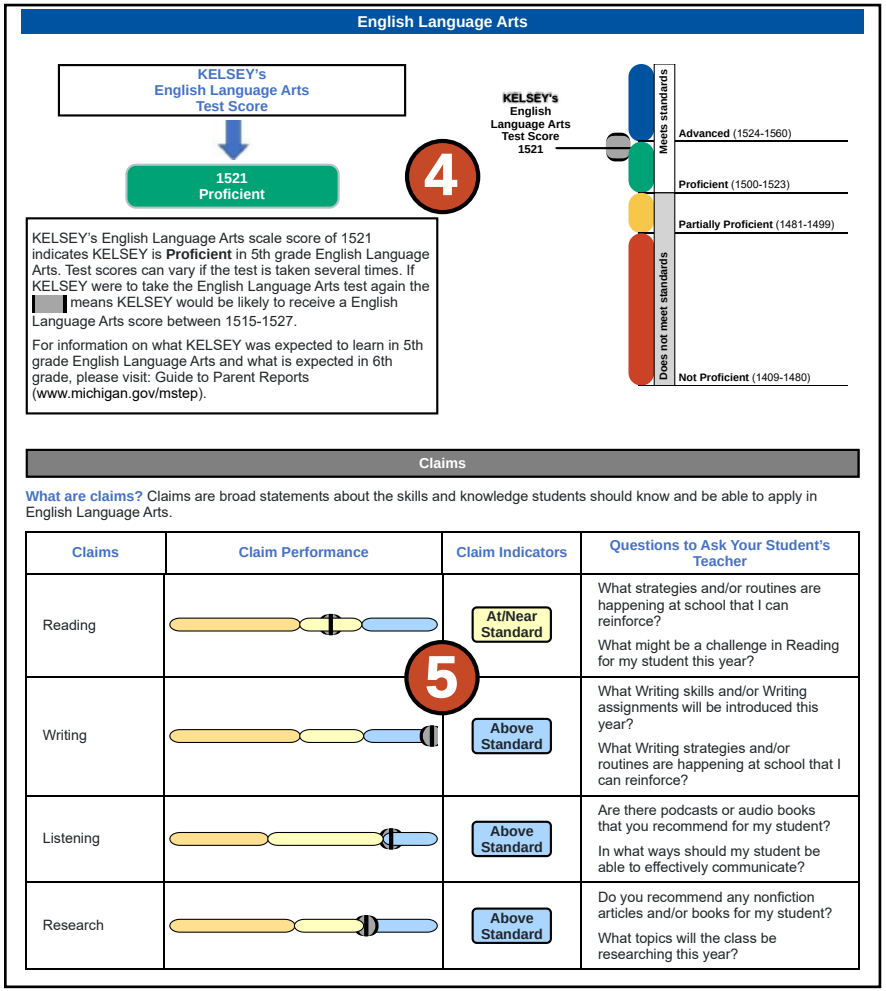
This report helps schools to:

- when used with other local assessment data, inform about student proficiency and progress toward proficiency based on Michigan's academic standards
- view overall summary score and performance-level information at a glance
- view a snapshot of individual student performance based on Michigan's Academic Standards
- analyze summary performance on the English language arts and mathematics claims
- view raw score data on science domains and social studies disciplines

Parent Report

Schools shouldn't use this report to:

- make program placement decisions for individual students, unless required by law
- make day-to-day instructional decisions for individual students
- conduct item-level analysis or item-type reviews that encourage "teaching to the test" rather than to the content standards
- make decisions about continuous improvement goals and strategies for schools or districts



Detailed Subscore Information

Claim performance indicators for English language arts and mathematics are reported. Science domains and social studies disciplines are reported as Points Earned out of Points Possible (PE/PP) raw score data. Depending on the test form administered, students will have different points possible in science.

The blue bar and indicator shows the student is **Above Standard** in the claim**.**

The yellow bar and indicator shows the student is **At/Near Standard** in the claim.

The orange bar and indicator shows the student is **Below Standard** in the claim.

The claim performance table provides:

- a visual representation of student performance relative to the range of possible performance within each claim
- the student's claim indicator
- questions for parents to ask the student's teacher based on the student's claim scores

In mathematics, Claim 2 (Problem Solving) and Claim 4 (Modeling and Data Analysis) are combined for reporting purposes because of content similarity. There are still four claims, but only three claim scores will be reported with the overall mathematics score.

To help understand assessment claims and targets, the Michigan Department of Education has produced ELA and mathematics crosswalks for each grade. Educators can use the crosswalks to see the alignment between claims, targets, and content standards. The crosswalks can be found on the M-STEP web page (http://www.michigan.gov/mstep).

In rare instances, a student make take a sufficient portion of the test to generate an overall scale score, but does not complete the test sufficiently to fully evaluate claim-level performance. In these instances, the claim performance indicators are not reported.

Science content standards are organized by domains. Raw scores, that is points earned out of total points possible, are reported for each science domain. Points possible may vary based on the science form the student was assessed with. Raw scores are not comparable across test forms.

Social studies content standards are organized by disciplines. Raw scores—that is, points earned out of total points possible—are reported for each. Raw scores are not comparable across test forms.

Read by Grade 3 Law information is provided on grade 3 reports only.

Michigan's Read by Grade 3 Law (MCL.2801.280.f) requires 3rd grade M-STEP ELA results be used to flag students who are eligible for retention. Student tests are flagged as follows:

- Meets Requirements: Scale score 1272 or above: student meets the requirements of the Read by Grade 3 law for promotion to the 4th grade
- Needs Supports: Scale sore between 1253 and 1271: student needs additional reading supports

Parent Report

This report provides information about:

- individual student – overall performance level and scale score
- ELA and mathematics claim performance information
- social studies discipline raw scores

Parent Report

This report can help educators:

- view student overall scale score and performance level for rostered students
- view student performance sorted by scale score, claim, domain, or discipline data

- Eligible for Retention: Scale score 1252 or below: student is eligible for 3rd grade retention

Menu Options

Filter option information is available in the Dynamic Score Reporting Site User Guide.

Help

- Dynamic Score Reporting User Guide – user guide that describes how to access and navigate the Dynamic Score Reporting Site
- Interpretive Guide to M-STEP Reports – provides information on the interpretation and use of M-STEP reports

Take Action

The take action menu is enabled after a report is generated and contains the following options for the report:

- **About this Report** – this document
- **PDF Download** – A PDF Download is available in English; Spanish and Arabic translations will be available later this fall. To view a PDF of the report, select "PDF Download – <Translation>". This will open a PDF of the reports in your selected language option and according to your selected filters. You can print individual or small groups of reports from this option.



Student Roster Report

The M-STEP Student Roster Report provides information about student performance by content area.

Overall Proficiency Summary

Overall proficiency summary data is displayed in graphic format for each group.

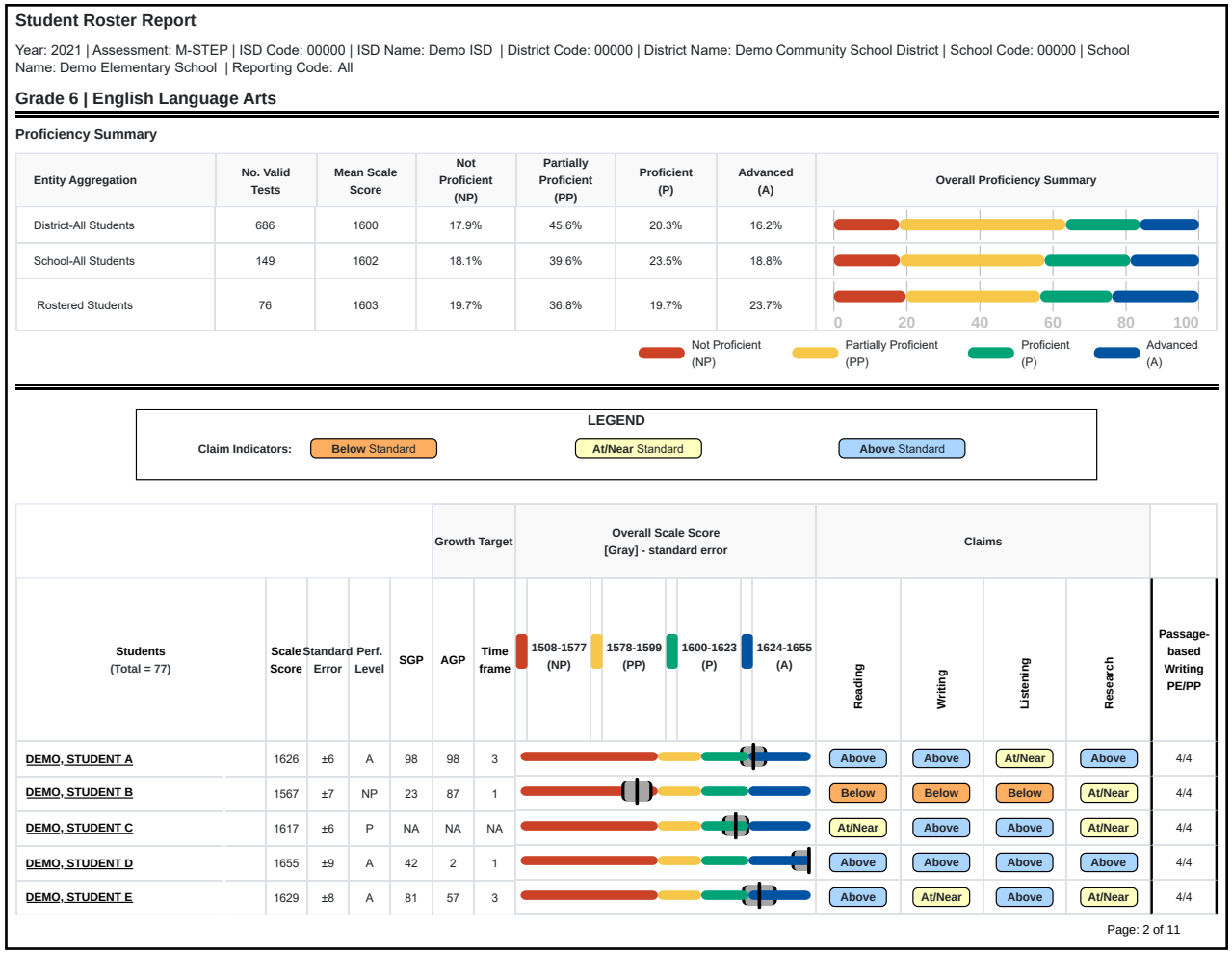
- State – all students in the state
- District – all students in the district
- School – all students in the school
- Rostered Students – students displayed in the roster according to user filter selections

The data displayed in the table is:

- total number of valid tests
- mean scale score
- percent of valid tests in each performance level (Not Proficient, Partially Proficient, Proficient, and Advanced)

The data displayed in the graph is:

- percent of valid tests in each performance level (Not Proficient, Partially Proficient, Proficient, and Advanced)
- number of valid tests in each performance level (Not Proficient, Partially Proficient, Proficient, and Advanced) – displayed in the hover feature



Student Roster Report

Year: 2021 | Assessment: M-STEP | ISD Code: 00000 | ISD Name: Demo ISD | District Code: 00000 | District Name: Demo Community School District | School Code: 00000 | School Name: Demo Elementary School | Reporting Code: All

Grade 6 | English Language Arts

Proficiency Summary

Entity Aggregation	No. Valid Tests	Mean Scale Score	Not Proficient (NP)	Partially Proficient (PP)	Proficient (P)	Advanced (A)	Overall Proficiency Summary
District-All Students	686	1600	17.9%	45.6%	20.3%	16.2%	
School-All Students	149	1602	18.1%	39.6%	23.5%	18.8%	
Rostered Students	76	1603	19.7%	36.8%	19.7%	23.7%	

0 20 40 60 80 100

Not Proficient (NP) | Partially Proficient (PP) | Proficient (P) | Advanced (A)

LEGEND

Claim Indicators: Below Standard | At/Near Standard | Above Standard

Students (Total = 77)	Scale Score	Standard Error	Perf. Level	SGP	Growth Target: AGP	Growth Target: Time frame	Overall Scale Score [Gray] - standard error: 1508-1577 (NP) / 1578-1599 (PP) / 1600-1623 (P) / 1624-1655 (A)	Claims: Reading	Writing	Listening	Research	Passage-based Writing PE/PP
DEMO, STUDENT A	1626	±6	A	98	98	3		Above	Above	At/Near	Above	4/4
DEMO, STUDENT B	1567	±7	NP	23	87	1		Below	Below	Below	At/Near	4/4
DEMO, STUDENT C	1617	±6	P	NA	NA	NA		At/Near	Above	Above	At/Near	4/4
DEMO, STUDENT D	1655	±9	A	42	2	1		Above	Above	Above	Above	4/4
DEMO, STUDENT E	1629	±8	A	81	57	3		Above	At/Near	Above	At/Near	4/4

Page: 2 of 11

Rostered Students Description

Students meeting the selected filter criteria are displayed in ascending alphabetical order by last name, then first name. The sort sequence may be changed to sort in descending alphabetical order. The following data is displayed in this section.

- Number of students displayed in the student roster – all students who tested in the selected filters including students with invalid tests
- Student Name as last name, first name, middle initial – student name is sortable
- Unique Identification Code (UIC) – displayed when clicking the Information or ⓘ icon
- Date of Birth (DOB) – displayed when the Information or ⓘ icon is clicked

Student Roster Report

This report helps schools to:

- view overall summary score and performance level information at a glance
- view and sort student overall scale score and performance level in a rostered list of students
- view a snapshot of student performance
- help to inform, along with other local assessment data, student proficiency and progress toward proficiency based on Michigan's academic standards
- view and sort student performance by claim, discipline, domain, growth data, or Passage-based Writing
- view raw score data on social studies disciplines and science domains

Overall Content Performance (Table Format) Description

Overall content area scale scores, including standard error and the associated performance level, are provided as a graphic and as a table. Scale score ranges for each performance level are also shown on the graphic.

Growth Data includes Growth Score (SGP), Growth Target Score (AGP), and Growth Target Timeframe. SGP, AGP, and Growth Target Timeframes will be available after the initial release of student reports.

Growth Scores range from one to 99, with 50 being average, and represent the percentage of comparable students—those who took the same test and had similar prior test scores—who had growth lower than that student. For example, a Growth Score of 60 means the student had higher growth than 60 percent of comparable students.

Growth Target Scores also range from one to 99 and represent the amount growth above or below average a student needs to maintain year-over-year to reach or maintain proficiency by the end of the set number of years. For example, consider a Growth Target Score of 80; this means the student must maintain considerably above average growth year-over-year to reach or maintain proficiency by the end of the set number of years.

Student Roster Report

Schools shouldn't use this report to:

- make program/placement decisions for individual students unless required by law
- make day-to-day instructional decisions for individual students
- make decisions about continuous improvement goals and strategies for schools or districts

Growth Target Timeframes range from one to three years and are the number of years expected for a student to reach or maintain proficiency. Growth Target Timeframes are set based on how long it has historically taken similar students to reach or maintain proficiency.

Growth data is not available for:

- all grade 3 tests
- all grade 4 tests in Spring 2021 only due to no prior year assessment data as a result of the cancellation of Spring 2020 testing
- grade 5 social studies tests
- all science tests due to no prior assessment data available (prior science testing was field-test only)

Michigan's Read by Grade 3 Law (MCL.2801.280.f) requires 3rd grade M-STEP ELA results be used to flag students who are eligible for retention. Student tests are flagged as follows:

- **Meets** Requirements: Scale score 1272 or above: student meets the requirements of the Read by Grade 3 law for promotion to the 4th grade
- Needs **Supports**: Scale sore between 1253 and 1271: student needs additional reading supports
- Eligible for **Retention**: Scale score 1252 or below: student is eligible for 3rd grade retention

For each selected student, the following is displayed:

- **Scale Score:** The scale score is sortable.
  - Sorting by scale score will result in a list of the selected students in order of scale score (ascending or descending); selecting "Scale Score" once sorts in ascending order, and selecting it twice sorts in descending order.
- **Standard Error:** (gray band in graphic)
- **Performance Levels:**
  - NP = Not Proficient
  - PP = Partially Proficient
  - P = Proficient
  - A = Advanced
- **Growth Score (SGP):** available after the initial release of reports
  - The SGP is sortable. Sorting by SGP will result in a list of selected students in order of SGP (ascending or descending); selecting "SGP" once sorts in ascending order, and selecting it twice sorts in descending order.
- **Growth Target (AGP):** available after the initial release of reports
  - The AGP is sortable. Sorting by AGP will result in a list of selected students in order of AGP (ascending or descending); selecting "AGP" once sorts in ascending order, and selecting it twice sorts in descending order.
- **Timeframe:** The Timeframe is sortable.
  - Sorting by Timeframe will result in a list of selected students in order of Timeframe, with AGP as secondary sort (ascending or descending); selecting "Timeframe" once sorts in ascending order, and selecting it twice sorts in descending order.

Overall Content Performance (Graphic Format) Description

The performance data for each selected student is also displayed in graphic format. The ranges for the four performance levels are provided in the legend.

Subscore (Claim, Domain, or Discipline) Data

Claim performance indicators are displayed for English language arts and mathematics. Science domains and social studies disciplines are reported as Points Earned out of Points Possible (PE/PP) raw score data. Depending on the test form administered, students will have different points possible in science.

Claim performance indicators show student performance within each claim.

'**Above Standard**' indicates the student's performance on the standards that make up the claim is above the overall content standard or proficiency cut.

'At / Near Standard' indicates the student's performance on the standards that make up the claim is at or near the overall content standard or proficiency cut.

'**Below Standard'** indicates the student's performance on the standards that make up the claim is below the overall standard or proficiency cut.

Note: Performance indicator labels have changed for Spring 2021. This is only a change in the labels; calculations of subscore performance have not changed from prior administrations.

In rare instances, an ELA and/or mathematics claim may contain an asterisk. This occurs if a student took a portion of the test sufficient to report an overall scale score, but did not complete a sufficient number of items to fully evaluate the claim-level detail.

For ELA only, the Passage-based Writing Prompt (PBW) raw score is reported. The Passage-based Writing Prompt score is one portion of the Writing claim score. The score is reported as Points Earned out of Points Possible (PE/PP). Scores range from 0-4.

If a student PBW response is determined to be non-scorable, the condition code category is reported. Condition code categories are:

- Blank – the response area is blank
- Insufficient – the response is too brief to make a determination regarding whether it is on purpose or topic
- Non-Scorable for Language – the response is written in a language other than English.
- Off-Topic – the response is unrelated to the task or the sources, or shows no evidence that the student has read the task or the sources
- Off-Purpose – the student has clearly not written to the purpose designated in the task

The Passage-based Writing Prompt score is sortable.

Michigan's Read by Grade 3 Law (MCL.2801.280.f) requires 3rd grade M-STEP ELA results be used to flag students who are eligible for retention.

On grade 3 ELA reports, the column to the right of the ELA claims displays the Read by Grade 3 Indicator, based on the scale score. Student tests are flagged as follows:

- Scale score 1272 or above: student meets the requirements of the Read by Grade 3 law for promotion to the 4th grade
- Scale score between 1253 and 1271: student needs additional reading supports
- Scale score is 1252 or below: student is eligible for 3rd grade retention

For more information, visit the MDE Early Literacy web page (http:www.michigan.gov/earlyliteracy).

In mathematics, Claim 2 (Problem Solving) and Claim 4 (Modeling and Data Analysis) are combined for reporting purposes because of content similarity. There are still four claims, but only three claim scores will be reported with the overall mathematics score.

In rare instances, an ELA and/or mathematics claim may contain an asterisk. This occurs if a student took a portion of the test, sufficient to report an overall scale score, but did not complete a sufficient number of items to fully evaluate the claim-level detail.

Science content standards are organized by domains. Raw scores—that is, points earned out of total points possible—are reported for each science domain. Points possible may vary based on the science form the student was assessed with. Raw scores are not comparable across test forms.

Social studies content standards are organized by disciplines. Raw scores—that is, points earned out of total points possible—are reported for each discipline and Grade Level Content Expectation (GLCE) within the discipline. Raw scores are not comparable across test forms.

Report Features

Features of the Student Roster Report are described below.

Menu Options

Filter option information is available in the Dynamic Score Reporting Site User Guide.

Help

- Dynamic Score Reporting User Guide – user guide that describes how to access and navigate the Dynamic Score Reporting Site
- Interpretive Guide to M-STEP Reports – provides information on the interpretation and use of M-STEP reports

Sort Options

There are several sort options available in the Student Roster Report.

- **Claims/ Domains/Disciplines** (for English language arts [ELA] and mathematics) can be sorted individually. The first click sorts from high to low, the second click will sort from low to high.
- **Growth Score (SGP)** can be sorted from high to low on the first click; if clicked a second time, the Growth Score sorts from low to high.
- **Growth Target (AGP)** can be sorted from high to low on the first click; if clicked a second time, the Growth Target sorts from low to high.
- **Growth Target Timeframe** can be sorted from high to low on the first click; if clicked a second time, the Growth Target sorts from low to high. The secondary sort for Growth Target Timeframe is the Growth Target score.
- **Passage-based Writing (PBW)** can be sorted from high to low on the first click; condition codes sort at the bottom of the list in alphabetical order. If clicked a second time, the PBW is sorted from low to high, with condition codes at the top in alphabetical order.
- **Scale Score** can be sorted from high to low on the first click; if clicked a second time, the Scale Score sorts from low to high.
- **Read by Grade Three Indicator** – Read by Grade Three Indicator scores can be sorted from high to low on the first selection; if selected a second time, the Passage-based Writing Prompt score sorts from low to high.
- **Student Name** initially displays the report in alphabetical order, with invalid reports grouped at the bottom of the report. Users can click to sort in reverse alphabetical order; invalid reports will display at the top.

Take Action

The take action menu is enabled after a report is generated and contains the following options for the report:

- **About this Report** – this document
- **CSV Download** – two downloadable files that contain all student data that is contained on the report: one file contains the data in the overall proficiency summary and one file contains the data from the student roster.
- **CSV File Format** – file that describes the data contained in the CSV downloads.
- **PDF Download**
  To view a PDF of the report, select “PDF Download”. This will open a PDF of the reports, according to the selected filters.

Drill-Down Feature

The Student Roster Report includes a drill-down feature that allows the user to select a student’s name on the Student Roster Report to open an Individual Student Report.

After a user has selected a student name to drill down into the Individual Student Report and the Individual Student Report displays, a breadcrumb area appears below the District/School entity information that displays 'Student Roster Report – Individual Student Report'. Each report name in the breadcrumb is an active link. To return to the Student Roster Report, the user selects 'Student Roster Report'.

A user may drill down into a Student Roster Report from the School Demographic Report. When a user accesses the Student Roster Report in this way, the user cannot make any additional filter selections in the report. The user can view the report and use its sorting functionality, or drill down further into an Individual Student Report. However, to use the filter options in the Student Roster Report, the user must select the Student Roster Report from the report's drop-down menu.

Student Overview

The Student Overview Report provides summary information about student performance in English language arts, mathematics, science, and social studies assessments in all grades tested.

For each content area, the report is divided into two main sections.

1. Overall Content Performance
2. Subscore (Claim, Domain, or Discipline) Performance

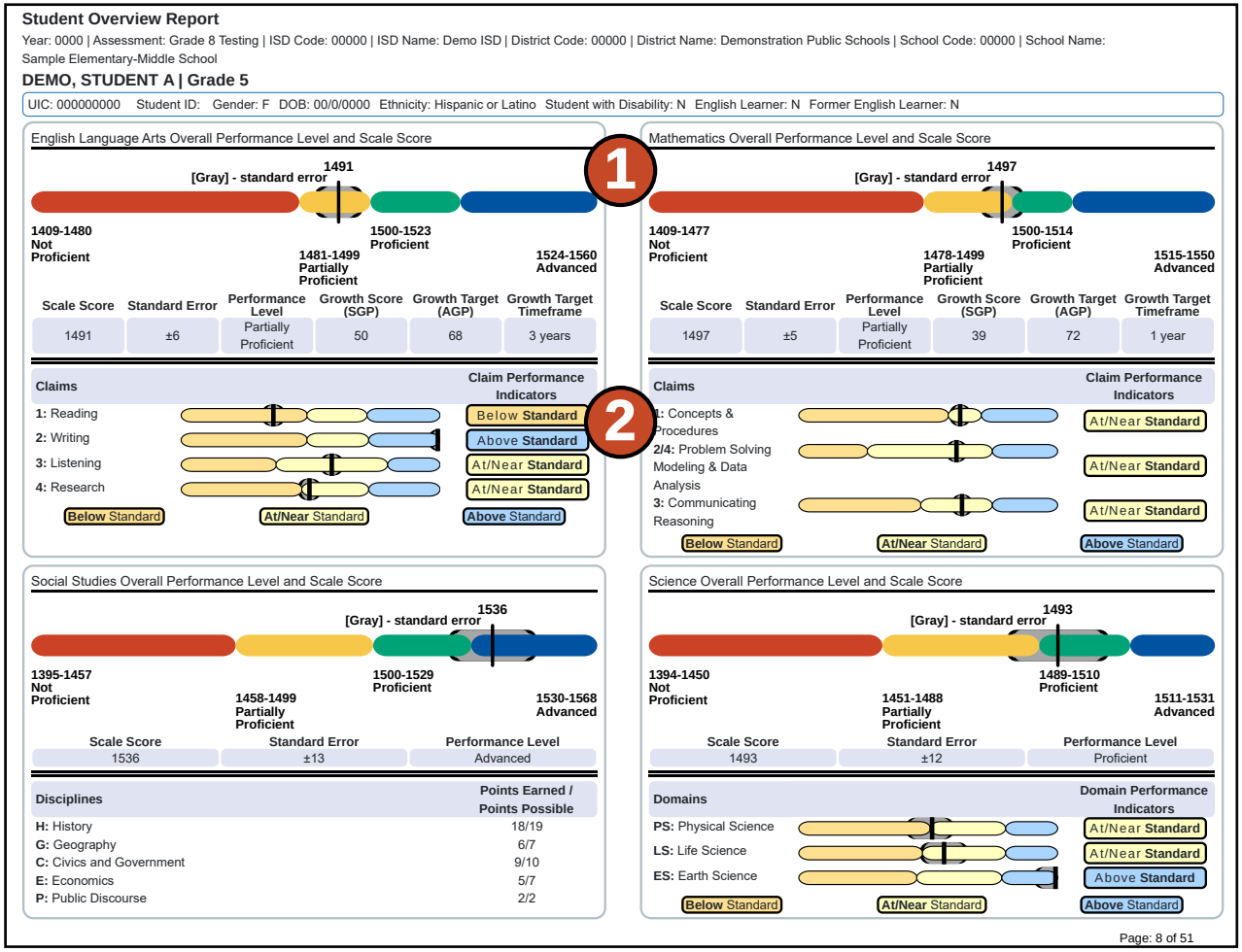
Overall Content Performance

Overall content area scale scores, including standard error and the associated performance level, are provided as a graphic and as a table. Scale score ranges for each performance level are also shown on the graphic.

Growth Data are available after the initial release of assessment reports; these include:

- Growth Score (SGP)
- Growth Target Score (AGP)
- Growth Target Timeframe

Growth Scores range from one to 99, with 50 being average, and represent the percent of comparable students—those who took the same test and had similar prior test scores—who had growth lower than that student. For example, a Growth Score of 60 means the student had higher growth than 60 percent of comparable students.



Student Overview Report

Year: 0000 | Assessment: Grade 8 Testing | ISD Code: 00000 | ISD Name: Demo ISD | District Code: 00000 | District Name: Demonstration Public Schools | School Code: 00000 | School Name: Sample Elementary-Middle School

DEMO, STUDENT A | Grade 5

UIC: 000000000 Student ID: Gender: F DOB: 00/0/0000 Ethnicity: Hispanic or Latino Student with Disability: N English Learner: N Former English Learner: N

English Language Arts Overall Performance Level and Scale Score

[Gray] - standard error 1491

1409-1480 Not Proficient | 1481-1499 Partially Proficient | 1500-1523 Proficient | 1524-1560 Advanced

Scale Score	Standard Error	Performance Level	Growth Score (SGP)	Growth Target (AGP)	Growth Target Timeframe
1491	±6	Partially Proficient	50	68	3 years

Claims	Claim Performance Indicators
1: Reading	Below Standard
2: Writing	Above Standard
3: Listening	At/Near Standard
4: Research	At/Near Standard

Below Standard | At/Near Standard | Above Standard

Mathematics Overall Performance Level and Scale Score

[Gray] - standard error 1497

1409-1477 Not Proficient | 1478-1499 Partially Proficient | 1500-1514 Proficient | 1515-1550 Advanced

Scale Score	Standard Error	Performance Level	Growth Score (SGP)	Growth Target (AGP)	Growth Target Timeframe
1497	±5	Partially Proficient	39	72	1 year

Claims	Claim Performance Indicators
1: Concepts & Procedures	At/Near Standard
2/4: Problem Solving Modeling & Data Analysis	At/Near Standard
3: Communicating Reasoning	At/Near Standard

Below Standard | At/Near Standard | Above Standard

Social Studies Overall Performance Level and Scale Score

[Gray] - standard error 1536

1395-1457 Not Proficient | 1458-1499 Partially Proficient | 1500-1529 Proficient | 1530-1568 Advanced

Scale Score	Standard Error	Performance Level
1536	±13	Advanced

Disciplines	Points Earned / Points Possible
H: History	18/19
G: Geography	6/7
C: Civics and Government	9/10
E: Economics	5/7
P: Public Discourse	2/2

Science Overall Performance Level and Scale Score

[Gray] - standard error 1493

1394-1450 Not Proficient | 1451-1488 Partially Proficient | 1489-1510 Proficient | 1511-1531 Advanced

Scale Score	Standard Error	Performance Level
1493	±12	Proficient

Domains	Domain Performance Indicators
PS: Physical Science	At/Near Standard
LS: Life Science	At/Near Standard
ES: Earth Science	Above Standard

Below Standard | At/Near Standard | Above Standard

Page: 8 of 51

Student Overview Report

This report helps schools to:

- when used with other local assessment data, inform about student proficiency and progress toward proficiency based on Michigan's academic standards
- view overall summary score and performance-level information at a glance
- view a snapshot of individual student performance based on Michigan's academic standards
- analyze summary performance on the English language arts and mathematics claims
- view raw score data on social studies disciplines and science domains

Student Overview Report

Schools shouldn't use this report to:

- make program/placement decisions for individual students, unless required by law
- make day-to-day instructional decisions for individual students
- conduct item-level analysis or item-type reviews that encourage "teaching to the test" rather than to the content standards
- make decisions about continuous improvement goals and strategies for schools or districts

Growth Target Scores also range from one to 99 and represent the amount growth above or below average a student needs to maintain year-over-year to reach or maintain proficiency by the end of the set number of years. For example, consider a Growth Target Score of 80. This means the student must maintain considerably above average growth year-over-year to reach or maintain proficiency by the end of the set number of years.

Growth Target Timeframes range from one to three years and are the number of years expected for a student to reach or maintain proficiency. Growth Target Timeframes are based on how long it has historically taken similar students to reach or maintain proficiency.

Growth data are not available for:

- all grade 3 tests
- all grade 4 tests in Spring 2021 only due to no prior year assessment data as a result of the cancellation of Spring 2020 testing.
- grade 5 social studies tests
- all science tests due to no prior assessment data available (prior science testing was field-test only)

Michigan's Read by Grade 3 Law (MCL.2801.280.f) requires 3rd grade M-STEP ELA results be used to flag students who are eligible for retention. Student tests are flagged as follows:

- **Meets** Requirements: Scale score 1272 or above: student meets the requirements of the Read by Grade 3 law for promotion to the 4th grade
- Needs **Supports**: Scale sore between 1253 and 1271: student needs additional reading supports
- Eligible for **Retention**: Scale score 1252 or below: student is eligible for 3rd grade retention

Subscore (Claim, Domain, or Discipline) Performance

Claim performance indicators for English language arts and mathematics are reported. Science domains and social studies disciplines are reported as Points Earned out of Points Possible (PE/PP) raw score data. Depending on the test form administered, students will have different points possible in science.

Performance indicators show student performance within each ELA or mathematics claim. The Performance Indicator graph provides a visual representation of student performance relative to the range of possible performance within each claim.

- '**Above** Standard' indicates the student's performance on the standards that make up the claim is above the overall content standard or proficiency cut.
- '**At/Near** Standard' indicates the student's performance on the standards that make up the claim is at or near the overall content standard or proficiency cut.
- '**Below** Standard' indicates the student's performance on the standards that make up the claim is below the overall content standard or proficiency cut.

Note: Performance indicator labels have changed for Spring 2021. This is only a change in the labels; calculations of subscore performance have not changed from prior administrations.

In mathematics, Claim 2 (Problem Solving) and Claim 4 (Modeling and Data Analysis) are combined for reporting purposes because of content similarity. There are still four claims, but only three claim scores will be reported with the overall mathematics score.

To help understand assessment claims and targets, the Michigan Department of Education has produced ELA and mathematics crosswalks for each grade. Educators can use the crosswalks to see the alignment between claims, targets, and content standards. The crosswalks can be found at the M-STEP web page (www.michigan.gov/mstep).

In rare instances, a student may take a sufficient portion of the test to generate an overall scale score, but not complete the test sufficiently to fully evaluate claim-level performance. In these instances, the claim performance indicators are not reported.

Science content standards are organized by domains. Raw scores, or points earned out of total points possible, are reported for each discipline. Domain points possible may vary student depending on the test form administered.

Social studies content standards are organized by disciplines. Raw scores, that is points earned out of total points possible, are reported for each discipline. Raw scores are not comparable across test forms.

Report Features

Features of the Student Overview Report are described.

Student Overview Report

This report provides information about:

- individual student overall performance level and scale score
- ELA and mathematics claim performance information
- social studies discipline and science domain raw scores
- growth data: growth score, growth target, and growth target timeframe

Menu Options

Filter option information is available in the Dynamic Score Reporting Site User Guide.

Help

- Dynamic Score Reporting User Guide – user guide that describes how to access and navigate the Dynamic Score Reporting Site
- Interpretive Guide to M-STEP Reports – provides information on the interpretation and use of M-STEP reports

Take Action

The take action menu is enabled after a report is generated and contains the following options for the report:

- **About this Report** – this document
- **PDF Download** – To view a PDF of the report, select "PDF Download". This will open a PDF of the reports, according to your selected filters. You can print individual or small groups of reports from this option.

Student Growth and Proficiency Report

The Michigan Student Test of Educational Progress (M-STEP) Student Growth and Proficiency Report provides information about student growth by content area. Each student in grades containing reportable growth data will have a separate Student Growth and Proficiency Report for each content area test taken.

Grade three English language arts and mathematics, and grade five social studies reports are not included because there is no student growth data in these grades and content areas. Student growth data is not available for the M-STEP Science test because there are no prior year test scores available. Also, there are no growth scores available for grade 4 tests in Spring 2021 due to the Spring 2020 cancellation of statewide testing; there are no prior year scores for these students.

Grades eight and eleven social studies do not include Growth Target (AGP) or Growth Target Timeframe data. This occurs because AGP/Timeframe scores are projections based on prior year assessment score. Timeframe projections are one to three years. Due to the gap of three years or more between assessments in this content area at these grade levels, MDE does not report Growth Target data for grades eight and eleven social studies.

The report is divided into three main sections:

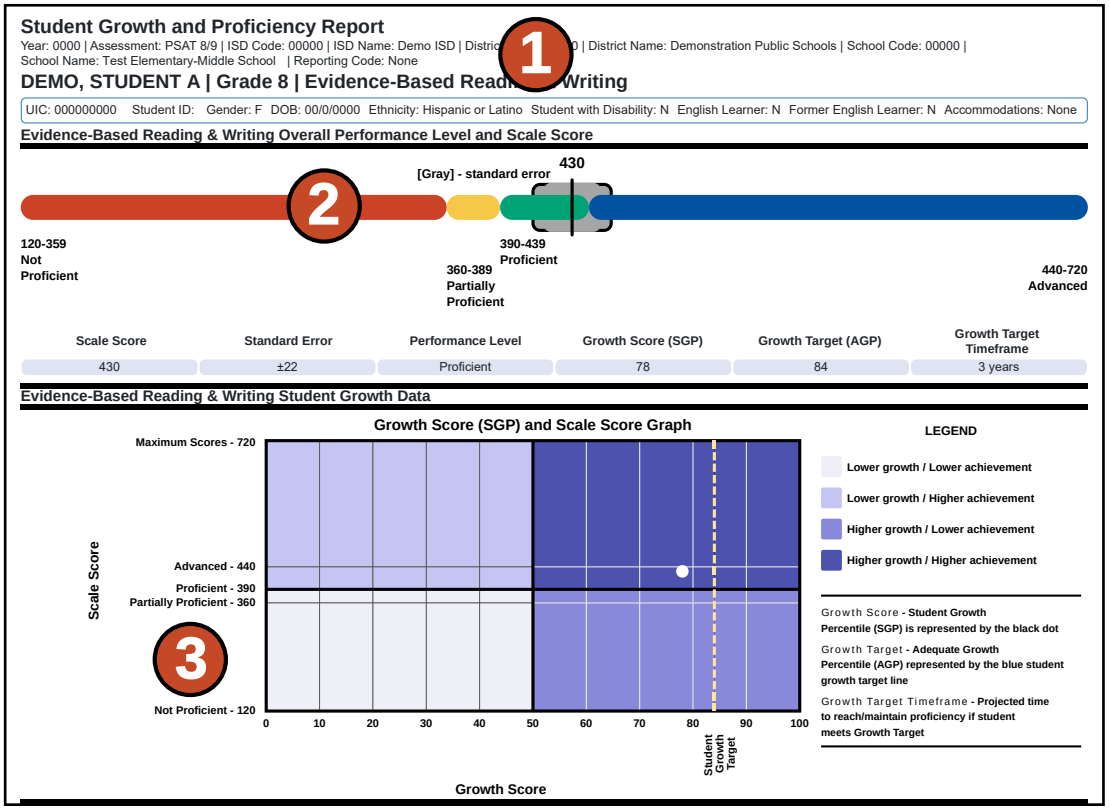
1. Student Demographic Information
2. Overall Content Performance
3. Student Growth Data Graph

Student Demographic Information

This section provides identifying information about the student including name, Unique Identification Code (UIC), district student ID if provided by the school, gender, data of birth, and ethnicity.

The report will indicate if the student has been marked as a Student with Disability, English Learner, or Former English Learner in the Michigan Student Data System (MSDS).

Additionally, any Designated Supports or Accommodations the student received as indicated by the DRC INSIGHT Portal or on the paper answer document are displayed.



Student Growth and Proficiency Report

This report helps schools to:

- view overall summary score and performance level information at a glance
- view a snapshot of student performance
- view a snapshot of student growth target and timeframe to reach or maintain proficiency
- help to inform, along with other local assessment data, student proficiency and progress toward proficiency

Student Growth and Proficiency Report

Schools shouldn't use this report to:

- make program-placement decisions for individual students unless required by law
- make day-to-day instructional decisions for individual students
- make decisions about continuous improvement goals and strategies for schools or districts

Overall Content Performance

Overall content area scale scores, including standard error and the associated performance level are provided as a graphic and as a table. Scale score ranges for each performance level are also shown on the graphic.

Growth Data are available and includes:

- Growth Score (SGP)
- Growth Target Score (AGP)
- Growth Target Timeframe

Growth scores describe a student's learning over time compared to other students who took the same test and had similar prior test scores. Growth Scores are percentiles that range from one to 99 with 50 being the average and indicate how many scores in the comparison group are below that score. For example, a Growth Score of 60 means the student had higher growth than 60 percent of comparable students.

Growth Target Scores also range from one to 99 and represent the amount of growth above or below average a student needs to maintain year-over-year to reach or maintain proficiency by the end of the set number of years. For example, consider a Growth Target Score of 80. This means the student must maintain considerably above average growth year-over-year to reach or maintain proficiency by the end of the set number of years.

Growth Target Timeframes range from one to three years and are the number of years expected for a student to reach or maintain proficiency. Growth Target Timeframes are set based on how long it has historically taken similar students to reach or maintain proficiency.

Student Growth Data Graph

The Growth Score (SGP) and Scale Score Graph plots student growth score against student scale score.

The x-axis (horizontal axis) of the graph labels student's growth score and ranges from one to 99. Student Growth Target is also displayed with a vertical dotted line. The growth score of 50 is marked by a bold black line that separates the 'lower growth' sections from the 'higher growth' sections.

The y-axis (vertical axis) of the graph labels the student's scale score. Scale score is labeled for each Performance Level range. Scale score ranges for Not Proficient, Partially Proficient, Proficient, and Advanced are labeled. The highest possible scale score is also labeled. The Proficient label is marked by a bold black line that separates the 'lower achievement' sections from the 'higher achievement' sections.

The student's growth score plotted against the scale score is marked by a dot. This dot indicates which section the student's growth and scale score represents. The key to the right of the graph identifies four sections. Each section is identified:

- Lower growth/ lower achievement
- Lower growth/ higher achievement
- Higher growth/ lower achievement
- Higher growth/ higher achievement

The legend to the right of the graph describes each data point for Growth Score, Growth Target, and Timeframe.

Menu Options

Filter option information is available in the Dynamic Score Reporting Site User Guide.

Take Action

The take action menu is enabled after a report is generated and contains the following options for the report:

- **About this Report** – this document
- **PDF Download** – To view a PDF of the report, select "PDF Download". This will open a pdf document of the reports, according to your selected filters. You can print individual or small groups of reports from this option.

Help

- Dynamic Score Reporting User Guide – user guide that describes how to access and navigate the Dynamic Score Reporting Site
- Interpretive Guide to M-STEP Reports – provides information on the interpretation and use of M-STEP reports

Aggregate Data Reports

IMPORTANT: Aggregate reports may reflect non-random sampling disparities due to changes in instructional programming, quarantine requirements, and assessment participation during the 2020-21 school year. District leaders know best what the 2020-21 school year looked like for their district's students and should interpret results accordingly. Comparisons among school, district, and state results are discouraged this year.

Target Analysis Report

The Michigan Student Test of Educational Progress (M-STEP) Target Analysis Report provides information about relative strengths and relative weaknesses by assessment target in English language arts and mathematics. The Target Analysis Report is available at the school, district, and state levels. The report is intended to provide an overview of relative strengths and weaknesses in English language arts and mathematics by assessment target as compared to student performance on the test as a whole.

The report is divided into two main sections.

1. Number of Students Assessed
2. Claims and Assessment Targets

Number of Students Assessed

The report displays the number of students assessed with valid scores in the selected entity (not all students were assessed on every assessment target or received the same number of items on each target).

This report can help educators:

- identify aggregate group's strengths and weaknesses by assessment target
- analyze curricular alignment to assessment targets; that is, "Are all standards in each assessment target being taught? If so, are they taught at the appropriate Depth of Knowledge (DOK)?"
- compare school performance to other schools in the district **if assessment participation was consistent** across the district
- identify needs for academic program improvement or continuous improvement goals

This report provides information about:

- aggregate group relative strengths and weaknesses for ELA and mathematics

District Target Analysis Report

Year: 20XX | Assessment: M-STEP | ISD Code: 00000 | ISD Name: Demo RESA | District Code: 00000 | District Name: Demo Public Schools Community District

Grade 3 | Mathematics | All Students

△ Relative Strength ○ Neither Strength nor Weakness ▽ Relative Weakness ✱ Insufficient Data to Report

Note: This report compares assessment target performance to overall test performance within the district. The report identifies relative areas of strength and weaknesses among the identified aggregate group; it is not a proficiency report.

Number of Students Assessed	359
Claim 1: Concepts & Procedures	
Target A: Represent and solve problems involving multiplication and division.	○
3.OA.1. Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as 5 × 7.	
3.OA.2. Interpret whole-number quotients of whole numbers, e.g., interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.	
3.OA.3. Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	
3.OA.4. Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations 8 × ? = 48, 5 = _ ÷ 3, 6 × 6 = ?	
Target B: Understand properties of multiplication and relationship between multiplication and division.	△
Target C: Multiply and divide within 100.	▽
Target D: Solve problems involving the four operations. Identify, explain patterns in arithmetic.	○

Claims and Assessment Targets

This report is an aggregate report that shows relative strengths and weaknesses on each assessment target as compared to performance on the test as a whole. The Target Analysis Report is not a proficiency report.

The first row identifies the claim for the content area—either English language arts or mathematics. This row is gray, and the text is bold and centered. Each claim row is collapsible.

The first column of the next row lists the assessment targets for the identified claim. By selecting the caret, the Michigan Academic Standards for each assessment target are displayed. Each assessment target row is collapsible.

The second column contains information about the aggregate group's performance on the assessment target as compared to the test as a whole:

- An upward pointing blue triangle indicates a relative strength in the assessment target as compared to the aggregate group's performance on the test as a whole.
- A circle indicates neither a strength nor a weakness in the assessment target as compared to the aggregate group's performance on the test as a whole.
- A downward pointing orange triangle indicates a relative weakness in the assessment target as compared to the aggregate group's performance on the test as a whole.

Data is reported for assessment targets only when the aggregate group includes all of the following:

- 15 unique students per target
- 3 unique items per target
- 25 responses per target

Menu Options

Filter option information is available in the Dynamic Score Reporting Site User Guide.

Take Action

The take action menu is enabled after a report is generated and contains the following options for the report:

- **About this Report** – this document
- **CSV Download** – downloadable file that contains all student data that is contained on the report, according to your selected filters.
- **CSV File Format** – file that describes the data contained in the CSV download.
- **PDF Download** – To view a PDF of the report, select "PDF Download". This will open a PDF document of the reports, according to your selected filters.

Help

- Dynamic Score Reporting User Guide – user guide that describes how to access and navigate the Dynamic Score Reporting Site
- Interpretive Guide to M-STEP Reports – provides information on the interpretation and use of M-STEP reports

About the Data

- Only valid test scores are included in the reported results.
- Homeschool students are excluded from the reported results.
- Nonpublic students are included only on the school level reports. They are excluded from district and state level results.
- Student tests that were force submitted are excluded from the reported results.
- Students who scored at the lowest and highest obtainable theta (LOT and HOT) were excluded from the reported results.
- Not all students were assessed with the same number of items on each assessment target.

Data Definitions

- **Claim:** Claims are used as a means to organize assessment targets. Claims apply to ELA and mathematics.

- Assessment Target: Assessment targets describe the content expectations of what will be assessed by the items within each claim.
- **Lowest and Highest Obtainable Theta (LOT and HOT):** Extreme value scores (both high and low) are ceiling and floor scores of the full distribution of scores. These are often (but not always) tests with all-correct or all-incorrect responses. Using standard psychometric procedures, LOT and HOT scores are established for each grade to create the range of scale scores.

Note: This report compares assessment target performance to overall test performance within the identified aggregate group. The report identifies relative areas of strength and weaknesses among the identified aggregate group; it is **not** a proficiency report.

Expectation Analysis

The Michigan Student Test of Educational Progress (M-STEP) Expectation Analysis Report provides the percentage of points earned by grade and content area expectation in each social studies discipline, and the number of students scoring in each of four scoring categories. Expectation Analysis Reports are provided for social studies only.

The report is divided into two main sections:

1. Discipline and Expectation Information
2. Aggregate student data by expectation

This report can help educators:

- identify expectations on which students perform well and expectations on which students do not perform well
- analyze curricular alignment to Michigan Academic Standards

District Expectation Analysis Report

Year: 20XX | Assessment: M-STEP | ISD Code: 00000 | ISD Name: Demo RESA | District Code: 55555 | District Name: Sample Public Schools | Reporting Code: All

Grade 08 | Social Studies | All Students

Discipline H Expectations	History	No. of Students Assessed per Expectation	Average % Points Earned	Number of Students With:			
				0-25% Points Earned	26-50% Points Earned	51-75% Points Earned	76-100% Points Earned
7H1.1.02	Compare different calendar systems	1024	50.7	505	0	0	519
6H1.2.01	Explain how historians use a variety of sources	1024	4.3	980	0	0	44
6H1.2.02	Read a historical passage/identify factual knowledge	37	4				
7H1.2.06	Identify the role of the individual in history	37					
6H1.4.01	Describe cultural institutions: study an era/region	37					
7W1.1.01	Explain human communities: Eastern Hemisphere	37					
7W1.1.02	Explain Paleolithic/Neolithic: Africa/Western Europe/Asia	1024					
6W1.2.02	Describe natural environment: agricultural settlements	1061					
6W1.2.03	Explain the impact of the Agricultural Revolution	37					
7W1.2.01	Describe natural environment: agricultural settlements	1024	4				
7W1.2.03	Compare two early civilizations: Eastern Hemisphere	1024	26.5	753	0	0	271
6W2.1.01	Explain how environment/agriculture in Western Hemisphere	37	81.1	7	0	0	30

Schools shouldn't use this report to:

- make program-placement decisions for individual students unless required by law
- conduct item-level analysis or item-type reviews that encourage "teaching to the test" rather than the content standards

Discipline and Expectation Information

The report displays the discipline being reported in the gray heading area. The discipline heading can be collapsed by selecting the caret next to the discipline. Next, the expectations within the discipline are listed, including the Michigan Academic Standard abbreviation and a short description of each expectation.

Aggregate student data by expectation

The report displays the number of students assessed in the expectation (not all students were assessed on every expectation), the average percentage of points earned, and the number of students scoring in one of four bands: 0-25%, 26-50%, 51-75%, and 76-100% points earned out of points possible. Individual students may have a different number of points possible associated with an expectation, depending on the test form they received.

Menu Options

Filter option information is available in the Dynamic Score Reporting Site User Guide.

Take Action

The Take Action button appears after a report is generated, and contains the following options for the Student Roster Report.

- **About this Report** – document available in the Dynamic Score Reporting Site that describes the data contained in the report
- **CSV File Download** – downloadable file that contains all student data found on the report
- **CSV File Format** – describes the data contained in the CSV file download
- **PDF Download** – To view a PDF of the report, select “PDF Download”. This will open a PDF document of the reports.

Help

- Dynamic Score Reporting User Guide – user guide that describes how to access and navigate the Dynamic Score Reporting Site
- Interpretive Guide to M-STEP Reports – provides information on the interpretation and use of M-STEP reports

Demographic Subscore Report

The Michigan Student Test of Educational Progress (M-STEP) Demographic Subscore Report provides a comparison of students by grade and content in English language arts (ELA) and mathematics, aggregated across selected demographic groups, showing percentages of students at each claim performance indicators (below standard, at/near standard, and above standard). The Demographic Subscore Report is available at the school, district, and state levels.

The report is divided into four main sections:

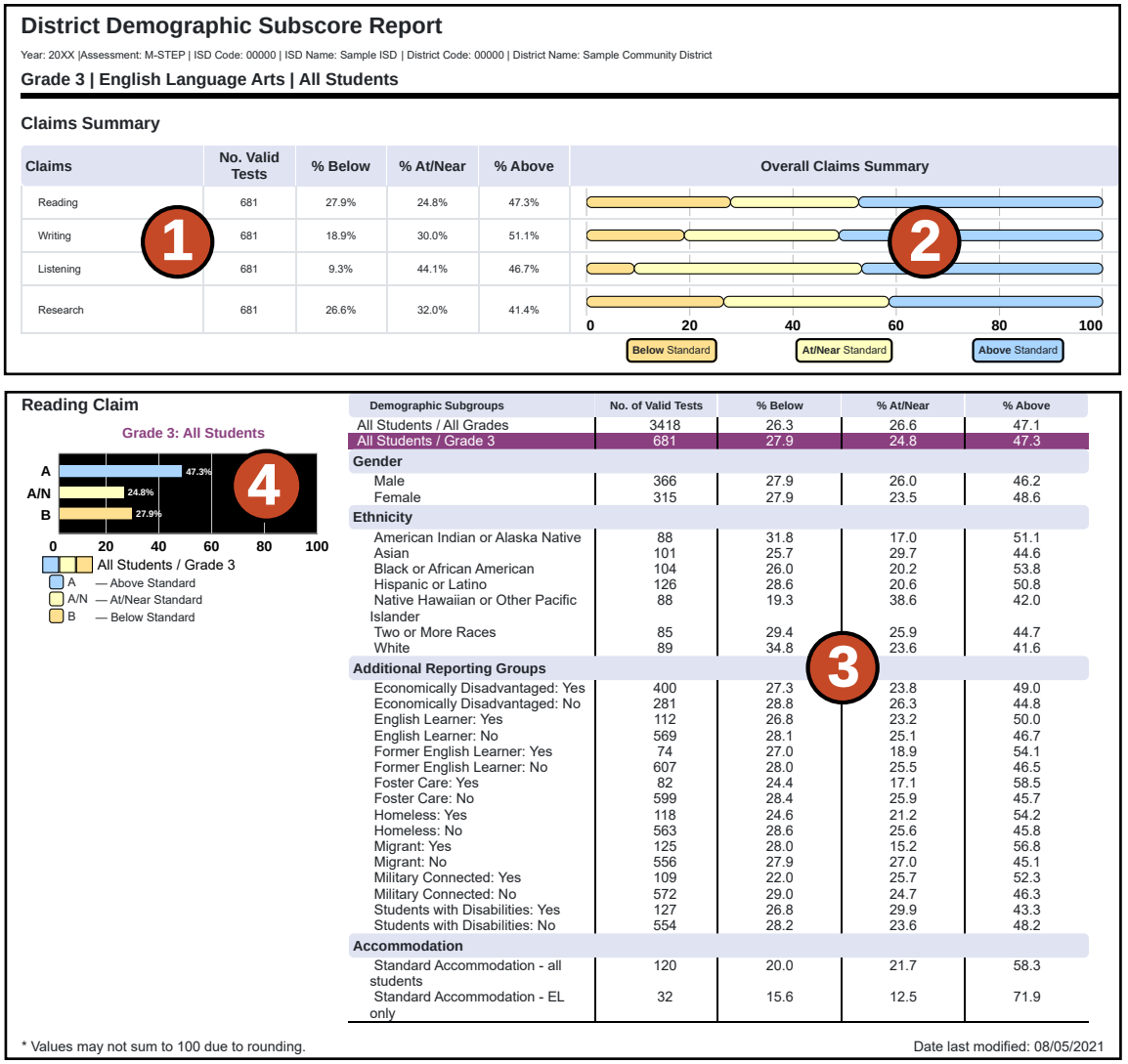
1. Overall Claims Summary Data Table
2. Overall Claim Performance Indicator Percentages Graphic
3. Demographic Subgroups Claim Performance Indicator Data Table
4. Demographic Subgroup Claim Performance Indicator Percentages Graphic

Overall Claims Summary Data Table

Overall Claims Summary data for each claim is displayed in a graphic format for each claim.

The data displayed in the table is:

- Total number of valid tests
- Percentage of students scoring in the below standard category
- Percentage of students scoring in the at/near standard category
- Percentage of students scoring in the above standard category



District Demographic Subscore Report

Year: 20XX |Assessment: M-STEP | ISD Code: 00000 | ISD Name: Sample ISD | District Code: 00000 | District Name: Sample Community District

Grade 3 | English Language Arts | All Students

Claims Summary

Claims	No. Valid Tests	% Below	% At/Near	% Above
Reading	681	27.9%	24.8%	47.3%
Writing	681	18.9%	30.0%	51.1%
Listening	681	9.3%	44.1%	46.7%
Research	681	26.6%	32.0%	41.4%

Overall Claims Summary

0 20 40 60 80 100

Below Standard | At/Near Standard | Above Standard

1

2

Reading Claim

Grade 3: All Students

A 47.3%
A/N 24.8%
B 27.9%

0 20 40 60 80 100

All Students / Grade 3

A — Above Standard
A/N — At/Near Standard
B — Below Standard

4

Demographic Subgroups	No. of Valid Tests	% Below	% At/Near	% Above
All Students / All Grades	3418	26.3	26.6	47.1
All Students / Grade 3	681	27.9	24.8	47.3
Gender				
Male	366	27.9	26.0	46.2
Female	315	27.9	23.5	48.6
Ethnicity				
American Indian or Alaska Native	88	31.8	17.0	51.1
Asian	101	25.7	29.7	44.6
Black or African American	104	26.0	20.2	53.8
Hispanic or Latino	126	28.6	20.6	50.8
Native Hawaiian or Other Pacific Islander	88	19.3	38.6	42.0
Two or More Races	85	29.4	25.9	44.7
White	89	34.8	23.6	41.6
Additional Reporting Groups				
Economically Disadvantaged: Yes	400	27.3	23.8	49.0
Economically Disadvantaged: No	281	28.8	26.3	44.8
English Learner: Yes	112	26.8	23.2	50.0
English Learner: No	569	28.1	25.1	46.7
Former English Learner: Yes	74	27.0	18.9	54.1
Former English Learner: No	607	28.0	25.5	46.5
Foster Care: Yes	82	24.4	17.1	58.5
Foster Care: No	599	28.4	25.9	45.7
Homeless: Yes	118	24.6	21.2	54.2
Homeless: No	563	28.6	25.6	45.8
Migrant: Yes	125	28.0	15.2	56.8
Migrant: No	556	27.9	27.0	45.1
Military Connected: Yes	109	22.0	25.7	52.3
Military Connected: No	572	29.0	24.7	46.3
Students with Disabilities: Yes	127	26.8	29.9	43.3
Students with Disabilities: No	554	28.2	23.6	48.2
Accommodation				
Standard Accommodation - all students	120	20.0	21.7	58.3
Standard Accommodation - EL only	32	15.6	12.5	71.9

3

* Values may not sum to 100 due to rounding.

Date last modified: 08/05/2021

Note: Claim performance indicator labels have changed for Spring 2021. This is only a change in the labels; calculations of claim performance have not changed from prior administrations.

Demographic Subscore Report

This report helps schools to:

- compare overall performance for each aggregated group of students if assessment participation was consistent across the district
- identify needs for academic program improvement or continuous improvement goals
- analyze summary performance on the ELA and mathematics claims overall
- analyze summary performance on the ELA and mathematics claims by demographic group while considering assessment participation and instructional modality for the demographic group
- identify claim-level areas of strength and weakness by demographic group while considering assessment participation and instructional modality for the demographic group
- analyze claim-level curricular alignment and impact by demographic group while considering assessment participation and instructional modality for the demographic group
- compare claim-level performance among demographic groups while considering assessment participation and instructional modality for the demographic group
- identify achievement gaps by demographic group while considering assessment participation and instructional modality for the demographic group

Demographic Subscore Report

Schools shouldn't use this report to:

- make program-placement decisions for individual students unless required by law
- make day-to-day instructional decisions for individual students
- conduct item-level analysis or item-type reviews that encourage "teaching to the test" rather than the content standards
- compare a school's performance to other schools in the district when participation rates are not consistent
- compare school or district results to statewide results due to variation in participation and instructional modality across the state

Overall Claim Performance Indicator Percentages Graphic

A horizontal bar graph displays the percentages of students earning below standard, at/near standard, and above standard for all students in the selected student population, grade, and content area. The legend beneath the graph provides the definitions associated with each claim performance indicator.

Demographic Subgroups Claim Performance Indicator Data Table

Claim performance data for each claim, including the number of valid tests and percentages of students scoring in each claim performance indicator—below standard, at/near standard, and above standard—are displayed for all students and for the reported demographic subgroups in a table. The demographic subgroups reported are:

- Gender
  - Female
  - Male
- Ethnicity
  - American Indian or Alaska Native
  - Asian
  - Black or African American
  - Hispanic or Latino
  - Native Hawaiian or Other Pacific Islander
  - Two or More Races
  - White

- Additional Reporting Groups
  - Economically Disadvantaged: Yes
  - Economically Disadvantaged: No
  - English Learner: Yes
  - English Learner: No
  - Foster Care: Yes
  - Foster Care: No
  - Homeless: Yes
  - Homeless: No
  - Migrant: Yes
  - Migrant: No
  - Military Connected: Yes
  - Military Connected: No
  - Students with Disabilities: Yes
  - Students with Disabilities: No

Demographic Subgroup Claim Performance Indicator Percentages Graphic

The user may select up to eight demographic subgroups in the demographic table to compare against the overall student population. Each selected demographic subgroup will be highlighted and a graph entitled “Subgroup Comparisons” with a corresponding horizontal bar graph of the performance indicator percentages will display under the overall performance indicator graph. Patterns and different colors are applied to represent each subgroup and the legend below the graph is updated to display the color and pattern for each selected demographic subgroup displayed in the graph.

Menu Options

Filter option information is available in the Dynamic Score Reporting Site User Guide.

Take Action

The take action menu is enabled after a report is generated and contains the following options for the report:

- **About this Report** – this document
- **CSV File Download** – downloadable file that contains all student data that is contained on the report, according to your selected filters
- **CSV File Format** – file that describes the data contained in the CSV file download
- **PDF Download** – To view a PDF of the report, select “PDF Download”. This will open a PDF document of the reports, according to your selected filters.

Help

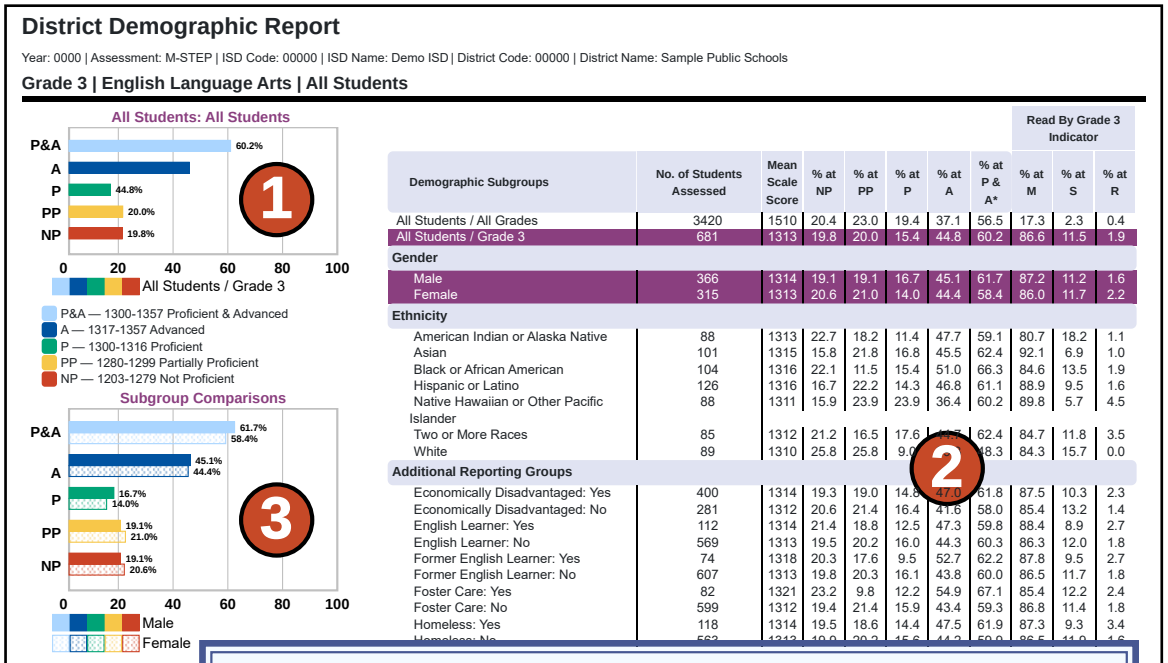
- Dynamic Score Reporting User Guide – user guide that describes how to access and navigate the Dynamic Score Reporting Site
- Interpretive Guide to M-STEP Reports – provides information on the interpretation and use of M-STEP reports

Demographic Report

The Demographic Report provides a comparison of students by grade and content, aggregated across selected demographic groups, showing the percentages of students at each performance level (Not Proficient, Partially Proficient, Proficient, Advanced, and Proficient and Advanced Combined). The Demographic Report is available at the school, district, and state levels.

The report is divided into two main sections.

1. Overall Performance Level Percentages Graphic
2. Demographic Subgroup Performance Level Data Table
3. Demographic Subgroup Performance Level Percentages Graphic



District Demographic Report

Year: 0000 | Assessment: M-STEP | ISD Code: 00000 | ISD Name: Demo ISD | District Code: 00000 | District Name: Sample Public Schools

Grade 3 | English Language Arts | All Students

All Students: All Students

Subgroup Comparisons

Demographic Subgroups	No. of Students Assessed	Mean Scale Score	% at NP	% at PP	% at P	% at A	% at P & A*	Read By Grade 3 Indicator % at M	% at S	% at R
All Students / All Grades	3420	1510	20.4	23.0	19.4	37.1	56.5	17.3	2.3	0.4
All Students / Grade 3	681	1313	19.8	20.0	15.4	44.8	60.2	86.6	11.5	1.9
Gender										
Male	366	1314	19.1	19.1	16.7	45.1	61.7	87.2	11.2	1.6
Female	315	1313	20.6	21.0	14.0	44.4	58.4	86.0	11.7	2.2
Ethnicity										
American Indian or Alaska Native	88	1313	22.7	18.2	11.4	47.7	59.1	80.7	18.2	1.1
Asian	101	1315	15.8	21.8	16.8	45.5	62.4	92.1	6.9	1.0
Black or African American	104	1316	22.1	11.5	15.4	51.0	66.3	84.6	13.5	1.9
Hispanic or Latino	126	1316	16.7	22.2	14.3	46.8	61.1	88.9	9.5	1.6
Native Hawaiian or Other Pacific Islander	88	1311	15.9	23.9	23.9	36.4	60.2	89.8	5.7	4.5
Two or More Races	85	1312	21.2	16.5	17.6	[illegible]	62.4	84.7	11.8	3.5
White	89	1310	25.8	25.8	9.0	[illegible]	48.3	84.3	15.7	0.0
Additional Reporting Groups										
Economically Disadvantaged: Yes	400	1314	19.3	19.0	14.8	47.0	61.8	87.5	10.3	2.3
Economically Disadvantaged: No	281	1312	20.6	21.4	16.4	41.6	58.0	85.4	13.2	1.4
English Learner: Yes	112	1314	21.4	18.8	12.5	47.3	59.8	88.4	8.9	2.7
English Learner: No	569	1313	19.5	20.2	16.0	44.3	60.3	86.3	12.0	1.8
Former English Learner: Yes	74	1318	20.3	17.6	9.5	52.7	62.2	87.8	9.5	2.7
Former English Learner: No	607	1313	19.8	20.3	16.1	43.8	60.0	86.5	11.7	1.8
Foster Care: Yes	82	1321	23.2	9.8	12.2	54.9	67.1	85.4	12.2	2.4
Foster Care: No	599	1312	19.4	21.4	15.9	43.4	59.3	86.8	11.4	1.8
Homeless: Yes	118	1314	19.5	18.6	14.4	47.5	61.9	87.3	9.3	3.4
Homeless: No	563	1313	19.9	20.2	15.6	44.2	59.9	86.5	11.9	1.6

Schools shouldn't use this report to:

- make program-placement decisions for individual students unless required by law
- make day-to-day instructional decisions for individual students
- conduct item-level analysis or item-type reviews that encourage "teaching to the test" rather than the content standards
- compare school, district, or state results due to differences in instructional modality and participation

This report helps schools to:

- compare overall performance for each aggregated group of students
- compare school performance to other schools in the district **if assessment participation was consistent** across the district
- identify needs for academic program improvement or continuous improvement goals
- analyze summary performance by demographic group
- compare demographic group performance to overall performance
- identify areas of strength and weakness by demographic group
- analyze curricular alignment and impact by demographic group
- identify achievement gaps by demographic group
- analyze school-level overall performance
- analyze curricular alignment to Michigan Academic Standards

Demographic Report

This report provides information about:

- aggregate group performance by mean scale score and performance level

Overall Performance Level Percentages Graphic

A horizontal bar graph displays the percentages of Advanced, Proficient, Partially Proficient, and Not Proficient students for all students in the selected student population, grade, and content area. The legend beneath the graph(s) provides the scale score ranges associated with each performance level.

Demographic Subgroup Performance Level Data Table

Performance level data—including the number of students assessed, the mean scale score, and the percentages of students in each performance level (Advanced, Proficient, Partially Proficient, Not Proficient, and Advanced and Proficient Combined)—for all students and for the reported demographic subgroups are displayed in a table.

Read by Grade 3 law indicators are included on grade 3 English language arts reports.

The demographic subgroups reported are:

- Gender
  - Female
  - Male
- Ethnicity
  - American Indian or Alaska Native
  - Asian
  - Black or African American
  - Hispanic or Latino
  - Native Hawaiian or Other Pacific Islander
  - Two or More Races
  - White
- Additional Reporting Groups
  - Economically Disadvantaged: Yes
  - Economically Disadvantaged: No
  - English Learner: Yes
  - English Learner: No
  - Former English Learner: Yes
  - Former English Learner: No
  - Foster Care: Yes
  - Foster Care: No
  - Homeless: Yes
  - Homeless: No
  - Migrant: Yes
  - Migrant: No
  - Military Connected: Yes
  - Military Connected: No
  - Students with Disabilities: Yes
  - Students with Disabilities: No

Demographic Subgroup Performance Level Percentages Graphic

A user may select up to eight demographic subgroups in the demographic table to compare against the overall student population. Each selected demographic subgroup will be highlighted and a graph entitled “Subgroup Comparisons” with a corresponding horizontal bar graph will display under the overall performance level graph. Patterns and different colors are applied to represent each subgroup, and the legend below the graph is updated to display the color and pattern for each selected demographic subgroup displayed in the graph.

Grade 3 English language arts reports also include a Read by Grade 3 graphic. Users may view all grade 3 students and/or selected subgroups.

Report Features

Features of the Demographic Report are described below.

Menu Options

Filter option information is available in the Dynamic Score Reporting Site User Guide.

- Dynamic Score Reporting User Guide – user guide that describes how to access and navigate the Dynamic Score Reporting Site
- Interpretive Guide to M-STEP Reports – provides information on the interpretation and use of M-STEP reports

Take Action

The take action menu is enabled after a report is generated and contains the following options for the report:

- **About this Report** – this document
- **CSV Download** – downloadable file that contains all student data that is contained on the report, according to your selected filters.
- **CSV File Format** – file that describes the data contained in the CSV download.

School Demographic Report Drill-Down Feature

The School Demographic Report includes a drill-down feature that enables the user to select the link in the Number of Students Assessed column to open a Student Roster Report, which includes the students represented in the aggregated group. When the Number of Students Assessed is zero, the "0" is not an active link.

Note: In some instances, the number of students displayed may differ between the School Demographic Report and the generated Student Roster Report. This is because the Demographic Report does not include invalid tests, while the Student Roster Report does include invalid tests.

After a user has selected the link to drill down into the represented aggregate group, a breadcrumb area appears below the District/School entity information, displaying "Demographic Report – School > Student Roster". Each Demographic Report in the breadcrumb is an active link. To return to the School Demographic Report, the user selects "Demographic Report – School".

The drill-down feature is not available on the state- or district-level Demographic Reports.

Comprehensive Report

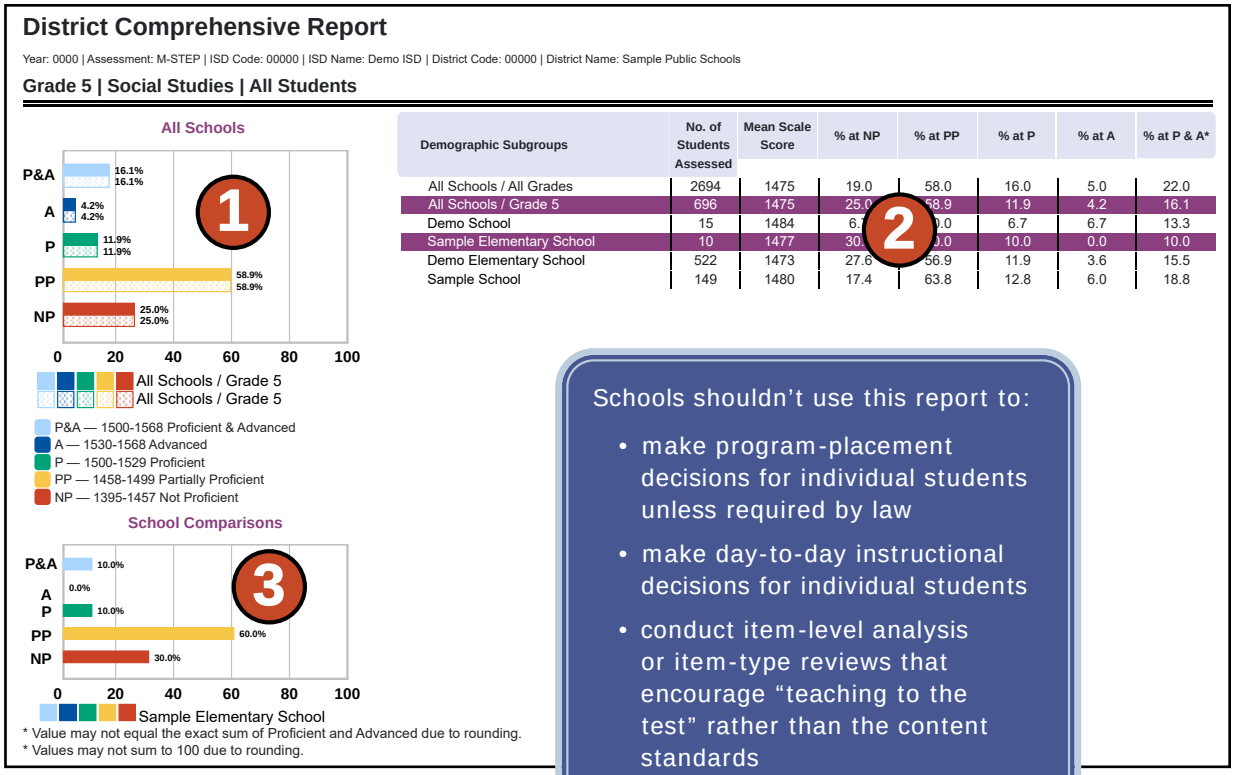
The Comprehensive Report provides a comparison of students by grade and content, aggregated across schools, showing the percentages proficient at each level (Advanced, Proficient, Partially Proficient, and Not Proficient). The Comprehensive Report is available at the district level.

The report is divided into three main sections:

1. Overall Performance Level Percentages Graphic
2. Entity Performance Level Data Table
3. School Performance Level Percentages Graphic

Overall Performance Level Percentages Graphic

For all students with valid test scores in the selected grade, student population, and displayed content, the percentages of



Demographic Subgroups	No. of Students Assessed	Mean Scale Score	% at NP	% at PP	% at P	% at A	% at P & A*
All Schools / All Grades	2694	1475	19.0	58.0	16.0	5.0	22.0
All Schools / Grade 5	696	1475	25.0	58.9	11.9	4.2	16.1
Demo School	15	1484	6.7	0.0	6.7	6.7	13.3
Sample Elementary School	10	1477	30.0	0.0	10.0	0.0	10.0
Demo Elementary School	522	1473	27.6	56.9	11.9	3.6	15.5
Sample School	149	1480	17.4	63.8	12.8	6.0	18.8

This report helps schools to:

- compare overall performance for each aggregated group of students
- identify needs for academic program improvement for continuous improvement goals
- analyze school-level overall performance
- compare school performance to other schools in the district if assessment participation was consistent across the district
- analyze curricular alignment to Michigan Academic Standards

Schools shouldn't use this report to:

- make program-placement decisions for individual students unless required by law
- make day-to-day instructional decisions for individual students
- conduct item-level analysis or item-type reviews that encourage "teaching to the test" rather than the content standards
- compare a school's performance to other schools in the district when participation rates are not consistent
- compare school, district, or state results due to differences in instructional modality and participation

Advanced, Proficient, Partially Proficient, and Not Proficient students are displayed in a horizontal bar graph. The legend beneath the graph provides the scale score ranges associated with each performance level.

Entity Performance Level Data Table

Performance level data are displayed for the schools in the district in the grade assessed as well as for all schools/all grades for the content area, excluding nonpublic schools. This data includes the number of students assessed, the mean scale score, and the percentages of students in each performance level—Not Proficient, Partially Proficient, Proficient, Advanced—as well as the combined percentage of Proficient and Advanced.

School Performance Level Percentages Graphic

The user may select a school in the table to compare against the overall district performance data. The selected school will be highlighted, and a corresponding horizontal bar graph of the performance level percentages will display under the overall performance level graph.

Menu Options

Filter option information is available in the Dynamic Score Reporting Site User Guide.

- Dynamic Score Reporting User Guide – user guide that describes how to access and navigate the Dynamic Score Reporting Site
- Interpretive Guide to M-STEP Reports – provides information on the interpretation and use of M-STEP reports

Take Action

The take action menu is enabled after a report is generated and contains the following options for the report:

- **About this Report** – this document
- **CSV Download** – downloadable file that contains all student data that is contained on the report, according to your selected filters
- **CSV File Format** – file that describes the data contained in the CSV download

Help

- Dynamic Score Reporting User Guide – user guide that describes how to access and navigate the Dynamic Score Reporting Site
- Interpretive Guide to M-STEP Reports – provides information on the interpretation and use of M-STEP reports

Drill-Down Feature

The Comprehensive Report includes a drill-down feature that enables the user to select the name of the school in the report to open the School Demographic Report.

After a user has selected the link to drill down into the School Demographic Report, a breadcrumb area appears below the District/School entity information, displaying “District Comprehensive Report > School Demographic Report”. Each Comprehensive Report in the breadcrumb is an active link. To return to the District Comprehensive Report, the user selects “District Comprehensive Report”.

OEAA Secure Site Data Files

Data files are available for download by authorized school and district users under the Student Test Scores tab on the Office of Educational Assessment and Accountability (OEAA) Secure Site (www.michigan.gov/oeaa-secure).

Student Data File

The Student Data File contains detailed individual student data in an Microsoft Excel file. This data includes school information, student demographic data, test administration data, and student performance data.

School information – student intermediate school district (ISD), local district, and school codes

Student Demographic Data – includes Grade, Name, Gender, Ethnicity, UIC, Date of Birth; also includes subgroup information including Economically Disadvantaged, Special Education, Limited English Proficiency, Migrant status and Homeschooled information

Test Administration Data – includes online or paper/pencil format, valid or invalid test (if invalid, includes reason for invalidation of the test), also whether student received accommodations

Student Performance Data – includes student scale score, student growth score, growth target, growth target timeframe, raw score data for science and social studies, and claim performance indicators for ELA and mathematics

The Student Data File is provided for schools to use as a data resource for school- or district-level data reviews. Schools or districts can use the Student Data File to manipulate and evaluate data in ways that support school improvement goals or other data-based decision making purposes.

M-STEP Student Data File Format

The downloaded file containing student test scores is a Comma Delimited File (CSV) with the following fields in order:

Please note: fields containing "Reporting Level" information are referring to Claims for ELA/Math and Disciplines for Science/Social Studies.

Excel Column	Field	Descriptor	Field Type (length)	Format
A	TestCycleID	M-STEP test period and fiscal year	text(20)	
B	ISDCode	ISD code number	varchar(5)	99999
C	DistrictCode	District code number	varchar(5)	99999
D	SchoolCode	School code number	varchar(5)	99999
E	Grade	Student grade	varchar(2)	99
F	LastName	Student last name	varchar(25)	
G	FirstName	Student first name	varchar(25)	
H	MiddleInitial	Student middle initial	char(1)	9
I	Gender	Student's gender M = Male, F = Female	char(1)	9
J	Ethnicity	Student's ethnic code 0 = Native Hawaiian or Other Pacific Islander 1 = American Indian or Alaska Native 3 = Black or African American 4 = Hispanic or Latino 5 = White 6 = Two or more Races 9 = Asian	int(1)	9
K	UIC	Student UIC	char(10)	9999999999
L	StudentNumber	Student number from local school district	varchar(20)	
M	BirthDate	Student's date of birth	datetime(8)	mm/dd/yyyy
N	Barcode	Student's barcode number	varchar(10)	9999999999
O	ED	Economically disadvantaged Y = Yes, N = No	char(1)	9
P	EL	English learner Y = Yes, N = No	char(1)	9
Q	FEL	Former English learner Y = Yes, N = No	char(1)	9
R	FosterCare	Student is in foster care	char(1)	9

Aggregate Data File

The Aggregate Data File contains student performance data used in the selected report. This data includes information on the selected school, student population, demographic group, and student performance data.

School information – ISD, district, and school information are included in the selected report

Demographic Data – demographic data—such as Gender, Ethnicity, Economically Disadvantaged, Migrant status, or Other—are included, based on the data contained in the selected report

Student Performance Data – student or student aggregate group scale scores and claim, domain, or discipline data are included, based on the data contained in the selected report

The Aggregate Data File is provided for schools to use as a data resource for school- or district-level data reviews. Schools or districts can use the Aggregate Data Files to evaluate data in ways that support school improvement goals or other data-based decision making purposes.



Section 7: Additional Resources

Additional Sources of Assessment Results

MI School Data

MI School Data (www.michigan.gov/mischooldata) is an online public portal that provides views of Michigan education data. This information is intended to help educators make informed educational decisions; to help improve instruction; and to enable school systems to prepare a higher percentage of students to succeed in rigorous high school courses, college, and challenging careers.

MiLearn

The Michigan Linked Educational Assessment Reporting Network (MiLearn) is a Michigan Department of Education service that delivers state assessment data electronically to students, parents, and educators directly through the district's Student Information System (SIS). MiLearn is updated daily using data fromthe Michigan Data Hub to reflect student enrollment changes.

When users log into the SIS, no second login or password is needed to access MiLearn. The user clicks a "State Assessment Data" link in the SIS to access MiLearn and their reports. Currently, districts on the Michigan Data Hub that use PowerSchool, MISTAR, Skyward, Infinite Campus, or Synergy as their SIS are able to integrate this free service. If your district is not yet on the Michigan Data Hub, contact support@michigandatahub.org.

The MiLearn system has been designed with flexibility and convenience for districts. Districts control who sees their data. District administrative staff configure their system security to locally govern which data is provided to their users. Since MiLearn receives rostering updates nightly, local data is always current and reflects the current school and district enrollment. This also means available state assessment results for new students in the district can be seen the next day.

Currently, MiLearn houses three years' worth of data for M-STEP (including PSAT, SAT, and ACT), WIDA, and MI-Access results. Early Literacy and Mathematics Benchmark Assessment reports will be available soon. For more information on MiLearn, please Tim Hall at hallt@michigan.gov.

General Resources

General resources are available on the M-STEP web page (www.michigan.gov/mstep)

For instructions on how to obtain access to the Dynamic Reporting Site, go to Secure Site Training (www.michigan.gov/securesitetraining) and click **How do I get access to the Secure Site?**

Resources available on the M-STEP web page:

- M-STEP and MME Performance Level (PL) Descriptors
- M-STEP Performance Level Scale Score Ranges
- Videos and information regarding Computer Adaptive Testing (CAT)
- Statewide Summative Assessments Calendars
- M-STEP: What it is, What it means, and What it Offers—presentation
- Online Practice for M-STEP ELA, mathematics, science, and social studies
- Sample Item Sets
- Mathematics and ELA Crosswalk documents with Claims, Targets, and Standards
- M-STEP Parent Guides—available in English and translated versions of Spanish and Arabic

Also, be sure to sign up for the OEAA Spotlight on Assessment and Accountability Newsletter (www.michigan.gov/mde-spotlight) for weekly up-to-date information about statewide summative assessments.

Section 8: Glossary

- **Claim:** Claims are used as a means to organize assessment targets. Claims apply to ELA and mathematics.
- **Discipline:** Disciplines are used as a means of organizing content standards and expectations. Disciplines apply to social studies.
- **Domains:** Domains are used to group the three-dimensional science standards using similar disciplinary core ideas. Domains apply to science.
- **Growth Score (SGP):** (previously called Student Growth Percentiles) SGPs describe a student's learning over time compared to other students with comparable prior test scores. Percentiles range from one to 99 and indicate how many scores in the comparison group are below that score.
- **Growth Target (AGP):** (previously called Adequate Growth Percentiles) This is the amount of growth necessary for the student to reach or maintain proficiency within a set timeframe. Percentiles range from one to 99 and indicate how much growth is required in order for the student to achieve proficiency in the timeframe score.
- **Growth Target (AGP) Timeframe:** This is the amount of time the growth target (AGP) model expects the student to take to reach or maintain proficiency. Timeframes range from one to three and indicate how many years it would take for the student to achieve proficiency if they meet the Growth Target Score.
- **Invalid Test:** A test that was completed by the student but was not administered according to required test administration policies or procedures. The invalid reasons include:
  - **Invalid Return of Materials (Multiple Answer Documents OR Late Returns):** For paper/pencil tests, either multiple answer documents were received for the student or materials were returned after the materials return deadline.
  - **Lowest and Highest Obtainable Theta (LOT and HOT):** Extreme value scores (both high and low) are ceiling and floor scores of the full distribution of scores. These are often (but not always) tests with all-correct or all-incorrect responses. Using standard psychometric procedures, LOT and HOT scores are established for each grade to create the range of scale scores.
  - **Misadministration:** The test was not administered according to required test administration policies and procedures. Examples of this type of invalidation include, but are not limited to: test directions not read verbatim during testing; students were able to view content-related materials in the classroom during testing; or the testing environment was not conducive to testing or was not appropriate for the test session.
  - **Missing MSDS data:** Data in the Michigan Student Data System is missing.
  - **Nonstandard Accommodation:** The student received an accommodation during testing that is not allowed. For example, a student who tested in grades 3-5 with any type of calculator has received a nonstandard accommodation because this accommodation changes what is being assessed in the test.
  - **Not Tested in Enrolled Grade (Out of Level):** The student's enrolled grade in MSDS does not match the grade-level test taken.
  - **Prohibited Behavior:** The student engaged in not-allowable behavior during the test session. This may include, but is not limited to: disruptions during testing, accessing prohibited electronic devices, or cheating.
  - **Test Not Attempted:** The student did not take the test or did not complete a sufficient portion of the test to receive a score.
- **Item:** A test question or stimulus presented to a student to elicit a response.
- **Mean Scale Score:** The mean scale score for a group of students is determined by summing the valid scale scores across that group (within a grade and content area) and dividing by the number of valid scores used for the summed total.

- **Michigan's Academic Standards:** The standards outline learning expectations for Michigan students and are intended to guide local curriculum development. They should be used as a framework by schools for curriculum development, with the curriculum itself prescribing instructional resources, methods, progressions, and additional knowledge valued by the local community.
- **Passage-based Writing Prompt (PBW):** The PBW is an ELA constructed response item wherein students are presented withe either a literary or informational reading passage. Based on the passage, students receive a writing prompt requirement them to respond to the prompt using supporting evidence from the passage.
- **Performance Indicator Graphs:** Claim performance for individual ELA and mathematics claims is indicated by the Claim Performance Indicator graph. The graph provides a visual representation of student performance relative to the range of possible performance within each claim. The orange portion of the graph indicates the student is most at risk of falling behind on a claim. The yellow portion of the graph indicates attention may be indicated for a student to continue meeting the claim. The blue portion of the graph indicates the student is making adequate progress on a claim.
- **Performance Level:** This provides descriptive information about the student's performance on the M-STEP:
  - **Not Proficient** The student's performance is not yet proficient and indicates minimal understanding and application of key academic content standards defined for Michigan students. The student needs intensive intervention and support to improve achievement.
  - **Partially Proficient** The student's performance is not yet proficient, indicating a partial understanding and application of key academic content standards defined for Michigan students. The student needs assistance to improve achievement.
  - **Proficient** The student's performance indicates understanding and application of key academic content standards defined for Michigan students. The student needs continued support to maintain and improve proficiency.
  - **Advanced** The student's performance exceeds academic content standards and indicates substantial understanding and application of key concepts defined for Michigan students. The student needs support to continue to excel.
- **Raw Score:** Points earned/total points possible. Raw scores are not comparable across different forms of the test.
- **Scale Score:** Scale scores are test scores that have been statistically adjusted to a common scale that allows scores to be compared across different forms of the test.
- **Standard Error:** Educational measurements are attempts to capture a student's true score, or ability, in the area being assessed. The standard error around the student score is an estimate of the range of scores one would expect if the student was to be measured repeatedly with parallel assessments.



Section 9: Contact Information

School administrators, teachers, and counselors should become familiar with the report layouts and information contained in this document. After reviewing this Interpretive Guide to Reports, you can contact the Michigan Department of Education Office of Educational Assessment and Accountability (OEAA), using the contact information listed below, for additional information about M-STEP administration procedures, content, scheduling, and/or appropriate assessment of or accommodations for students with disabilities or English Learners (ELs).

Office of Educational Assessment and Accountability

Andrew Middlestead, Director, Office of Educational Assessment and Accountability (OEAA)

Kate Cermak, Manager, Test Administration and Reporting

Phoebe Gohs, M-STEP Administration and Reporting Consultant

Pietro Semifero, Interim Manager, Test Development

Nichole Mosser, ELA Consultant

Kyle Ward, Mathematics Consultant

Susan Palmiter, Social Studies Consultant

TJ Heck, Science Consultant

Jennifer Paul, English Learner and Accessibility Assessment Specialist

Ji Zeng, Ph.D., Lead Psychometrician, Psychometrics

Phone: 1-877-560-8378, option 3

Fax: 517-335-1186

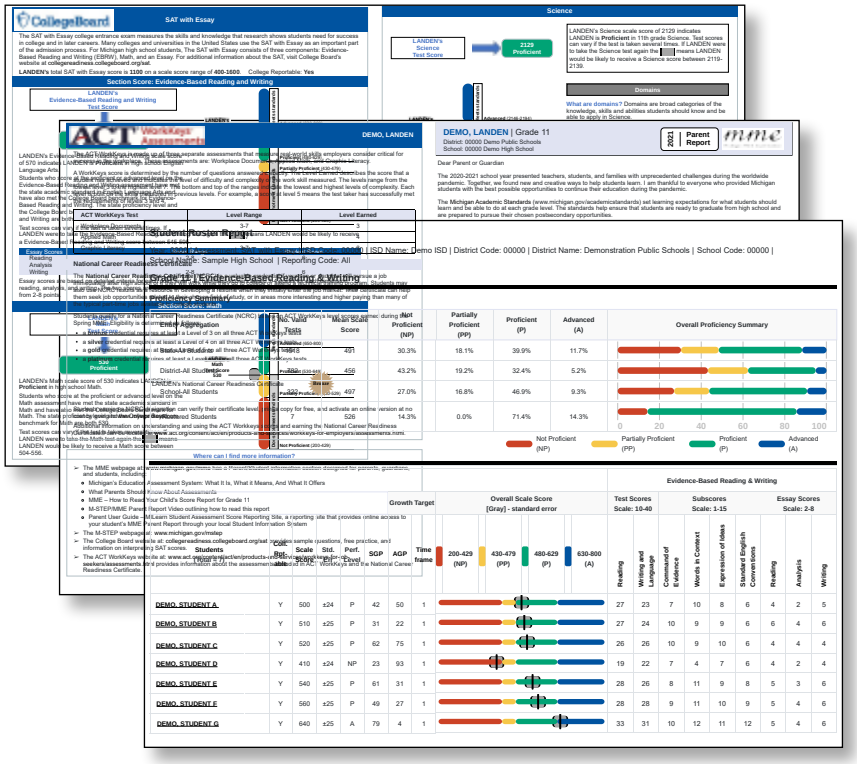
Website: www.michigan.gov/mstep

E-mail: mde-oeaa@michigan.gov

Appendix B.2 Interpretive Guide to MME Reports

mme

Michigan Merit Examination



Spring 2021 Michigan

Interpretive Guide to MME (Michigan Merit Exam) Reports

November 2021

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mme
Michigan Merit Examination

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mme
Michigan Merit Examination

Section 1: Introduction

On Friday, March 26, 2021, the Michigan Department of Education (MDE) received approval to waive some federal high-stakes school accountability requirements, including the requirement that the state assess with a participation rate of at least 95 percent. Michigan districts were required to offer remote or virtual students the **opportunity** to come into school to take the appropriate assessments; however, remote-only students were not **required** to come into school for the sole purpose of taking the assessments.

The COVID-19 pandemic created significant challenges to instruction during the 2020-21 school year. As a result, the data from the Spring 2021 SAT with Essay and M-STEP, assessments should be used cautiously and in combination with other local assessment data (including benchmark assessment data) to identify the learning needs of students and to plan educational programming.

Aggregate report results may reflect non-random sampling disparities caused by changes in instructional programming during the 2020-21 school year. For example, schools across a district may have been provided different, and non-comparable, learning options, including remote, in-person, and/or hybrid programs. In addition, quarantine requirements may have created variations in instructional program offerings throughout the school year, leading to variations in instruction across a school or district. District leaders know best what the 2020-21 school year looked like for their district's students; for example, some districts' school years may have had fewer interruptions and higher test participation than others. Thus, comparisons among school, district, and state results are discouraged this year.

Aggregate report results will reflect only students who participated in the SAT with Essay or M-STEP assessments. As a result of the federal accountability waiver of the participation requirement, schools within a district may have variations in participation in statewide summative assessments. Additionally, schools or districts that had larger populations of students learning remotely may not have comparable quantities of students participating in assessments; these differences in participation are not random. Some communities or demographic subgroups of students may be underrepresented in reported results because of variations in assessment participation.

While participation rates varied by grade, overall approximately 70% of eligible students participated in Spring testing for ELA and Mathematics; approximately 61% participated in testing for Science and Social Studies. These rates are significantly lower than participation rates in previous years, making any comparison to previous years' data problematic.

With these cautions in mind, aggregated results from the SAT with Essay and M-STEP provide data local schools and districts can use to analyze curricular alignment to Michigan's Academic Standards, to inform educational program evaluation, and to inform curricular and school improvement decisions at the school and/or district level. SAT with Essay and M-STEP data also provide student academic progress information from year to year, to show school and district academic progress.

SAT with Essay and M-STEP individual student data provides a snapshot of what a student knows and is able to do based on Michigan's Academic Standards. Student level SAT with Essay and M-STEP data should also be used cautiously and in combination with local formative, benchmark, and other summative assessment data to develop a complete picture of what the student knows and is able to do.

The Michigan Merit Examination (MME) includes three components: the SAT® with Essay college readiness assessment, ACT® WorkKeys® work skills assessment, and the Michigan Student Test of Educational Performance (M-STEP) in science and social studies. These three components provide a measure of individual performance based on Michigan's high school content standards as well as college and career readiness.

What's In This Guide?

This guide was developed to assist educators in understanding and using the Spring Michigan Merit Examination (MME) results. Reports available include student level and aggregate level data reports. Student level reports provide individual student level performance data. The Student Record Labels, Individual Student Report, Parent Report, Student Roster, Student Growth and Proficiency, and Student Overview reports all provide data at the individual student level.

Aggregate-level reports provide performance data based on groups of students grouped by grade, school, district, and state. The Aggregate level reports are the Comprehensive Report, Demographic Report, and Expectation Analysis Report.

This guide also includes the following sections:

- **Section 2:** provides information on assessment item types and how scores are reported
- **Section 3:** describes performance level categories and ranges
- **Section 4:** explains the appropriate use of data
- **Section 5:** explains use of the Dynamic Score Reporting System (DSRS)
- **Section 6:** describes the various student- and aggregate-level reports available
- **Section 7:** includes additional resources regarding assessment results and general information on statewide assessments; users are encouraged to review these additional resources for further information on statewide assessment reporting
- **Section 8:** provides contact information
- **Section 9:** includes a glossary of reporting terms
- **Appendix:** describes how to access available reports from College Board and ACT

The **SAT with Essay** is a college admission exam that measures the skills and knowledge research shows students need to be successful in college and careers and reflects what students are learning in their classrooms every day. The SAT includes Evidence-Based Reading and Writing, Math, and an Essay. Many colleges and universities in the United States use the SAT as an important part of the admission process. The results from the Evidence-Based Reading and Writing, and Math sections of the SAT are used in 11th grade ELA and mathematics accountability calculations.

ACT WorkKeys is a job skills assessment system measuring real-world skills, designed to support economic and workforce development programs. The MME ACT WorkKeys component consists of three tests: Workplace Documents, Applied Math, and Graphic Literacy. Skills assessed by ACT WorkKeys are valued by Michigan employers, colleges, and technical training institutions. Students who receive qualifying scores on the three ACT WorkKeys assessments, taken as part of the MME, are eligible for the National Career Readiness Certificate® (NCRC)®.

The purpose of the **M-STEP** is to measure Michigan students' achievement on the Michigan Academic Standards. Aggregated results from the M-STEP provide data local schools and districts can use to analyze curricular alignment to Michigan's Academic Standards, to inform educational program evaluation, and to inform curricular and school improvement decisions at the school and/or district level. M-STEP data also provide student academic progress information from year to year, to show school and district academic progress.

The M-STEP is the assessment the Michigan Department of Education (MDE) uses to meet state and federal accountability requirements. All students are required to take the M-STEP; eligible students with disabilities take the MI-Access assessment. For information about MI-Access assessments, see the MI-Access web page (www.michigan.gov/mi-access).

MDE-produced reports are listed in the table below. This table includes the name of the report, the MME component/content area, the type or level of the report, report recipients, and a brief description of each report. Printed copies of the Parent Reports and Student Record Labels are shipped to schools.

Family Educational Rights and Privacy Act (FERPA)

Reports that provide student level data include federally protected student data. Some aggregate reports may contain score data representing small numbers of students. MDE no longer suppresses aggregate data for fewer than ten students. Data representing small numbers of students should also be considered federally protected student data. It is imperative that report users understand the sensitive and confidential nature of the data presented on M-STEP reports and comply with all Family Educational Rights and Privacy Act (https://www2.ed.gov/policy/gen/guid/fpco/ferpa/index.html) regulations.

MDE-Produced Report Descriptions – Available through various distribution channels

Report	MME Component	Type or Level	Distribution	Description
Student Record Label	• M-STEP • SAT with Essay	• Student Level	• Mailed to School	Summarizes individual student achievement in each content area for inclusion in the student's Cumulative Student Record folder
Parent Report	• M-STEP • SAT with Essay • WorkKeys	• Student Level	• MiLearn – Educator, Parent, Student • Mailed to School • DSRS	Summarizes individual student achievement, including overall scale score and performance level for SAT Evidence-Based Reading and Writing, and Math and for M-STEP Science and Social Studies; also includes a summary report for the ACT WorkKeys
Individual Student Report (ISR)	• M-STEP • SAT with Essay	• Student Level	• DSRS • MiLearn – Educator	Separated by content area, provides detailed information on individual student achievement, including scale score, performance level, and growth data
Student Overview Report	• M-STEP • SAT with Essay • WorkKeys	• Student Level	• MiLearn – Educator • DSRS	Provides summary data of each student's performance in all content areas assessed on the MME; designed to provide educators a high-level snapshot of a student's performance in all content areas; SAT and WorkKeys data are included in this report

Report	MME Component	Type or Level	Distribution	Description
Student Roster	• M-STEP • SAT with Essay	• Individual Student	• MiLearn – Educator • DSRS	Separated by content area, provides detailed information on student achievement for groups of students in English language arts, mathematics, science or social studies, including overall scale score, performance level, growth score, growth target, target time frame, and summarized discipline data; summary proficiency information is also included for rostered students, school, district, and state aggregate groups
Expectation Analysis Report	• M-STEP	• School • District • State	• DSRS	Provides the percentage of points earned by grade and content area expectation in each discipline and the number of students scoring in each of four score ranges: 0-25%, 26-50%, 51-75%, and 76-100%; available for social studies only and is intended to provide an overview of performance by content expectation
Demographic Report	• M-STEP • SAT with Essay	• School • District • State	• DSRS	Provides a comparison of students by grade and content, aggregated across selected demographic groups, showing mean scale scores and percentages of students in each performance level
Comprehensive Report	• M-STEP • SAT with Essay	• District	• DSRS	Provides a comparison of students by grade and content by schools within a district; includes mean scale scores and percentages of students in each performance level
Student Growth and Proficiency Report	• M-STEP • SAT with Essay	• Student Level	• DSRS	Provides detailed information about student achievement and student growth data; includes overall scale score, performance level, growth score, growth target, and target time frame; student scale score is shown plotted against growth data
Student Data File	• M-STEP • SAT with Essay • ACT WorkKeys	• Student Level	• Secure Site	Includes all individual level student data, including scale score, performance level, student demographic information, valid/invalid reasons, and growth data
Aggregate Data File	• M-STEP • SAT with Essay	• School • District • State	• Secure Site	Includes aggregated student performance information, including average scale score, count and percent of students in each performance level, and demographic subgroups

Report	MME Component	Type or Level	Distribution	Description
CTE Student Roster Report	• M-STEP • SAT with Essay	• CTE Student Level	• Mailed to School	Provides student achievement results for M-STEP social studies and SAT with Essay for students enrolled in one of the CTE programs
CTE School Summary Report	• M-STEP • SAT with Essay	• CTE Program Level	• Mailed to School	Provides program-level results for M-STEP social studies and SAT with Essay for students enrolled in one of the CTE programs

College Board-Produced Report Descriptions – Available through the K-12 Educator Portal

Report	MME Component	Type or Level	Distribution	Description
Individual Score Report	• SAT with Essay	• Student Level	• Online • Paper	Includes percentiles, color coding showing how the student performs compared to college readiness benchmarks, score projections, and demographic information; students can access their online report (https://studentscores.collegeboard.org/home); educators can access this printable report in the K-12 reporting portal (https://k12reports.collegeboard.org/login)
Roster Report	• SAT with Essay	• Student Level	• Online	Lists students with aggregate performance data and scores; an individual student report can be viewed by clicking on the student's name
Scores & Benchmarks	• SAT with Essay	• Student Level	• Online	Provides aggregate and student-level performance; shows how well students performed by comparing their scores to mean scores, benchmark data, and other statistics at the school, district and state levels; establish baselines for school improvement goals; identifies which students did not meet benchmarks
Instructional Planning	• SAT with Essay	• Student Level	• Online	Shows students by performance group in specific subscores, section, and test scores; shows the skills in which the student is strongest, and which need the most improvement

ACT WorkKeys-Produced Report Descriptions – Mailed to schools by ACT

Report	MME Component	Type or Level	Distribution	Description
Individual Summary Score Report	• ACT WorkKeys	• Student Level	• Paper	Contains the examinee's reportable scores (Level and Scale scores) and explanations of what the scores mean; test coordinators will receive one paper report per examinee to be given to the examinee
Summary Score Report	• ACT WorkKeys	• Student Level	• Paper	Contains the examinee's reportable scores (Level and Scale scores) but without the explanations of what the scores mean; test coordinators will receive one paper report per examinee to be retained by the school
Roster Score Report	• ACT WorkKeys	• Student Level	• Paper	A roster of examinees showing their scores and when they took the test; test coordinators will receive one paper report to be retained by the school
National Career Readiness Certificates (NCRC)	• ACT WorkKeys	• Student Level	• Online	Examinees who achieve a minimum score of three (3) or higher on each subject test will earn an ACT WorkKeys NCRC (or an ACT WorkKeys NCRC en Espanol if they took the tests in Spanish); for more information, go to ACT WorkKeys National Career Readiness Certificate (https://www.act.org/content/act/en/products-and-services/workkeys-for-job-seekers.html)

Section 2: Scoring

Scoring by Item Type for M-STEP

All of the processes employed to assess overall student performance begin at the item level. There are two types of items on the M-STEP for science and social studies: Multiple Choice (MC) items, and Technology Enhanced (TE) items. Item scores are used in the statistical models and transformations that result in scale scores.

Multiple Choice Item Scores

In Spring 2021, science and social studies content area assessments included multiple choice items. When responding to multiple choice items, students select from the available options, only one of which is a correct response to the item. Students who select only the correct option receive a score of one (1) on the MC item. Students who select one of the incorrect options, multiple options, or did not respond receive a score of zero (0). The string of responses from the MC items (e.g. 1,0,0,0,1,…,1) serves as input for the statistical models used to derive scale scores. MC items are scanned and scored by computer.

Technology Enhanced Item Scores

Technology Enhanced (TE) items are computer-delivered test questions that include specialized interactions; these items allow students to respond to tasks that go beyond what can be covered in traditional MC items. TE items require students to produce information, as opposed to simply selecting a choice from answer options. The scoring for most TE items is automated (similar to MC items), eliminating the need for human scorers in the majority of cases. TE item types include the following:

Drag and Drop – students can drag pictures or words into boxes or "drop zones" to indicate an answer

Choice Interaction – similar to a multiple-choice items, but the item can have more than four options, and any number of the options can be correct or incorrect

Hotspot (Count or Selection) – graphics are selectable; for Count, students can choose a particular number of hotspots to show their answer; for Selection, students select a specific hotspot to show their answer

Matching Interaction – an interaction grid that allows the students to select areas of matching between an option in the row with an option in the column

Keypad Input – a math item type containing an embedded keyboard for math functions that can be used to answer the question

Evidence Based Selected Response – an item consisting of two parts, with each part being multiple choice or a hot text paragraph with answers embedded in the paragraph

Hot Text Highlight (Line and Paragraph) – text is selectable, and once selected, will highlight for the students; for Line, the students can select one or more lines of text to answer the question; Hot text paragraph involves answers embedded within a paragraph(s) – students select word(s), phrase(s), sentence(s), and/or paragraph(s) according to the instructions in the stem or question

Order – a list of items or sentences that can be arranged by the students in the correct order

Table – students fill in missing numbers

Drop Down – students select numbers or words from list

Table Interaction – students check appropriate boxes to match columns to rows

Differences between Online and Paper/Pencil Items

The M-STEP MC items appear the same in both the online testing environment and in the paper/pencil print forms. Due to the computer interactions involved in the TE items, the paper/pencil print forms feature variations of the TE items, called companion items, that test the same concepts and skills as the corresponding TE items. The variations are modified for use in a print form.

The print variations of the TE items are created in various ways. Some TE items are converted to multiple-select items (similar to Choice Interaction but with more than four options and possibly more than one correct answer) or table interactions (where the student fills in portions of a table to complete the question). In all cases, the companion items maintain the same point values as their TE counterparts.

How Scores are Reported for M-STEP and SAT with Essay

Scale Scores

Students receive an overall scale score in each content area for which a valid test was returned. Scale scores are the basic unit of reporting. A scaled score is calculated from a total number of obtained score points that is statistically adjusted and converted into a consistent, standardized scale that permits direct and fair comparisons of scores from different forms of a test, either within the same administration year or across years. Established psychometric procedures are used to ensure that a given scale score represents the same level of performance regardless of the test form. Scale scores are especially suitable for comparing the performance of different groups of students in the same grade from year to year and for maintaining the same performance standard across the years. While scale scores are comparable across test forms in a given content area within the same grade, they are not comparable across content areas or grades. Each overall scale score is indicated by a single number. An standard error is noted for each scale score. The standard error indicates the range of scores that the student would be likely to achieve if he or she were to take the test multiple times.[1]

For additional information on College Board standard setting, see Standard Setting for the SAT in Section 3.

Student Growth Scores

Student Growth Scores (SGPs, previously called Student Growth Percentiles), Growth Target Scores (AGPs, previously called Adequate Growth Percentiles), and Growth Target Time Frame will appear on the Individual Student Report, Student Roster, Student Growth and Proficiency Report, Student Overview, and in the student data files accessed through the Secure Site.

Growth data are relative to students in Michigan who had comparable achievement scores on prior state-level tests. This means only those students who received valid scores on the most recent state assessment in a content area and have a valid score on this year's test will receive growth scores. Growth scores will not be available for science tests because prior science tests were field tests.

Growth scores describe a student's learning over time compared to other students who took the same test and had similar prior test scores. Growth Scores are percentiles that range from one to 99, with 50 being the average, and indicate how many scores in the comparison group are below that score. For example, a Growth Score of 60 means the student had higher growth than 60 percent of comparable students.

Growth Target Scores also range from one to 99 and represent the amount of growth above or below average that a student needs to maintain year-over-year to reach or maintain proficiency by the end of the set number of years. For example, consider a Growth Target Score of 80. This means the student must maintain considerably above-average growth year-over-year to reach or maintain proficiency by the end of the set number of years.

[1] The Connecticut Smarter Balanced Assessments Interpretive Guide

Growth Target Time Frames which range from one to three years, are the number of years expected for a student to reach or maintain proficiency. Growth Target Time Frames are set based on how long it has historically taken similar students to reach or maintain proficiency.

Growth data add important context for understanding the growth of individual students and growth patterns within groupings of students. When combined with achievement scores and proficiency categories, growth data can help educators understand how students' achievement scores compare to those of their peers in the state who had comparable prior test scores. Growth data will be added to reports after the initial release of reports, due to the additional time required to calculate them. For more information on student growth scores, visit the Student Growth Resources web page (https://www.michigan.gov/mde/0,4615,7-140-81376_59490-298094--,00.html).

Performance Levels

Scale scores within each subject area can be described in ranges. The labels applied to these ranges are called Performance Levels. The performance levels are: Not Proficient, Partially Proficient, Proficient, and Advanced. The divisions between the levels are often referred to as cut scores. Scale score and performance level range tables can be seen on the following pages.

The cut scores are typically recommended by a panel comprised of educators and other stakeholders throughout the state in a process known as standard setting. To set these standards, the panel uses detailed descriptions of what students in each of the performance levels should know and be able to do. Based upon these detailed descriptions and actual assessment items, the panel recommends the score that best separates each performance level from the next to the Michigan Superintendent of Public Instruction. While the performance level descriptors necessarily differ by grade and subject area, student achievement, as defined by the obtained performance level, can be reasonably compared across subjects within a grade. Such a comparison can be used to indicate whether students are meeting Michigan content standards in each subject and grade.

A standard setting was conducted in May 2019 with the College Board Psychometric and Assessment Design and Development staff and panels of Michigan educators. Performance Level Descriptors were adopted and used to determine performance level cut scores for the SAT. The proficient cut score and the College Board benchmark score are the same. For additional information, see Standard Setting for SAT in Section 3.

Additional Information Regarding SAT with Essay

The College Board provides extensive information on how to interpret the data displayed on College Board score reports on the College Board website (www.collegeboard.org/michigan), under the **Understand Educator Score Reports** section.

Section 3: Performance Level Descriptors and Ranges

M-STEP and SAT Performance Level (PL) Descriptors

Not Proficient – The student needs intensive intervention and support to improve achievement and to become career- and college-ready. The student's performance is not yet proficient and indicates minimal understanding and application of the high school content standards defined for Michigan students.

Partially Proficient – The student needs assistance to improve achievement and to become career and college ready. The student's performance is not yet proficient, indicating a partial understanding and application of the high school content standards defined for Michigan students.

Proficient – The student's performance indicates understanding and application of key high school content standards defined for Michigan students. The student needs continued support to maintain and improve proficiency and to be career- and college-ready.

Advanced – The student's performance exceeds the high school content standards and indicates substantial understanding and application of key concepts defined for Michigan students. The student needs support to continue to excel and to be career- and college-ready.

ACT WorkKeys

ACT WorkKeys has developed a Scale Score Interpretation Guide (www.act.org/stateanddistrict/michigan), under **WorkKeys on Paper Resources: Interpretation – Interpret score reports and test data – Understand Score Reports – ACT WorkKeys Scale Score Interpretation Guide**. This document helps readers understand the WorkKeys Scale Score by explaining what the score is, how it can be used, and how it was developed.

2021 M-STEP Performance Level Scale Score Ranges

Subject	Grade	Level 1 Not Proficient	Level 2 Partially Proficient	Level 3 Proficient	Level 4 Advanced
Science	11	2011-2070	2071-2099	2100-2132	2133-2160
Social Studies	11	2021-2068	2069-2099	2100-2130	2131-2169

mme Michigan Merit Examination	2021 SAT Performance Level Scale Score Ranges				
Subject	**Grade**	**Level 1 Not Proficient**	**Level 2 Partially Proficient**	**Level 3 Proficient**	**Level 4 Advanced**
Evidence-Based Reading and Writing	11	200-429	430-479	480-629	630-800
Math	11	200-429	430-529	530-649	650-800

Note: Michigan uses SAT results for measuring proficiency on state academic standards in high school ELA and mathematics. Students who are proficient or advanced in Evidence-Based Reading and Writing and/or in Math have also met the College Board benchmark for those subjects.

Standard Setting for the SAT

In May 2019, College Board Psychometric and Assessment Design and Development staff conducted panel-based standard setting meetings for the SAT. The purpose of the standard setting meeting was to produce recommended cut scores on the SAT Math section and the SAT Evidence-Based Reading and Writing (EBRW) section, for classifying students into the four performance levels (Not Proficient, Partially Proficient, Proficient, or Advanced) to be used by Michigan for accountability purposes.

The cut scores for Partially Proficient and Advanced were set by the panelists. Each panel used the Performance Level Descriptors (PLDs) to guide them in placing bookmarks to make their recommendations. The cut scores for Proficient in Evidence-Based Reading and Writing and Math were set to the College Board College and Career Readiness scores. Panelists were asked to verify the reasonableness of the Proficient cut given the Performance Level Descriptors.

The cut scores recommended by the panel were provided to the state for consideration along with other information the panel considered relevant. The recommendations from the standard setting panel were accepted as the final cut scores.

SAT Evidence-Based Reading and Writing, and Math College- and Career-Readiness Benchmarks

Grade 11 English Language Arts (ELA) and mathematics results are reported using the College Board college- and career-ready (CCR) benchmarks for Evidence-Based Reading and Writing (EBRW) and Math. Students who have met or exceeded the EBRW CCR benchmark are considered proficient in ELA for accountability purposes. Students who meet or exceed the Math CCR benchmark are counted as proficient in 11th grade mathematics.

SAT with Essay	Score Range	Benchmark Score
Evidence-Based Reading and Writing	200-800	480
Math	200-800	530
Total Score	**400-1600**	

Section 4: Appropriate Use of the Data Provided in Assessment Reports

Appropriate Uses and Limitations of Summative Assessment Data

Summative reports and data are important parts of a comprehensive assessment system that schools and districts should use in data-driven decision-making when they consider curriculum development and instructional program evaluation. Assessment data should be shared with administrators, curriculum directors, instructional coaches, instructional leaders, and teachers. While reviewing the summative assessment data, educators should be aware of the appropriate uses – and limitations – of the data.

Individual Level Data

Uses: Summary information is provided for individual students. The student's scale score provides an indication of the student's proficiency at the time the test was taken. These scores represent what the student knows and is able to do in relation to Michigan's Academic Standards. Scale scores are sorted into ranges of Performance Levels, which are used to indicate student progress toward college- and career-readiness. The Performance Levels are Not Proficient, Partially Proficient, Proficient, and Advanced. More information about Performance Levels and how cut scores are determined is available under "Performance Levels" in the Reporting section of this guide.

Limitations: Summative assessments, administered at the end of the student's instructional program, measure the standards that are assessed; they do not reflect student skills and abilities that are not part of assessed content. These results should be used together with other assessment and classroom performance information to provide a more complete picture of student performance.

Aggregated Data

Uses: Summary information about student performance is provided by aggregate groups. This includes:

- overall mean scale scores by school, district, and state
- overall mean scale scores for identified demographic groups by school, district, and state
  - This information can be used to compare the results of a demographic group within your school or district to the overall performance of students in your school or district if there are no variations in participation across the district. Comparisons among schools, district, and the state are discouraged in 2021 due to non-random sampling disparities that occurred during the Spring 2021 administration. District leaders understand their local context and participation rates and should make decisions about appropriate use based on local assessment participation.
- social studies percentages of points earned by expectation, aggregated at the school, district, and state levels
  - Expectation subscores provide information about aggregate group performance on portions of the test. You can use differences in mean subscores, in conjunction with other formative and benchmark assessment data, to investigate the curriculum and instruction at the school or district levels.

Limitations:

Expectation subscore data may represent small numbers of items. Some expectations are assessed using fewer than five items. Use caution when interpreting results based on a few items on the test.

Overall aggregate mean scale scores provide a snapshot of information about a group of students' performance on the test. These results should be used within a comprehensive assessment system that includes formative and benchmark assessment data to provide a more complete picture of student achievement.

Aggregate reports are intended to reflect the data needed to meet the expectations of state and federal legislation. In accordance with these mandates, separate aggregate results are provided for the following three student populations:

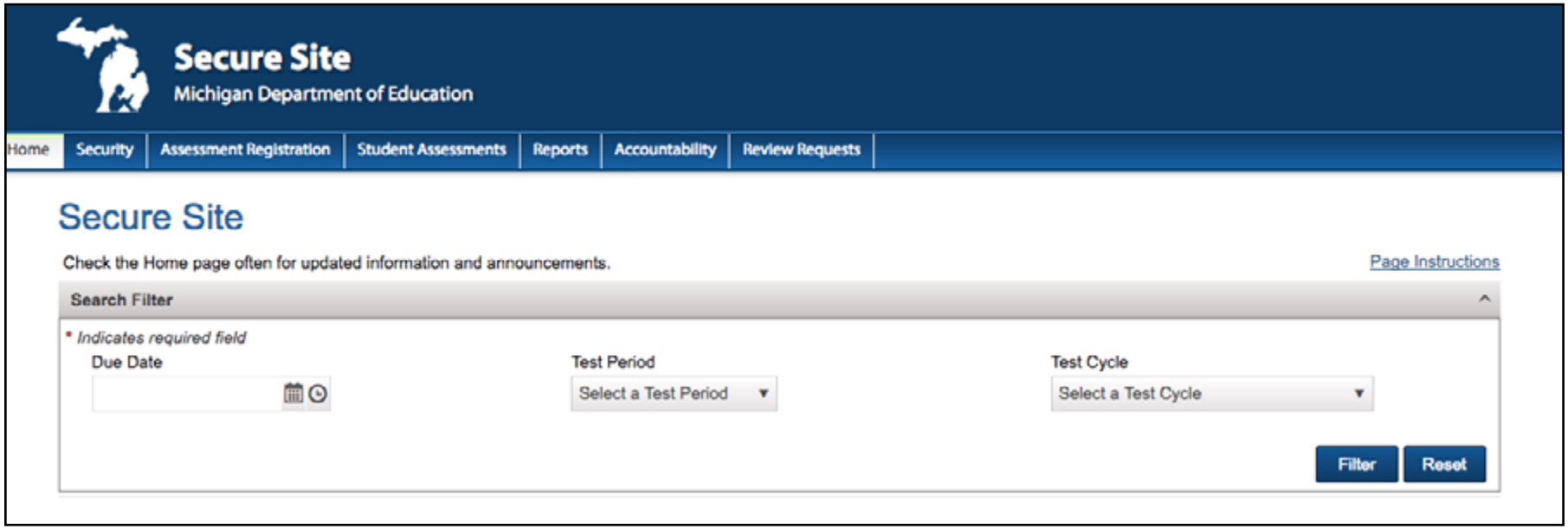
1. All students
2. Students with disabilities (SWD)
3. All except students with disabilities (AESWD)

Note About Longitudinal Assessment Data: Annual assessment data are usually cross-sectional. Caution should be used if making any historical (longitudinal) comparisons at any level of the student population as assessment scales may have changed over the years.

Section 5: The Dynamic Score Reporting System

M-STEP and SAT reports are available to school and district users through the Dynamic Score Reports site, which is accessible through the Office of Educational Assessment and Accountability (OEAA) Secure Site. Detailed directions for accessing the M-STEP and SAT reports are documented in the **How to Access and Navigate Michigan's Dynamic Score Reporting Site** document, which is located on the MME web page (www.michigan.gov/mme).

The Secure Site

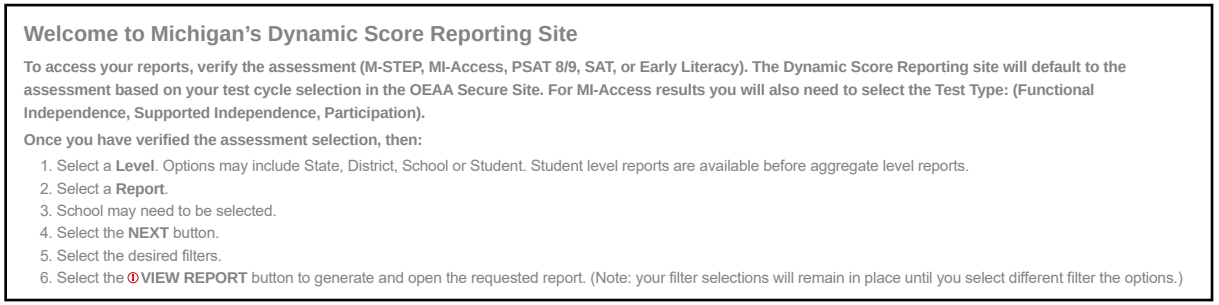


Access to the OEAA Secure Site (www.michigan.gov/oeaa-secure) is available only to district and school employees with authorized user roles and permissions granted by their district. You must have a Michigan Education Information System (MEIS) login in order to access the Secure Site. For instructions on how to obtain a MEIS login, go to Secure Site Training (www.michigan.gov/securesitetraining) and click "How do I get access to the Secure Site?"

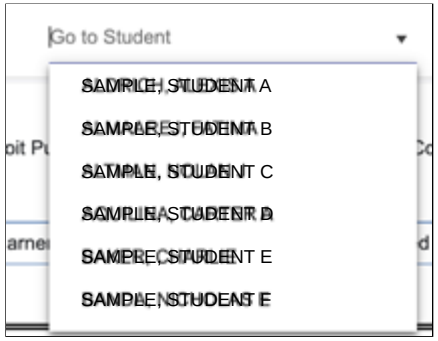
Functionality

Michigan's Dynamic Score Reporting Site provides data for a variety of reports. Regardless of the selected report, users will encounter the following components:

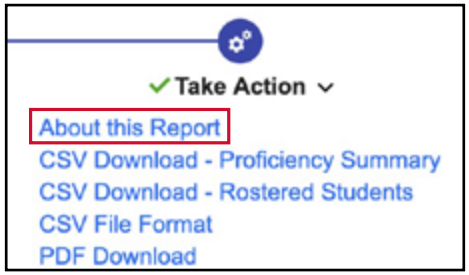
1. **Welcome Page:** provides detailed directions for accessing the reports based on user role



2. **Go to Student Quick Link:** allows user to jump to a student selected in the Filter Pane



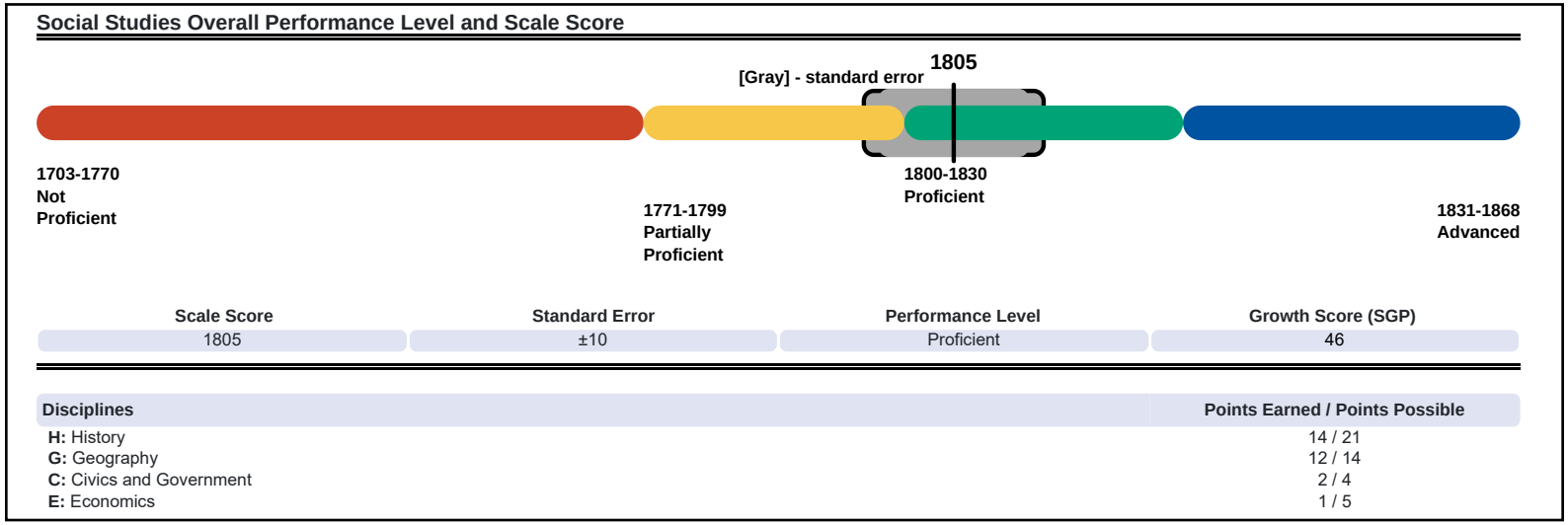
3. **The Take Action menu:** these options vary depending on the report



Options in the **Take Action** menu include:

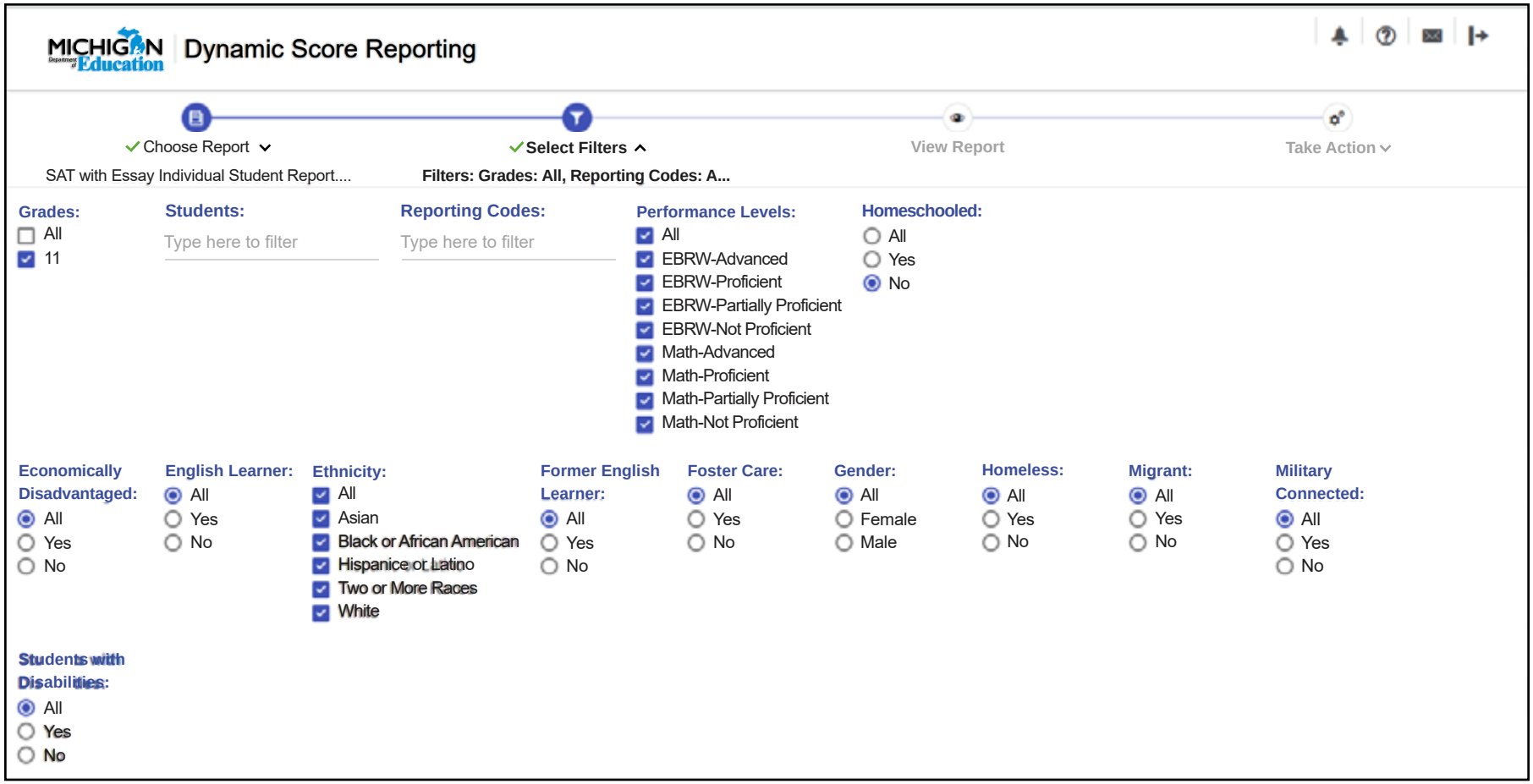
- **About this Report** – document available in the Dynamic Score Reporting Site describes the data contained in the report
- **PDF Download** – to print reports
- **CSV File Download** – contains all student data found in the report
- **CSV File Format** – describes the data contained in the CSV file download

4. **Report Body** – contains the selected report with the results of the filtered input



Filter Options: Allows the user to filter by grade, content area, reporting code, and individual students. The student filter has a predictive search feature. To filter the results, the user types the name of the student(s) into the search bar. The filter options available vary depending on the report. Filter options may include:

- Grade
- Content Area
- Reporting Code
- Performance Level
- Homeschooled
- Economically Disadvantaged
- English Learner
- Ethnicity
- Former English Learner
- Foster Care
- Gender
- Homeless
- Migrant
- Military Connected
- Students with Disabilities



CSV Files: CSV files are available for the aggregate reports and the Student Roster Report. They are found under the Take Action menu on each report. More information is available about the CSV files in the Report sections and in the CSV File section of this document.

Section 6: Reports

What's New!

Redesigned Parent Report

The MME Parent Report has been redesigned with bar graphs for SAT with Essay English language arts and mathematics and M-STEP science and social studies. The bar graphs display state proficiency levels, student scores, and whether the student meets or does not meet state academic standards for each content area. Science domains and social studies disciplines are displayed as Points Earned/Points Possible.

SAT with Essay Student Roster Report

The SAT with Essay Student Roster Report provides individual student performance data by content area, Evidence-Based Reading and Writing or Math. The Roster includes student growth data, graphic representation of performance levels, test scores, and subscore performance. The report provides overall proficiency summary data, displayed in graphic format, for each group: state, district, school, and rostered students, so student's scores may be compared to each group for mean scale scores and proficiency percentages.

SAT with Essay Demographic Report

The SAT with Essay Demographic Report provides a comparison of students by grade and content, aggregated across selected demographic groups, showing the percentages of students at each performance level (Not Proficient, Partially Proficient, Proficient, Advanced, and Proficient and Advanced Combined). The Demographic Report is available at the School, District, and State levels.

The user of this report may now select a demographic subgroup in the demographic table to compare against the overall student population. The selected demographic subgroup will be highlighted and a corresponding horizontal bar graph of the performance level percentages will display under the overall performance level graph.

SAT with Essay Comprehensive Report

The SAT with Essay Comprehensive Report provides a comparison of students by grade and content, aggregated across schools, showing the percentages proficient at each performance level (Advanced, Proficient, Partially Proficient, and Not Proficient). The Comprehensive Report is available at the district level.

Student Level Data Reports

Use student-level data from the Spring 2021 SAT with Essay and M-STEP assessments with caution and in combination with other local assessment data (including benchmark assessment data) to confirm and interpret the results of individual students.

Appropriate Uses of Data in Student Level Data Reports

The COVID-19 pandemic created significant challenges to instruction during the 2020-21 school year. As a result, the data from the Spring 2021 PSAT and M-STEP assessments should be used with caution and in combination with other local assessment data (including benchmark assessment data) to confirm and interpret the results of individual students.

Student Record Labels

The Student Record Labels provide summary student performance levels for individual students. The labels include district and school information, student demographic information, M-STEP and SAT administration cycle information, and overall student performance level for tested content areas.

The labels are printed and shipped to the school where the student tested and are available through the Secure Site if schools need to print additional copies.

00000 ABC SCHOOL DISTRICT
00000 ABC ELEMENTARY-MIDDLE SCHOOL
DOE, JOHN A
UIC#: 0000000000

DOB: 00/00/0000
Gender: M
Grade: 11
Spring 2021

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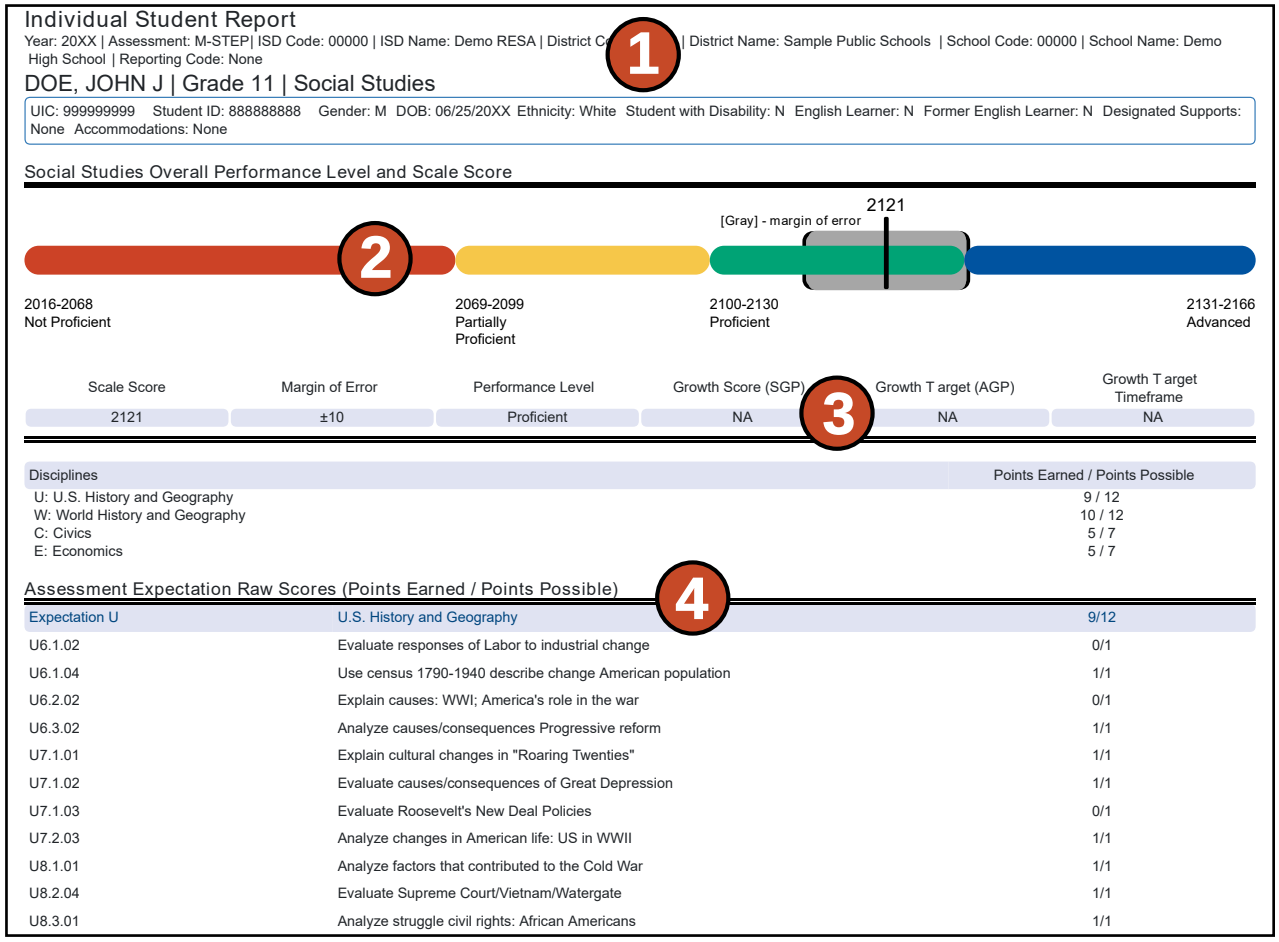
Content	SS	Performance Level
ELA (EBRW)	590	3-Proficient
Mathematics	530	3-Proficient
Science	2133	3-Proficient
Social Studies	2081	2-Partially Proficient

Individual Student Reports

The Individual Student Report (ISR) provides information about student performance by content area. Each student will have an ISR for M-STEP Science and Social Studies and a separate ISR for SAT Evidence-Based Reading and Writing and Math.

The **M-STEP ISR** report is divided into four main sections:

1. Student demographic information
2. Overall content performance
3. Growth Data
4. Detailed discipline and content expectation data for social studies



Individual Student Report

Year: 20XX | Assessment: M-STEP| ISD Code: 00000 | ISD Name: Demo RESA | District C | District Name: Sample Public Schools | School Code: 00000 | School Name: Demo High School | Reporting Code: None

DOE, JOHN J | Grade 11 | Social Studies

UIC: 999999999 Student ID: 888888888 Gender: M DOB: 06/25/20XX Ethnicity: White Student with Disability: N English Learner: N Former English Learner: N Designated Supports: None Accommodations: None

Social Studies Overall Performance Level and Scale Score

2121

[Gray] - margin of error

2016-2068 Not Proficient

2069-2099 Partially Proficient

2100-2130 Proficient

2131-2166 Advanced

Scale Score	Margin of Error	Performance Level	Growth Score (SGP)	Growth T arget (AGP)	Growth T arget Timeframe
2121	±10	Proficient	NA	NA	NA

Disciplines	Points Earned / Points Possible
U: U.S. History and Geography	9 / 12
W: World History and Geography	10 / 12
C: Civics	5 / 7
E: Economics	5 / 7

Assessment Expectation Raw Scores (Points Earned / Points Possible)

Expectation U	U.S. History and Geography	9/12
U6.1.02	Evaluate responses of Labor to industrial change	0/1
U6.1.04	Use census 1790-1940 describe change American population	1/1
U6.2.02	Explain causes: WWI; America's role in the war	0/1
U6.3.02	Analyze causes/consequences Progressive reform	1/1
U7.1.01	Explain cultural changes in "Roaring Twenties"	1/1
U7.1.02	Evaluate causes/consequences of Great Depression	1/1
U7.1.03	Evaluate Roosevelt's New Deal Policies	0/1
U7.2.03	Analyze changes in American life: US in WWII	1/1
U8.1.01	Analyze factors that contributed to the Cold War	1/1
U8.2.04	Evaluate Supreme Court/Vietnam/Watergate	1/1
U8.3.01	Analyze struggle civil rights: African Americans	1/1

Student Demographic Information

This section provides identifying information about the student including name, grade, gender, date of birth, race/ethnicity, Unique Identification Code (UIC), and, if provided by the school, the district student ID. It indicates if the student has been identified as a Student with Disability, English learner, or formerly limited English proficiency in the Michigan Student Data System (MSDS). Additionally, any designated supports or accommodations the student received are displayed.

Overall Content Performance

Overall content area scores—including standard error and the associated performance level—are provided as a graphic and as a table. Scale score ranges for each performance level are also shown on the graphic.

Individual Student Report

This report provides information about:

- when used with other local assessment data, inform about student proficiency and progress toward proficiency based on Michigan's academic standards
- view overall summary score and performance-level information at a glance
- view a snapshot of individual student performance based on Michigan's Academic Standards
- analyze summary performance on the English language arts and mathematics claims
- view raw score data on social studies disciplines

Growth Data

Growth data are typically available after the initial release of assessment reports and includes:

- Growth Score (SGP)
- Growth Target Score (AGP)
- Growth Target Timeframe

Growth Scores range from one to 99, with 50 being average, and represent the percent of comparable students—that is, who took the same test and had similar prior test scores—who had growth lower than the selected student. For example, a Growth Score of 60 means the student had higher growth than 60 percent of comparable students.

Growth Target Scores also range from one to 99 and represent the amount of growth above or below average a student needs to maintain year-over-year to reach or maintain proficiency by the end of the set number of years. For example, consider a Growth Target Score of 80.

Individual Student Report

Schools shouldn't use this report to:

- make program/placement decisions for individual students, unless required by law
- make day-to-day instructional decisions for individual students
- conduct item-level analysis or item-type reviews that encourage "teaching to the test" rather than to the content standards
- make decisions about continuous improvement goals and strategies for schools or districts

This means the student must maintain considerably above average growth year-over-year to reach or maintain proficiency by the end of the set number of years.

Growth Target Timeframes range from one to three years and are the number of years expected for a student to reach or maintain proficiency. Growth Target Timeframes are set based on how long it has historically taken similar students to reach or maintain proficiency.

Growth data are not available for science tests due to no prior assessment data available (prior science testing was field-test only).

Science content standards are organized by domains. Raw scores—that is, points earned out of total points possible—are reported for each science domain. Points possible may vary based on the science form the student was assessed with. Raw scores are not comparable across test forms.

Social studies content standards are organized by disciplines. Raw scores—that is, points earned out of total points possible—are reported for each discipline and Grade Level Content Expectation (GLCE) within the discipline. Raw scores are not comparable across test forms.

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Menu Options

Filter option information is available in the Dynamic Score Reporting Site User Guide

Take Action

The take action menu is enabled after a report is generated and contains the following options for the report:

- **About this Report** – this document
- **PDF Download** – To view a PDF of the report, select "PDF Download". This will open a PDF document of the reports, according to your selected filters. You can print individual or small groups of reports from this option.

Help

- Dynamic Score Reporting User Guide – user guide that describes how to access and navigate the Dynamic Score Reporting Site
- Interpretive Guide to MME Reports – provides information on the interpretation and use of MME reports

Report Features

Features of the Individual Student Report are described below.

Go to Student

The Go to Student menu allows the user to go directly to the generated report for the selected student.

Drill Down

The Individual Student Report includes a drill-down feature that enables the user to select the Student Growth Score on the Individual Student Report to open a Student Growth and Proficiency Report when growth scores are available.

After a user has selected the Student Growth Score to drill down into the Student Growth and Proficiency Report and the Student Growth and Proficiency Report displays, a breadcrumb area appears below the District/School entity information that displays "Individual Student Report > Student Growth and Proficiency Report". Each report name in the breadcrumb is an active link. To return to the Individual Student Report, the user selects "Individual Student Report".

A user may drill down into an Individual Student Report from the Student Roster Report. When a user accesses the Individual Student Report in this way, the user cannot make any additional filter selections in the report. The user can view the report or drill down further into a Student Growth and Proficiency Report. However, to use the filter options in the Individual Student Report, the user must select the Individual Student Report from the "Choose Report" drop-down menu.

About the Data

- Individual Student Reports are available for paper/pencil and online test takers.
- Tests marked "invalid" display the invalid reason.
- Overall content performance is marked on the graphic to indicate the student's overall scale score and standard error.
- Each color band of the graphic indicates a performance level:
  - Blue is Advanced
  - Green is Proficient
  - Yellow is Partially Proficient
  - Red is Not Proficient
- The color bands contain a minimum and maximum scale score range for that performance level.
- A table below the overall content performance graphic provides the overall content performance data in tabular form.
- Growth Score (SGP) (previously called Student Growth Percentiles) will be reported after the initial release of the student reports.

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- Growth Target Score (AGP) and Growth Target Timeframe (previously called Adequate Growth Percentiles) will be reported after the initial release of the student reports.
- Growth data is not available for science tests due to no prior assessment data available (prior science testing was field-test only).

Data Definitions

- **Discipline:** Disciplines are used as a means to organize content standards and expectations. Disciplines apply to social studies.
- **Domains:** Domains are used to group the three-dimensional science standards using similar disciplinary core ideas. Domains apply to science.
- **Growth Score (SGP):** Growth Scores (previously called Student Growth Percentiles) describe a student's learning over time compared to other students with comparable prior test scores. Percentiles range from 1 to 99 and indicate how many scores in the comparison group are below that score.
- **Growth Target (AGP):** Growth Targets (previously called Adequate Growth Percentiles) the amount of growth necessary to reach or maintain proficiency within a set timeframe. Percentiles range from 1 to 99 and indicate how much growth is required in order for the student to achieve proficiency in the timeframe score.
- **Growth Target (AGP) Timeframe:** Growth Target Timeframes show the amount of time the growth target (AGP) model is expecting the student to take to reach or maintain proficiency. Timeframes range from 1 to 3 and indicate how many years it would take for the student to achieve proficiency if they meet the Growth Target Score.
- **Standard Error:** Educational measurements are attempts to capture a student's true score, or ability, in the area being assessed. The standard error around the student score is an estimate of the range of scores one would expect if the student was to be measured repeatedly with parallel assessments.
- **Raw Score:** Points earned/total points possible. Raw scores are not comparable across different forms of the test.
- **Scale Score:** Scale scores are test scores that have been statistically adjusted to a common scale that allows scores to be compared across different forms of the test.

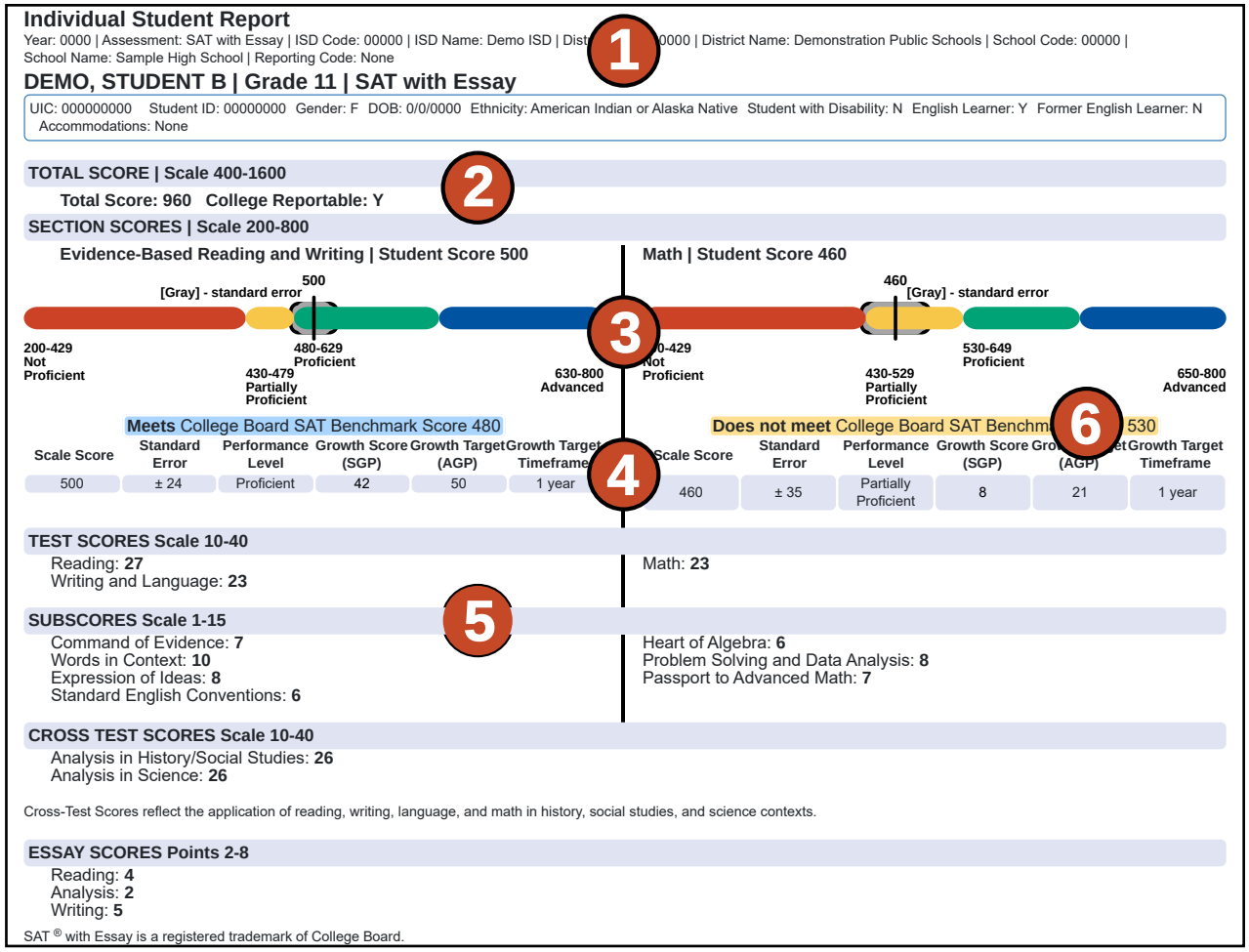
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SAT with Essay Individual Student Report

The SAT® with Essay Individual Student Report (ISR) provides information about student performance in two content areas: Evidence-Based Reading and Writing (EBRW) and Math. Students will have a separate ISR for M-STEP Science and Social Studies.

The **SAT with Essay ISR** report is divided into five main sections:

1. Student Demographic Information
2. Total Score
3. Overall Content Performance
4. Overall Performance and Growth Data
5. Information on Individual Test Scores, Subscores, Cross-Test Scores, and Essay Scores
6. Benchmark Score



Student Demographic Information

This section provides identifying information about the student including name, grade, assessment, Unique Identification Code (UIC), the district student ID if provided by the school, gender, date of birth, and race/ethnicity. It also indicates whether the student has been marked as a Student with Disability, English Learner, or Former English Learner in the Michigan Student Data System (MSDS). If the student was assigned accommodations, the accommodations will be listed.

Total Score

The total score is the sum of the two section scores: Evidence-Based Reading and Writing, and Math. Scores for the SAT Essay are reported separately and are not part of a student's total SAT score. The total score has a range of 400-1600.

Section Scores for Evidenced-Based Reading and Writing (EBRW) and Math

- The EBRW score is derived from the reading test score and the writing and language test score.
- The Math Section score is derived from the math test score.
- Tests marked "invalid" display the invalid reason.
- Overall content performance is marked on the graphic to indicate the student's overall scale score and standard error.
- Each color band of the graphic indicates a performance level:
  - Blue is Advanced
  - Green is Proficient
  - Yellow is Partially Proficient
  - Red is Not Proficient
- Each color band contains the minimum and maximum scale score range for that performance level.
- The SAT benchmark score is an indicator displayed on the student's SAT Score Report provided by the College Board.
- Students meeting the SAT benchmark are on track for college readiness upon graduation from high school.
- The College Board SAT benchmark score and the MDE proficiency cut score, shown on this report, are the same.
- A table below the overall content performance graphic provides the overall content performance data in tabular form.
- Growth Data are available after the initial release of assessment reports and includes:
  - Growth Score (SGP)
  - Growth Target Score (AGP)
  - Growth Target Timeframe

  Growth Scores range from one to 99, with 50 being average, and represent the percent of comparable students—that is, who took the same test and had similar prior test scores—who had growth lower than the selected student. For example, a Growth Score of 60 means the student had higher growth than 60 percent of comparable students.

  Growth Target Scores also range from one to 99 and represent the amount growth above or below average a student needs to maintain year-over-year to reach or maintain proficiency by the end of the set number of years. For example, consider a Growth Target Score of 80. This means the student must maintain considerably above average growth year-over-year to reach or maintain proficiency by the end of the set number of years.

  Growth Target Timeframes range from one to 3 year and are the number of years expected for a student to reach or maintain proficiency. Growth Target Timeframes are set based on how long it has historically taken similar students to reach or maintain proficiency.

Individual Test Scores

- The Reading test measures comprehensive and reasoning skills and focuses on close reading of passages in a wide array of subject areas.
- The Writing and Language test measures a range of skills including command of evidence, expression of ideas, and the use of standard English conventions in grammar and punctuation.

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- The Math test includes multiple-choice and student-produced response questions. It assesses skills in algebra, problem solving and data analysis, manipulation of complex equations, geometry, and trigonometry.

Subscores

The EBRW and Math assessments report multiple subscores for reading, writing and language, and math, all ranging from 1 to 15 points. Subscores provide more detail about student achievement.

Subscores for Evidenced-Based Reading and Writing:

- **Command of Evidence** – questions focus on the assessment of students' ability to understand, evaluate, and make use of textual evidence (facts, details, statistics, and the like.)
- **Words in Context** – questions focus on the assessment of students' ability to interpret words and phrases in context, analyze word choice rhetorically, and use language effectively in writing.
- **Expression of Ideas** – questions focus on the assessment of students' ability to revise multiparagraph texts for development, organization, and rhetorically effective language use.
- **Standard English Conventions** – questions focus on the assessment of students' ability to edit multiparagraph texts to ensure conformity to the conventions of standard written English sentence structure, usage, and punctuation.

Subscores of the Math test:

- **Heart of Algebra** – questions focus on the assessment of students' skills with linear equations and systems of linear equations.
- **Problem Solving and Data Analysis** – questions focus on the assessment of students' ability to use ratios, percentages, and proportional reasoning, as well as to describe graphical relationships and analyze data.
- **Passport to Advanced Math** – questions focus on the assessment of students' skills with analyzing, manipulating, and rewriting expressions, interpreting and building functions, as well as reasoning with more complex equations.

Cross-Test Scores

From the EBRW and Math section scores, two cross-test scores are reported:

- Analysis in Science
- Analysis in History/Social Studies

Analysis in History/Social Studies and Analysis in Science Cross-Test scores are based on questions in the reading, writing and language, and math tests that ask students to think analytically about texts

SAT Essay

The SAT Essay asks students to read a high-quality source text and write an effective analysis of that text using evidence drawn from the source. It measures a range of skills in reading, analysis, and writing.

Menu Options

Filter option information is available in the Dynamic Score Reporting Site User Guide.

Take Action

The take action menu is enabled after a report is generated and contains the following options for the report:

- **About this Report** – this document
- **PDF Download** – To view a pdf of the report, select "PDF Download". This will open a pdf document of the reports, according to your selected filters. You can print individual or small groups of reports from this option.

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Help

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Report Features

Features of the SAT with Essay Individual Student report are described below.

Go to Student

The Go to Student menu allows the user to go directly to the generated report for the selected student.

Drill Down

The Individual Student Report includes a drill-down feature that enables the user to select the Student Growth Score on the Individual Student Report to open a Student Growth and Proficiency Report.

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Data Definitions

- **Growth Score (SGP):** Growth Scores (previously called Student Growth Percentiles) describe a student's learning over time compared to other students with comparable prior test scores. Percentiles range from 1 to 99 and indicate how many scores in the comparison group are below that score.
- **Growth Target (AGP):** Growth Targets (previously called Adequate Growth Percentiles) show the amount of growth necessary to reach or maintain proficiency within a set timeframe. Percentiles range from 1 to 99 and indicate how much growth is required in order for the student to achieve proficiency in the timeframe score.
- **Growth Target (AGP) Timeframe:** Growth Target Timeframes show the amount of time the growth target (AGP) model is expecting the student to take to reach or maintain proficiency. Timeframes range from 1 to 3 and indicate how many years it would take for the student to achieve proficiency if they meet the Growth Target Score.
- **Standard Error:** Educational measurements are attempts to capture a student's true score, or ability, in the area being assessed. The standard error around the student score is an estimate of the range of scores one would expect if the student was to be measured repeatedly with parallel assessments.
- **Scale Score:** Scale scores are test scores that have been statistically adjusted to a common scale that allows scores to be compared across different forms of the test.

MME Parent Report

Appropriate Uses of Data in Student Level Data Reports

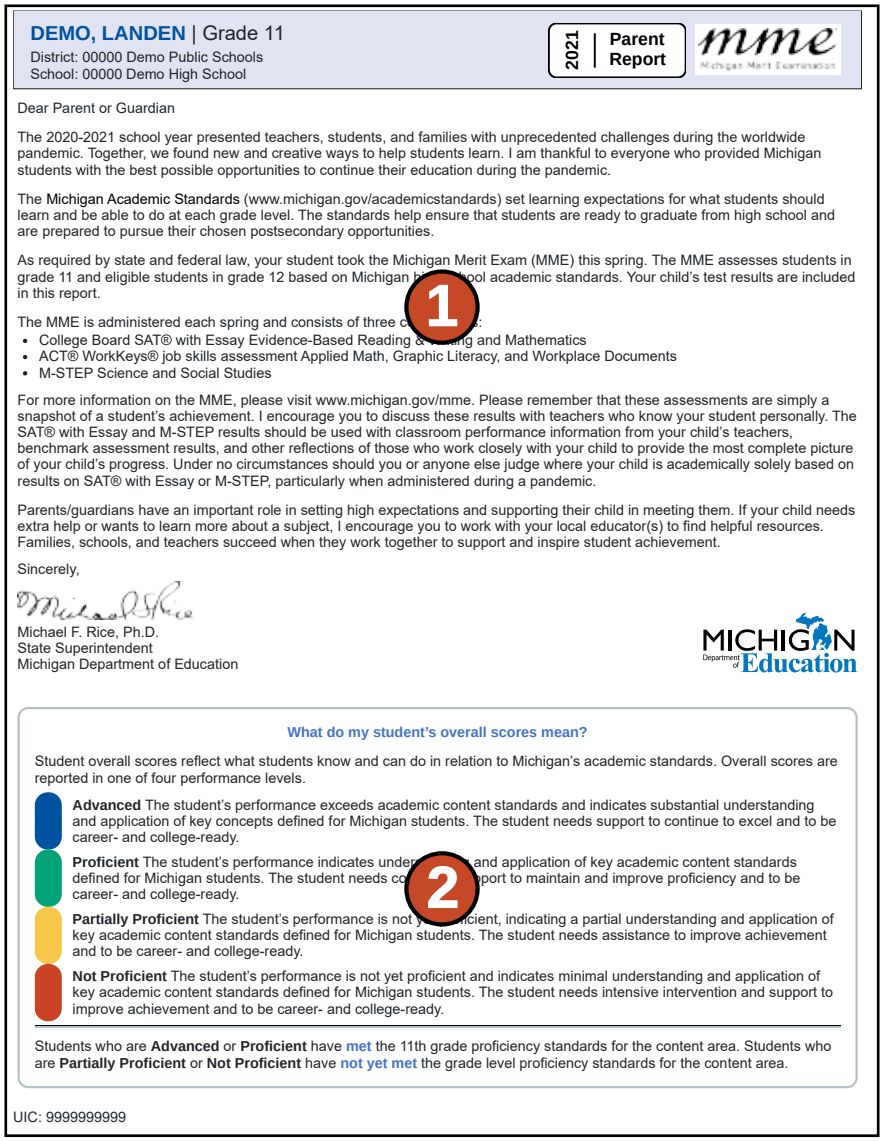
The COVID-19 pandemic created significant challenges to instruction during the 2020-21 school year. As a result, the data from the Spring 2021 PSAT and M-STEP assessments should be used with caution and in combination with other local assessment data (including benchmark assessment data) to confirm and interpret the results of individual students.

The Michigan Merit Exam (MME) Parent Report provides information about student performance in English language arts, mathematics, social studies, science, and work skills.

Printed versions of the Parent Report are typically mailed to schools in late August. Online Parent Reports are available through the Dynamic Score Reporting Site and provide Spanish and Arabic translations in addition to English.

This report includes six main sections:

1. Superintendent Letter
2. What Do My Student's Overall Scores Mean?
3. SAT Evidence-Based Reading and Writing (EBRW) and Math Performance Data
4. M-STEP Science and Social Studies Performance Data
5. ACT WorkKeys Performance Data
6. Where Can I Find More Information?



DEMO, LANDEN | Grade 11
District: 00000 Demo Public Schools
School: 00000 Demo High School

2021 | Parent Report

mme Michigan Merit Examination

Dear Parent or Guardian

The 2020-2021 school year presented teachers, students, and families with unprecedented challenges during the worldwide pandemic. Together, we found new and creative ways to help students learn. I am thankful to everyone who provided Michigan students with the best possible opportunities to continue their education during the pandemic.

The Michigan Academic Standards (www.michigan.gov/academicstandards) set learning expectations for what students should learn and be able to do at each grade level. The standards help ensure that students are ready to graduate from high school and are prepared to pursue their chosen postsecondary opportunities.

As required by state and federal law, your student took the Michigan Merit Exam (MME) this spring. The MME assesses students in grade 11 and eligible students in grade 12 based on Michigan high school academic standards. Your child's test results are included in this report.

1

The MME is administered each spring and consists of three components:

- College Board SAT® with Essay Evidence-Based Reading and Writing and Mathematics
- ACT® WorkKeys® job skills assessment Applied Math, Graphic Literacy, and Workplace Documents
- M-STEP Science and Social Studies

For more information on the MME, please visit www.michigan.gov/mme. Please remember that these assessments are simply a snapshot of a student's achievement. I encourage you to discuss these results with teachers who know your student personally. The SAT® with Essay and M-STEP results should be used with classroom performance information from your child's teachers, benchmark assessment results, and other reflections of those who work closely with your child to provide the most complete picture of your child's progress. Under no circumstances should you or anyone else judge where your child is academically solely based on results on SAT® with Essay or M-STEP, particularly when administered during a pandemic.

Parents/guardians have an important role in setting high expectations and supporting their child in meeting them. If your child needs extra help or wants to learn more about a subject, I encourage you to work with your local educator(s) to find helpful resources. Families, schools, and teachers succeed when they work together to support and inspire student achievement.

Sincerely,

Michael F. Rice, Ph.D.
State Superintendent
Michigan Department of Education

MICHIGAN Department of Education

What do my student's overall scores mean?

Student overall scores reflect what students know and can do in relation to Michigan's academic standards. Overall scores are reported in one of four performance levels.

Advanced The student's performance exceeds academic content standards and indicates substantial understanding and application of key concepts defined for Michigan students. The student needs support to continue to excel and to be career- and college-ready.

Proficient The student's performance indicates understanding and application of key academic content standards defined for Michigan students. The student needs continued support to maintain and improve proficiency and to be career- and college-ready.

2

Partially Proficient The student's performance is not yet proficient, indicating a partial understanding and application of key academic content standards defined for Michigan students. The student needs assistance to improve achievement and to be career- and college-ready.

Not Proficient The student's performance is not yet proficient and indicates minimal understanding and application of key academic content standards defined for Michigan students. The student needs intensive intervention and support to improve achievement and to be career- and college-ready.

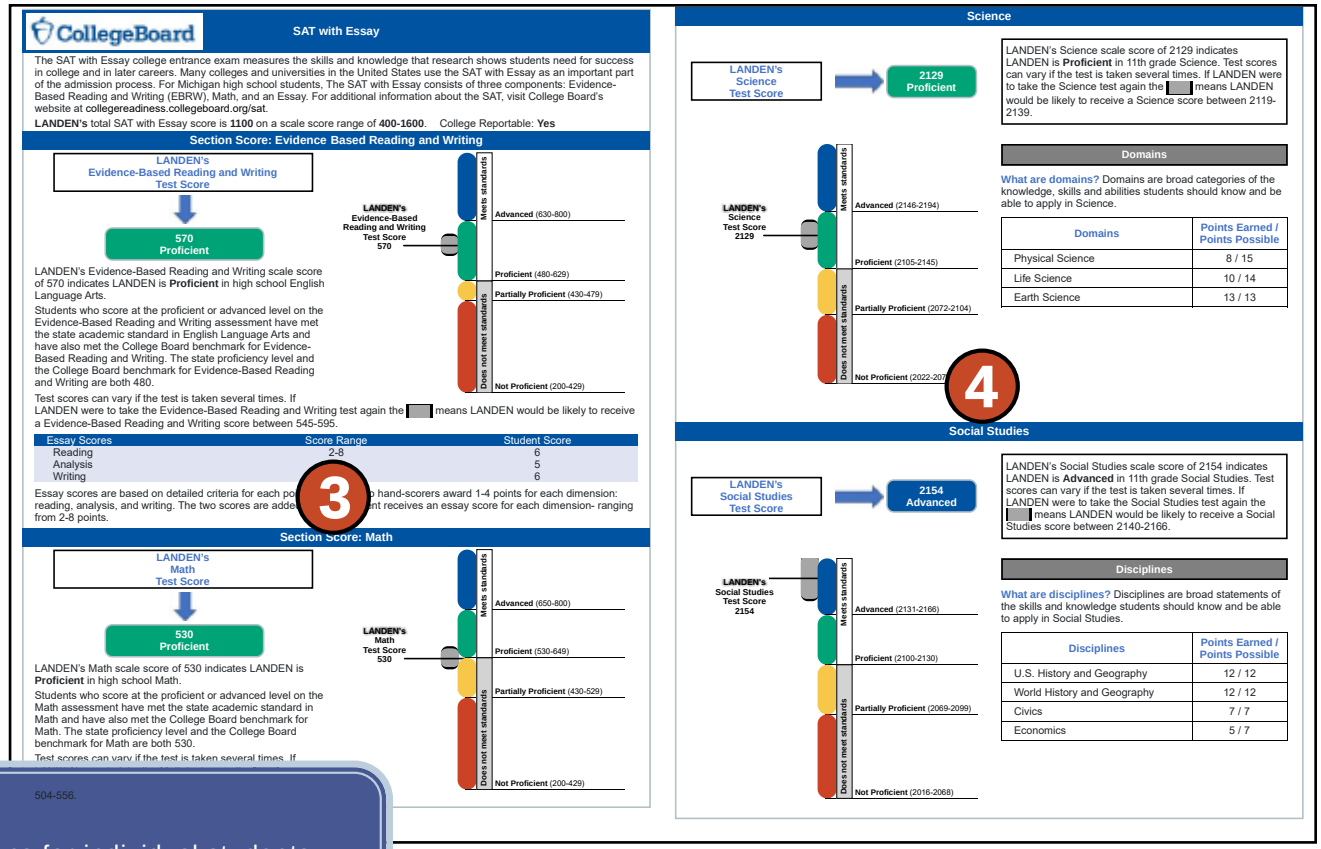
Students who are **Advanced** or **Proficient** have **met** the 11th grade proficiency standards for the content area. Students who are **Partially Proficient** or **Not Proficient** have **not yet met** the grade level proficiency standards for the content area.

UIC: 9999999999

Parent Report

This report helps schools to:

- when used with other local assessment data, inform about student proficiency and progress toward proficiency based on Michigan's academic standards
- view overall summary score and performance level information at a glance
- view a snapshot of individual student performance based on Michigan's Academic Standards
- view the ACT WorkKeys National Career Readiness® (NCRC®) certification



CollegeBoard — SAT with Essay

The SAT with Essay college entrance exam measures the skills and knowledge that research shows students need for success in college and in later careers. Many colleges and universities in the United States use the SAT with Essay as an important part of the admission process. For Michigan high school students, The SAT with Essay consists of three components: Evidence-Based Reading and Writing (EBRW), Math, and an Essay. For additional information about the SAT, visit College Board's website at collegereadiness.collegeboard.org/sat.

LANDEN's total SAT with Essay score is **1100** on a scale score range of **400-1600**. College Reportable: **Yes**

Section Score: Evidence Based Reading and Writing

LANDEN's Evidence-Based Reading and Writing Test Score → 570 Proficient

LANDEN's Evidence-Based Reading and Writing scale score of 570 indicates LANDEN is **Proficient** in high school English Language Arts.

Students who score at the proficient or advanced level on the Evidence-Based Reading and Writing assessment have met the state academic standard in English Language Arts and have also met the College Board benchmark for Evidence-Based Reading and Writing. The state proficiency level and the College Board benchmark for Evidence-Based Reading and Writing are both 480.

Test scores can vary if the test is taken several times. If LANDEN were to take the Evidence-Based Reading and Writing test again the [redacted] means LANDEN would be likely to receive a Evidence-Based Reading and Writing score between 545-595.

LANDEN's Evidence-Based Reading and Writing Test Score 570

Meets standards: Advanced (630-800); Proficient (480-629)
Does not meet standards: Partially Proficient (430-479); Not Proficient (200-429)

Essay Scores	Score Range	Student Score
Reading	2-8	6
Analysis		5
Writing		6

Essay scores are based on detailed criteria for each po[redacted] hand-scorers award 1-4 points for each dimension: reading, analysis, and writing. The two scores are adde[redacted]nt receives an essay score for each dimension- ranging from 2-8 points.

3

Section Score: Math

LANDEN's Math Test Score → 530 Proficient

LANDEN's Math scale score of 530 indicates LANDEN is **Proficient** in high school Math.

Students who score at the proficient or advanced level on the Math assessment have met the state academic standard in Math and have also met the College Board benchmark for Math. The state proficiency level and the College Board benchmark for Math are both 530.

Test scores can vary if the test is taken several times. If

504-556.

LANDEN's Math Test Score 530

Meets standards: Advanced (650-800); Proficient (530-649)
Does not meet standards: Partially Proficient (430-529); Not Proficient (200-429)

Science

LANDEN's Science Test Score → 2129 Proficient

LANDEN's Science scale score of 2129 indicates LANDEN is **Proficient** in 11th grade Science. Test scores can vary if the test is taken several times. If LANDEN were to take the Science test again the [redacted] means LANDEN would be likely to receive a Science score between 2119-2139.

LANDEN's Science Test Score 2129

Meets standards: Advanced (2146-2194); Proficient (2105-2145)
Does not meet standards: Partially Proficient (2072-2104); Not Proficient (2022-207[redacted])

Domains

What are domains? Domains are broad categories of the knowledge, skills and abilities students should know and be able to apply in Science.

Domains	Points Earned / Points Possible
Physical Science	8 / 15
Life Science	10 / 14
Earth Science	13 / 13

4

Social Studies

LANDEN's Social Studies Test Score → 2154 Advanced

LANDEN's Social Studies scale score of 2154 indicates LANDEN is **Advanced** in 11th grade Social Studies. Test scores can vary if the test is taken several times. If LANDEN were to take the Social Studies test again the [redacted] means LANDEN would be likely to receive a Social Studies score between 2140-2166.

LANDEN's Social Studies Test Score 2154

Meets standards: Advanced (2131-2166); Proficient (2100-2130)
Does not meet standards: Partially Proficient (2069-2099); Not Proficient (2016-2068)

Disciplines

What are disciplines? Disciplines are broad statements of the skills and knowledge students should know and be able to apply in Social Studies.

Disciplines	Points Earned / Points Possible
U.S. History and Geography	12 / 12
World History and Geography	12 / 12
Civics	7 / 7
Economics	5 / 7

Parent Report

- make program/placement decisions for individual students, unless required by law
- make day-to-day instructional decisions for individual students
- conduct item-level analysis or item-type reviews that encourage "teaching to the test" rather than to the content standards
- make decisions about continuous improvement goals and strategies for schools or districts

Superintendent Letter

A letter to parents from the State Superintendent is included on each report. This letter describes the Michigan Merit Examination (MME), which assesses students in grade 11 and eligible students in grade 12.

The MME content includes summary information about the SAT with Essay, ACT WorkKeys, and the M-STEP Science and Social Studies assessments. Additional information and resources for parents are also provided.

mme Michigan Merit Examination

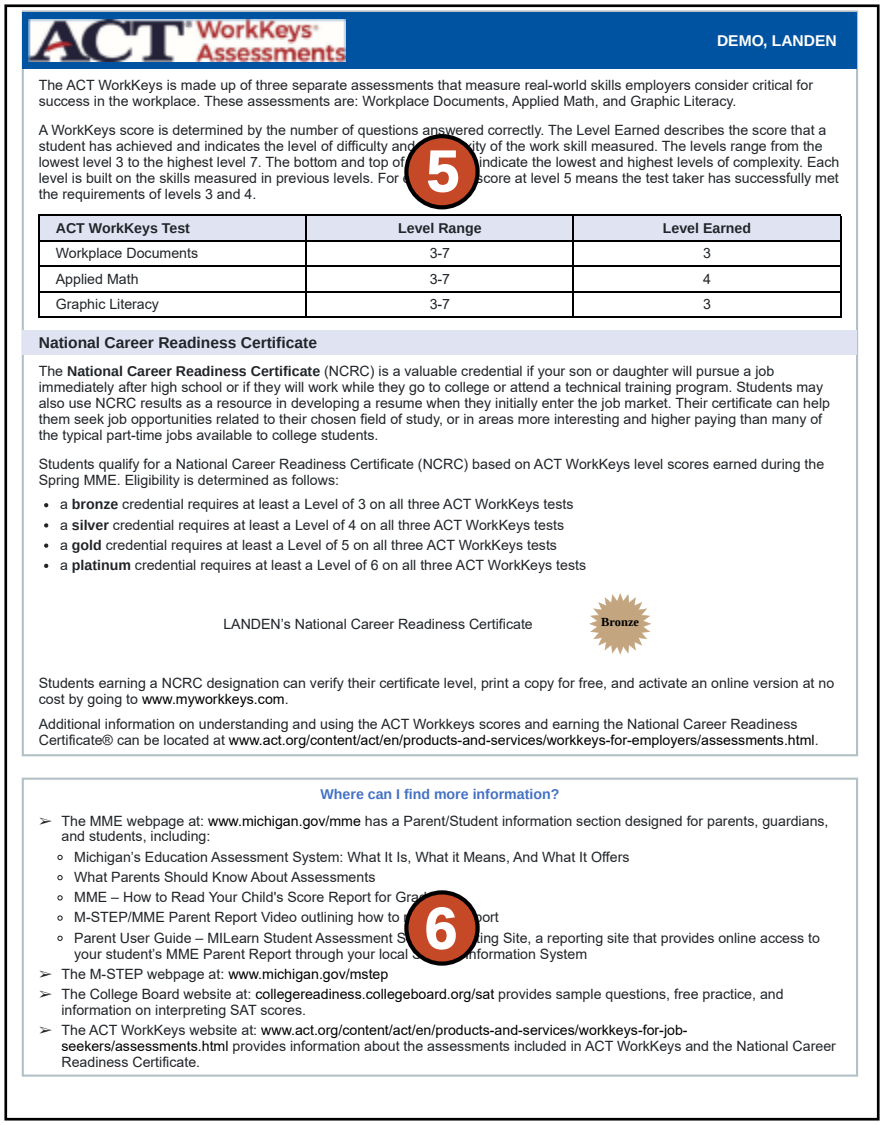
SAT with Essay

- The College Board SAT with Essay is composed of three sections: Evidence-Based Reading and Writing, Math, and an Essay. Michigan utilizes SAT with Essay results to measure students' proficiency in state academic standards for high school English language arts and mathematics.
- Overall content area scale scores—including standard error and the associated performance level—are provided as a graphic for Evidence-Based Reading and Writing and Math.
- The graphic includes the ranges of scale scores that do and do not meet standards, labeled as "Meets standards" and "Does not meet standards."
- The Michigan Department of Education proficiency cut score and the College Board SAT benchmark score, showing the student's college-readiness, are the same.

Visit the College Board Michigan web page for additional SAT information.

M-STEP Science and Social Studies

- Overall content area scale scores—including standard error and the associated performance level—are provided as a graphic and a table for M-STEP Science and Social Studies.
- The graphic includes the ranges of scale scores that do and do not meet standards, labeled as "Meets standards" and "Does not meet standards."
- Science content standards are organized by domains. Raw scores—that is, points earned out of total points possible—are reported for each science domain. Points possible may vary based on the science form the student was assessed with. Raw scores are not comparable across test forms.



ACT WorkKeys Assessments

DEMO, LANDEN

The ACT WorkKeys is made up of three separate assessments that measure real-world skills employers consider critical for success in the workplace. These assessments are: Workplace Documents, Applied Math, and Graphic Literacy.

A WorkKeys score is determined by the number of questions answered correctly. The Level Earned describes the score that a student has achieved and indicates the level of difficulty and complexity of the work skill measured. The levels range from the lowest level 3 to the highest level 7. The bottom and top of the range indicate the lowest and highest levels of complexity. Each level is built on the skills measured in previous levels. For example, a score at level 5 means the test taker has successfully met the requirements of levels 3 and 4.

ACT WorkKeys Test	Level Range	Level Earned
Workplace Documents	3-7	3
Applied Math	3-7	4
Graphic Literacy	3-7	3

National Career Readiness Certificate

The **National Career Readiness Certificate** (NCRC) is a valuable credential if your son or daughter will pursue a job immediately after high school or if they will work while they go to college or attend a technical training program. Students may also use NCRC results as a resource in developing a resume when they initially enter the job market. Their certificate can help them seek job opportunities related to their chosen field of study, or in areas more interesting and higher paying than many of the typical part-time jobs available to college students.

Students qualify for a National Career Readiness Certificate (NCRC) based on ACT WorkKeys level scores earned during the Spring MME. Eligibility is determined as follows:

- a **bronze** credential requires at least a Level of 3 on all three ACT WorkKeys tests
- a **silver** credential requires at least a Level of 4 on all three ACT WorkKeys tests
- a **gold** credential requires at least a Level of 5 on all three ACT WorkKeys tests
- a **platinum** credential requires at least a Level of 6 on all three ACT WorkKeys tests

LANDEN's National Career Readiness Certificate Bronze

Students earning a NCRC designation can verify their certificate level, print a copy for free, and activate an online version at no cost by going to www.myworkkeys.com.

Additional information on understanding and using the ACT Workkeys scores and earning the National Career Readiness Certificate® can be located at www.act.org/content/act/en/products-and-services/workkeys-for-employers/assessments.html.

Where can I find more information?

- The MME webpage at: www.michigan.gov/mme has a Parent/Student information section designed for parents, guardians, and students, including:
  - Michigan's Education Assessment System: What It Is, What it Means, And What It Offers
  - What Parents Should Know About Assessments
  - MME – How to Read Your Child's Score Report for Gra
  - M-STEP/MME Parent Report Video outlining how to port
  - Parent User Guide – MILearn Student Assessment S ing Site, a reporting site that provides online access to your student's MME Parent Report through your local nformation System
- The M-STEP webpage at: www.michigan.gov/mstep
- The College Board website at: collegereadiness.collegeboard.org/sat provides sample questions, free practice, and information on interpreting SAT scores.
- The ACT WorkKeys website at: www.act.org/content/act/en/products-and-services/workkeys-for-job-seekers/assessments.html provides information about the assessments included in ACT WorkKeys and the National Career Readiness Certificate.

- Social studies content standards are organized by disciplines. Raw scores—that is, points earned out of total points possible—are reported for each. Raw scores are not comparable across test forms.

Visit the M-STEP web page for additional M-STEP information.

Definitions

The following definitions are provided:

- **Disciplines** – Disciplines are to organize content standards and expectations. Disciplines apply to science and social studies. A discipline score reflects a student's performance on the test items within the discipline.
- **College and Career Readiness Benchmark** – The SAT benchmark scores are indicators displayed on student's SAT Score Report provided by the College Board. Students meeting the SAT benchmark are on track for college readiness. SAT benchmarks apply to both Math and to Evidence-Based Reading and Writing. The College Board SAT benchmarks and the MDE proficient cut scores shown on this report are the same.
- **Margin of Error** – Educational measurements are attempts to capture a student's true score, or ability, in the area being assessed. The margin of error around the student score is an estimate of the range or scores one would expect if the same student was to be measured repeatedly with parallel assessments.

ACT WorkKeys

ACT WorkKeys is an assessment of job skills in Workplace Documents, Applied Math, and Graphic Literacy. Students may qualify for a National Career Readiness Certificate® (NCRC), based on the ACT WorkKeys level scores they earn during the Spring MME. Eligibility is determined as follows:

- **Bronze credentia**l – requires at least a Level 3 on all three ACT WorkKeys tests
- **Silver credential** – requires at least a Level 4 on all three ACT WorkKeys tests
- **Gold credential** – requires at least a Level 5 on all three ACT WorkKeys tests
- **Platinum credential** – requires at least a Level 6 on all three ACT WorkKeys tests

Visit the ACT Michigan website for additional information about the ACT WorkKeys.

Menu Options

Filter option information is available in the Dynamic Score Reporting Site User Guide.

Take Action

The take action menu is enabled after a report is generated and contains the following options for the report:

- **About this Report** – this document
- **PDF Download** – To view a pdf of the report, select "PDF Download". This will open a pdf document of the reports, according to your selected filters. You can print individual or small groups of reports from this option.

Help ⓘ

- Dynamic Score Reporting User Guide – user guide that describes how to access and navigate the Dynamic Score Reporting Site
- Interpretive Guide to MME Reports – provides information on the interpretation and use of MME reports

Report Features

Features of the MME Parent Report are described in the following subsections.

Go to Student

The Go to Student menu allows the user to go directly to the generated report for the selected student.

About the Data

- Parent Reports are available for paper/pencil test takers.
- Tests marked “invalid” display the invalid reason. Invalid tests are not included in school, district, or state aggregations.
- Overall content performance is marked on the graphic to indicate the student’s overall scale score and standard error.
- Each color band of the graphic indicates a performance level:
  - Blue is Advanced
  - Green is Proficient
  - Yellow is Partially Proficient
  - Red is Not Proficient
- The color bands contain a minimum and maximum scale score range for that performance level.
- A table below the overall content performance graphic provides the overall content performance data in tabular form.
- Science reports domain results as raw scores (points earned/points possible). Points possible may vary depending on the test form the student received.
- Social studies report discipline results as raw scores (points earned/points possible).
- Raw scores (points earned/points possible) are reported for each discipline.

Data Definitions

- **Discipline:** Disciplines are used as a means to organize content standards and expectations. Disciplines apply to social studies.
- **Domains:** Domains are used to group the three-dimensional science standards using similar disciplinary core ideas. Domains apply to science.
- **Standard Error:** Educational measurements are attempts to capture a student’s true score, or ability, in the area being assessed. The standard error around the student score is an estimate of the range of scores one would expect if the student was to be measured repeatedly with parallel assessments.
- **Raw Score:** Points earned/total points possible. Raw scores are not comparable across different forms of the test.
- **Scale Score:** Scale scores are test scores that have been statistically adjusted to a common scale that allows scores to be compared across different forms of the test.

Privacy Notice: The Parent Report contains federally protected student information. This report must be used in accordance with the Family Educational Rights and Privacy Act (FERPA).

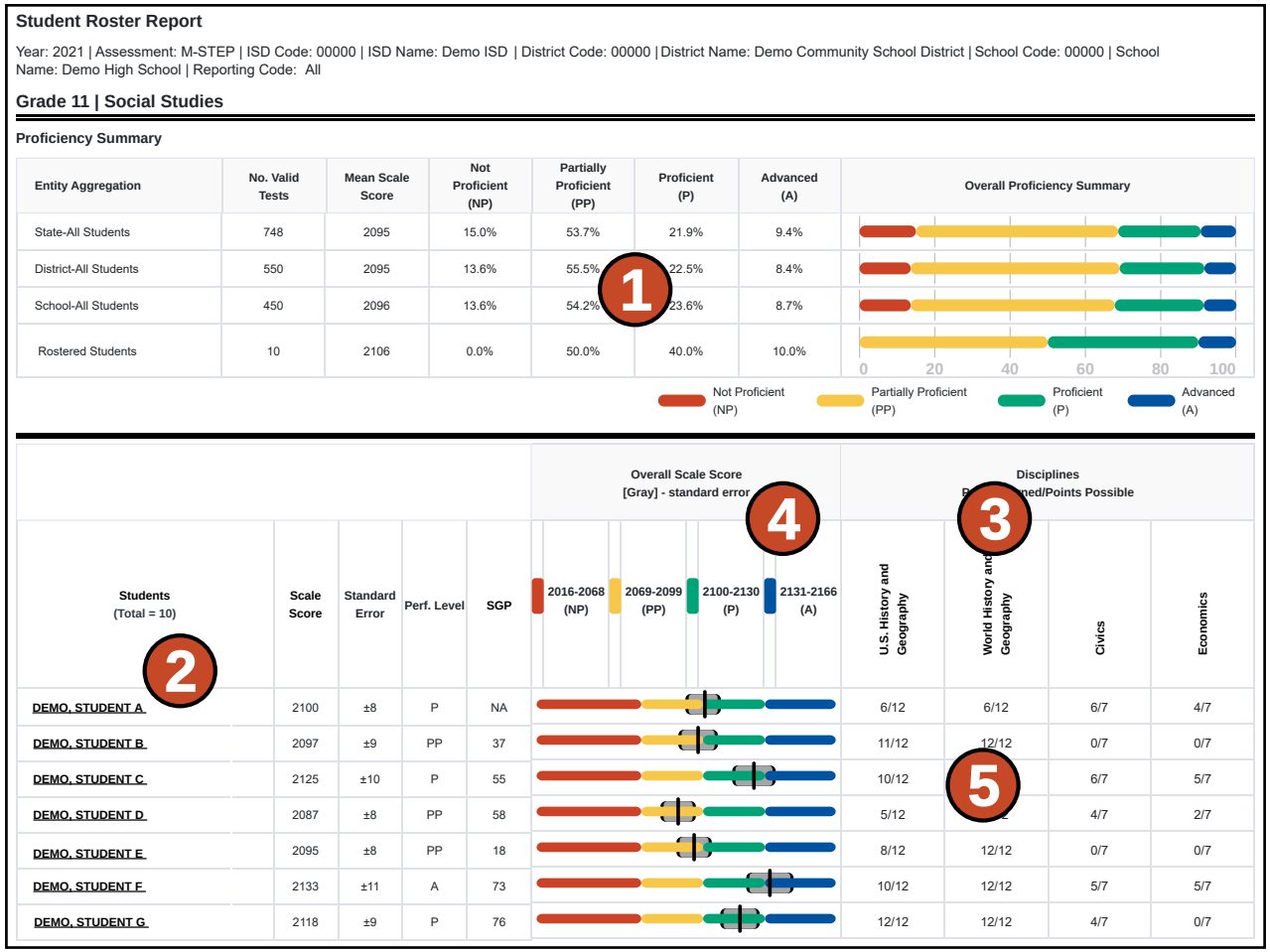
mme
Michigan Merit Examination

Student Roster

The M-STEP Student Roster Report provides information about student performance by content area.

The report is divided into five main sections.

1. Overall Proficiency Summary
2. Rostered Students
3. Overall Content Performance (Table Format)
4. Overall Content Performance (Graphic Format)
5. Subscore Data



Student Roster Report

Year: 2021 | Assessment: M-STEP | ISD Code: 00000 | ISD Name: Demo ISD | District Code: 00000 | District Name: Demo Community School District | School Code: 00000 | School Name: Demo High School | Reporting Code: All

Grade 11 | Social Studies

Proficiency Summary

Entity Aggregation	No. Valid Tests	Mean Scale Score	Not Proficient (NP)	Partially Proficient (PP)	Proficient (P)	Advanced (A)
State-All Students	748	2095	15.0%	53.7%	21.9%	9.4%
District-All Students	550	2095	13.6%	55.5%	22.5%	8.4%
School-All Students	450	2096	13.6%	54.2%	23.6%	8.7%
Rostered Students	10	2106	0.0%	50.0%	40.0%	10.0%

Overall Proficiency Summary

0 20 40 60 80 100

Not Proficient (NP) | Partially Proficient (PP) | Proficient (P) | Advanced (A)

1

Overall Scale Score [Gray] - standard error

4

Disciplines

3

Students (Total = 10)	Scale Score	Standard Error	Perf. Level	SGP	2016-2068 (NP)	2069-2099 (PP)	2100-2130 (P)	2131-2166 (A)	U.S. History and Geography	World History and Geography	Civics	Economics
DEMO, STUDENT A	2100	±8	P	NA					6/12	6/12	6/7	4/7
DEMO, STUDENT B	2097	±9	PP	37					11/12	12/12	0/7	0/7
DEMO, STUDENT C	2125	±10	P	55					10/12		6/7	5/7
DEMO, STUDENT D	2087	±8	PP	58					5/12		4/7	2/7
DEMO, STUDENT E	2095	±8	PP	18					8/12	12/12	0/7	0/7
DEMO, STUDENT F	2133	±11	A	73					10/12	12/12	5/7	5/7
DEMO, STUDENT G	2118	±9	P	76					12/12	12/12	4/7	0/7

2

5

Overall Proficiency Summary

Overall proficiency summary data is displayed in graphic format for each group.

- State – All students in the state
- District – All students in the district
- School – All students in the school
- Rostered Students – Students displayed in the roster according to user filter selections

The data displayed in the table is:

- Total number of valid tests
- Mean scale score
- Percent of valid tests in each performance level (Not Proficient, Partially Proficient, Proficient, and Advanced)

The data displayed in the graph is:

- Percent of valid tests in each performance level (Not Proficient, Partially Proficient, Proficient, and Advanced)

Student Roster Report

This report helps schools to:

- view overall summary score and performance level information at a glance
- view and sort student overall scale score and performance level in a rostered list of students
- view a snapshot of student performance
- help to inform, along with other local assessment data, student proficiency and progress toward proficiency based on Michigan's academic standards
- view and sort student performance by claim, discipline, domain, growth data, or Passage-based Writing
- view raw score data on social studies disciplines and science domains

Student Roster Report

Schools should not use this report to:

- make program-placement decisions for individual students unless required by law
- make day-to-day instructional decisions for individual students
- make decisions about continuous improvement goals and strategies for schools or districts

- Number of valid tests in each performance level (Not Proficient, Partially Proficient, Proficient, and Advanced) – displayed in the hover feature

Rostered Students

Students meeting the selected filter criteria are displayed in ascending alphabetical order by last name, then first name. The sort sequence may be changed to sort in descending alphabetical order. The following data is displayed in this section.

- Number of students displayed in the student roster – represents all students who tested in the selected filters including students with invalid tests
- Student Name as last name, first name, middle initial – student name is sortable
- Unique Identification Code (UIC) – displayed when clicking the Information or ⓘ icon
- Date of Birth (DOB) – displayed when the Information or ⓘ icon is clicked

Overall Content Performance (Table Format)

Overall content area scores—including standard error and the associated performance level—are provided as a graphic and as a table. Scale score ranges for each performance level are also shown on the graphic.

Growth Data includes Growth Score, Growth Target Score, and Growth Target Timeframe. Growth Scores (SGP), Growth Target Scores (AGP), and Growth Target Timeframes will be available after the initial release of student reports.

Growth Scores range from one to 99, with 50 being average, and represent the percent of comparable students—that is, who took the same test and had similar prior test scores—who had growth lower than the selected student. For example, a Growth Score of 60 means the student had higher growth than 60 percent of comparable students.

Growth Target Scores also range from one to 99 and represent the amount of growth above or below average a student needs to maintain year-over-year to reach or maintain proficiency by the end of the set number of years. For example, consider a Growth Target Score of 80.

This means the student must maintain considerably above average growth year-over-year to reach or maintain proficiency by the end of the set number of years.

Growth Target Timeframes range from one to three years and are the number of years expected for a student to reach or maintain proficiency. Growth Target Timeframes are set based on how long it has historically taken similar students to reach or maintain proficiency.

For each selected student, the following is displayed:

- **Scale Score:** The scale score is sortable. Sorting by scale score will result in a list of the selected students in order of scale score (ascending or descending – selecting "Scale Score" once sorts in ascending order, selecting twice sorts in descending order).
- **Standard Error:** (gray band in graphic)
- **Performance Levels:**
  - NP = Not Proficient
  - PP = Partially Proficient
  - P = Proficient
  - A = Advanced
- **Growth Score (SGP):** is typically available after the initial release of reports.
  - The SGP is sortable. Sorting by SGP will result in a list of selected students in order of SGP (ascending or descending – selecting "SGP" once sorts in ascending order, selecting twice sorts in descending order).
- **Growth Target (AGP):** is typically available after the initial release of reports.
  - The AGP is sortable: Sorting by AGP will result in a list of selected students in order of AGP (ascending or descending – selecting "AGP" once sorts in ascending order, selecting twice sorts in descending order).
- **Timeframe:** will be available after the initial release of reports.
  - The Timeframe is sortable. Sorting by Timeframe will result in a list of selected students in order of Timeframe, with AGP as secondary sort (ascending or descending – selecting "Timeframe" once sorts in ascending order, selecting twice sorts in descending order).

Overall Content Performance (Graphic Format)

The performance data for each selected student is also displayed in graphic format. The ranges for the four performance levels are provided in the legend.

Domain and Discipline Data

Science content standards are organized by domains. Raw scores—that is, points earned out of total points possible—are reported for each science domain. Points possible may vary based on the science form the student was assessed with. Raw scores are not comparable across test forms.

Social studies content standards are organized by disciplines. Raw scores—that is, points earned out of total points possible—are reported for each discipline and Grade Level Content Expectation (GLCE) within the discipline. Raw scores are not comparable across test forms.

Menu Options

Filter option information is available in the Dynamic Score Reporting Site User Guide.

Take Action

The take action menu is enabled after a report is generated and contains the following options for the report:

- **About this Report** – this document
- **CSV Download** – two downloadable files that contain all student data that is contained on the report. One file contains the data in the overall proficiency summary and the other file contains the data from the student roster.

- **CSV File Format** – file that describes the data contained in the CSV downloads.
- **PDF Download** – To view a PDF of the report, select "PDF Download". This will open a pdf document of the reports, according to your selected filters.

Help

- Dynamic Score Reporting User Guide – user guide that describes how to access and navigate the Dynamic Score Reporting Site
- Interpretive Guide to MME Reports – provides information on the interpretation and use of MME reports

Report Features

Features of the Student Roster Report are described below.

Sort Options

- **Growth Score (SGP)** – Growth Score can be sorted from high to low on the first selection, if selected a second time, the Growth Score sorts from low to high.
- **Growth Target (AGP)** – Growth Target can be sorted from high to low on the first selection, if selected a second time, the Growth Target sorts from low to high.
- **Growth Target Timeframe** – Growth Target Timeframe can be sorted from high to low on the first selection, if selected a second time, the Growth Target sorts from low to high. The secondary sort for Growth Target Timeframe is the Growth Target score.
- **Scale Score** – Scale Score can be sorted from high to low on the first click, if selected a second time the Scale Score sorts from low to high.
- **Student Name** – the initial display of the report is in alphabetical order with invalid reports grouped at the bottom of the report. Users can select to sort in reverse alphabetical order; invalid reports will display at the top.

Drill Down

The Student Roster Report includes a drill-down feature that enables the user to select the student's name on the Student Roster Report to open an Individual Student Report.

After a user has selected a student name to drill down into the Individual Student Report and the Individual Student Report displays, a breadcrumb area appears below the District/School entity information that displays "Student Roster Report > Individual Student Report". Each report name in the breadcrumb is an active link. To return to the Student Roster Report, the user selects "Student Roster Report".

A user may drill down into a Student Roster Report from the School Demographic Report. When a user accesses the Student Roster Report in this way, the user cannot make any additional filter selections in the report. The user can view the report and use its sorting functionality or drill down further into an Individual Student Report. However, to use the filter options in the Student Roster Report, the user must select the Student Roster Report from the "Choose Report" drop-down menu.

About the Data

- Student Roster Reports are available for paper/pencil and online test takers.
- Tests marked "invalid" display the invalid reason. Invalid tests are not included in school, district, or state aggregations.
- A table provides the overall content performance data in tabular form.
- Overall content performance is marked on the graphic to indicate the student's overall scale score and standard error.
- Each color band of the graphic indicates a performance level:
  - Blue is Advanced
  - Green is Proficient
  - Yellow is Partially Proficient
  - Red is Not Proficient

- The color bands contain a minimum and maximum scale score range for that performance level.
- Growth Score (SGP) (previously called Student Growth Percentiles) will be reported after the initial release of the student reports.
- Growth Target Score (AGP) and Growth Target Timeframe (previously called Adequate Growth Percentiles) will be reported after the initial release of the student reports.
- Growth data is not available for science tests due to no prior assessment data available (prior science testing was field-test only).
- Science reports domain results as raw scores (points earned/points possible). Points possible may vary depending on the test form the student received.
- Social studies reports discipline results as raw scores (points earned/points possible).

Data Definitions

- **Discipline:** Disciplines are used as a means to organize content standards and expectations. Disciplines apply to social studies.
- **Domains:** Domains are used to group the three-dimensional science standards using similar disciplinary core ideas. Domains apply to science.
- **Growth Score (SGP):** Growth Scores (previously called Student Growth Percentiles) describe a student's learning over time compared to other students with comparable prior test scores. Percentiles range from one to 99 and indicate how many scores in the comparison group are below that score.
- **Growth Target (AGP):** Growth Targets (previously called Adequate Growth Percentiles) the amount of growth necessary to reach or maintain proficiency within a set timeframe. Percentiles range from one to 99 and indicate how much growth is required in order for the student to achieve proficiency in the timeframe score.
- **Growth Target (AGP) Timeframe:** Growth Target Timeframes show the amount of time the growth target (AGP) model is expecting the student to take to reach or maintain proficiency. Timeframes range from one to three and indicate how many years it will take for the student to achieve proficiency if they meet the Growth Target Score.
- **Standard Error:** Educational measurements are attempts to capture a student's true score, or ability, in the area being assessed. The standard error around the student score is an estimate of the range of scores one would expect if the student was to be measured repeatedly with parallel assessments.
- **Raw Score:** Points earned/total points possible. Raw scores are not comparable across different forms of the test.
- **Scale Score:** Scale scores are test scores that have been statistically adjusted to a common scale that allows scores to be compared across different forms of the test.

SAT with Essay Student Roster

The SAT with Essay Student Roster Report provides information about student performance by content area.

Overall Proficiency Summary

Overall proficiency summary data for each group is displayed in graphic format for each group.

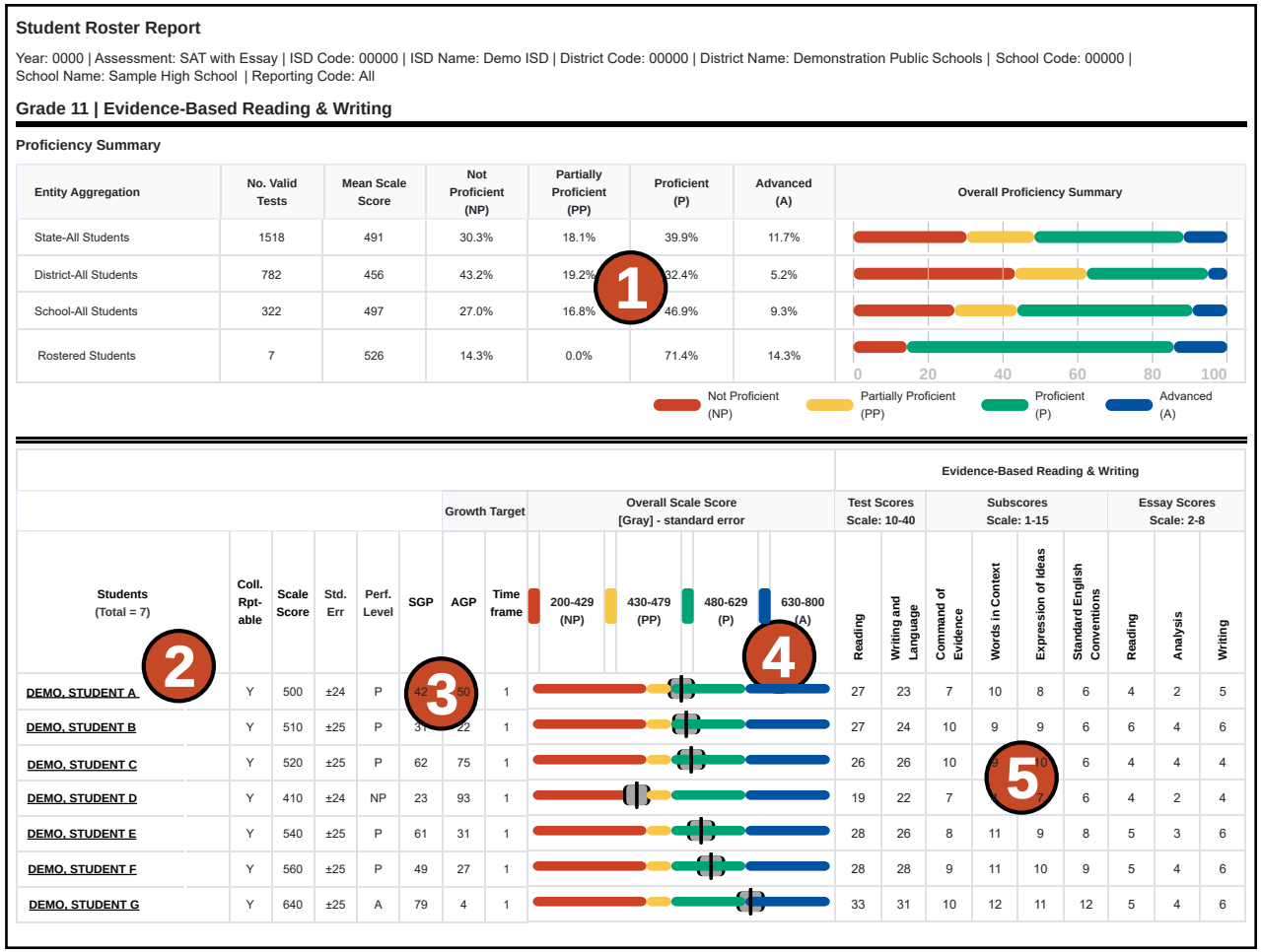
- State – All students in the state
- District – All students in the district
- School – All students in the school
- Rostered Students – Students displayed in the roster according to user filter selections

The data displayed in the table is:

- Total number of valid tests
- Mean scale score
- Percent of valid tests in each performance level (Not Proficient, Partially Proficient, Proficient, and Advanced)

The data displayed in the graph is:

- Percent of valid tests in each performance level (Not Proficient, Partially Proficient, Proficient, and Advanced) is displayed
- Number of valid tests in each performance level (Not Proficient, Partially Proficient, Proficient, and Advanced) is displayed in the hover feature



Student Roster Report

Year: 0000 | Assessment: SAT with Essay | ISD Code: 00000 | ISD Name: Demo ISD | District Code: 00000 | District Name: Demonstration Public Schools | School Code: 00000 | School Name: Sample High School | Reporting Code: All

Grade 11 | Evidence-Based Reading & Writing

Proficiency Summary

Entity Aggregation	No. Valid Tests	Mean Scale Score	Not Proficient (NP)	Partially Proficient (PP)	Proficient (P)	Advanced (A)
State-All Students	1518	491	30.3%	18.1%	39.9%	11.7%
District-All Students	782	456	43.2%	19.2%	32.4%	5.2%
School-All Students	322	497	27.0%	16.8%	46.9%	9.3%
Rostered Students	7	526	14.3%	0.0%	71.4%	14.3%

Overall Proficiency Summary

0 20 40 60 80 100

Not Proficient (NP) | Partially Proficient (PP) | Proficient (P) | Advanced (A)

1

Students (Total = 7)	Coll. Rpt-able	Scale Score	Std. Err	Perf. Level	SGP	AGP	Time frame	Growth Target	Overall Scale Score [Gray] - standard error: 200-429 (NP) / 430-479 (PP) / 480-629 (P) / 630-800 (A)	Evidence-Based Reading & Writing: Test Scores Scale: 10-40 — Reading	Writing and Language	Subscores Scale: 1-15 — Command of Evidence	Words in Context	Expression of Ideas	Standard English Conventions	Essay Scores Scale: 2-8 — Reading	Analysis	Writing
DEMO, STUDENT A	Y	500	±24	P	42	50	1			27	23	7	10	8	6	4	2	5
DEMO, STUDENT B	Y	510	±25	P	31	22	1			27	24	10	9	9	6	6	4	6
DEMO, STUDENT C	Y	520	±25	P	62	75	1			26	26	10	9	10	6	4	4	4
DEMO, STUDENT D	Y	410	±24	NP	23	93	1			19	22	7	7	7	6	4	2	4
DEMO, STUDENT E	Y	540	±25	P	61	31	1			28	26	8	11	9	8	5	3	6
DEMO, STUDENT F	Y	560	±25	P	49	27	1			28	28	9	11	10	9	5	4	6
DEMO, STUDENT G	Y	640	±25	A	79	4	1			33	31	10	12	11	12	5	4	6

2 3 4 5

Rostered Students

Students meeting the selected filter criteria are displayed in ascending alphabetical order by last name, then first name. The sort sequence may be changed to sort in descending alphabetical order.

The following data is displayed in these sections:

- Number of students displayed in the student roster – represents all students who tested in the selected filters including students with invalid tests.
- Student Name as last name, first name, middle initial – student name is sortable.
- Unique Identification Code (UIC) – displayed when clicking the Information or ⓘ icon
- Date of Birth (DOB) – displayed when clicking the Information or ⓘ icon

Overall Content Performance (Table Format)

Overall content area scores—including standard error and the associated performance level—are provided as a graphic and as a table. Scale score ranges for each performance level are also shown on the graphic.

Growth Data includes Growth Score, Growth Target Score, and Growth Target Timeframe. Growth Scores (SGP), Growth Target Scores (AGP), and Growth Target Timeframes will be available after the initial release of student reports.

Growth Scores range from one to 99, with 50 being average, and represent the percent of comparable students—that is, who took the same test and had similar prior test scores—who had growth lower than the selected student. For example, a Growth Score of 60 means the student had higher growth than 60 percent of comparable students.

Growth Target Scores also range from one to 99 and represent the amount growth above or below average a student needs to maintain year-over-year to reach or maintain proficiency by the end of the set number of years. For example, consider a Growth Target Score of 80. This means the student must maintain considerably above average growth year-over-year to reach or maintain proficiency by the end of the set number of years.

Growth Target Timeframes range from one to three years and are the number of years expected for a student to reach or maintain proficiency. Growth Target Timeframes are set based on how long it has historically taken similar students to reach or maintain proficiency.

For each selected student, the following is displayed:

- Scale Score. The scale score is sortable. Sorting by scale score will result in a list of the selected students in order of scale score (ascending or descending – selecting “Scale Score” once sorts in ascending order, selecting twice sorts in descending order).
- Standard Error (gray band in graphic)
- Performance Levels:
  - NP = Not Proficient
  - PP = Partially Proficient
  - P = Proficient
  - A = Advanced
- Growth Score (SGP) will be available after the initial release of reports.
  - The SGP is sortable. Sorting by SGP will result in a list of selected students in order of SGP (ascending or descending – selecting “SGP” once sorts in ascending order, selecting twice sorts in descending order).
- Growth Target (AGP) will be available after the initial release of reports.
  - The AGP is sortable. Sorting by AGP will result in a list of selected students in order of AGP (ascending or descending – selecting “AGP” once sorts in ascending order, selecting twice sorts in descending order).
- Timeframe will be available after the initial release of reports.
  - The Timeframe is sortable. Sorting by Timeframe will result in a list of selected students in order of Timeframe, with AGP as secondary sort (ascending or descending – selecting “Timeframe” once sorts in ascending order, selecting twice sorts in descending order).

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Overall Content Performance (Graphic Format)

The performance data for each selected student is also displayed in graphic format. In addition, the ranges for the four performance levels are provided in the legend.

Evidence-Based Reading & Writing and Math

Individual Test Scores

Individual test scores for Reading, Writing and Language, and Math are provided as scale scores between 10-40. Students at the lowest score bands are beginning to obtain basic foundational skills to be college ready. Increases in the score band indicate that students are capable of more complex college ready skills.

- The Reading test measures comprehensive and reasoning skills and focuses on close reading of passages in a wide array of subject areas.
- The Writing and Language test measures a range of skills including command of evidence, expression of ideas, and the use of standard English conventions in grammar and punctuation.
- The Math test includes multiple-choice and student-produced response questions. It assesses skills in algebra, problem solving and data analysis, manipulation of complex equations, geometry, and trigonometry.

Subscores

Subscores between 1-15 for the Evidenced-Based Reading and Writing and Math provide detail about student performance.

Evidenced-Based Reading and Writing

- **Command of Evidence** – questions focus on the assessment of students' ability to understand, evaluate, and make use of textual evidence (facts, details, statistics, and the like.)
- **Words in Context** – questions focus on the assessment of students' ability to interpret words and phrases in context, analyze word choice rhetorically, and use language effectively in writing.
- **Expression of Ideas** – questions focus on the assessment of students' ability to revise multiparagraph texts for development, organization, and rhetorically effective language use.
- **Standard English Conventions** – questions focus on the assessment of students' ability to edit multiparagraph texts to ensure conformity to the conventions of standard written English sentence structure, usage, and punctuation.

Math

- **Heart of Algebra** – questions focus on the assessment of students' skills with linear equations and systems of linear equations.
- **Problem Solving and Data Analysis** – questions focus on the assessment of students' ability to use ratios, percentages, and proportional reasoning, as well as to describe graphical relationships and analyze data.
- **Passport to Advanced Math** – Evaluates the student's ability to identify and create equivalent algebraic expressions; creating, analyzing and fluently solving quadratic and other nonlinear equations.

Essay Scores

The SAT Essay asks students to read a high-quality source text and write an effective analysis of that text using evidence drawn from the source. It measures a range of skills in reading, analysis, and writing.

Essays scores are based on detailed criteria for each point level 1-4. Two hand-scorers award 1-4 points for each dimension: reading, analysis, and writing. The two scores are added, and the student receives an essay score for each dimension – ranging from 2-8 points.

Menu Options

Filter option information is available in the Dynamic Score Reporting Site User Guide.

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Take Action

The take action menu is enabled after a report is generated and contains the following options for the report:

- **About this Report** – this document
- **CSV Download** – two downloadable files that contain all student data that is contained on the report. One file contains the data in the overall proficiency summary and the other file contains the data from the student roster.
- **CSV File Format** – file that describes the data contained in the CSV downloads.
- **PDF Download** – To view a PDF of the report, select "PDF Download". This will open a pdf document of the reports, according to your selected filters.

Help

- Dynamic Score Reporting User Guide – user guide that describes how to access and navigate the Dynamic Score Reporting Site
- Interpretive Guide to MME Reports – provides information on the interpretation and use of MME reports

Report Features

Features of the SAT with Essay Student Roster Report are described below.

Sort Options

There are several sort options available in the report:

- **Growth Score (SGP)** – Growth Score can be sorted from high to low on the first selection, if selected a second time, the Growth Score sorts from low to high.
- **Growth Target (AGP)** – Growth Target can be sorted from high to low on the first selection, if selected a second time, the Growth Target sorts from low to high.
- **Growth Target Timeframe** – Growth Target Timeframe can be sorted from high to low on the first selection, if selected a second time, the Growth Target sorts from low to high. The secondary sort for Growth Target Timeframe is the Growth Target score.
- **Student Name** – the initial display of the report is in alphabetical order with invalid reports grouped at the bottom of the report. Users can select to sort in reverse alphabetical order; invalid reports will display at the top.
- **Scale Score** – Scale Score can be sorted from high to low on the first click, if selected a second time the Scale Score sorts from low to high.

Drill Down

The Student Roster Report includes a drill-down feature that enables the user to select the student's name on the Student Roster Report to open an Individual Student Report.

After a user has selected a student name to drill down into the Individual Student Report and the Individual Student Report displays, a breadcrumb area appears below the District/School entity information that displays "Student Roster Report > Individual Student Report". Each report name in the breadcrumb is an active link. To return to the Student Roster Report, the user selects "Student Roster Report".

A user may drill down into a Student Roster Report from the School Demographic Report. When a user accesses the Student Roster Report in this way, the user cannot make any additional filter selections in the report. The user can view the report and use its sorting functionality or drill-down further into an Individual Student Report. However, to use the filter options in the Student Roster Report, the user must select the Student Roster Report from the "Choose Report" drop-down menu.

About the Data

- Student Roster Reports are available for paper/pencil and online test takers.

- Tests marked “invalid” display the invalid reason.
- A table provides the overall content performance data.
- Overall content performance is marked on the graphic to indicate the student’s overall scale score and standard error.
- Each color band of the graphic indicates a performance level:
  - Blue is Advanced
  - Green is Proficient
  - Yellow is Partially Proficient
  - Red is Not Proficient
- The color bands contain a minimum and maximum scale score range for that performance level.
- Growth Score (SGP) (previously called Student Growth Percentiles) will be reported after the initial release of the student reports.
- Growth Target Score (AGP) and Growth Target Timeframe (previously called Adequate Growth Percentiles) will be reported after the initial release of the student reports.

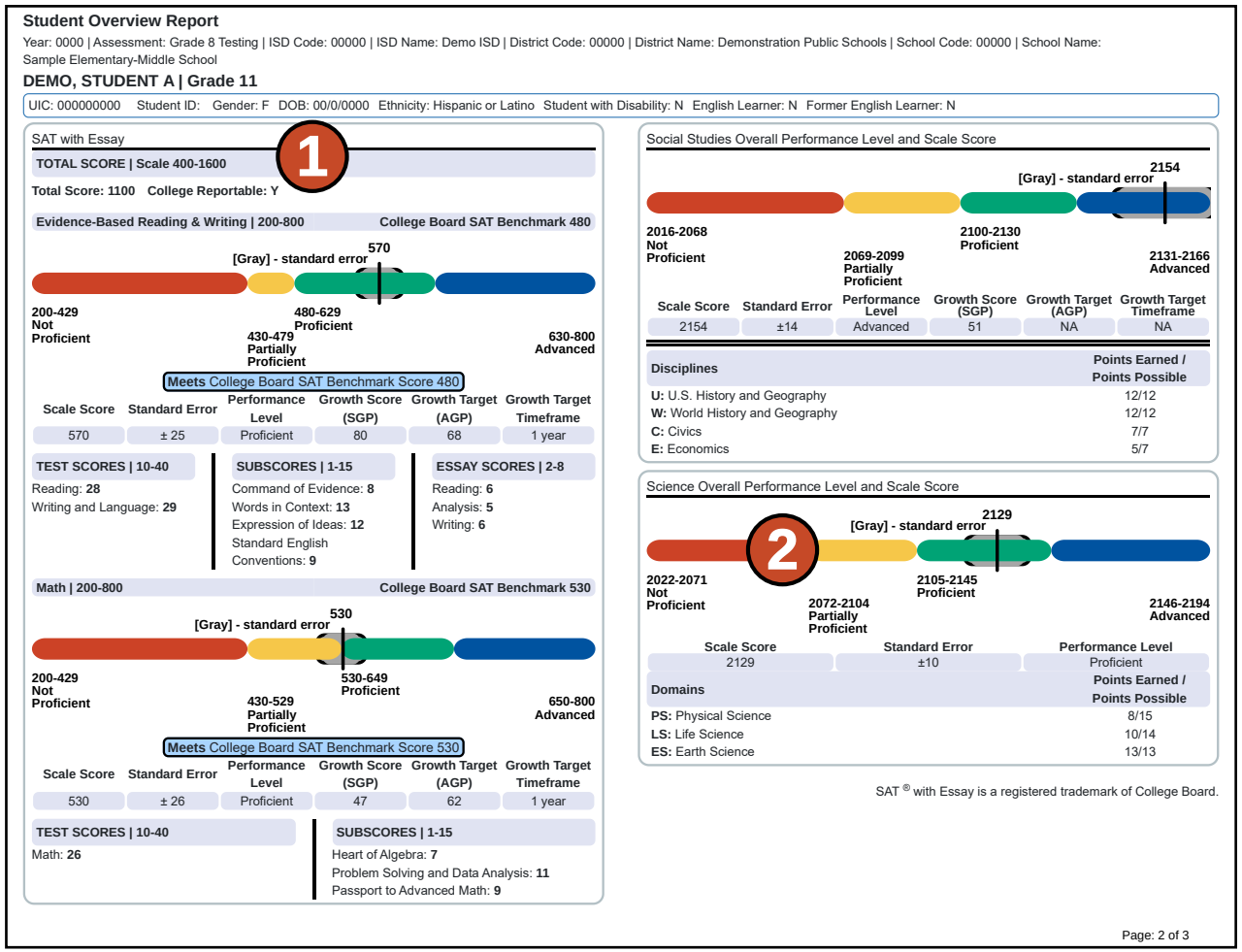
Data Definitions

- **Growth Score (SGP):** Growth Scores (previously called Student Growth Percentiles) describe a student’s learning over time compared to other students with comparable prior test scores. Percentiles range from 1 to 99 and indicate how many scores in the comparison group are below that score.
- **Growth Target (AGP):** Growth Targets (previously called Adequate Growth Percentiles) the amount of growth necessary to reach or maintain proficiency within a set timeframe. Percentiles range from 1 to 99 and indicate how much growth is required in order for the student to achieve proficiency in the timeframe score.
- **Growth Target (AGP) Timeframe:** Growth Target Timeframes show the amount of time the growth target (AGP) model is expecting the student to take to reach or maintain proficiency. Timeframes range from 1 to 3 and indicate how many years it will take for the student to achieve proficiency if they meet the Growth Target Score.
- **Standard Error:** Educational measurements are attempts to capture a student’s true score, or ability, in the area being assessed. The standard error around the student score is an estimate of the range of scores one would expect if the student was to be measured repeatedly with parallel assessments.
- **Raw Score:** Points earned/total points possible. Raw scores are not comparable across different forms of the test.
- **Scale Score:** Scale scores are test scores that have been statistically adjusted to a common scale that allows scores to be compared across different forms of the test.

Student Overview

The MME Student Overview Report provides summary information about student performance on the SAT® with Essay in English language arts and mathematics, the ACT WorkKeys® in workplace skills, and the Michigan Student Test of Educational Progress (M-STEP) in science and social studies. For each selected student the following data is displayed for each tested content in both graphical and table format:

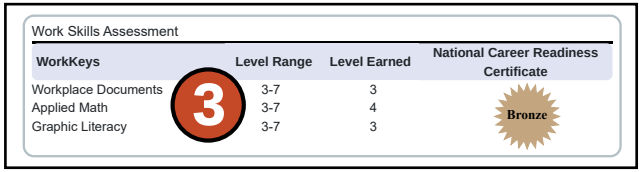
1. SAT Evidence-Based Reading and Writing and Math
2. M-STEP Science and Social Studies Overall Performance and Scale Score
3. ACT WorkKeys Scores



SAT with Essay Total Score, Section Scores, Individual Test Scores and Subscores

Total Score

- The Total Score is the sum of two section scores: Evidence-Based Reading and Writing and Math. The Total Score for the student is given along with a notation if the score is college reportable.
- Reasons why a SAT score might not be college reportable include:
  - the test is invalid
  - a state allowed accommodation was used
  - the student requested a score cancellation



Student Overview

This report helps schools to:

- inform about student proficiency and progress toward proficiency based on Michigan's academic standards
- view overall summary score and performance-level information at a glance
- view a snapshot of individual student performance based on Michigan's Academic Standards
- view SAT Evidence-Based Reading and Writing and Math subscores
- view raw score data on social studies disciplines and science domains
- view the level earned for each ACT WorkKeys assessment and overall NCRC level

Student Overview

Schools shouldn't use this report to:

- make program/placement decisions for individual students, unless required by law
- make day-to-day instructional decisions for individual students
- conduct item-level analysis or item-type reviews that encourage "teaching to the test" rather than to the content standards
- make decisions about continuous improvement goals and strategies for schools or districts

- as a first year English Learner, the student did not take the Evidence-Based Reading and Writing portions of the assessment.

Section Scores

- Overall content area scores—including standard error and the associated performance level—are provided as a graphic and as a table. Scale score ranges for each performance level are also shown on the graphic.
- The Evidence-Based Reading and Writing score is derived from the reading test score and the writing and language test score.
- The Math Section Score is derived from the math test score.
- The SAT benchmark scores are indicators displayed on the student's SAT Score Report provided by the College Board.
- SAT benchmarks apply to both Math and Evidenced-Based Reading and Writing.
- Students meeting the SAT benchmark are on track for college readiness.
- The College Board SAT benchmarks and the MDE proficient cut scores shown on this report are the same.
- Growth Data are available after the initial release of assessment reports and includes:

  – Growth Score (SGP)
  – Growth Target Score (AGP)
  – Growth Target Timeframe

  Growth Scores range from one to 99, with 50 being average, and represent the percent of comparable students—that is, who took the same test and had similar prior test scores—who had growth lower than the selected student. For example, a Growth Score of 60 means the student had higher growth than 60 percent of comparable students.

  Growth Target Scores also range from one to 99 and represent the amount growth above or below average a student needs to maintain year-over-year to reach or maintain proficiency by the end of the

set number of years. For example, consider a Growth Target Score of 80. This means the student must maintain considerably above average growth year-over-year to reach or maintain proficiency by the end of the set number of years.

Growth Target Timeframes range from one to three years and are the number of years expected for a student to reach or maintain proficiency. Growth Target Timeframes are set based on how long it has historically taken similar students to reach or maintain proficiency.

Individual Test Scores

- The Reading test measures comprehensive and reasoning skills and focuses on close reading of passages in a wide array of subject areas.
- The Writing and Language test measures a range of skills including command of evidence, expression of ideas, and the use of standard English conventions in grammar and punctuation.
- The Math test includes multiple-choice and student-produced response questions. It assesses skills in algebra, problem solving and data analysis, manipulation of complex equations, geometry, and trigonometry.

Subscores

The EBRW and Math assessments report multiple subscores for reading, writing and language, and math, all ranging from one to 15 points. Subscores provide more detail about student achievement.

Subscores of the Reading test and the Writing and Language test

- **Command of Evidenc**e – questions focus on the assessment of students' ability to understand, evaluate, and make use of textual evidence (facts, details, statistics, and the like.)
- **Words in Context** – questions focus on the assessment of students' ability to interpret words and phrases in context, analyze word choice rhetorically, and use language effectively in writing.

Additional Subscores of the Writing and Language Test

- **Expression of Ideas** – questions focus on the assessment of students' ability to revise multiparagraph texts for development, organization, and rhetorically effective language use.
- **Standard English Conventions** – questions focus on the assessment of students' ability to edit multiparagraph texts to ensure conformity to the conventions of standard written English sentence structure, usage, and punctuation.

Subscores of the Math Test

- **Heart of Algebra** – questions focus on the assessment of students' skills with linear equations and systems of linear equations.
- **Problem Solving and Data Analysis** – questions focus on the assessment of students' ability to use ratios, percentages, and proportional reasoning, as well as to describe graphical relationships and analyze data.
- **Passport to Advanced Math** – questions focus on the assessment of students' skills with analyzing, manipulating, and rewriting expressions, interpreting and building functions, as well as reasoning with more complex equations.

SAT Essay Scores

The SAT essay asks students to read a high-quality source text and write an effective analysis of that text using evidence drawn from the source. It measures a range of skills in reading, analysis, and writing.

M-STEP Subscore (Discipline or Domain) Performance Data

- Science content standards are organized by domains. Raw scores, or points earned out of total points possible are reported for each discipline. Domain points possible may vary student depending on the test form administered.
- Social studies content standards are organized by disciplines. Raw scores—that is, points earned out of total points possible—are reported for each discipline. Raw scores are not comparable across test forms.

M-STEP Science and Social Studies Overall Performance and Scale Score

- Overall content area scores—including standard error and the associated performance level—are provided as a graphic and as a table. Scale score ranges for each performance level are also shown on the graphic.
- Science content standards are organized by domains. Raw scores, or points earned out of total points possible are reported for each discipline. Domain points possible may vary student depending on the test form administered.
- Social studies content standards are organized by disciplines. Raw scores—that is, points earned out of total points possible—are reported for each discipline. Raw scores are not comparable across test forms.

ACT® WorkKeys® Scores

- ACT WorkKeys is an assessment of job skills in Workplace Documents, Applied Math, and Graphic Literacy. The ACT WorkKeys is a required component of the MME, which assesses students in grade 11 and eligible students in grade 12.
- Students may qualify for a National Career Readiness Certificate® (NCRC), based on the ACT WorkKeys level scores they earn during the Spring MME. Eligibility is determined as follows:
  - Bronze credential: requires at least a Level 3 on all three ACT WorkKeys tests
  - Silver credential: requires at least a Level 4 on all three ACT WorkKeys tests
  - Gold credential: requires at least a Level 5 on all three ACT WorkKeys tests
  - Platinum credential: requires at least a Level 6 on all three ACT WorkKeys tests

Visit the ACT Michigan website (www.act.org/stateanddistrict/michigan) for additional information about the ACT WorkKeys.

Menu Options

Filter option information is available in the Dynamic Score Reporting Site User Guide.

Take Action

The take action menu is enabled after a report is generated and contains the following options for the report:

- **About this Report** – this document
- **PDF Download** – To view a PDF of the report, select "PDF Download". This will open a pdf document of the reports, according to your selected filters.

Help

- Dynamic Score Reporting User Guide – user guide that describes how to access and navigate the Dynamic Score Reporting Site
- Interpretive Guide to MME Reports – provides information on the interpretation and use of MME reports

Report Features

Features of the Student Overview Report are described below.

Go to Student

The Go to Student menu allows the user to go directly to the generated report for the selected student.

About the Data

- Student Roster Reports are available for paper/pencil and online test takers.
- Tests marked "invalid" display the invalid reason.
- A table provides the overall content performance data.
- Overall content performance is marked on the graphic to indicate the student's overall scale score and standard error.

- Each color band of the graphic indicates a performance level:
  - Blue is Advanced
  - Green is Proficient
  - Yellow is Partially Proficient
  - Red is Not Proficient
- The color bands contain a minimum and maximum scale score range for that performance level.
- A table below the overall content performance graphic provides the overall content performance data in tabular form.
- Growth Score (SGP) (previously called Student Growth Percentiles) will be reported after the initial release of the student reports.
- Growth Target Score (AGP) and Growth Target Timeframe (previously called Adequate Growth Percentiles) will be reported after the initial release of the student reports.
- Science domains and social studies disciplines are reported as Points Earned out of Points Possible (PE/PP) raw score data. Depending on the test form administered, students will have different points possible in science.

Data Definitions

- **Discipline:** Disciplines are used as a means to organize content standards and expectations. Disciplines apply to social studies.
- **Domains:** Domains are used to group the three-dimensional science standards using similar disciplinary core ideas. Domains apply to science.
- **Growth Score (SGP):** Growth Scores (previously called Student Growth Percentiles) describe a student's learning over time compared to other students with comparable prior test scores. Percentiles range from 1 to 99 and indicate how many scores in the comparison group are below that score.
- **Growth Target (AGP):** Growth Targets (previously called Adequate Growth Percentiles) the amount of growth necessary to reach or maintain proficiency within a set timeframe. Percentiles range from 1 to 99 and indicate how much growth is required in order for the student to achieve proficiency in the timeframe score.
- **Growth Target (AGP) Timeframe:** Growth Target Timeframes show the amount of time the growth target (AGP) model is expecting the student to take to reach or maintain proficiency. Timeframes range from 1 to 3 and indicate how many years it will take for the student to achieve proficiency if they meet the Growth Target Score.
- **Standard Error:** Educational measurements are attempts to capture a student's true score, or ability, in the area being assessed. The standard error around the student score is an estimate of the range of scores one would expect if the student was to be measured repeatedly with parallel assessments.
- **Raw Score:** Points earned/total points possible. Raw scores are not comparable across different forms of the test.
- **Scale Score:** Scale scores are test scores that have been statistically adjusted to a common scale that allows scores to be compared across different forms of the test.

Student Growth and Proficiency Report

The SAT with Essay and the Michigan Student Test of Educational Progress (M-STEP) Student Growth and Proficiency Reports provide information about student growth by content area. Each student in grades containing reportable growth data will have a separate Student Growth and Proficiency report for each content area test taken.

Grade 11 social studies does not include Growth Target (AGP) or Growth Target Timeframe data. This is because AGP/Timeframe scores are projections based on prior year assessment score. Timeframe projections are one to three years. Due to the gap of three years or more between assessments in this content area, MDE does not report Growth Target data for grades 11 social studies.

Student growth data is not calculated for the M-STEP Science Field Test, therefore the Science Field Test is not included in the Student Growth and Proficiency Report.

The report is divided into three main sections:

1. Student Demographic Information
2. Overall Content Performance
3. Student Growth Data Graph

Student Demographic Information

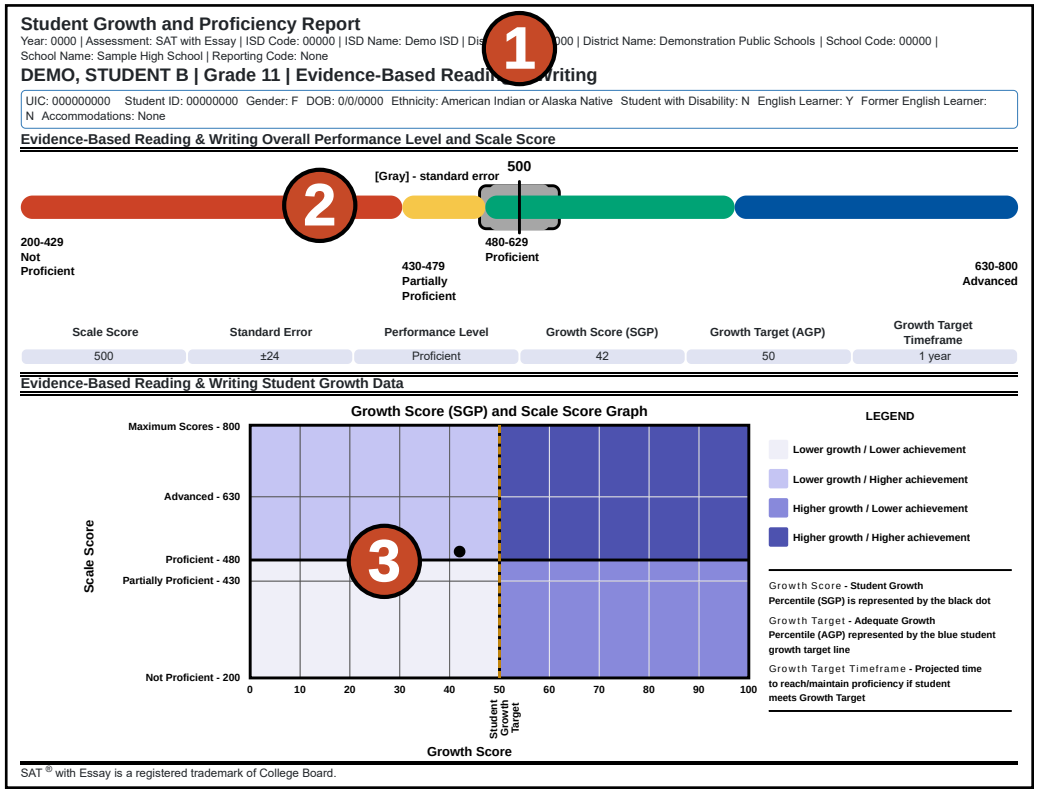
This section provides identifying information about the student including name, grade, gender, date of birth, race/ethnicity, Unique Identification Code (UIC), and, if provided by the school, the district student ID. The report will indicate if the student has been marked as a Student with Disability, English Learner, or Former English Learner in the Michigan Student Data System (MSDS). Additionally, any designated supports or accommodations the student received as indicated by the DRC INSIGHT Portal or the paper Answer Document are displayed.

Overall Content Performance

Overall content area scores—including standard error and the associated performance level—are provided as a graphic and as a table. Scale score ranges for each performance level are also shown on the graphic.

Growth Data are available and includes:

- Growth Score (SGP)
- Growth Target Score (AGP)
- Growth Target Timeframe



Student Growth and Proficiency Report

This report helps schools to:

- view overall summary score and performance level information at a glance
- view a snapshot of student performance
- view a snapshot of student growth target and timeframe to reach or maintain proficiency
- help to inform, along with other local assessment data, student proficiency and progress toward proficiency

Growth scores describe a student's learning over time compared to other students who took the same test and had similar prior test scores. Growth Scores are percentiles that range from one to 99 with 50 being the average and indicate how many scores in the comparison group are below that score. For example, a Growth Score of 60 means the student had higher growth than 60 percent of comparable students.

Growth Target Scores also range from one to 99 and represent the amount of growth above or below average a student needs to maintain year-over-year to reach or maintain proficiency by the end of the set number of years. For example, consider a Growth Target Score of 80. This means the student must maintain considerable above average growth year-over-year to reach or maintain proficiency by the end of the set number of years.

Growth Target Timeframes range from one to three years and are the number of years expected for a student to reach or maintain proficiency. Growth Target Timeframes are set based on how long it has historically taken similar students to reach or maintain proficiency.

Student Growth Data Graph

The Growth Score (SGP) and Scale Score Graph plots student growth score against student scale score.

Student Growth and Proficiency Report

Schools shouldn't use this report to:

- make program-placement decisions for individual students unless required by law
- make day-to-day instructional decisions for individual students
- make decisions about continuous improvement goals and strategies for schools or districts

The x-axis (horizontal axis) of the graph labels student's growth score and ranges from one to 99. Student Growth Target is also displayed with a vertical dotted line. The growth score of 50 is marked by a bold black line that separates the 'lower growth' sections from the 'higher growth' sections.

The y-axis (vertical axis) of the graph labels the student's scale score. Scale score is labeled for each Performance Level range. Scale score ranges for Not Proficient, Partially Proficient, Proficient, and Advanced are labeled. The highest possible scale score is also labeled. The Proficient label is marked by a bold black line that separates the 'lower achievement' sections from the 'higher achievement' sections.

The student's growth score plotted against the scale score is marked by a dot. This dot indicates which section the student's growth and scale score represents. The key to the right of the graph identifies four sections. Each section is identified:

- Lower growth/ lower achievement
- Lower growth/ higher achievement
- Higher growth/ lower achievement
- Higher growth/ higher achievement

The legend to the right of the graph describes each data point for Growth Score, Growth Target, and Timeframe.

Menu Options

Filter option information is available in the Dynamic Score Reporting Site User Guide.

Take Action

The take action menu is enabled after a report is generated and contains the following options for the report:

- **About this Report** – this document
- **PDF Download** – To view a pdf of the report, select "PDF Download". This will open a PDF document of the reports, according to your selected filters. You can print individual or small groups of reports from this option.

Help

- Dynamic Score Reporting User Guide – user guide that describes how to access and navigate the Dynamic Score Reporting Site
- Interpretive Guide to MME Reports – provides information on the interpretation and use of MME reports

Report Features

Features of the Student Growth and Proficiency report are described below.

Go to Student

The Go to Student menu allows the user to go directly to the generated report for the selected student.

About the Data

- Student Growth and Proficiency Reports are available for paper/pencil and online test takers.
- Tests marked "invalid" display the invalid reason.
- Overall content performance is marked on the graphic to indicate the student's overall scale score and standard error.
- Each color band of the graphic indicates a performance level:
  - Blue is Advanced
  - Green is Proficient
  - Yellow is Partially Proficient
  - Red is Not Proficient
- The color bands contain a minimum and maximum scale score range for that performance level.
- A table below the overall content performance graphic provides the overall content performance data in tabular form.
- Growth data is not available for science data due to no prior assessment data available (prior science testing was field-test only).

Data Definitions

- **Growth Score (SGP):** Growth Scores (previously called Student Growth Percentiles) describe a student's learning over time compared to other students with comparable prior test scores. Percentiles range from 1 to 99 and indicate how many scores in the comparison group are below that score.
- Growth Target (AGP): Growth Targets (previously called Adequate Growth Percentiles) the amount of growth necessary to reach or maintain proficiency within a set timeframe. Percentiles range from 1 to 99 and indicate how much growth is required in order for the student to achieve proficiency in the timeframe score.
- **Growth Target (AGP) Timeframe:** Growth Target Timeframes show the amount of time the growth target (AGP) model is expecting the student to take to reach or maintain proficiency. Timeframes range from 1 to 3 and indicate how many years it would take for the student to achieve proficiency if they meet the Growth Target Score.

- **Standard Error:** Educational measurements are attempts to capture a student's true score, or ability, in the area being assessed. The standard error around the student score is an estimate of the range of scores one would expect if the student was to be measured repeatedly with parallel assessments.
- **Scale Score:** Scale scores are test scores that have been statistically adjusted to a common scale that allows scores to be compared across different forms of the test.

Aggregate Data Reports

IMPORTANT: Aggregate reports may reflect non-random sampling disparities due to changes in instructional programming, quarantine requirements, and assessment participation during the 2020-21 school year. District leaders know best what the 2020-21 school year looked like for their district's students and should interpret results accordingly. Comparisons among school, district, and state results are discouraged this year.

Expectation Analysis

The Michigan Student Test of Educational Progress (M-STEP) Expectation Analysis Report provides the percentage of points earned by grade and content area expectation in each discipline for social studies, and the number of students scoring in each of four scoring categories. Expectation Analysis Reports are provided for social studies only.

The report is divided into two main sections:

1. Discipline and Expectation Information
2. Aggregate student data by expectation

District Expectation Analysis Report

This report helps schools to:

- identify expectations on which students perform well and expectations on which students do not perform well
- analyze curricular alignment to Michigan Academic Standards

District Expectation Analysis Report

Schools shouldn't use this report to:

- make program-placement decisions for individual students unless required by law
- conduct item-level analysis or item-type reviews that encourage "teaching to the test" rather than the content standards

District Expectation Analysis Report

Year: 20XX | Assessment: M-STEP| ISD Code: 00000 | ISD Name: Demo ISD | District Code: 00000 | District Name: Demo Public Schools

Grade 11 | Social Studies | All Students

Discipline U Expectations		No. of		0-25% Points Earned	26-50% Points Earned	51-75% Points Earned	76-100% Points Earned
U6.1.02	Evaluate responses of Labor to industrial change	521	84.1	83	0	0	438
U6.1.04	Use census 1790-1940 describe change American population	521	73.7	137	0	0	384
U6.2.02	Explain causes: WWI; America's role in the war	557	78.1	122	0	0	435
U6.2.04	Explain Wilson's Fourteen Points/geopolitical tension	36	63.9	13	0	0	23
U6.3.02	Analyze causes/consequences Progressive reform	521	76.4	123	0	0	398
U7.1.01	Explain cultural changes in "Roaring Twenties"	521	81	99	0	0	422
U7.1.02	Evaluate causes/consequences of Great Depression	557	70.4	165	0	0	392
U7.1.03	Evaluate Roosevelt's New Deal Policies	521	62.4	196	0	0	325

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Discipline and Expectation Information

The report displays the discipline being reported in the gray heading area. The discipline heading can be collapsed by selecting the caret next to the discipline. Next, the expectations within the discipline are listed, including the Michigan Academic Standard abbreviation and a short description of each expectation.

Aggregate student data by expectation

The report displays the Number of Students Assessed in the expectation (not all students were assessed on every expectation), the average percentage of points earned, and the number of students scoring in one of four bands: 0-25%, 26-50%, 51-75%, and 76-100% points earned out of points possible. Individual students may have a different number of points possible associated with an expectation, depending on the test form they received.

Menu Options

Filter option information is available in the Dynamic Score Reporting Site User Guide.

Take Action

The take action menu is enabled after a report is generated and contains the following options for the report:

- **About this Report** – this document
- **CSV Download** – downloadable file that contains all student data that is contained on the report, according to your selected filters.
- **CSV File Format** – file that describes the data contained in the CSV download.
- **PDF Download** – To view a PDF of the report, select "PDF Download". This will open a PDF document of the reports, according to your selected filters.

Help

- Dynamic Score Reporting User Guide – user guide that describes how to access and navigate the Dynamic Score Reporting Site
- Interpretive Guide to MME Reports – provides information on the interpretation and use of MME reports

CSV Files from Dynamic Score Reporting Site

Comma Delimited Files (CSV) are available from the Dynamic Score Reporting Site for the M-STEP Expectation Analysis Report. The data includes school information, student population, demographic group, and student performance data. CSV Files are provided for schools to use as a data resource for school- or district- level data reviews. Schools or districts can use the CSV files to evaluate data in ways that support school improvement goals or for other data-based-decision making purposes.

Demographic Report

Available for both M-STEP and SAT, the Demographic Report provides a comparison of students by grade and content, aggregated across selected demographic groups, showing the percentages proficient at each level (Advanced, Proficient, Partially Proficient, and Not Proficient). The Demographic Report is available at the school, district, and state levels.

The population of students to be displayed may be selected by the user. Users may select from the following student populations:

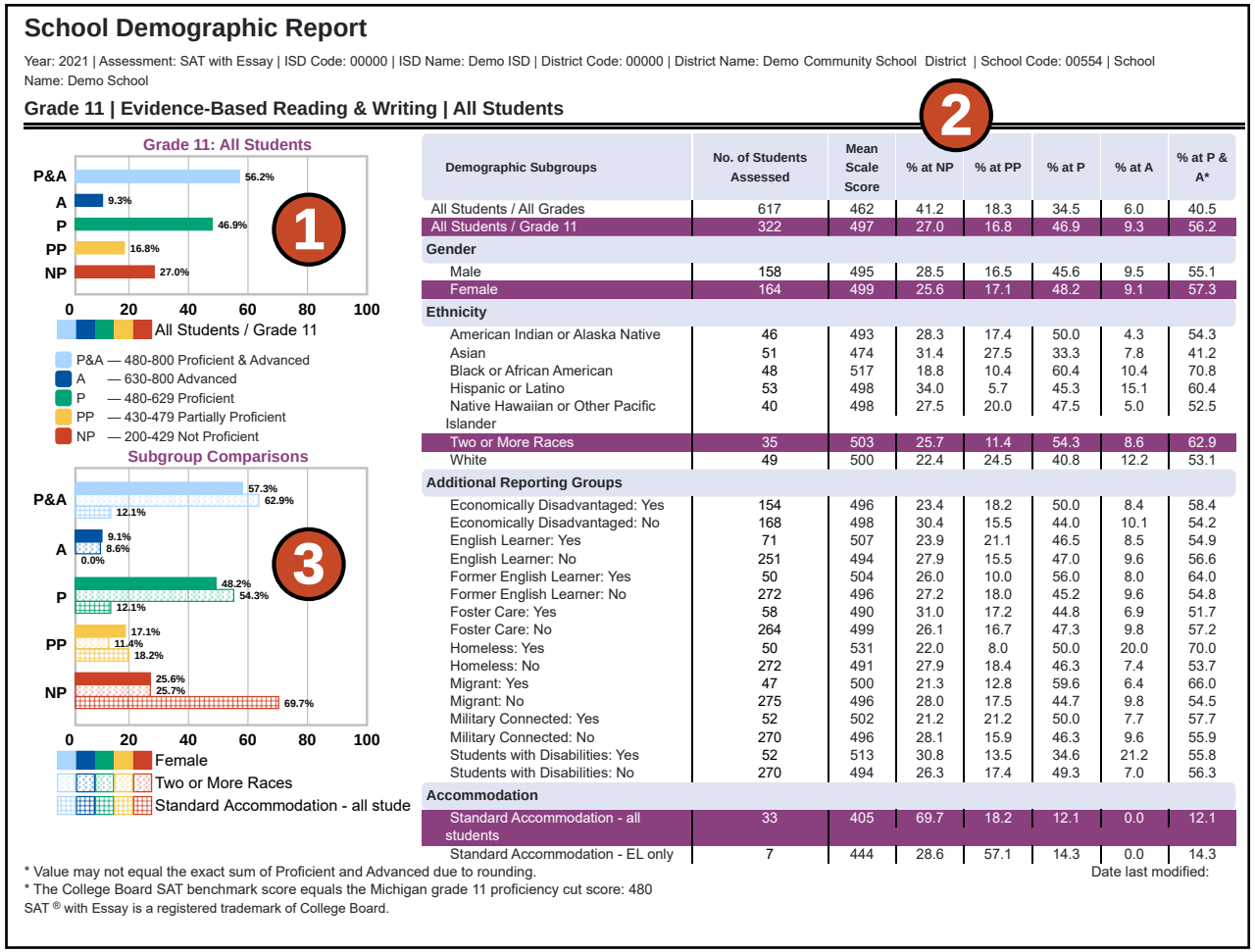
All Students – the default

All Except Students with Disabilities – students who are not marked Special Education in the Michigan Student Data System (MSDS) at the time of testing

Students with Disabilities – students who are marked Special Education in MSDS at the time of testing

After the user selects a grade to view, all tested content for that grade is displayed sequentially in alphabetical order. The report is divided into three main sections:

1. Overall Performance Level Percentages Graphic
2. Demographic Subgroup Performance Level Data Table
3. Subgroup Performance Level Percentages Graphic



School Demographic Report

Year: 2021 | Assessment: SAT with Essay | ISD Code: 00000 | ISD Name: Demo ISD | District Code: 00000 | District Name: Demo Community School District | School Code: 00554 | School Name: Demo School

Grade 11 | Evidence-Based Reading & Writing | All Students

Demographic Subgroups	No. of Students Assessed	Mean Scale Score	% at NP	% at PP	% at P	% at A	% at P & A*
All Students / All Grades	617	462	41.2	18.3	34.5	6.0	40.5
All Students / Grade 11	322	497	27.0	16.8	46.9	9.3	56.2
Gender							
Male	158	495	28.5	16.5	45.6	9.5	55.1
Female	164	499	25.6	17.1	48.2	9.1	57.3
Ethnicity							
American Indian or Alaska Native	46	493	28.3	17.4	50.0	4.3	54.3
Asian	51	474	31.4	27.5	33.3	7.8	41.2
Black or African American	48	517	18.8	10.4	60.4	10.4	70.8
Hispanic or Latino	53	498	34.0	5.7	45.3	15.1	60.4
Native Hawaiian or Other Pacific Islander	40	498	27.5	20.0	47.5	5.0	52.5
Two or More Races	35	503	25.7	11.4	54.3	8.6	62.9
White	49	500	22.4	24.5	40.8	12.2	53.1
Additional Reporting Groups							
Economically Disadvantaged: Yes	154	496	23.4	18.2	50.0	8.4	58.4
Economically Disadvantaged: No	168	498	30.4	15.5	44.0	10.1	54.2
English Learner: Yes	71	507	23.9	21.1	46.5	8.5	54.9
English Learner: No	251	494	27.9	15.5	47.0	9.6	56.6
Former English Learner: Yes	50	504	26.0	10.0	56.0	8.0	64.0
Former English Learner: No	272	496	27.2	18.0	45.2	9.6	54.8
Foster Care: Yes	58	490	31.0	17.2	44.8	6.9	51.7
Foster Care: No	264	499	26.1	16.7	47.3	9.8	57.2
Homeless: Yes	50	531	22.0	8.0	50.0	20.0	70.0
Homeless: No	272	491	27.9	18.4	46.3	7.4	53.7
Migrant: Yes	47	500	21.3	12.8	59.6	6.4	66.0
Migrant: No	275	496	28.0	17.5	44.7	9.8	54.5
Military Connected: Yes	52	502	21.2	21.2	50.0	7.7	57.7
Military Connected: No	270	496	28.1	15.9	46.3	9.6	55.9
Students with Disabilities: Yes	52	513	30.8	13.5	34.6	21.2	55.8
Students with Disabilities: No	270	494	26.3	17.4	49.3	7.0	56.3
Accommodation							
Standard Accommodation - all students	33	405	69.7	18.2	12.1	0.0	12.1
Standard Accommodation - EL only	7	444	28.6	57.1	14.3	0.0	14.3

* Value may not equal the exact sum of Proficient and Advanced due to rounding.
* The College Board SAT benchmark score equals the Michigan grade 11 proficiency cut score: 480
SAT ® with Essay is a registered trademark of College Board.

Date last modified:

Overall Performance Level Percentages Graphic

For all students in the selected grade, student population, and displayed content, the percentages of Advanced, Proficient, Partially Proficient, and Not Proficient students are displayed in a horizontal bar graph. The legend beneath the graph provides the scale score ranges associated with each performance level.

Demographic Subgroup Performance Level Data Table

Performance level data, including the number of students assessed, mean scale score, and percentages of students in each performance level – advanced, proficient, partially proficient, not proficient – as well as advanced and proficient combined, are displayed for all students in all grades, for all students in the reported grade, and for the reported demographic subgroups in a table. The demographic subgroups reported are:

- Gender
  - Male
  - Female
- Ethnicity
  - American Indian or Alaska Native
  - Asian
  - Black or African American
  - Hispanic or Latino
  - Native Hawaiian or Other Pacific Islander
  - Two or More Races
  - White

Demographic Report

This report helps schools to:

- compare overall performance for each aggregated group of students if assessment participation and instructional modality were consistent across the district
- identify needs for academic program improvement or continuous improvement goals
- analyze summary performance by demographic group while considering assessment participation and instructional modality for the demographic group
- compare demographic group performance to overall performance if assessment participation and instructional modality were consistent across the district
- identify areas of strength and weakness by demographic group while considering assessment participation and instructional modality for the demographic group
- analyze curricular alignment and impact by demographic group
- identify achievement gaps by demographic group
- analyze school-level overall performance
- analyze curricular alignment to Michigan Academic Standards

Demographic Report

Schools shouldn't use this report to:

- make program-placement decisions for individual students unless required by law
- make day-to-day instructional decisions for individual students
- conduct item-level analysis or item-type reviews that encourage "teaching to the test" rather than the content standards
- compare a school's performance to other schools in the district when participation rates are not consistent
- compare school or district results to statewide results due to variation in participation and instructional modality across the state

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- Additional Reporting Groups
  - Economically Disadvantaged: Yes
  - Economically Disadvantaged: No
  - English Learner: Yes
  - English Learner: No
  - Former English Learner: Yes
  - Former English Learner: No
  - Foster Care: Yes
  - Foster Care: No
  - Homeless: Yes
  - Homeless: No
  - Migrant: Yes
  - Migrant: No
  - Military Connected: Yes
  - Military Connected: No
  - Students with Disabilities: Yes
  - Students with Disabilities: No
- Students with Disabilities
  - Standard Accommodation—all students
  - Standard Accommodation—EL only

Subgroup Performance Level Percentages Graphic

The user may select up to eight demographic subgroups in the demographic table to compare against the overall student population. Each selected demographic subgroup will be highlighted and a graph entitled “Subgroup Comparisons” with a corresponding horizontal bar graph will display under the overall performance level graph. Patterns and different colors are applied to represent each subgroup and the legend below the graph is updated to display the color and pattern for each selected demographic subgroup displayed in the graph.

Report Features

Features of the Demographic Report are described below.

Menu Options

Filter option information is available in the Dynamic Score Reporting Site User Guide.

Take Action

The take action menu is enabled after a report is generated and contains the following options for the report:

- **About this Report** – this document
- **CSV Download** – downloadable file that contains all student data that is contained on the report, according to your selected filters.
- **CSV File Format** – file that describes the data contained in the CSV download.
- **PDF Download** – To view a PDF of the report, select “PDF Download”. This will open a pdf document of the reports, according to your selected filters.

Help

- Dynamic Score Reporting User Guide – user guide that describes how to access and navigate the Dynamic Score Reporting Site
- Interpretive Guide to MME Reports – provides information on the interpretation and use of MME reports

Drill Down

The School Demographic Report includes a drill-down feature that enables the user to select the link in the Number of Students Assessed column to open a Student Roster Report, which includes the students represented in the aggregated group. When the Number of Students Assessed is zero, the “0” is not an active link.

Note: In some instances, the number of students displayed may differ between the School Demographic Report and the generated Student Roster Report. This is because the Demographic Report does not include invalid tests, while the Student Roster Report does include invalid tests.

After a user has selected the link to drill down into the represented aggregate group, a breadcrumb area appears below the District/School entity information that displays “School Demographic Report > Student Roster Report”. Each report name in the breadcrumb is an active link. To return to the School Demographic Report, the user selects “School Demographic Report”.

The Drill Down feature is not available on the State or District level Demographic Reports.

SAT with Essay Comprehensive Report

The SAT with Essay Comprehensive Report provides a comparison of students by grade and content, aggregated across schools, showing the percentages proficient at each performance level (Advanced, Proficient, Partially Proficient, and Not Proficient). The Comprehensive Report is available at the district level.

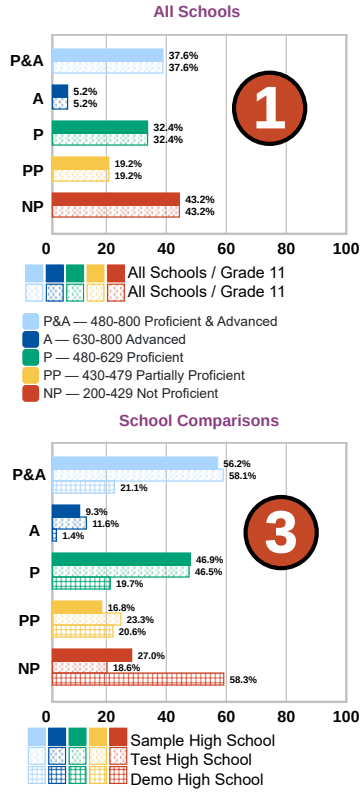
The report is divided into three main sections:

1. Overall Performance Level Percentages Graphic
2. Entity Performance Level Data Table
3. Subgroup Performance Level Percentages Graphic

District Comprehensive Report

Year: 0000 SAT | Assessment: M-STEP | ISD Code: 00000 | ISD Name: Demo ISD | District Code: 00000 | District Name: Demonstration Public Schools

Grade 11 | Evidence-Based Reading & Writing | All Students



Demographic Subgroups	No. of Students Assessed	Mean Scale Score	% at NP	% at PP	% at P	% at A	% at P & A*
All Schools / All Grades	1132	456	47.0	19.0	28.0	4.0	33.0
All Schools / Grade 11	782	456	43.2	19.2	32.4	5.2	37.6
Sample High School	322	497	27.0	16.8	46.9	9.3	56.2
Test High School	43	506	18.6	23.3	46.5	11.6	58.1
Demo High School	417	419	58.3	20.6	19.7	1.4	21.1

This report helps schools to:

- compare overall performance for each aggregated group of students **if** assessment participation and instructional modality were consistent across the school or district
- identify needs for academic program improvement or continuous improvement goals
- analyze school-level overall performance
- compare school performance to other schools in the district **if** assessment participation was consistent across the district
- analyze curricular alignment to Michigan Academic Standards

Schools shouldn't use this report to:

- make program-placement decisions for individual students unless required by law
- make day-to-day instructional decisions for individual students
- conduct item-level analysis or item-type reviews that encourage "teaching to the test" rather than the content standards
- compare a school's performance to other schools in the district when participation rates are not consistent
- compare school, district, or state results due to differences in instructional modality and participation

Overall Performance Level Percentages Graphic

For all students with valid test scores in the selected grade, student population, and displayed content, the percentages of not proficient, partially proficient, proficient, advanced, and students who are proficient and advanced combined are displayed in a horizontal bar graph. The legend beneath the graph provides the scale score ranges associated with each performance level.

Entity Performance Level Data Table

Performance level data are displayed for all schools in the district in the grade assessed as well as for all schools/all grades for the content area, excluding nonpublic schools. This data includes the number of students assessed, the mean scale score, and the percentages of students in each performance level—not proficient, partially proficient, proficient, advanced—as well as the combined percentage of proficient and advanced.

School Performance Level Percentages Graphic

The user may select a school in the table to compare against the overall district performance data. The selected school will be highlighted, and a corresponding horizontal bar graph of the performance level percentages will display under the overall performance level graph.

Take Action

The take action menu is enabled after a report is generated and contains the following options for the report:

- **About this Report** – this document
- **CSV Download** – downloadable file that contains all student data that is contained on the report, according to your selected filters.
- **CSV File Format** – file that describes the data contained in the CSV download.
- **PDF Download** – To view a pdf of the report, select “PDF Download”. This will open a pdf document of the reports, according to your selected filters.

Help

- Dynamic Score Reporting User Guide – user guide that describes how to access and navigate the Dynamic Score Reporting Site
- Interpretive Guide to MME Reports – provides information on the interpretation and use of MME reports

Drill Down

The Comprehensive Report includes a drill-down feature that enables the user to select the name of the school in the report to open the School Demographic Report.

After a user has selected the link to drill down into the School Demographic Report, a breadcrumb area appears below the District/ School entity information that displays “District Comprehensive Report > School Demographic Report”. Each report name in the breadcrumb is an active link. To return to the District Comprehensive Report, the user selects “District Comprehensive Report”.

OEAA Secure Site Data Files

Data files are available for download by authorized school and district users under the Student Test Scores tab on the OEAA Secure Site (www.michigan.gov/oeaa-secure).

Student Data Files are available for the M-STEP, SAT with Essay, and ACT WorkKeys assessments.

Aggregate Data Files are available for the M-STEP and SAT with Essay assessments.

Student Data File

The Student Data File contains detailed individual student data in a Microsoft Excel file. This includes school information, student demographic data, test administration data, and student performance data.

School information – student ISD, district, and school codes

Student Demographic Data – includes Grade, Name, Gender, Ethnicity, UIC, Date of Birth; also includes subgroup information including Economically Disadvantaged, Special Education, Limited English Proficiency, Migrant status and Homeschooled information

Test Administration Data – includes online/paper-pencil format, valid or invalid test (if invalid, includes reason for invalidation of the test), also whether student received accommodations

Student Performance Data – includes student scale score, student growth score, growth target, growth target Time Frame, raw score data for social studies, and claim performance indicators for ELA and mathematics

The Student Data File is provided for schools to use as a data resource for school- or district-level data reviews. Schools or districts can use the Student Data File to manipulate and evaluate data in ways that support School Improvement goals or for other data-based decision-making purposes.

SAT with Essay Student Roster (CSV) File Format

The download file containing SAT with Essay data is a Comma Delimited File (CSV) with the following fields in order:

SAT with Essay Student Roster (CSV) File Layout

Column	Field Name	Description	Field Type (Length)
A	TestCycle	Spring 21 SAT with Essay	varchar(60)
B	ISDCode	ISD Code	varchar(5)
C	ISDName	ISD Name	varchar(50)
D	DistrictCode	District Code	varchar(5)
E	DistrictName	District Name	varchar(50)
F	SchoolCode	School Code	varchar(5)
G	SchoolName	School Name	varchar(50)
H	Grade	Tested Grade	int(2)
I	ContentArea	Content Area • EL=ELA/EBRW • MA=Math	varchar(2)
J	ReportingCode	Reporting Code	varchar(4)
K	ReportingCodeLabel	Reporting Code Label	varchar(25)
L	LastName	Student Last Name	varchar(30)
M	FirstName	Student First Name	varchar(30)
N	MiddleInitial	Student Middle Initial	varchar(1)
O	UIC	Student Unique Identification Code (UIC)	varchar(10)
P	StudentNumber	Locally assigned student number	varchar(20)
Q	CollegeBoardStudentID	College Board student id number	varchar(7)
R	BirthDate	Student Date of Birth (mm/dd/yyyy)	datetime(8)
S	Gender	Student Gender • F = Female • M = Male	varchar(1)
T	Ethnicity	Student Ethnicity: • American Indian or Alaska Native • Asian • Black or African American • Hispanic or Latino • Native Hawaiian or Other Pacific Islander • Two or more races • White	varchar(50)
U	EconDisadv	Economically Disadvantaged • Yes • No	varchar(3)
V	EnglishLearner	English Learner • Yes • No	varchar(3)

Aggregate Data File

The Aggregate Data File contains student performance data used in the selected report. This data includes school information, student population, demographic group, and student performance data.

School information – ISD, district, and school information are included in the selected report

Demographic Data – demographic data, such as Gender, Ethnicity, Economically Disadvantaged, Migrant status, or Other—are included, based on the data contained in the selected report

Student Performance Data – student or student aggregate group scale scores and claim or discipline data are included, based on the data contained in the selected report

The Aggregate Data File is provided for schools to use as a data resource for school- or district-level data reviews. Schools or districts can use the Aggregate Data Files to evaluate data in ways that support school improvement goals or other data-based decision-making purposes.

PSAT 8/9_SAT with Essay Demographic Downloadable (CSV) File Format

The downloaded file is a Comma Delimited File (CSV) with the following fields in order:

PSAT 8/9, SAT with Essay Demographic Downloadable (CSV) File Layout

Column	Field Name	Description	Field Type (Length)
A	TestCycle	Spring 20xx PSAT/SAT	varchar(60)
B	ISDCode	ISD Code	char(5)
C	ISDName	ISD Name	varchar(50)
D	DistrictCode	District Code	char(5)
E	DistrictName	District Name	varchar(50)
F	SchoolCode	School Code	char(5)
G	SchoolName	School Name or All Buildings	varchar(50)
H	Assessment	PSAT 8/9 or SAT with Essay	varchar (14)
I	Grade	Tested Grade	int(2)
J	ContentArea	Content Area • EL=ELA/EBRW (Evidenced-Based Reading and Writing) • MA=Math	varchar(2)
K	StudentPopulation	Student Population • All = All Students • SWD = Students with Disabilities • AED = All Except SWD	varchar(3)
L	DemographicGroup	Demographic Groups • All Students/All Grades • All Students/Grade X • Gender • Ethnicity • Economically Disadvantaged • English Learner • Former English Learner • Foster Care • Homeless • Migrant • Military Connected • Students with Disabilities • Standard Accommodation	varchar(30)
M	DemographicSubGroup	For each Demographic Group, the following subgroups are reported: • Gender: o Male o Female • Ethnicity: o American Indian or Alaska Native o Asian	varchar(50)

Section 7: Additional Resources

Additional Sources of Assessment Results

MI School Data

MI School Data (www.michigan.gov/mischooldata) is an online portal that provides views of Michigan education data to help in making informed educational decisions, to help improve instruction, and to enable school systems to prepare a higher percentage of students to succeed in rigorous high school courses, college, and challenging careers.

MiLearn

The Michigan Linked Educational Assessment Reporting Network (MiLearn) is a Michigan Department of Education service that delivers state assessment data electronically to students, parents, and educators through the district's Student Information System (SIS). MiLearn is updated daily using the Michigan Data Hub data to reflect student enrollment changes.

When users log into the SIS, no second login or password is needed to access MiLearn. The user clicks a "State Assessment Data" link in the SIS to access MiLearn and its reports. Currently, districts on the Michigan Data Hub that use PowerSchool, MISTAR, Skyward, or Synergy as their SIS are able to integrate this free service. If your district is not yet on the Michigan Data Hub, contact support@michigandatahub.org.

The MiLearn system has been designed with flexibility and convenience for districts. You control who sees the data. District administrative staff configure their system security to locally govern which data is provided to their users. Since MiLearn receives rostering updates nightly, your data is always current and reflects the current school and district enrollment. This also means you will see the available state assessment results for new students in the district the next day.

Currently, MiLearn houses three years' worth of data for M-STEP, WIDA, and MI-Access results. Beginning with the Spring 2019 score results, PSAT, SAT, and ACT results have been added to the system. For more information on MiLearn, contact Tim Hall at hallt@michigan.gov.

SAT Information:

- College Board website (www.collegeboard.org)

  The following resources are located on the College Board website:

  – Understanding SAT Scores

  – Benchmarks: K-12 Educator Brief – The College and Career Readiness Benchmarks for the SAT Suite of Assessments

- MME web page (www.michigan.gov/mme)

WorkKeys Information:

- ACT website (www.Act.org)

  The following resources are located on the ACT website:

  – Understanding Scores web page

  – How the ACT WorkKeys Assessments can work for you

  – ACT WorkKeys for Educators and Administrators

  – ACT WorkKeys Michigan web page

  – ACT WorkKeys Assessments

- MME web page (www.michigan.gov/mme)

General Resources

General additional resources are available on the MME web page (www.michigan.gov/mme). Links are provided to the following:

- College Board – Michigan website (www.collegeboard.org/michigan)
- ACT Testing – Michigan website (www.act.org/stateanddistrict/michigan)
- M-STEP web page (www.michigan.gov/mstep)
  Available resources:
  - M-STEP and MME Performance Level (PL) Descriptors
  - M-STEP Performance Level Scale Score Ranges
  - M-STEP Student Data File Format
  - Statewide Summative Assessments Calendars
  - M-STEP: What it is, What it means, and What it Offers – presentation
  - Online Practice for M-STEP science and social studies
  - Sample Item Sets

For instructions on how to obtain access to the Dynamic Reporting Site, go to Secure Site Training (www.michigan.gov/securesitetraining) and click **How do I get access to the Secure Site?**

Also, be sure to sign up for the Office of Student Assessments' Spotlight Newsletter (www.michigan.gov/mde-spotlight) for weekly up-to-date information about Statewide Summative Assessments.

Section 8: Contact Information

School administrators, teachers, and counselors should become familiar with the report layouts and information contained in this document. If you have questions after reviewing this Guide to Reports, or if you need additional information about MME administration procedures, content, scheduling, appropriate assessment of or accommodations for students with disabilities or English Learners (ELs), contact the Michigan Department of Education Office of Educational Assessment and Accountability, using the contact information listed below:

Office of Educational Assessment and Accountability

Andrew Middlestead, Director, OEAA

Kate Cermak, Manager, Test Administration and Reporting

Pietro Semifero, Manager, Online Assessment

Steven Reed, MME Administration and Reporting Consultant

Phoebe Gohs, M-STEP Administration and Reporting Consultant

Pietro Semifero, Interim Manager, Test Development

Nichole Mosser, ELA Consultant

Kyle Ward, Mathematics Consultant

Susan Palmiter, Social Studies Consultant

TJ Heck, Science Consultant

Jennifer Paul, English Learner and Accessibility Assessment Specialist

Ji Zeng, Ph.D., Lead Psychometrician, Psychometrics

Phone: 1-877-560-8378, option 3

Fax: 517-335-1186

Website: www.michigan.gov/mme

E-mail: OEAA@michigan.gov

Section 9: Glossary

- **Benchmark Score:** The SAT benchmark scores are indicators displayed on the student's SAT Score Report provided by the College Board. Students meeting the SAT benchmark are on track for college readiness. SAT benchmarks apply to both Mathematics and to Evidence-Based Reading and Writing. The College Board SAT benchmarks and the MDE proficient cut scores shown on this report are the same.
- **Disciplines:** Disciplines are used as a means of organizing content standards and expectations. Disciplines apply to social studies.
- **Domains:** Domains are used to group the three-dimensional science standards using similar disciplinary core ideas. Domains apply to science.
- **Growth Score (SGP):** Growth Scores (previously called Student Growth Percentiles) SGPs describe a student's learning over time compared to other students with comparable prior test scores. Percentiles range from one to 99 and indicate how many scores in the comparison group are below that score.
- **Growth Target (AGP):** Growth Targets (previously called Adequate Growth Percentiles) This is the amount of growth necessary for the student to reach or maintain proficiency within a set Time Frame. Percentiles range from one to 99 and indicate how much growth is required in order for the student to achieve proficiency in the Time Frame score.
- **Growth Target (AGP) Time Frame:** the amount of time the growth target (AGP) model expects the student to take to reach or maintain proficiency. Time Frames range from one to three and indicate how many years it would take for the student to achieve proficiency if they meet the Growth Target Score.
- **Interquartile Range:** This graphic "box" in the Science Summary Report represents the middle 50 percent of scores for the aggregate group; represents the range of scores from the lower quartile to the upper quartile.
- **Invalid Test:** This is a test that was completed by the student but was not administered according to required test administration policies or procedures. The invalid reasons include:
  - **Invalid Return of Materials (Multiple Answer Documents OR Late Returns):** For paper/pencil tests, either multiple answer documents were received for the student or materials were returned after the materials return deadline.
  - **Misadministration:** The test was not administered according to required test administration policies and procedures. Examples of this type of invalidation include, but are not limited to: test directions not read verbatim during testing; students were able to view content-related materials in the classroom during testing; or the testing environment was not conducive to testing or was not appropriate for the test session.
  - **Missing MSDS data:** Data in the Michigan Student Data System is missing.
  - **Nonstandard Accommodation:** The student received an accommodation during testing that is not allowed. For example, a student who tested in grades 3-5 with any type of calculator has received a nonstandard accommodation because this accommodation changes what is being assessed in the test.
  - **Not Tested in Enrolled Grade (Out of Level):** The student's enrolled grade in MSDS does not match the grade-level test taken.
  - **Prohibited Behavior:** The student engaged in not-allowable behavior during the test session. This may include, but is not limited to: disruptions during testing, accessing prohibited electronic devices, or cheating.
  - **Test Not Attempted:** The student did not take the test or did not complete a sufficient portion of the test to receive a score.

Glossary

- **Item:** This is a test question or stimulus presented to a student to elicit a response.
- **Lower quartile:** In the Science Summary report, 25 percent of all scores in the aggregate group fall below the lower quartile.
- **Mean Scale Score:** The mean scale score for a group of students is determined by summing the valid scale scores across that group (within a grade and content area) and dividing by the number of valid scores used for the summed total.
- **Mean:** This is the average raw score percentage of points earned for the aggregate group.
- **Median:** The median is the middle quartile (50 percent) and marks the midpoint of the data displayed for the aggregate group.
- **Michigan's Academic Standards:** The standards outline learning expectations for Michigan students and are intended to guide local curriculum development. They should be used as a framework by schools for curriculum development, with the curriculum itself prescribing instructional resources, methods, progressions, and additional knowledge valued by the local community.
- **Performance Level:** This provides descriptive information about the student's performance on the M-STEP:
  - **Not Proficient** The student's performance is not yet proficient and indicates minimal understanding and application of key academic content standards defined for Michigan students. The student needs intensive intervention and support to improve achievement.
  - **Partially Proficient** The student's performance is not yet proficient, indicating a partial understanding and application of key academic content standards defined for Michigan students. The student needs assistance to improve achievement.
  - **Proficient** The student's performance indicates understanding and application of key academic content standards defined for Michigan students. The student needs continued support to maintain and improve proficiency.
  - **Advanced** The student's performance exceeds academic content standards and indicates substantial understanding and application of key concepts defined for Michigan students. The student needs support to continue to excel.
- **Raw Score:** These are points earned/total points possible. Raw scores are not comparable across different forms of the test.
- **Scale Score:** Scale scores are test scores that have been statistically adjusted to a common scale, allowing scores to be compared across different forms of the test.
- **Standard Error:** Educational measurements are attempts to capture a student's true score, or ability, in the area being assessed. The standard error around the student score is an estimate of the range of scores that would be expected if the student was to be measured repeatedly with parallel assessments.
- **Upper quartile:** On the Science Summary Report, 75 percent of all scores in the aggregate group fall below the upper quartile.
- **Whiskers:** On a graph of test results, the upper and lower whisker markings represent scores outside of the interquartile range. Scores in the upper "whisker" represent quartile four – that is scores observed in the highest 25 percent of scores in the aggregate group. Scores in the lower "whisker" represent quartile one – scores observed in the lowest 25 percent of scores in the aggregate group.

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Michigan Merit Examination

Appendix: Accessing SAT and ACT WorkKeys Score Reports

SAT with Essay:

Detailed SAT with Essay results are reported in the College Board reporting portal under two categories:

1. Student Score Reports
2. K-12 Educators

For students:

Students may access their SAT score reports through their College Board account. The student's test registration must be linked to their College Board account before the scores are accessible.

Link Your Account to Your Registration: If the student's SAT School Day registration does not appear, students will need to link their account to their registration.

a. Select **My SAT**.

b. On the SAT Registration page, click **Continue** to get started.

c. In the **Previous Registration** section, choose "Yes" and enter the registration number for your SAT School Day in the **Your Previous Registration Number** box.

Students will need a registration number for accessing scores. These can be found in the Roster Report of the K–12 Reporting Portal.

d. Select April 2019 for the **Date You Took the Test**.

e. Complete the **Personal Info** section using your full legal name that matches what your school has on file.

f. Complete the **High School** section by entering your expected graduation date and grade level.

g. Complete the **Mailing Address** section.

h. Verify your email address is correct. Click **Save & Exit**.

There still may be cases where a student is unable to link the test registration and the College Board account because the information is too different. If a student still does not see the registration on the My SAT page, he/she can call the College Board's Student SAT Help Line at 1-866-756-7346.

Note: It may take up to 24 hours for the scores to load into the account once it is linked.

For educators:

Reports for schools and educators are available on the College Board Reporting Portal. To access scores, educators must have a College Board Professional account and have been granted access to reporting by the school's Data Access Tool Manager.

Accessing the College Board Reporting Portal

Each district/school must have at least one Data Access Tool (DAT) Manager. This person is responsible for assigning access to educators within the school. The DAT Manager will assign a user role to each educator. The online reporting portal consists of two areas:

Report Center: Reporting tools allow educators to configure and run online reports, apply filters for data analysis, and print student reports.

Download Center: Data files are available to manage electronic score downloads.

To access the reporting portal:

a. Log in to your College Board professional account.

b. Look under Tools and Services and click K–12 Assessment Reporting.

If you don't see K–12 Assessment Reporting, you don't have access. To identify your school's access manager in order to request access:

a. Log in to your College Board professional account.

b. Scroll down to Add Additional Tools and Services → K–12 → K–12 Assessment Reporting → Request Access.

You should see the name and contact info of your access manager.

Note: Choosing Request Access from the portal dashboard does not notify your access manager. You still need to contact your access manager directly to request access.

ACT WorkKeys

The following reports are mailed to schools in July.

For students:

- **Individual Summary Score Report** – an examinee-level report containing the examinee's reportable scores (Level and Scale scores) and explanations of what the scores mean. The test coordinators will receive one paper report per examinee to be given to the examinee.
- **National Career Readiness Certificates** (NCRCs) – Students earning a certificate may print their own NCRC by creating an account at myworkkeys.com (www.myworkkeys.com).

For educators:

- **Summary Score Report** – an examinee-level report containing the examinee's reportable scores (Level and Scale scores) but without the explanations of what the scores mean. The test coordinator will receive one paper report per examinee to be retained by the school.
- **Roster Score Report** – a roster of examinees showing their scores and when they took the tests. The test coordinator will receive one paper report to be retained by the school.

Student Access to MyWorkKeys.com

Examinees can view their scores by creating and logging into their account at www.myworkkeys.com. In order to access scores, examinees will need to provide matching criteria when creating their account. The five matching criteria are:

- first name
- last name
- month of birth
- day of birth
- State Assigned Student ID Number (SASID).

The SASID will have to be provided by the school.

Note: The SASID is the same as the Unique Identification Code (UIC) that is assigned through the Michigan Student Data System (MSDS) for each student.

Appendix B.3 Grade 8 Testing Interruptive Guide

Michigan grade 8 Testing

Spring 2021

Interpretive Guide to Michigan Grade 8 Testing Reports

September 2021

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grade 8

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grade 8

Section 1: Introduction

Purpose

In 2021, the PSAT™ 8/9 for Grade 8 and the Michigan Student Test of Educational Progress (M-STEP™) were administered to students in grade 8.

PSAT 8/9 assessments measure student knowledge of state academic standards in Evidence-Based Reading and Writing and in Mathematics. These assessments also help prepare students for the SAT® with Essay college entrance exam, which is given each year to high school juniors. Students who are proficient or advanced in Evidence-Based Reading and Writing and/or Mathematics have met the College Board grade-level benchmark for those subjects and are on track for college readiness after high school graduation.

The purpose of PSAT 8/9 and M-STEP testing is to measure Michigan students' achievement on the Michigan Academic Standards; however, the COVID-19 pandemic created significant challenges to instruction during the 2020-21 school year. As a result, the data from the Spring 2021 PSAT 8/9 and the M-STEP assessments should be used cautiously and in combination with other local assessment data (including benchmark assessment data) to identify the learning needs of students and to plan educational programming.

Aggregate report results may reflect non-random sampling disparities caused by changes in instructional programming during the 2020-21 school year. For example, schools across a district may have been provided different, and non-comparable, learning options, including remote, in-person, and/or hybrid programs. In addition, quarantine requirements may have created variations in instructional program offerings throughout the school year, leading to variations in instruction across a school or district. District leaders know best what the 2020-21 school year looked like for their district's students; for example, some districts' school years may have had fewer interruptions and higher test participation than others. Thus, comparisons among school, district, and state results are discouraged this year.

Aggregate report results will reflect only students who participated in the PSAT 8/9 or M-STEP assessments. As a result of the federal accountability waiver of the participation requirement, schools within a district may have variations in participation in statewide summative assessments. Additionally, schools or districts that had larger populations of students learning remotely may not have comparable quantities of students participating in assessments; these differences in participation are not random. Some communities or demographic subgroups of students may be underrepresented in reported results because of variations in assessment participation.

While participation rates varied by grade, overall approximately 70% of eligible students participated in Spring testing for ELA and Mathematics; approximately 61% participated in testing for Science and Social Studies. These rates are significantly lower than participation rates in previous years, making any comparison to previous years' data problematic.

The PSAT 8/9 for English language arts (ELA) and Mathematics and M-STEP for Science and Social studies are the assessments the MDE uses for meeting state and federal accountability requirements. Eligible students with disabilities take the MI-Access assessment. For information about MI-Access assessments, see the MI-Access web page (www.michigan.gov/mi-access).

What's In This Guide?

This guide is intended to help educators understand and use the results from the Spring 2021 grade 8 assessments. Reports available include student-level and aggregate-level data reports.

The reports including PSAT 8/9 data only are the PSAT Individual Student Report, PSAT Student Growth and Proficiency Report, PSAT Student Roster Report, PSAT Comprehensive Report, and the PSAT Demographic Report. Each of these reports contain Evidence-Based Reading and Writing and Mathematics results.

Reports that include both PSAT 8/9 and M-STEP data are the Grade 8 Parent Report, Student Record Labels, and Student Overview Report.

Reports that include M-STEP data only are the M-STEP Individual Student Report, M-STEP Student Roster Report, and the M-STEP Demographic Reports for Science and Social Studies.

Student-level reports provide performance data for individual students. The Student Record Labels, Individual Student Report, Parent Report, Student Roster, Student Growth and Proficiency, and Student Overview reports all provide data at the individual student level.

Aggregate-level reports provide performance data based on groups of students, grouped by grade, school, district, and state. The aggregate-level reports are the Comprehensive Report, Demographic Report, and Expectation Analysis Report.

This guide also includes the following sections.

- **Section 2** provides information on assessment item types and how scores are reported
- **Section 3** describes performance level categories and ranges
- **Section 4** explains the appropriate uses and limitations of the data
- **Section 5** explains how to access reports
- **Section 6** provides detailed descriptions of each report
- **Section 7** includes other resources, both for additional information regarding sources of assessment results and general information on statewide assessments; users are encouraged to review these additional resources for further information on statewide assessment reporting
- **Section 8** includes a glossary of data and reporting terms
- **Section 9** includes contact information for Michigan Department of Education (MDE) staff involved in reporting of data

Family Educational Rights and Privacy Act (FERPA)

Reports that provide student-level data include federally protected student data. Some aggregate reports may contain score data representing small numbers of students. MDE no longer suppresses aggregate data for fewer than ten students. Data representing small numbers of students is also considered federally protected student data. It is imperative that report users understand the sensitive and confidential nature of the data presented on Grade 8 reports and comply with all Family Educational Rights and Privacy Act (https://www2.ed.gov/policy/gen/guid/fpco/ferpa/index.html) regulations.

Invalid Tests

Students who attempted to test in Spring 2021 but who did not receive a valid test score are reported on the student level reports only. While the student's test score is not reported, the reason for the invalid test is provided. Students who do not receive a valid score are not included on aggregated reports.

M-STEP tests may be flagged as invalid for the following reasons:

- Student Prohibited Behavior
- Tested in incorrect grade (Out of Level)
- Did not meet "attemptedness" criteria
  - the student did not answer enough questions to calculate an overall scale score
- Non-standard accommodation administered
- Other misadministrations
  - student not given correct test
  - student not provided appropriate designated support or accommodation
  - paper/pencil test materials not returned according to schedule

PSAT 8/9 tests may be flagged as invalid for the following reasons:

- Mathematics only, exemption for first year English learner (EL) student. **Note:** While the PSAT would be considered invalid without an EBRW score, for accountability purposes, the mathematics portion would be a valid test
- Not tested in enrolled grade
- Student test invalid – the invalid reasons can have several different codes. **Note:** Invalid reasons can be found on the downloadable Student Data File found in the Secure Site under the Reports tab.

(See each assessment's Test Administration Manual for more information.)

MDE Report Descriptions

Report	Assessment	Description	Aggregation	Distribution
Student Record Labels	• PSAT 8/9 • M-STEP	Summarizes individual student achievement in each content area for inclusion in the student's Cumulative Student Record folder	• Individual Student	• Secure Site • Mailed to School
Individual Student Report (ISR)	• PSAT 8/9 • M-STEP	Separated by content area, provides detailed information on individual student achievement, including overall scale score, performance level, growth score, growth target, and target time frame	• Individual Student	• MiLearn – Educator • Dynamic Score Reporting Site
Parent Report	• PSAT 8/9 • M-STEP	Summarizes individual student achievement in each content area, including overall scale score, performance level, and summarized domain or discipline data	• Individual Student	• MiLearn – Educator, Parent, Student • Secure Site • Dynamic Score Reporting Site • Mailed to School
Student Overview	• PSAT 8/9 • M-STEP	Summarizes student achievement for all content areas, including scale score, performance level information, summarized domain and discipline data, growth score, growth target, and target time frame	• Individual Student	• MiLearn – Educator • Dynamic Score Reporting Site
Student Roster	• PSAT 8/9 • M-STEP	Provides detailed information on student achievement for groups of students, including overall scale score, performance level, growth score, growth target, target time frame, and summarized domain and discipline data; summary proficiency information is also included for rostered students, school, district, and state aggregate groups	• Individual Student	• MiLearn – Educator • Dynamic Score Reporting Site

Continued on next page

Report	Assessment	Description	Aggregation	Distribution
Student Growth and Proficiency Report*	• PSAT 8/9 • M-STEP	Provides detailed information about student achievement and student growth data; includes overall scale score, performance level, growth score, growth target, and target time frame; student scale score is shown plotted against growth data	• Individual Student	• Dynamic Score Reporting Site
Expectation Analysis Report	• M-STEP	Provides the percentage of points earned by grade and content area expectation in each discipline and the number of students scoring in each of four score ranges: 0-25%, 26-50%, 51-75%, and 76-100%—this report is available for social studies only and is intended to provide an overview of performance by content expectation	• School • District • State	• Dynamic Score Reporting Site
Demographic Report	• PSAT 8/9 • M-STEP	Provides a comparison of students by grade and content, aggregated across selected demographic groups, showing mean scale scores and percentages of students in each performance level	• School • District • State	• Dynamic Score Reporting Site
Comprehensive Report	• PSAT 8/9 • M-STEP	Provides a comparison of students by grade and content by schools within a district—mean scale scores and percentages of students in each performance level are reported	• District	• Dynamic Score Reporting Site
Student Data File	• PSAT 8/9 • M-STEP	Data file that includes all individual level student data, including scale score, performance level, domain, and discipline data, growth score, growth target, and target timeframe, student demographic information, and valid/ invalid reasons	• Individual Student	• Secure Site
Aggregate Data File	• PSAT 8/9 • M-STEP	Data file that includes aggregated student performance information, including average scale score, count and percent of students in each performance level, and demographic subgroups	• School • District • State	• Secure Site

College Board-Produced Report Descriptions – Available through the K-12 Educator Portal

Report	Description	Aggregation	Distribution
Individual Score Report – Students	A student score report that includes percentiles, color coding showing how the student performs compared to college readiness benchmarks, score projections, and demographic information; students can access their online report (https://studentscores.collegeboard.org/home)	• Individual Student	• Online
Individual Score Report – Educators	A student score report that includes percentiles, color coding showing how the student performs compared to college readiness benchmarks, score projections, and demographic information; a printable report available for educators to access in the K-12 reporting portal (https://k12reports.collegeboard.org/login)	• Individual Student	• Paper
Roster Report	Lists students with aggregate performance data and scores (select a student's name to view an individual student report)	• Individual Student	• Online
Score and Benchmarks	Provides aggregate an d student-level performance; use it to see how well students performed by comparing their scores to mean scores, benchmark data, and other statistics at the school, district and state levels; establish baselines for school improvement goals; and identify which students did not meet benchmarks	• Individual Student	• Online
Instructional Planning	View students by performance group in specific subscores, section, and test scores; see which skills your students are strongest, and which need the most improvement	• Individual Student	• Online

Section 2: Scoring

Scoring by Item Type for M-STEP

All of the processes employed to assess overall student performance begin at the item level. There are two types of items on the M-STEP: Multiple Choice (MC) items and Technology Enhanced (TE) items. Item scores are used in the statistical models and transformations that result in scale scores.

Multiple Choice Item Scores

In Spring 2021, the PSAT 8/9 and M-STEP science and social studies content area assessments included multiple choice (MC) items. When responding to multiple choice items, students select from the available options, only one of which is a correct response to the item. Students who select only the correct option receive a score of one (1) on the MC item. Students who select one of the incorrect options, multiple options, or do not respond receive a score of zero (0). The string of responses from the MC items (e.g. 1,0,0,0,1,…,1) serves as input for the statistical models used to derive scale scores. MC items are scanned and scored by computer.

Technology Enhanced Item Scores

Technology Enhanced (TE) items are computer-delivered test questions that include specialized interactions; these items allow students to respond to tasks that go beyond what can be covered in traditional MC items. TE items require students to produce information, as opposed to simply selecting a choice from answer options. The scoring for most TE items is automated (similar to MC items), eliminating the need for human scorers in the majority of cases. TE item types include the following:

Drag and Drop – students can drag pictures or words into boxes or "drop zones" to indicate an answer

Choice Interaction – similar to a multiple-choice items, but the item can have more than four options, and any number of the options can be correct or incorrect

Hotspot (Count or Selection) – graphics are selectable; for Count, students can choose a particular number of hotspots to show their answer; for Selection, students select a specific hotspot to show their answer

Matching Interaction – an interaction grid that allows the students to select areas of matching between an option in the row with an option in the column

Inline Text Entry – students type the answer in an empty field

Evidence Based Selected Response – an item consisting of two parts, with each part being multiple choice or a hot text paragraph with answers embedded in the paragraph

Hot Text Highlight (Line and Paragraph) – text is selectable, and once selected, will be highlighted for the students; for Line, the students can select one or more lines of text to answer the question; Hot Text Paragraph answers are embedded within a paragraph(s) – students select word(s), phrase(s), sentence(s), and/or paragraph(s) according to the instructions in the stem or question

Order – a list of items or sentences that can be arranged by the students in the correct order

Table – students fill in missing numbers

Drop Down – students select numbers or words from list

Table Interaction – students check appropriate boxes to match columns to rows

Differences between M-STEP Online and Paper/Pencil Items

The MC and CR items appear the same in both the online testing environment and in the paper/pencil print forms. Due to the computer interactions involved in the TE items, the paper/pencil print forms feature variations of the TE items, called companion items, that test the same concepts and skills as the corresponding TE items. The variations are modified for use in a print form.

The print variations of the TE items are created in various ways. Some TE items are converted to multiple-select items (similar to Choice Interaction but with more than four options and possibly more than one correct answer) or table interactions (where the student fills in portions of a table to complete the question). In all cases, the companion items maintain the same point values as their TE counterparts.

PSAT 8/9 Scoring

The PSAT 8/9 is a paper/pencil assessment that includes multiple choice items and student-response questions. The Evidenced-Based Reading and Writing section includes a reading test and a Writing and Language test. Each test is composed of multi-paragraph passages and multiple-choice questions. Mathematics includes multiple-choice and student-produced response questions divided into two portions: one that permits calculator use, and one that does not.

How Scores Are Reported

M-STEP Scale Scores

Students receive an overall scale score in science and social studies for valid tests. Scale scores are the basic unit of reporting. A scaled score is calculated from a total number of points the student scores on the item, statistically adjusted and converted into a consistent, standardized scale that permits direct and fair comparisons of scores from different forms of a test, either within the same administration year or across years. Established psychometric procedures are used to ensure that a given scale score represents the same level of performance regardless of the test form. Scale scores are especially suitable for comparing the performance of different groups of students in the same grade from year to year and for maintaining the same performance standard across the years. While scale scores are comparable across tests in a given content area within the same grade, they are not comparable across content areas or grades. Each overall scale score is indicated by a single number. A standard error is noted for each scale score. The standard error indicates the range of scores that the student would be likely to achieve if he or she were to take the test multiple times.

PSAT 8/9

Students receive a total score that is the sum of their scores on two sections (Evidence-Based Reading and Writing and Mathematics). To calculate section scores, the College Board computes the student's raw score—the number of questions correctly answered—for each section. Nothing is deducted for incorrect answers or for unanswered questions.

Each of the raw score sections is then converted to a scale score of 120 to 720. This conversion process adjusts for slight differences in difficulty among versions of the test and provides a score that is consistent across different versions. The scaled scores are the scores provided on score reports.

Student Growth Data

Student Growth Scores (SGPs, previously called Student Growth Percentiles), Growth Target Scores (AGP, previously called Adequate Growth Percentiles), and Growth Target Time Frame will appear on the Individual Student Report, Student Roster, Student Growth and Proficiency Report, Student Overview Report, in the student data files accessed through the Secure Site for PSAT 8/9 and M-STEP, and on the Student Roster for M-STEP.

Growth data are relative to students in Michigan who had comparable achievement scores on prior state-level tests. This means only those students who received valid scores on the most recent state assessment in a content area and have a valid score on this year's test will receive growth scores. Growth scores will not be available for science tests because prior science tests were field tests.

Growth scores describe a student's learning over time compared to other students who took the same test and had similar prior test scores. Growth Scores are percentiles that range from one to 99, with 50 being the average, and indicate how many scores in the comparison group are below that score. For example, a Growth Score of 60 means the student had higher growth than 60 percent of comparable students.

Growth Target Scores also range from one to 99 and represent the amount growth above or below average a student needs to maintain year-over-year to reach or maintain proficiency by the end of the set number of years. For example, consider a Growth Target Score of 80. This means the student must maintain considerably above average growth year-over-year to reach or maintain proficiency by the end of the set number of years.

Growth Target Time Frames range from one to three years and are the number of years expected for a student to reach or maintain proficiency. Growth Target Time Frames are set based on how long it has historically taken similar students to reach or maintain proficiency.

Growth data add important context for understanding the growth of individual students and growth patterns within groupings of students. When combined with achievement scores and proficiency categories, growth data can help educators understand how students' achievement scores compare to their peers in the state who had comparable prior test scores. Growth data will be added to reports after the initial release of reports, due to the additional time required to calculate them. For more information, select the link Student Growth in School Accountability, located on the MDE Accountability web page (www.michigan.gov/mde-accountability) under the **General Accountability Resources** section.

M-STEP Performance Levels

M-STEP scale scores within each subject area can be described in ranges. The labels applied to these ranges are known as Performance Levels. The M-STEP performance levels are Not Proficient, Partially Proficient, Proficient, and Advanced. The divisions between the levels are often referred to as cut scores. Scale score and performance level range tables are located on the following pages.

The cut scores are recommended by a panel comprised of educators and other stakeholders throughout the state in a process known as standard setting. To set these standards, the panel uses detailed descriptions of what students in each of the performance levels should know and be able to do. Based upon these detailed descriptions and actual assessment items, the panel recommends the score that best separates each performance level from the next; the recommendations are made to Michigan's State Superintendent of Public Instruction, who approves the final cut scores and performance level ranges. While the performance level descriptors necessarily differ by grade and subject area, student achievement—as defined by the obtained performance level—can be reasonably compared across subjects within a grade. Such a comparison can be used to indicate whether students are meeting Michigan Academic Standards in each subject and grade.

Standard Setting for the PSAT 8/9

In May 2019, College Board Psychometrics facilitated a standard setting for the Evidence-Based Reading and Writing (EBRW) and Mathematics sections of the PSAT 8/9 for grade 8. The purpose of the standard setting was to obtain three cut scores for the EBRW and for the Mathematics exams to be used for accountability purposes. The state of Michigan utilizes four Performance Levels (Not Proficient, Partially Proficient, Proficient, or Advanced) and three cut scores defining those levels.

The cut scores for Partially Proficient and Advanced were set by the educator panelists. Each panel used Performance Level Descriptors (PLDs) to guide them in placing bookmarks and making their recommendations. The cut scores for Proficient in EBRW and Mathematics were set to the College Board College and Career Readiness scores. Panelists were asked to verify the reasonableness of the Proficient cut given the previously approved Performance Level Descriptors.

The cut scores recommended by the panels were provided to the state for consideration along with other information considered relevant. The recommendations from the standard setting panel were accepted as the final cut scores.

Section 3: Performance Level Descriptors and Ranges for Grade 8

Performance Level (PL) Descriptors

Not Proficient: The student's performance is not yet proficient and indicates minimal understanding and application of key academic content standards defined for Michigan students. The student needs intensive intervention and support to improve achievement.

Partially Proficient: The student's performance is not yet proficient, indicating a partial understanding and application of key academic content standards defined for Michigan students. The student needs assistance to improve achievement.

Proficient: The student's performance indicates understanding and application of key academic content standards defined for Michigan students. The student needs continued support to maintain and improve proficiency.

Advanced: The student's performance exceeds academic content standards and indicates substantial understanding and application of key concepts defined for Michigan students. The student needs support to continue to excel.

M-Step™
Michigan Student Test of Educational Progress

2021 M-STEP
Performance Level Scale Score Ranges

Subject	Grade	Level 1 Not Proficient	Level 2 Partially Proficient	Level 3 Proficient	Level 4 Advanced
Science	8	1712-1772	1773-1799	1800-1832	1833-1869
Social Studies	8	1706-1770	1771-1799	1800-1830	1831-1867

Michigan grade 8 Testing	2021 Michigan Grade 8 Performance Level Scale Score Ranges				
Subject	**Grade**	**Level 1 Not Proficient**	**Level 2 Partially Proficient**	**Level 3 Proficient**	**Level 4 Advanced**
Evidence-Based Reading and Writing	8	120-359	360-389	390-439	440-720
Mathematics	8	120-369	370-429	430-509	510-720

Note: Michigan uses the PSAT 8/9 results for measuring proficiency on state academic standards in eighth grade English language arts and mathematics. Students who are proficient or advanced in Evidence-Based Reading and Writing and/or in Mathematics have also met the grade level College Board benchmark for those subjects.

PSAT EBRW and Mathematics College Board Readiness Benchmarks

Michigan utilizes PSAT 8/9 results for measuring proficiency on state academic standards in eighth grade English Language Arts (ELA) and Mathematics. Students who are proficient or advanced in Evidence-Based Reading and Writing and/or in Mathematics have also met the grade level College Board benchmark for those subjects. Students who meet the grade level benchmark are on track for college readiness after high school graduation. The PSAT 8/9 benchmark scores for grade 8 are:

PSAT 8/9	Score Range	Benchmark Score
Evidence-Based Reading and Writing	120-720	390
Math	120-720	430
Total Score	**240-1440**	

Section 4: Appropriate Use of the Data Provided in Assessment Reports

Important Note Regarding 2021 PSAT and M-STEP Reports

The COVID-19 pandemic created significant challenges to instruction during the 2020-21 school year. As a result, the data from the Spring 2021 PSAT and M-STEP assessments should be used cautiously and in combination with other local assessment data (including benchmark assessment data) to identify the learning needs of students and to plan educational programming.

Aggregate report results may reflect non-random sampling disparities caused by changes in instructional programming during the 2020-21 school year. For example, schools across a district may have provided different, and non-comparable, learning options, including remote, in-person, and/or hybrid programs. In addition, quarantine requirements may have created variations in instructional program offerings throughout the school year, leading to variations in instruction across a school or district. District leaders know best what the 2020-21 school year looked like for their district's students; for example, some districts' school years may have had fewer interruptions and higher test participation than others. Thus, comparisons among school, district, and state results are discouraged this year.

Reported results will reflect only students who participated in the PSAT and M-STEP assessments. As a result of the federal accountability waiver of the participation requirement, schools within a district may have variations in participation in statewide summative assessments. Additionally, schools or districts that had larger populations of students learning remotely may not have comparable quantities of students participating in assessments; these differences in participation are not random. Some communities or demographic subgroups of students may be underrepresented in reported results because of variations in assessment participation.

Appropriate Uses and Limitations of Summative Assessment Data

Assessment reports and data are an important part of a comprehensive assessment system that schools and districts should use in data-driven decision-making when considering curriculum development and instructional program evaluation. Assessment data should be shared with administrators, curriculum directors, instructional coaches, instructional leaders, and teachers. While reviewing the summative assessment data, educators should be aware of the appropriate uses – and limitations – of the data.

Individual Level Data

Uses: Summary information is provided for individual students. The student's scale score provides an indication of the student's proficiency at the time the test was taken. Scale scores represent what the student knows and is able to do in relation to Michigan's Academic Standards. Scale scores are sorted into ranges of Performance Levels, which are used to indicate student progress toward college and career readiness. Performance Levels are Not Proficient, Partially Proficient, Proficient, and Advanced. More information about Performance Levels and how cut scores are determined is available under "Performance Levels" in the How Scores are Reported chapter of this guide.

Limitations: The PSAT 8/9 and M-STEP are summative assessments administered at the end of the student's instructional program. Assessment results measure the standards that are assessed; they do not reflect student skills and abilities that are not part of assessed content. Results should be used together with other assessment and classroom performance information to provide a more complete picture of student performance.

Aggregated Data

Uses: Summary information about student performance is provided by aggregate groups. This includes:

- overall mean scale scores by school, district, and state
- overall mean scale scores for identified demographic groups by school, district, and state
  - This information can be used to compare the results of a demographic group within your school or district to the overall performance of students in your school or district.
  - Comparisons among schools, district, and the state are discouraged in 2021 due to non-random sampling disparities and differing instructional modalities that occurred during the Spring 2021 administration. District leaders understand their local context and participation rates and should make decisions about appropriate use based on local assessment participation and modes of instruction.
- social studies percentages of points earned by expectation, aggregated at the school, district, and state levels
  - Expectation subscores for M-STEP social studies provide information about aggregate group performance on portions of the test; differences in mean subscores can be used in conjunction with other formative and benchmark assessment data to investigate the curriculum and instruction at the school or district levels.

Limitations: Overall aggregate mean scale scores provide a snapshot of information about a group of students' performance on the test. These results should be used within a comprehensive assessment system that includes formative and benchmark assessment data to provide a more complete picture of student achievement.

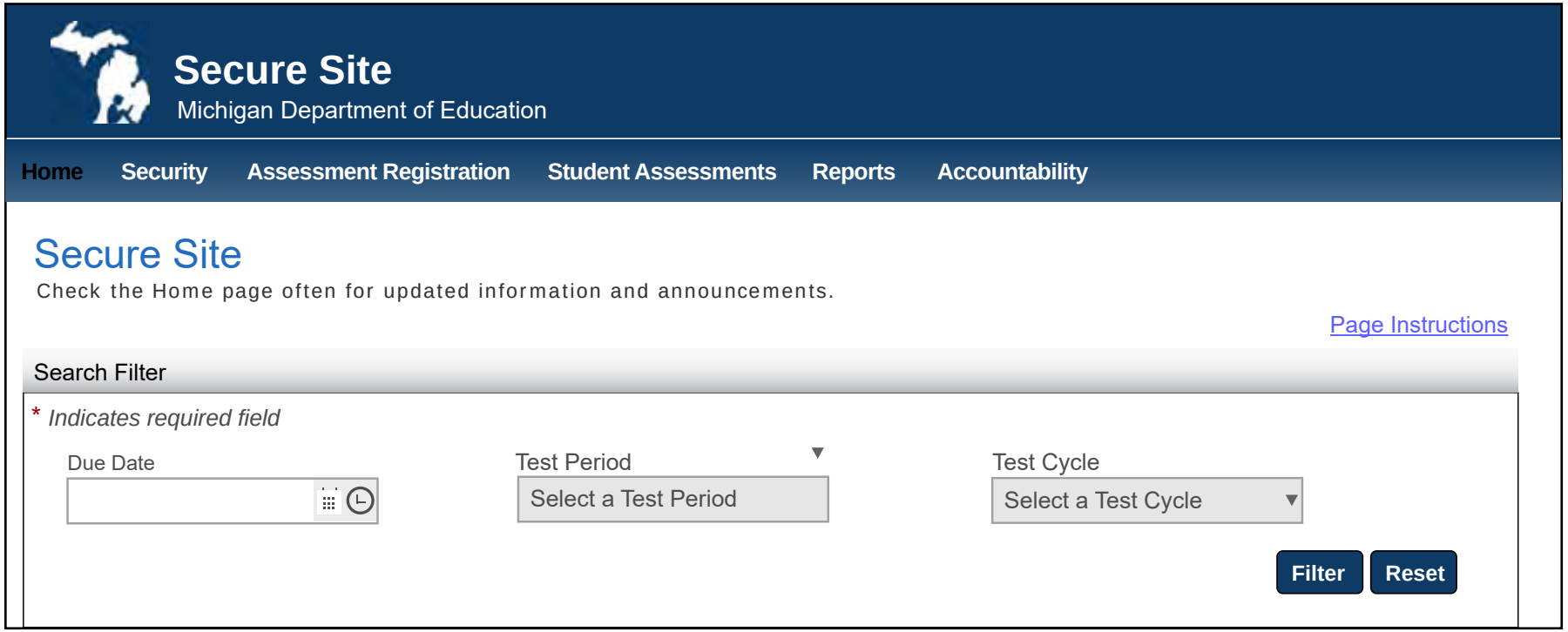
Some expectations are assessed using fewer than five items. Use caution when interpreting results based on a few items on the test. These results should be used within a comprehensive assessment system that includes formative and benchmark assessment data.

Note About Longitudinal Assessment Data: Annual assessment data are usually cross-sectional. Caution should be used if making any historical (longitudinal) comparisons at any level of the student population as assessment scales may have changed over the years.

Section 5: The Dynamic Score Reporting System

Grade 8 assessment reports are available to school and district users through the Dynamic Score Reporting Site, which is accessible through the Office of Educational Assessment and Accountability (OEAA) Secure Site. Detailed directions for accessing the reports are documented in **Michigan's Dynamic Score Reporting Site User Guide** located on the PSAT web page (www.michigan.gov/psat).

The Secure Site

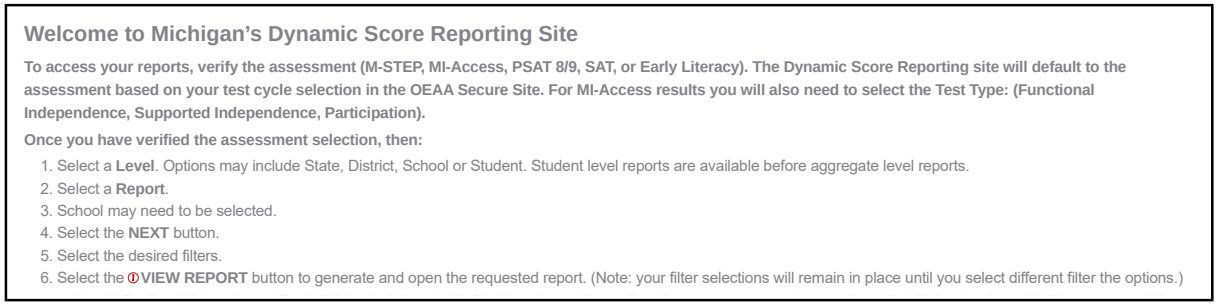


Grade 8 reports are available through the OEAA Secure Site (www.michigan.gov/oeaa-secure). Secure Site access is only available to district and school employees with authorized user roles and permissions granted by their district. You must have a Michigan Education Information System (MEIS) login in order to access the Secure Site. For instructions on how to obtain a MEIS login, go to Secure Site Training web page (www.michigan.gov/securesitetraining) and click "How do I get access to the Secure Site?"

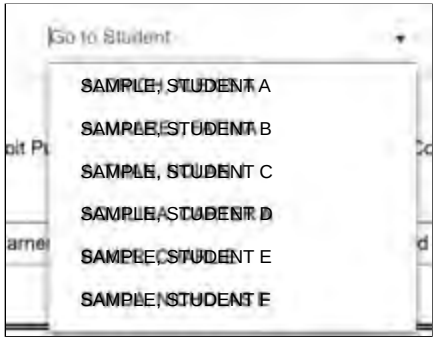
Functionality

Michigan's Dynamic Score Reporting Site provides data for a variety of reports. Regardless of the selected report, users will encounter the following components:

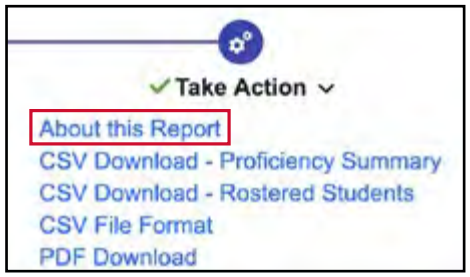
1. **Welcome Page:** provides detailed directions for accessing the reports based on user role



2. **Go to Student Quick Link:** allows user to jump to a student selected in the Filter Pane



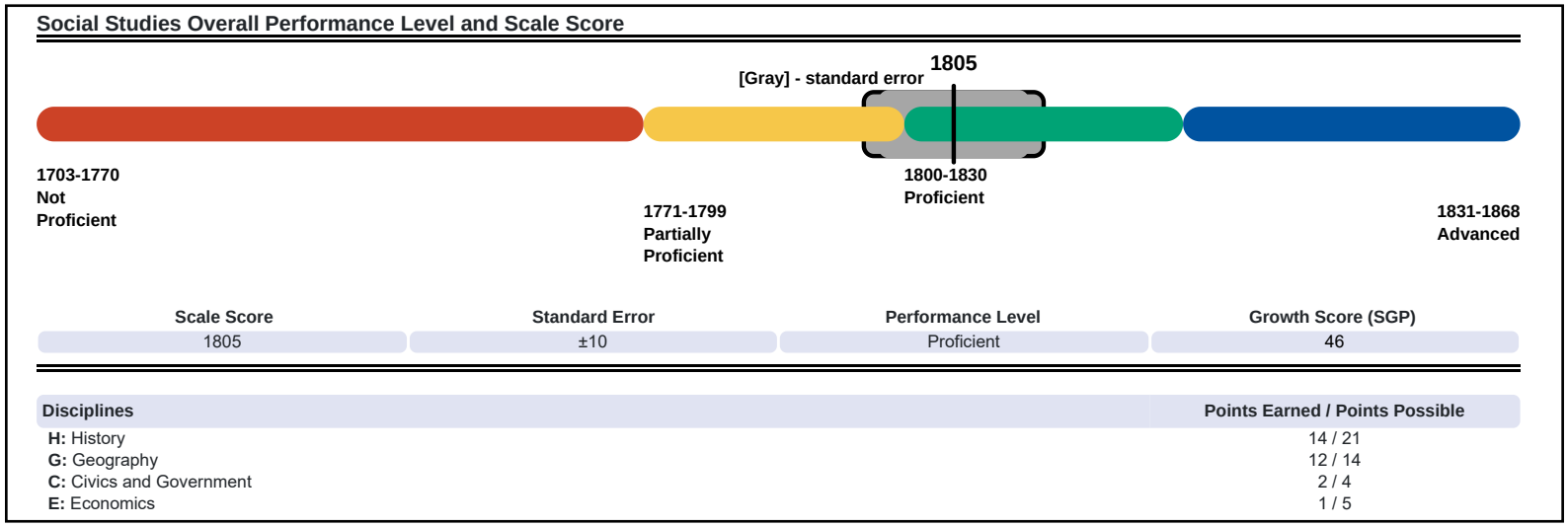
3. **The Take Action menu:** these options vary depending on the report



Options in the **Take Action** menu include:

- **About this Report** – document available in the Dynamic Score Reporting Site describes the data contained in the report
- **PDF Download** – to print reports
- **CSV File Download** – contains all student data found in the report
- **CSV File Format** – describes the data contained in the CSV file download

4. **Report Body** – contains the selected report with the results of the filtered input



Filter Options: Allows the user to filter by grade, content area, reporting code, and individual students. The student filter has a predictive search feature. To filter the results, the user types the name of the student(s) into the search bar. The filter options available vary depending on the report. Filter options may include:

- Grade
- Content Area
- Reporting Code
- Performance Level
- Home Schooled
- Economically Disadvantaged
- English Learner
- Ethnicity
- Former English Learner
- Foster Care
- Gender
- Homeless
- Migrant
- Military Connected
- Students with Disabilities



CSV Files: CSV files are available for the aggregate reports and the Student Roster Report. They are found under the Take Action menu on each report. More information is available about the CSV files in the Report sections and in the CSV File section of this document.

Section 6: Reports

What's New?

Redesigned Parent Report

The Grade 8 Parent Report has been redesigned with bar graphs for PSAT 8/9 English language arts and mathematics and M-STEP science and social studies. The bar graphs display state proficiency levels, student scores, and whether the student meets or does not meet state academic standards for each content area. Science domains and social studies disciplines are displayed as subscores.

Questions to Ask Your Student's Teacher is a feature that has been included to initiate conversations between the parent and the student's teachers. Some questions are applicable for all content areas, and other questions are individualized, based on the student's earned scores in English language arts and mathematics.

PSAT 8/9, Grade 8 Student Roster Report

The PSAT 8/9 Grade 8 Student Roster Report provides individual student performance data by content area, Evidence-Based Reading and Writing or Mathematics. The Roster includes student growth data, graphic representation of performance levels, test scores, and subscore performance. The report provides overall proficiency summary data, displayed in graphic format, for each group: state, district, school, and rostered students, so student's scores may be compared to each group for mean scale scores and proficiency percentages.

PSAT 8/9 Demographic Report

The PSAT Demographic Report provides a comparison of students by grade and content, aggregated across selected demographic groups, showing the percentages of students at each performance level (Not Proficient, Partially Proficient, Proficient, Advanced, and Proficient And Advanced Combined). The Demographic Report is available at the School, District, and State levels.

The user of this report may now select a demographic subgroup in the demographic table to compare against the overall student population. The selected demographic subgroup will be highlighted and a corresponding horizontal bar graph of the performance level percentages will display under the overall performance level graph.

PSAT 8/9 Comprehensive Report

The PSAT Comprehensive Report provides a comparison of students by grade and content, aggregated across schools, showing the percentages proficient at each performance level (Advanced, Proficient, Partially Proficient, and Not Proficient). The Comprehensive Report is available at the district level.

Student Level Data Reports

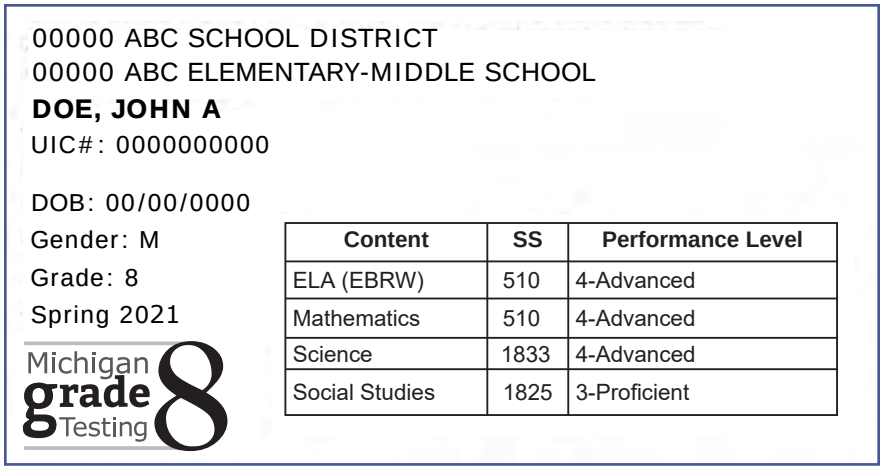
Appropriate Uses of Data in Student Level Data Reports

The COVID-19 pandemic created significant challenges to instruction during the 2020-21 school year. As a result, the data from the Spring 2021 PSAT and M-STEP assessments should be used with caution and in combination with other local assessment data (including benchmark assessment data) to confirm and interpret the results of individual students.

Student Record Labels

The Student Record Labels provide summary student performance levels for individual students. The labels include district and school information, student demographic information, grade 8 administration cycle information, and overall student performance level for tested content areas and assessments.

Student Record Labels are provided for inclusion in the students' Cumulative Student Record or CA-60 folder. The labels are printed and shipped to the school where the student tested in late summer and are available through the Secure Site if schools need to print additional copies.



00000 ABC SCHOOL DISTRICT
00000 ABC ELEMENTARY-MIDDLE SCHOOL
DOE, JOHN A
UIC#: 0000000000

DOB: 00/00/0000
Gender: M
Grade: 8
Spring 2021

Michigan grade 8 Testing

Content	SS	Performance Level
ELA (EBRW)	510	4-Advanced
Mathematics	510	4-Advanced
Science	1833	4-Advanced
Social Studies	1825	3-Proficient

Student Record Labels

This report provides information about the student's overall scale score and performance level.

The report can help educators:

- view overall summary score and performance level information at a glance
- view a student record folder for snapshot at a-glance achievement information

Individual Student Data Report

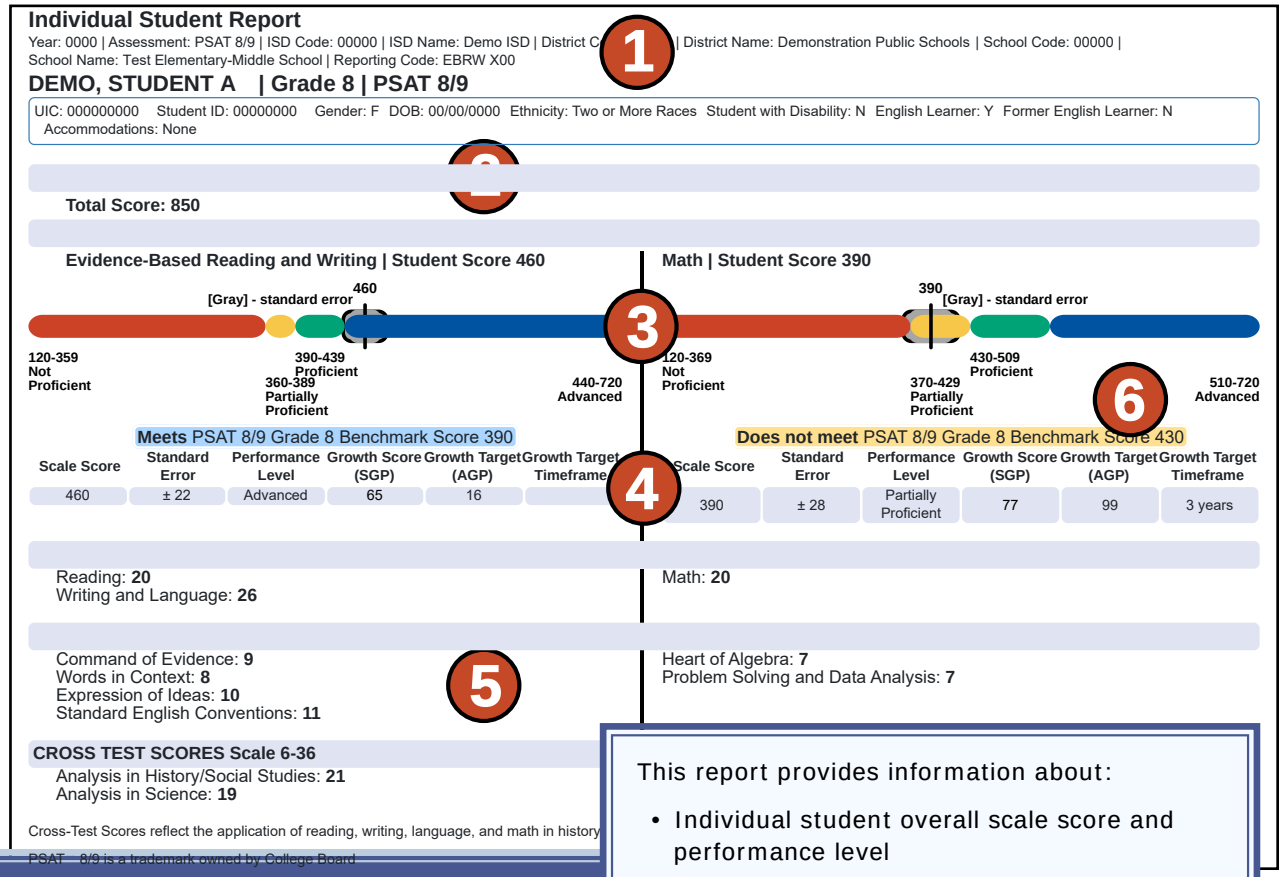
The Individual Student Report (ISR) provides information about student performance by content area. Each student will have an ISR for Science and Social Studies and a separate ISR for PSAT 8/9 Evidence-Based Reading and Writing and Mathematics.

The **PSAT 8/9 ISR** report is divided into six main sections:

1. Student Demographic Information
2. Total Score
3. Overall Content Performance
4. Overall Performance and Growth Data
5. Information on Individual Test Scores, Subscores, and Cross-Test Scores
6. Benchmark Score

Student Demographic Information

This section provides identifying information about the student; this includes the student's name, grade, gender, date of birth, race/ethnicity, Unique



This report can help educators:

- when used with other local assessment data, inform about student proficiency and progress based on Michigan's academic standards
- view overall summary score and performance-level information at a glance
- view a snapshot of individual student performance based on Michigan's Academic Standards

This report provides information about:

- Individual student overall scale score and performance level
- Individual test scores, subscores, and cross-test scores
- Science domain raw scores
- Social studies discipline raw scores
- Growth Data: growth score, growth target, and growth time frame

grade 8

Identification Code (UIC), and the district student ID (if provided by the school). The report will show if the student has been marked in the Michigan Student Data System (MSDS) as a Student with Disability, English Learner, or Former English Learner. Additionally, if the student was assigned accommodations, the accommodations will be listed.

Additionally, any designated supports or accommodations the student received during the assessment are displayed.

Total Score

The total score is the sum of the two section scores: Evidence-Based Reading and Writing, and Mathematics. The Total Score scale is 240-1440.

Overall Content Performance

Overall content area scale scores—including standard error and the associated performance level—are provided as a graphic and as a table. Scale score ranges for each performance level are also shown on the graphic.

Growth Data

Growth Data are available after the initial release of assessment reports. They include:

- Growth Score (SGP)

Growth Scores range from one to 99, with 50 being average, and represent the percentage of comparable students—those who took the same test and had similar prior test scores—who had growth lower than that student. For example, a Growth Score of 60 means the student had higher growth than 60 percent of comparable students.

Growth Target Scores also range from one to 99 and represent the amount growth above or below average a student needs to maintain year-over-year to reach or maintain proficiency by the end of the set number of years. For example, consider a Growth Target Score of 80. This means the student must maintain considerably above average growth year-over-year to reach or maintain proficiency by the end of the set number of years.

Growth Target Time Frames range from one to three years and are the number of years expected for a student to reach or maintain proficiency. Growth Target Time Frames are set based on how long it has historically taken similar students to reach or maintain proficiency.

Information on Individual Test Scores, Subscores, and Cross-Test Scores

Individual Test Scores

The Reading test measures comprehension and reasoning skills and focuses on close reading of passages in a wide array of subject areas.

The Writing and Language test measures a range of skills including command of evidence, expression of ideas, and the use of standard English conventions in grammar and punctuation.

The Mathematics test includes a range of mathematics practices, with an emphasis on problem solving, modeling, using tools strategically, and using algebraic structure.

Subscores

The EBRW and Mathematics assessments report multiple subscores for Reading, Writing and Language, and Mathematics, all ranging from one to 15 points. Subscores provide more detail about student achievement.

Cross-Test Scores

Two cross-test scores are reported:

- Analysis in Science
- Analysis in History/Social Studies

Analysis in History/Social Studies and Analysis in Science Cross-Test scores are based on questions in the Reading, Writing and Language, and Mathematics tests that ask students to think analytically about texts and problems in these subject areas.

Menu Options

Filter option information is available in the Dynamic Score Reporting Site User Guide.

Take Action

The take action menu, which is enabled after a report is generated, contains the following options for the report:

- **About this Report** – this document
- **PDF Download** – To view a PDF of the report, select "PDF Download". This will open a PDF document of the reports, according to your selected filters. You can print individual or small groups of reports from this option.

Help

- Dynamic Score Reporting User Guide – user guide that describes how to access and navigate the Dynamic Score Reporting Site
- Interpretive Guide to Michigan Grade 8 Testing Reports – provides information on the interpretation and use of grade 8 reports

Report Features

Features of the Individual Student Data Report are described below.

Go to Student

The Go to Student menu allows the user to go directly to the generated report for the selected student.

Drill Down

The Individual Student Report includes a drill-down feature that enables the user to select the Student Growth Score on the Individual Student Report to open a Student Growth and Proficiency Report.

When the Student Growth Score has been selected and the user proceeds to drill down into the Student Growth and Proficiency Report and the Student Growth and Proficiency displays, a "breadcrumb" area appears below the District/School entity information. The breadcrumb displays "Individual Student Report > Student Growth and Proficiency Report". Each report name in the breadcrumb is an active link. To return to the Individual Student Report, the user selects "Individual Student Report".

A user may drill down into an Individual Student Report from the Student Roster Report. When the ISR is accessed in this way, the user cannot make any additional filter selections in the report. The user can view the report or drill down further into a Student Growth and Proficiency Report. However, to use the filter options in an individual ISR, the user must select the Individual Student Report from the "Choose Report" drop-down menu.

Data Definitions

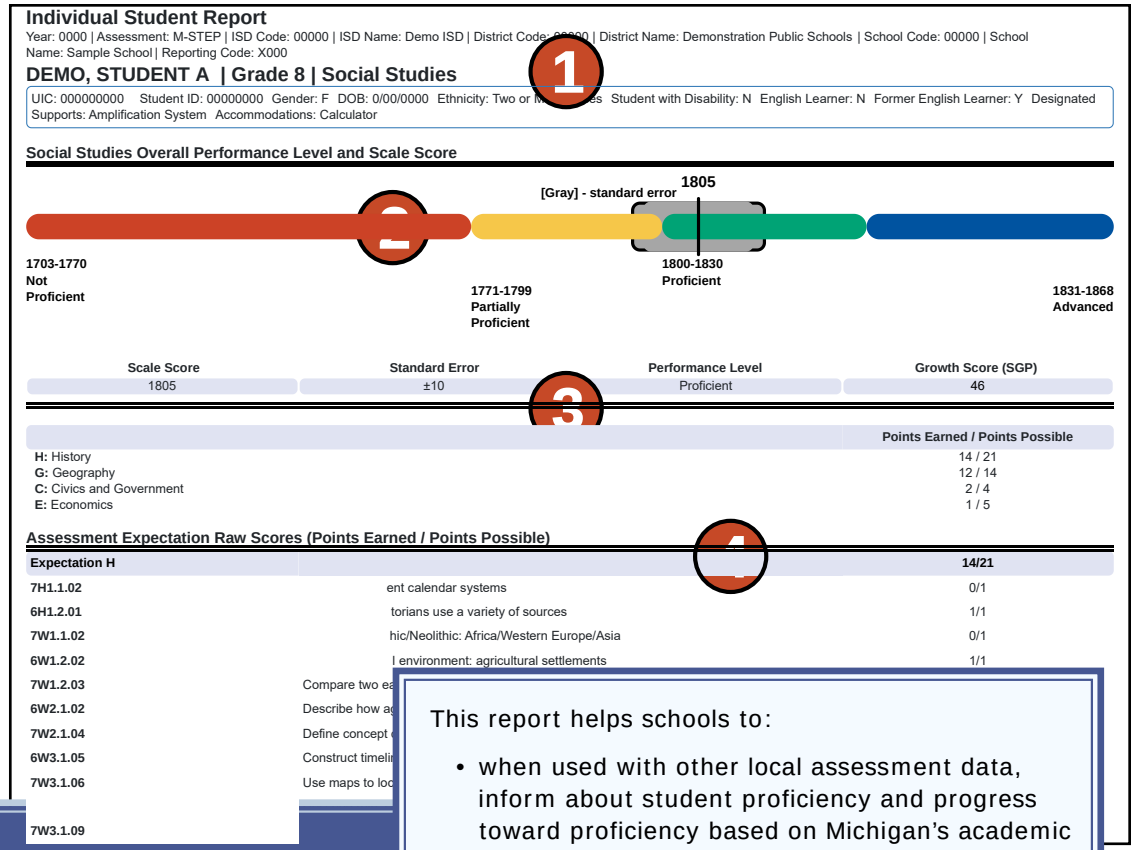
- **Growth Score (SGP)** [previously called Student Growth Percentiles]: describes a student's learning over time compared to other students with comparable prior test scores. Percentiles range from one to 99 and indicate how many scores in the comparison group are below that score.
- **Growth Target (AGP)** [previously called Adequate Growth Percentiles]: specifies the amount of growth necessary for the student to reach or maintain proficiency within a set timeframe. Percentiles range from one to 99.
- **Growth Target (AGP) Timeframe**: the amount of time the growth target (AGP) model is expecting the student will need to reach or maintain proficiency. Timeframes range from one to three, indicating how many years it would take for the student to achieve proficiency if they meet the Growth Target Score.
- **Standard Error:** Educational measurements are attempts to capture a student's true score, or ability, in the area being assessed. The standard error around the student score is an estimate of the range of scores that would be expected if the student were to be measured repeatedly with parallel assessments.
- **Scale Score:** Scale scores are test scores that have been statistically adjusted to a common scale, allowing scores to be compared across different forms of the test.

The **M-STEP ISR** report is divided into four main sections:

1. Student demographic information
2. Overall content performance
3. Growth data
4. Science domains/social studies disciplines

Student Demographic Information

This section provides identifying information about the student including name, grade, gender, date of birth, race/ethnicity, Unique Identification Code (UIC), and, if provided by the school, the district student ID. The report will indicate if the student has been marked as a Student with Disability, English Learner, or Former English Learner in the Michigan Student Data System (MSDS). Additionally, any designated supports or accommodations the student received as indicated by the DRC INSIGHT Portal or the paper Answer Document are displayed.



Individual Student Report

Year: 0000 | Assessment: M-STEP | ISD Code: 00000 | ISD Name: Demo ISD | District Code: 00000 | District Name: Demonstration Public Schools | School Code: 00000 | School Name: Sample School | Reporting Code: X000

DEMO, STUDENT A | Grade 8 | Social Studies

1

UIC: 000000000 Student ID: 00000000 Gender: F DOB: 0/00/0000 Ethnicity: Two or M[illegible]es Student with Disability: N English Learner: N Former English Learner: Y Designated Supports: Amplification System Accommodations: Calculator

Social Studies Overall Performance Level and Scale Score

2

1805

[Gray] - standard error

1703-1770 Not Proficient	1771-1799 Partially Proficient	1800-1830 Proficient	1831-1868 Advanced

Scale Score	Standard Error	Performance Level	Growth Score (SGP)
1805	±10	Proficient	46

3

	Points Earned / Points Possible
H: History	14 / 21
G: Geography	12 / 14
C: Civics and Government	2 / 4
E: Economics	1 / 5

Assessment Expectation Raw Scores (Points Earned / Points Possible)

4

Expectation H		14/21
7H1.1.02	ent calendar systems	0/1
6H1.2.01	torians use a variety of sources	1/1
7W1.1.02	hic/Neolithic: Africa/Western Europe/Asia	0/1
6W1.2.02	l environment: agricultural settlements	1/1
7W1.2.03	Compare two ea	
6W2.1.02	Describe how ag	
7W2.1.04	Define concept	
6W3.1.05	Construct timeli	
7W3.1.06	Use maps to loc	
7W3.1.09		

Schools shouldn't use this report to:

- make program/placement decisions for individual students, unless required by law
- make day-to-day instructional decisions for individual students
- conduct item-level analysis or item-type reviews that encourage "teaching to the test" rather than to the content standards
- make decisions about continuous improvement goals and strategies for schools or districts

This report helps schools to:

- when used with other local assessment data, inform about student proficiency and progress toward proficiency based on Michigan's academic standards
- view overall summary score and performance-level information at a glance
- view a snapshot of individual student performance based on Michigan's Academic Standards
- analyze summary performance on the English language arts and mathematics claims
- view raw score data on social studies disciplines

Overall Content Performance

Overall content area scale scores—including standard error and the associated performance level—are provided as a graphic and as a table. Scale score ranges for each performance level are also shown on the graphic.

Growth data are typically available after the initial release of assessment reports and include:

- Growth Score (SGP)
- Growth Target Score (AGP)
- Growth Target Timeframe

Growth Scores range from 1 to 99, with 50 being average, and represent the percent of comparable students—that is, those who took the same test and had similar prior test scores—who had growth lower than that student. For example, a Growth Score of 60 means the student had higher growth than 60 percent of comparable students.

Growth Target Scores also range from 1 to 99 and represent the amount of growth above or below average a student needs to maintain year-over-year to reach or maintain proficiency by the end of the set number of years. For example, consider a Growth Target Score of 80. This means the student must maintain considerably above average growth year-over-year to reach or maintain proficiency by the end of the set number of years.

Growth Target Timeframes range from 1 to 3 years and are the number of years expected for a student to reach or maintain proficiency. Growth Target Timeframes are set based on how long it has historically taken similar students to reach or maintain proficiency.

Science Domains/Social Studies Disciplines

Science domains and social studies disciplines are reported as Points Earned out of Points Possible (PE/PP) raw score data. Depending on the test form administered, students will have different points possible in science.

M-STEP ISR Report Features

Features of the M-STEP Individual Student Reports are described below.

Menu Options

Filter option information is available in the Dynamic Score Reporting User Guide.

Take Action

The take action menu is enabled after a report is generated and contains the following options for the report:

- **About this Report** – this document
- **PDF Download** – To view a PDF of the report, select “PDF Download”. This will open a PDF document of the reports, according to your selected filters. You can print individual or small groups of reports from this option.

Help

- Dynamic Score Reporting User Guide – user guide that describes how to access and navigate the Dynamic Score Reporting Site
- Interpretive Guide to Michigan Grade 8 Testing Reports – provides information on the interpretation and use of grade 8 reports

Go to Student

The Go to Student menu allows the user to go directly to the generated report for the selected student.

Drill Down

The Individual Student Report includes a drill-down feature that enables the user to select the Student Growth Score on the Individual Student Report to open a Student Growth and Proficiency Report when growth scores are available.

After a user has selected the Student Growth Score to drill down into the Student Growth and Proficiency Report and the Student Growth and Proficiency Report displays, a breadcrumb area appears below the District/School entity information that displays “Individual Student

Report > Student Growth and Proficiency Report". Each report name in the breadcrumb is an active link. To return to the Individual Student Report, the user selects "Individual Student Report".

A user may drill down into an Individual Student Report from the Student Roster Report. When a user accesses the Individual Student Report in this way, the user cannot make any additional filter selections in the report. The user can view the report or drill down further into a Student Growth and Proficiency Report. However, to use the filter options in the Individual Student Report, the user must select the Individual Student Report from the "Choose Report" drop-down menu.

About the Data

- Individual Student Reports are available for paper/pencil and online test takers.
- Tests marked "invalid" display the invalid reason.
- Overall content performance is marked on the graphic to indicate the student's overall scale score and standard error.
- Each color band of the graphic indicates a performance level:
  - Blue is Advanced
  - Green is Proficient
  - Yellow is Partially Proficient
  - Red is Not Proficient
- The color bands contain a minimum and maximum scale score range for that performance level.
- A table below the overall content performance graphic provides the overall content performance data in tabular form.
- Growth Score (SGP) (previously called Student Growth Percentiles) will be reported after the initial release of the student reports.
- Growth Target Score (AGP) and Growth Target Timeframe (previously called Adequate Growth Percentiles) will be reported after the initial release of the student reports.
- Growth data is not available for:
  - all science tests due to no prior assessment data available (prior science testing was field-test only).
  - science reports domain results as raw scores (points earned/points possible). Points possible may vary depending on the test form the student received.
  - social studies reports discipline results as raw scores (points earned/points possible).

Data Definitions

- **Discipline:** Disciplines are used as a means to organize content standards and expectations. Disciplines apply to social studies.
- **Domains:** Domains are used to group the three-dimensional science standards using similar disciplinary core ideas. Domains apply to science.
- **Growth Score (SGP):** (previously called Student Growth Percentiles) describe a student's learning over time compared to other students with comparable prior test scores. Percentiles range from one to 99 and indicate how many scores in the comparison group are below that score.
- **Growth Target (AGP):** (previously called Adequate Growth Percentiles) the amount of growth necessary to reach or maintain proficiency. Timeframes range from one to three and indicate how many years it would take for the student to achieve proficiency if they meet the Growth Target Score.
- **Standard Error:** Educational measurements are attempts to capture a student's true score, or ability, in the area being assessed. The standard error around the student score is an estimate of the range of scores one would expect if the student was to be measured repeatedly with parallel assessments.
- **Raw Score:** Raw scores are points earned/total points possible. Raw scores are not comparable across different forms of the test.
- **Scale Score:** Scale scores are test scores that have been statistically adjusted to a common scale that allows scores to be compared across different forms of the test.

Parent Report

Parent Reports are printed and shipped to schools for distribution to parents. Parent Reports are also made available to schools in the Dynamic Score Reporting Site for reprinting or to provide additional copies to parents or guardians.

The Parent Report provides information for parents about student performance in tested content areas.
This report includes five main sections:

1. Superintendent Letter
2. What Do My Student's Overall Scores Mean?
3. PSAT 8/9 Evidence-Based Reading and Writing (EBRW) and Mathematics Performance Data
4. M-STEP Science and Social Studies Performance Data
5. Questions to Ask Your Student's Teacher
6. Where Can I Find More Information?

Superintendent Letter

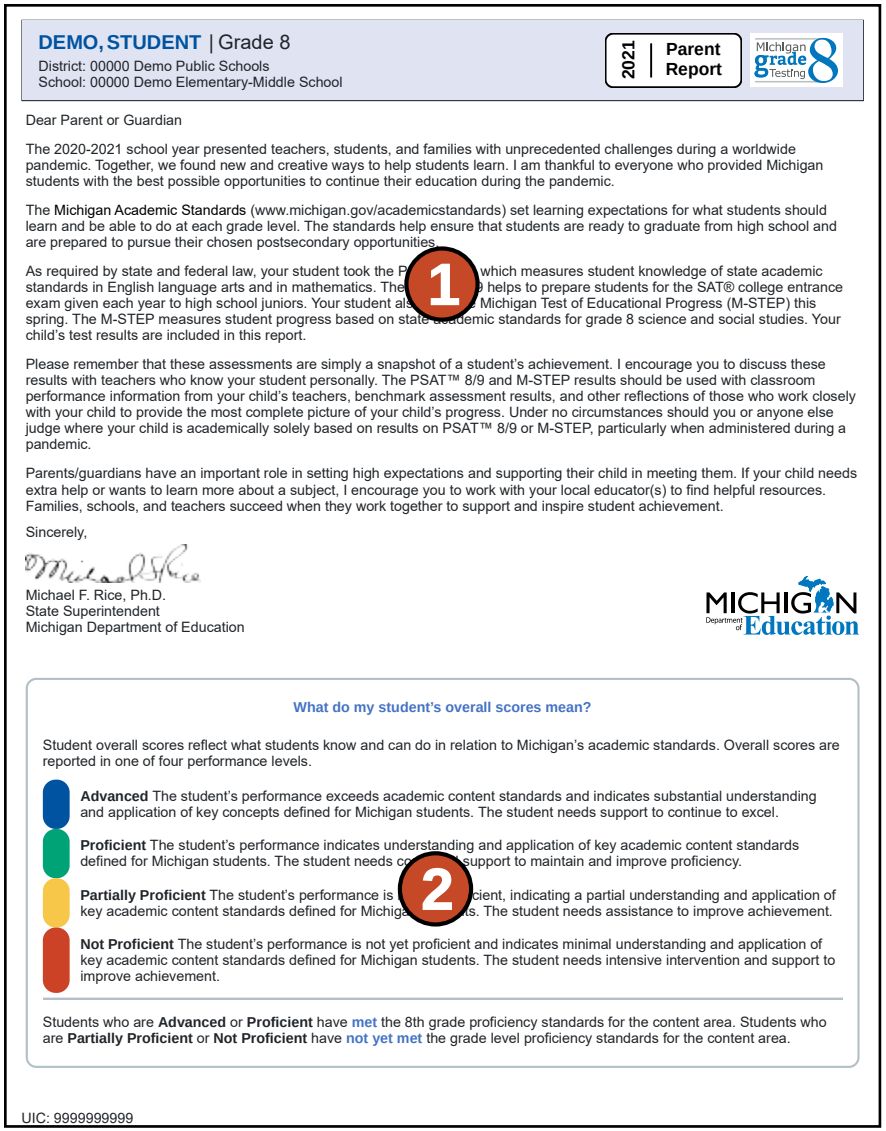
A letter to parents from the State Superintendent is included on each report. This letter describes the Grade 8 assessments and the content assessed

What Do My Student's Overall Scores Mean?

Student overall scores reflect what students know and can do in relation to Michigan's academic standards. Overall scores are reported in one of four performance levels.

Overall Content Performance

Grade 8 reports include summary information about PSAT 8/9 and the M-STEP assessments, along with additional information and resources for parents.



DEMO, STUDENT | Grade 8
District: 00000 Demo Public Schools
School: 00000 Demo Elementary-Middle School

2021 | Parent Report

Michigan grade 8 Testing

Dear Parent or Guardian

The 2020-2021 school year presented teachers, students, and families with unprecedented challenges during a worldwide pandemic. Together, we found new and creative ways to help students learn. I am thankful to everyone who provided Michigan students with the best possible opportunities to continue their education during the pandemic.

The Michigan Academic Standards (www.michigan.gov/academicstandards) set learning expectations for what students should learn and be able to do at each grade level. The standards help ensure that students are ready to graduate from high school and are prepared to pursue their chosen postsecondary opportunities.

As required by state and federal law, your student took the P which measures student knowledge of state academic standards in English language arts and in mathematics. The helps to prepare students for the SAT® college entrance exam given each year to high school juniors. Your student als Michigan Test of Educational Progress (M-STEP) this spring. The M-STEP measures student progress based on stat demic standards for grade 8 science and social studies. Your child's test results are included in this report.

Please remember that these assessments are simply a snapshot of a student's achievement. I encourage you to discuss these results with teachers who know your student personally. The PSAT™ 8/9 and M-STEP results should be used with classroom performance information from your child's teachers, benchmark assessment results, and other reflections of those who work closely with your child to provide the most complete picture of your child's progress. Under no circumstances should you or anyone else judge where your child is academically solely based on results on PSAT™ 8/9 or M-STEP, particularly when administered during a pandemic.

Parents/guardians have an important role in setting high expectations and supporting their child in meeting them. If your child needs extra help or wants to learn more about a subject, I encourage you to work with your local educator(s) to find helpful resources. Families, schools, and teachers succeed when they work together to support and inspire student achievement.

Sincerely,

Michael F. Rice, Ph.D.
State Superintendent
Michigan Department of Education

MICHIGAN Department of Education

What do my student's overall scores mean?

Student overall scores reflect what students know and can do in relation to Michigan's academic standards. Overall scores are reported in one of four performance levels.

Advanced The student's performance exceeds academic content standards and indicates substantial understanding and application of key concepts defined for Michigan students. The student needs support to continue to excel.

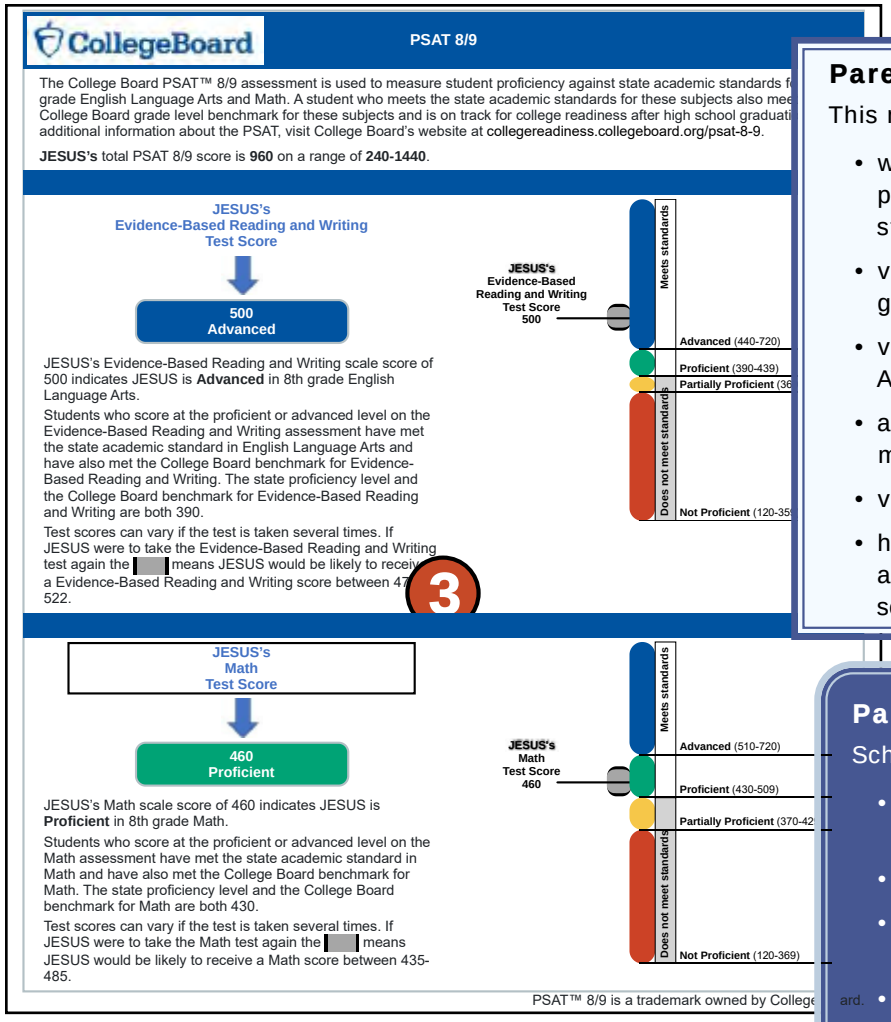
Proficient The student's performance indicates understanding and application of key academic content standards defined for Michigan students. The student needs c support to maintain and improve proficiency.

Partially Proficient The student's performance is cient, indicating a partial understanding and application of key academic content standards defined for Michig s. The student needs assistance to improve achievement.

Not Proficient The student's performance is not yet proficient and indicates minimal understanding and application of key academic content standards defined for Michigan students. The student needs intensive intervention and support to improve achievement.

Students who are **Advanced** or **Proficient** have met the 8th grade proficiency standards for the content area. Students who are **Partially Proficient** or **Not Proficient** have not yet met the grade level proficiency standards for the content area.

UIC: 9999999999



CollegeBoard

PSAT 8/9

The College Board PSAT™ 8/9 assessment is used to measure student proficiency against state academic standards f
grade English Language Arts and Math. A student who meets the state academic standards for these subjects also mee
College Board grade level benchmark for these subjects and is on track for college readiness after high school graduati
additional information about the PSAT, visit College Board's website at collegereadiness.collegeboard.org/psat-8-9.

JESUS's total PSAT 8/9 score is **960** on a range of **240-1440**.

JESUS's
Evidence-Based Reading and Writing
Test Score

500
Advanced

JESUS's Evidence-Based Reading and Writing scale score of 500 indicates JESUS is **Advanced** in 8th grade English Language Arts.

Students who score at the proficient or advanced level on the Evidence-Based Reading and Writing assessment have met the state academic standard in English Language Arts and have also met the College Board benchmark for Evidence-Based Reading and Writing. The state proficiency level and the College Board benchmark for Evidence-Based Reading and Writing are both 390.

Test scores can vary if the test is taken several times. If JESUS were to take the Evidence-Based Reading and Writing test again the [redacted] means JESUS would be likely to receiv
a Evidence-Based Reading and Writing score between 47
522.

JESUS's
Evidence-Based
Reading and Writing
Test Score
500

Meets standards
Advanced (440-720)
Proficient (390-439)
Partially Proficient (36
Does not meet standards
Not Proficient (120-35

JESUS's
Math
Test Score

460
Proficient

JESUS's Math scale score of 460 indicates JESUS is **Proficient** in 8th grade Math.

Students who score at the proficient or advanced level on the Math assessment have met the state academic standard in Math and have also met the College Board benchmark for Math. The state proficiency level and the College Board benchmark for Math are both 430.

Test scores can vary if the test is taken several times. If JESUS were to take the Math test again the [redacted] means JESUS would be likely to receive a Math score between 435-485.

JESUS's
Math
Test Score
460

Meets standards
Advanced (510-720)
Proficient (430-509)
Partially Proficient (370-42
Does not meet standards
Not Proficient (120-369)

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ard.

Parent Report

This report helps schools to:

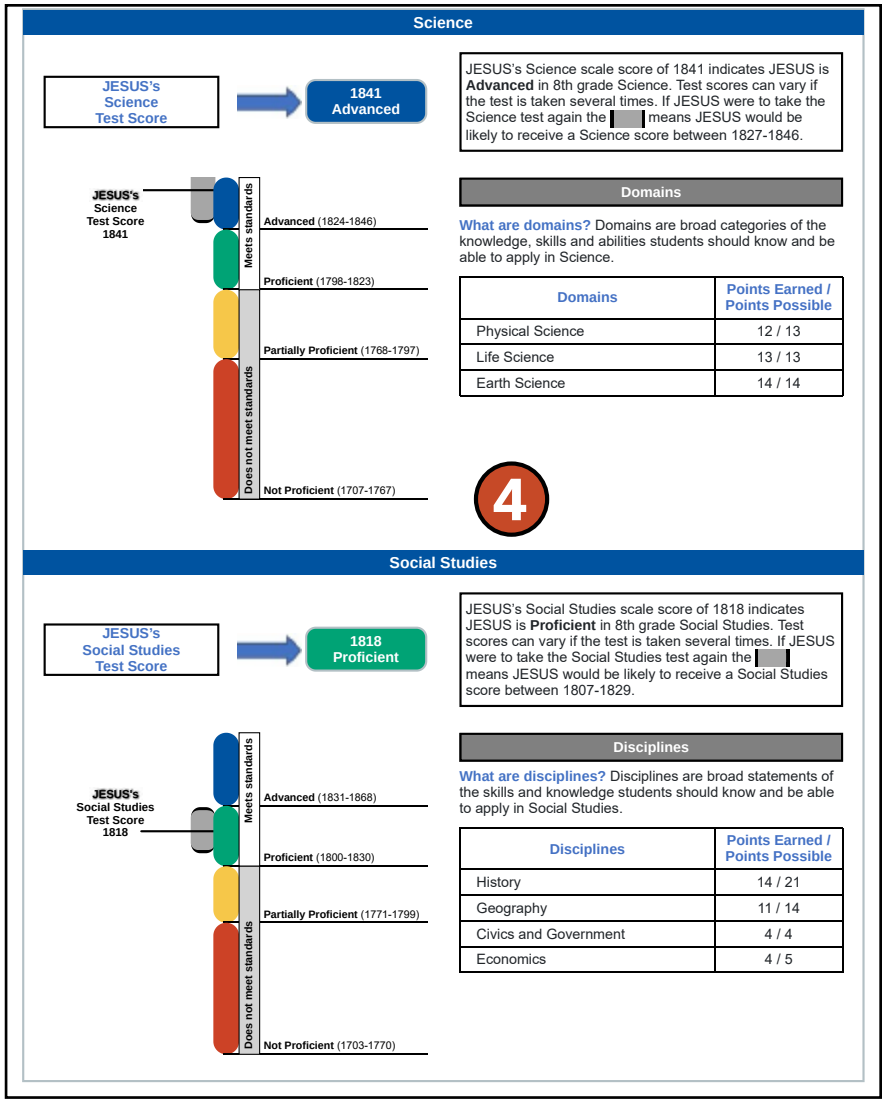
- when used with other local assessment data, inform about student proficiency and progress toward proficiency based on Michigan's academic standards
- view overall summary score and performance-level information at a glance
- view a snapshot of individual student performance based on Michigan's Academic Standards
- analyze summary performance on the English language arts and mathematics claims
- view raw score data on social studies disciplines
- hold a conversation with parents about their student's prior year's assessment results and expectations and plans going forward in the new school year

Parent Report

Schools shouldn't use this report to:

- make program/placement decisions for individual students, unless required by law
- make day-to-day instructional decisions for individual students
- conduct item-level analysis or item-type reviews that encourage "teaching to the test" rather than to the content standards
- make decisions about continuous improvement goals and strategies for schools or districts

grade 8



PSAT 8/9

- The College Board PSAT 8/9 is composed of two sections: Evidence-Based Reading and Writing, and Mathematics. Overall content area scale scores—including standard error and the associated performance level—are provided as a graphic. In addition, the graphic includes the ranges of scale scores that do and do not meet standards, labeled as "Does not meet standards" and "Meets standards."
- The Michigan Department of Education proficiency cut score and the College Board grade level benchmark score, which show the student's college-readiness after high school graduation, are the same.

Visit the College Board Michigan web page (www.collegeboard.org/michigan) for additional PSAT 8/9 information.

M-STEP Science and Social Studies Performance Data

- M-STEP science and social studies assessment results are displayed as a graphic and a table. Ranges for each performance level are shown on the graphic.
- Science content standards are organized by domains. Raw scores—that is, points earned out of total points possible—are reported for each science domain. Points possible may vary based on the science form the student was assessed with. Raw scores are not comparable across test forms.
- Social studies content standards are organized by disciplines. Raw scores—that is, points earned out of total points possible—are reported for each discipline. Raw scores are not comparable across test forms.

Visit the M-STEP web page (www.michigan.gov/mstep) for additional M-STEP information.

Questions to Ask Your Student's Teacher

Questions for generating conversations between parents and teachers are offered in the report. These include questions covering all subject areas, and questions based on individual student performance in Evidence-Based Reading and Writing and in Mathematics.

Menu Options

Filter option information is available in the Dynamic Score Reporting Site User Guide.

Take Action

The take action menu is enabled after a report is generated and contains the following options for the report:

- **About this Report** – this document
- **PDF Download** – To view a PDF of the report, select "PDF Download". This will open a PDF document of the reports, according to your selected filters.

Help

- Dynamic Score Reporting User Guide – user guide that describes how to access and navigate the Dynamic Score Reporting Site
- Interpretive Guide to Michigan Grade 8 Testing Reports – provides information on the interpretation and use of grade 8 reports

Report Features

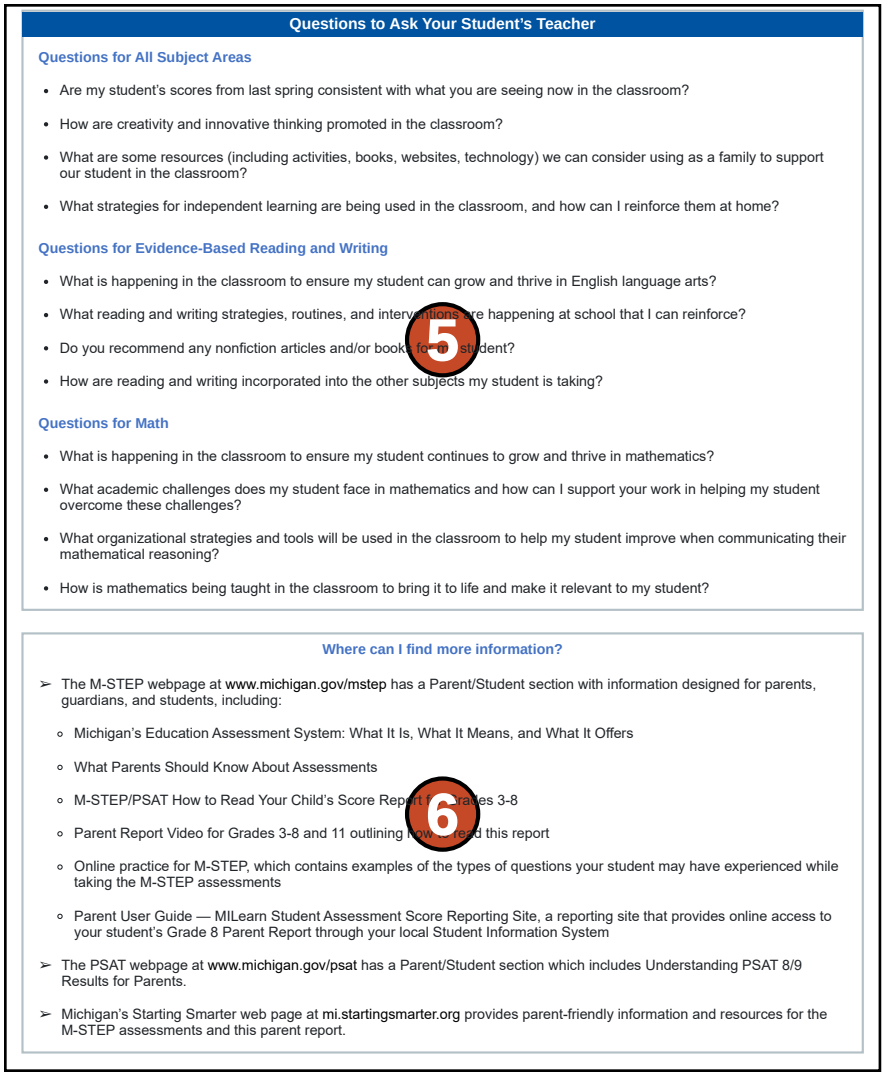
Features of the Parent Report are described below.

Go to Student

The Go to Student menu allows the user to go directly to the generated report for the selected student.

About the Data

- Parent Reports are available for paper/pencil and online test takers.
- Tests marked "invalid" display the invalid reason. Invalid tests are not included in school, district, or state aggregations.
- Overall content performance is marked on the graphic to indicate the student's overall scale score and standard error.
- Each color band of the graphic indicates a performance level:
  - Blue is Advanced
  - Green is Proficient



Questions to Ask Your Student's Teacher

Questions for All Subject Areas

- Are my student's scores from last spring consistent with what you are seeing now in the classroom?
- How are creativity and innovative thinking promoted in the classroom?
- What are some resources (including activities, books, websites, technology) we can consider using as a family to support our student in the classroom?
- What strategies for independent learning are being used in the classroom, and how can I reinforce them at home?

Questions for Evidence-Based Reading and Writing

- What is happening in the classroom to ensure my student can grow and thrive in English language arts?
- What reading and writing strategies, routines, and interventions are happening at school that I can reinforce?
- Do you recommend any nonfiction articles and/or books for my student?
- How are reading and writing incorporated into the other subjects my student is taking?

Questions for Math

- What is happening in the classroom to ensure my student continues to grow and thrive in mathematics?
- What academic challenges does my student face in mathematics and how can I support your work in helping my student overcome these challenges?
- What organizational strategies and tools will be used in the classroom to help my student improve when communicating their mathematical reasoning?
- How is mathematics being taught in the classroom to bring it to life and make it relevant to my student?

Where can I find more information?

- The M-STEP webpage at www.michigan.gov/mstep has a Parent/Student section with information designed for parents, guardians, and students, including:
  - Michigan's Education Assessment System: What It Is, What It Means, and What It Offers
  - What Parents Should Know About Assessments
  - M-STEP/PSAT How to Read Your Child's Score Report for Grades 3-8
  - Parent Report Video for Grades 3-8 and 11 outlining how to read this report
  - Online practice for M-STEP, which contains examples of the types of questions your student may have experienced while taking the M-STEP assessments
  - Parent User Guide — MILearn Student Assessment Score Reporting Site, a reporting site that provides online access to your student's Grade 8 Parent Report through your local Student Information System
- The PSAT webpage at www.michigan.gov/psat has a Parent/Student section which includes Understanding PSAT 8/9 Results for Parents.
- Michigan's Starting Smarter web page at mi.startingsmarter.org provides parent-friendly information and resources for the M-STEP assessments and this parent report.

  – Yellow is Partially Proficient
  – Red is Not Proficient
- The color bands contain a minimum and maximum scale score range for that performance level.
- A table below the overall content performance graphic provides the overall content performance data in tabular form.
- Science reports domain results as raw scores (points earned/points possible). Points possible may vary depending on the test form the student received.
- Social studies report discipline results as raw scores (points earned/points possible).
- Raw scores (points earned/points possible) are reported for each discipline.

Data Definitions

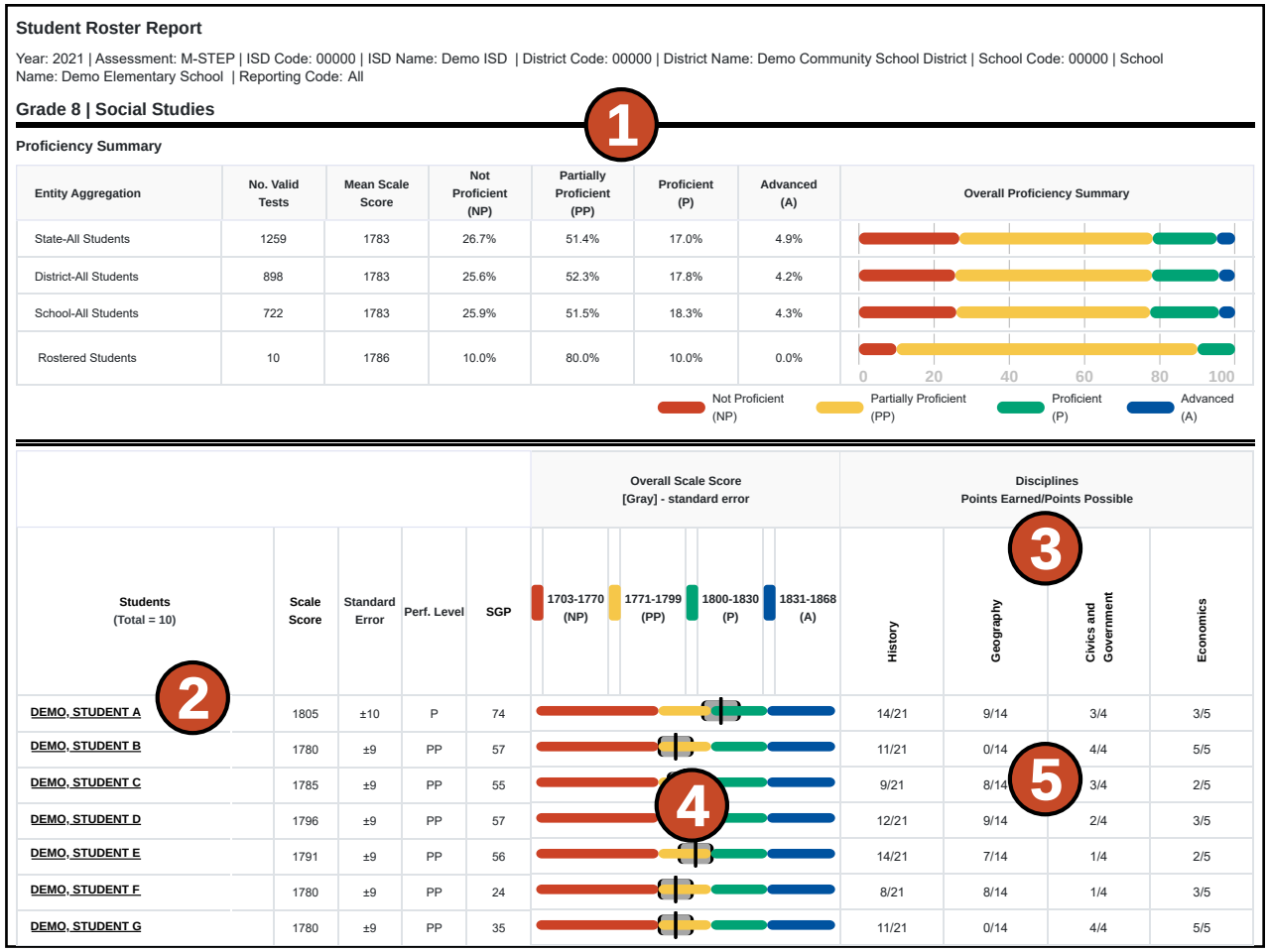
- **Discipline:** Disciplines are used as a means to organize content standards and expectations. Disciplines apply to social studies.
- **Domains:** Domains are used to group the three-dimensional science standards using similar disciplinary core ideas. Domains apply to science.
- **Standard Error:** Educational measurements are attempts to capture a student's true score, or ability, in the area being assessed. The standard error around the student score is an estimate of the range of scores one would expect if the student was to be measured repeatedly with parallel assessments.
- **Raw Score:** Points earned/total points possible. Raw scores are not comparable across different forms of the test.
- **Scale Score:** Scale scores are test scores that have been statistically adjusted to a common scale that allows scores to be compared across different forms of the test.

M-STEP Science and Social Studies Student Roster

The Michigan Student Test of Educational Progress (M-STEP) Student Roster Report provides information about student performance by content area.

The report is divided into five main sections:

1. Overall Proficiency Summary
2. Rostered Students
3. Overall Content Performance (Table Format)
4. Overall Content Performance (Graphic Format)
5. Domain or Discipline Data



Student Roster Report

Year: 2021 | Assessment: M-STEP | ISD Code: 00000 | ISD Name: Demo ISD | District Code: 00000 | District Name: Demo Community School District | School Code: 00000 | School Name: Demo Elementary School | Reporting Code: All

Grade 8 | Social Studies

Proficiency Summary

Entity Aggregation	No. Valid Tests	Mean Scale Score	Not Proficient (NP)	Partially Proficient (PP)	Proficient (P)	Advanced (A)
State-All Students	1259	1783	26.7%	51.4%	17.0%	4.9%
District-All Students	898	1783	25.6%	52.3%	17.8%	4.2%
School-All Students	722	1783	25.9%	51.5%	18.3%	4.3%
Rostered Students	10	1786	10.0%	80.0%	10.0%	0.0%

Overall Proficiency Summary: 0 20 40 60 80 100

Not Proficient (NP) | Partially Proficient (PP) | Proficient (P) | Advanced (A)

Students (Total = 10)	Scale Score	Standard Error	Perf. Level	SGP	Overall Scale Score [Gray] - standard error: 1703-1770 (NP) / 1771-1799 (PP) / 1800-1830 (P) / 1831-1868 (A)	Disciplines Points Earned/Points Possible: History	Geography	Civics and Government	Economics
DEMO, STUDENT A	1805	±10	P	74		14/21	9/14	3/4	3/5
DEMO, STUDENT B	1780	±9	PP	57		11/21	0/14	4/4	5/5
DEMO, STUDENT C	1785	±9	PP	55		9/21	8/14	3/4	2/5
DEMO, STUDENT D	1796	±9	PP	57		12/21	9/14	2/4	3/5
DEMO, STUDENT E	1791	±9	PP	56		14/21	7/14	1/4	2/5
DEMO, STUDENT F	1780	±9	PP	24		8/21	8/14	1/4	3/5
DEMO, STUDENT G	1780	±9	PP	35		11/21	0/14	4/4	5/5

Overall Proficiency Summary

Overall proficiency summary data for each group is displayed in graphic format for each group.

- State – All students in the state
- District – All students in the district
- School – All students in the school
- Rostered Students – Students displayed in the roster according to user filter selections

Student Roster Report

This report helps schools to:

- when used with other local assessment data, inform about student proficiency and progress toward proficiency based on Michigan's academic standards
- view overall summary score and performance-level information at a glance
- view a snapshot of individual student performance based on Michigan's Academic Standards
- view raw score data on science domains and social studies disciplines

Student Roster Report

Schools shouldn't use this report to:

- make program-placement decisions for individual students unless required by law
- make day-to-day instructional decisions for individual students
- make decisions about continuous improvement goals and strategies for schools or districts

The data displayed in the table is:

- Total number of valid tests
- Mean scale score
- Percentage of valid tests in each performance level (Not Proficient, Partially Proficient, Proficient, and Advanced)

The data displayed in the graph is:

- Percentage of valid tests in each performance level (Not Proficient, Partially Proficient, Proficient, and Advanced)
- Number of valid tests in each performance level (Not Proficient, Partially Proficient, Proficient, and Advanced)—displayed in the hover feature

Rostered Students Description

Students meeting the selected filter criteria are displayed in ascending alphabetical order by last name, then first name. The sort sequence may be changed to sort in descending alphabetical order.

The following data is displayed in this section:

- Number of students displayed in the student roster – represents all students who tested in the selected filters including students with invalid tests
- Student Name as last name, first name, middle initial – student name is sortable
- Unique Identification Code (UIC) – displayed when clicking the Information or ⓘ icon
- Date of Birth (DOB) – displayed when clicking the Information or ⓘ icon

Overall Content Performance (Table Format) Description

Overall content area scale scores—including standard error and the associated performance level—are provided as a graphic and as a table. Scale score ranges for each performance level are also shown on the graphic.

Growth Data includes Growth Score, Growth Target Score, and Growth Target Timeframe. Growth Scores (SGP), Growth Target Scores (AGP), and Growth Target Timeframes will be available after the initial release of student reports.

Growth Scores range from one to 99, with 50 being average, and represent the percent of comparable students—that is, who took the same test and had similar prior test scores—who had growth lower than the selected student. For example, a Growth Score of 60 means the student had higher growth than 60 percent of comparable students.

Growth Target Scores also range from one to 99 and represent the amount of growth above or below average a student needs to maintain year-over-year to reach or maintain proficiency by the end of the set number of years. For example, consider a Growth Target Score of 80. This means the student must maintain considerably above average growth year-over-year to reach or maintain proficiency by the end of the set number of years.

Growth Target Timeframes range from one to 3 and are the number of years expected for a student to reach or maintain proficiency. Growth Target Timeframes are set based on how long it has historically taken similar students to reach or maintain proficiency.

Growth data is not available for:

- All science tests due to no prior assessment data available (prior science testing was field-test only).

For each selected student, the following is displayed:

- **Scale Score:** The scale score is sortable. Sorting by scale score will result in a list of the selected students in order of scale score (ascending or descending – selecting "Scale Score" once sorts in ascending order, selecting twice sorts in descending order).
- **Standard Error:** (gray band in graphic)
- **Performance Levels:**
  - NP = Not Proficient
  - PP = Partially Proficient
  - P = Proficient
  - A = Advanced
- **Growth Score (SGP):** typically available after the initial release of reports
  - The SGP is sortable. Sorting by SGP will result in a list of selected students in order of SGP (ascending or descending – selecting "SGP" once sorts in ascending order, selecting twice sorts in descending order).
- **Growth Target (AGP):** typically available after the initial release of reports
  - The AGP is sortable: Sorting by AGP will result in a list of selected students in order of AGP (ascending or descending – selecting "AGP" once sorts in ascending order, selecting twice sorts in descending order).
- **Timeframe:** available after the initial release of reports.
  - The Timeframe is sortable. Sorting by Timeframe will result in a list of selected students in order of Timeframe, with AGP as secondary sort (ascending or descending – selecting "Timeframe" once sorts in ascending order, selecting twice sorts in descending order).

Overall Content Performance (Graphic Format) Description

The performance data for each selected student is also displayed in graphic format. In addition, the ranges for the four performance levels are provided in the legend.

Subscore (Domain, or Discipline) Data

- Science: reports domain results as raw scores (points earned/points possible).
- Social studies: reports discipline results as raw scores (points earned/points possible).

Menu Options

Filter option information is available in the Dynamic Score Reporting Site User Guide.

Take Action

The take action menu is enabled after a report is generated and contains the following options for the report:

- **About this Report** – this document

- **CSV Download** – two downloadable files that contain all student data that is contained on the report; one file contains the data in the overall proficiency summary and the other file contains the data from the student roster
- **CSV File Format** – file that describes the data contained in the CSV downloads
- **PDF Download** – To view a PDF of the report, select "PDF Download". This will open a PDF document of the reports, according to your selected filters.

Help

- Dynamic Score Reporting User Guide – user guide that describes how to access and navigate the Dynamic Score Reporting Site
- Interpretive Guide to Michigan Grade 8 Testing Reports – provides information on the interpretation and use of grade 8 reports

Report Features

Features of the Student Roster Report are described below.

Sort Options

There are several sort options available in the report:

- **Domains/Disciplines** – Domains (for science) and Disciplines (for social studies) can be sorted individually. Selecting once sorts from high to low; selecting a second time will sort from low to high.
- **Growth Score (SGP)** – Growth Score can be sorted from high to low on the first selection; if selected a second time, the Growth Score sorts from low to high.
- **Growth Target (AGP)** – Growth Target can be sorted from high to low on the first selection; if selected a second time, the Growth Target sorts from low to high.
- **Growth Target Timeframe** – Growth Target Timeframe can be sorted from high to low on the first selection; if selected a second time, the Growth Target sorts from low to high. The secondary sort for Growth Target Timeframe is the Growth Target score.
- **Scale Score** – Scale Score can be sorted from high to low on the first click; if selected a second time the Scale Score sorts from low to high.
- **Student Name** – the initial display of the report is in alphabetical order with invalid reports grouped at the bottom of the report. Users can select to sort in reverse alphabetical order; invalid reports will display at the top.

Drill Down

The Student Roster Report includes a drill-down feature that enables the user to select the student's name on the Student Roster Report to open an Individual Student Report.

After a user has selected a student name to drill down into the Individual Student Report and the Individual Student Report displays, a breadcrumb area appears below the District/School entity information that displays "Student Roster Report > Individual Student Report". Each report name in the breadcrumb is an active link. To return to the Student Roster Report, the user selects "Student Roster Report".

A user may drill down into an Individual Student Report from the Student Roster Report. When a user accesses the Student Roster Report in this way, the user cannot make any additional filter selections in the report. The user can view the report and use its sorting functionality or drill-down further into an Individual Student Report. However, to use the filter options in the Student Roster Report, the user must select the Student Roster Report from the "Choose Report" drop-down menu.

About the Data

- Student Roster Reports are available for paper/pencil and online test takers.
- Tests marked "invalid" display the invalid reason. Invalid tests are not included in school, district, or state aggregations.
- A table provides the overall content performance data in tabular form.
- Overall content performance is marked on the graphic to indicate the student's overall scale score and standard error.

- Each color band of the graphic indicates a performance level:
  - Blue is Advanced
  - Green is Proficient
  - Yellow is Partially Proficient
  - Red is Not Proficient
- The color bands contain a minimum and maximum scale score range for that performance level.
- Growth Score (SGP) (previously called Student Growth Percentiles) will be reported after the initial release of the student reports.
- Growth Target Score (AGP) and Growth Target Timeframe (previously called Adequate Growth Percentiles) will be reported after the initial release of the student reports.
- Growth data is not available for:
  - All science tests due to no prior assessment data available (prior science testing was field-test only).

Data Definitions

- **Discipline:** Disciplines are used as a means to organize content standards and expectations. Disciplines apply to social studies.
- **Domains:** Domains are used to group the three-dimensional science standards using similar disciplinary core ideas. Domains apply to science.
- **Growth Score (SGP):** Growth Scores (previously called Student Growth Percentiles) describe a student's learning over time compared to other students with comparable prior test scores. Percentiles range from 1 to 99 and indicate how many scores in the comparison group are below that score.
- **Growth Target (AGP):** Growth Targets (previously called Adequate Growth Percentiles) show the amount of growth necessary to reach or maintain proficiency within a set timeframe. Percentiles range from 1 to 99 and indicate how much growth is required in order for the student to achieve proficiency in the timeframe score.
- **Growth Target (AGP) Timeframe:** Growth Target Timeframes are the amount of time the growth target (AGP) model is expecting the student to take to reach or maintain proficiency. Timeframes range from 1 to 3 and indicate how many years it will take for the student to achieve proficiency if they meet the Growth Target Score.
- **Standard Error:** Educational measurements are attempts to capture a student's true score, or ability, in the area being assessed. The standard error around the student score is an estimate of the range of scores one would expect if the student was to be measured repeatedly with parallel assessments.
- **Raw Score:** Raw Scores are points earned/total points possible. Raw scores are not comparable across different forms of the test.
- **Scale Score:** Scale scores are test scores that have been statistically adjusted to a common scale that allows scores to be compared across different forms of the test.

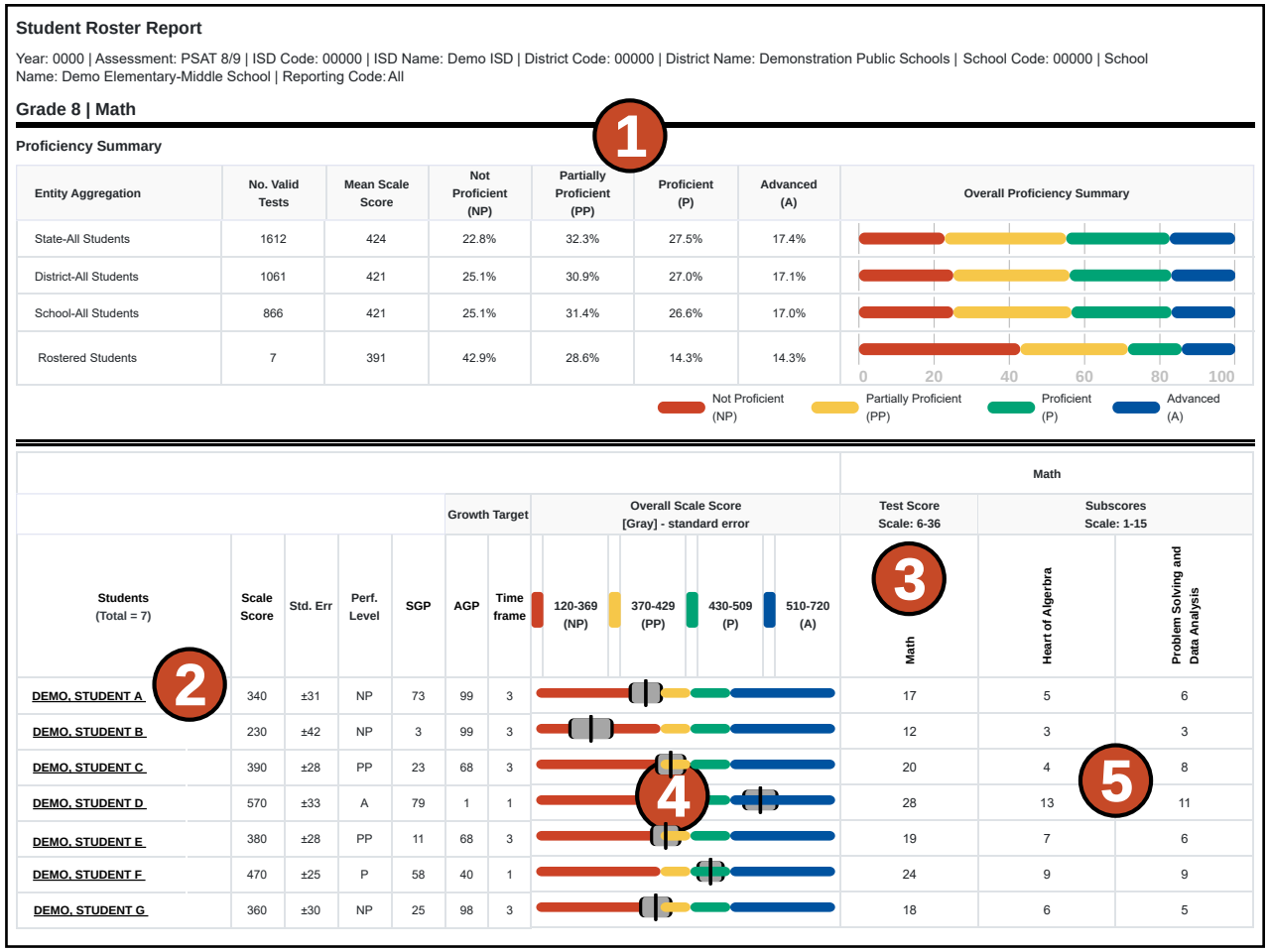
Privacy Notice: The Student Roster Report contains federally protected student information. This report must be used in accordance with the Family Educational Rights and Privacy Act (FERPA).

PSAT 8/9 Grade 8 Roster Report

The PSAT 8/9 Grade 8 Student Roster Report provides information about student performance by content area.

The report is divided into five main sections:

1. Overall Proficiency Summary
2. Rostered Student Description
3. Overall Content Performance (Table Format)
4. Overall Content Performance (Graphic Format)
5. Individual Test Scores and Subscore Data



Student Roster Report

Year: 0000 | Assessment: PSAT 8/9 | ISD Code: 00000 | ISD Name: Demo ISD | District Code: 00000 | District Name: Demonstration Public Schools | School Code: 00000 | School Name: Demo Elementary-Middle School | Reporting Code: All

Grade 8 | Math

1

Proficiency Summary

Entity Aggregation	No. Valid Tests	Mean Scale Score	Not Proficient (NP)	Partially Proficient (PP)	Proficient (P)	Advanced (A)	Overall Proficiency Summary
State-All Students	1612	424	22.8%	32.3%	27.5%	17.4%	
District-All Students	1061	421	25.1%	30.9%	27.0%	17.1%	
School-All Students	866	421	25.1%	31.4%	26.6%	17.0%	
Rostered Students	7	391	42.9%	28.6%	14.3%	14.3%	

0 20 40 60 80 100

Not Proficient (NP) | Partially Proficient (PP) | Proficient (P) | Advanced (A)

Students (Total = 7)	Scale Score	Std. Err	Perf. Level	SGP	Growth Target AGP	Growth Target Time frame	Overall Scale Score [Gray] - standard error 120-369 (NP) / 370-429 (PP) / 430-509 (P) / 510-720 (A)	Math Test Score Scale: 6-36	Math Subscores Scale: 1-15 Heart of Algebra	Math Subscores Scale: 1-15 Problem Solving and Data Analysis
DEMO, STUDENT A	340	±31	NP	73	99	3		17	5	6
DEMO, STUDENT B	230	±42	NP	3	99	3		12	3	3
DEMO, STUDENT C	390	±28	PP	23	68	3		20	4	8
DEMO, STUDENT D	570	±33	A	79	1	1		28	13	11
DEMO, STUDENT E	380	±28	PP	11	68	3		19	7	6
DEMO, STUDENT F	470	±25	P	58	40	1		24	9	9
DEMO, STUDENT G	360	±30	NP	25	98	3		18	6	5

2 3 4 5

Overall Proficiency Summary

Overall proficiency summary data is displayed in graphic format for each group.

- State – all students in the state
- District – all students in the district
- School – all students in the school
- Rostered Students – students displayed in the roster according to user filter selections

The data displayed in the table is:

- Total number of valid tests
- Mean scale score
- Percent of valid tests in each performance level (Not proficient, Partially Proficient, Proficient, and Advanced)
- Number of valid tests in each performance level (Not proficient, Partially Proficient, Proficient, and Advanced) – displayed in the hover feature

PSAT 8/9 Grade 8 Roster Report

This report helps schools to:

- when used with other local assessment data, inform about student proficiency and progress toward proficiency based on Michigan's academic standards
- view overall summary score and performance-level information at a glance
- view a snapshot of individual student performance based on Michigan's Academic Standards
- view raw score data on science domains and social studies disciplines

Rostered Student Description

Students meeting the selected filter criteria are displayed in ascending alphabetical order by last name, then first name. The sort sequence may be changed to sort in descending alphabetical order. The following data is displayed in this section.

- Number of students displayed in the student roster – all students who tested in the selected filters including students with invalid tests
- Student Name as last name, first name, middle initial – student name is sortable
- Unique Identification Code (UIC) – displayed when clicking the Information or ⓘ icon
- Date of Birth (DOB) – displayed when the Information or ⓘ icon is clicked

Overall Content Performance (Table Format)

Overall content area scale scores—including standard error and the associated performance level—are provided as a graphic and as a table. Scale score ranges for each performance level are also shown on the graphic.

PSAT 8/9 Grade 8 Roster Report

Schools shouldn't use this report to:

- make program-placement decisions for individual students unless required by law
- make day-to-day instructional decisions for individual students
- make decisions about continuous improvement goals and strategies for schools or districts

Growth Data includes Growth Score, Growth Target Score, and Growth Target Timeframe. Growth Scores (SGP), Growth Target Scores (AGP), and Growth Target Timeframes will be available after the initial release of student reports.

Growth Scores range from one to 99, with 50 being average, and represent the percent of comparable students—that is, who took the same test and had similar prior test scores—who had growth lower than that student. For example, a Growth Score of 60 means the student had higher growth than 60 percent of comparable students.

Growth Target Scores also range from one to 99 and represent the amount growth above or below average a student needs to maintain year-over-year to reach or maintain proficiency by the end of the set number of years. For example, consider a Growth Target Score of 80 this means the student must maintain considerably above average growth year-over-year to reach or maintain proficiency by the end of the set number of years.

Growth Target Timeframes range from one to three and are the number of years expected for a student to reach or maintain proficiency. Growth Target Timeframes are set based on how long it has historically taken similar students to reach or maintain proficiency.

For each selected student, the following is displayed:

- **Scale Score:** The scale score is sortable. Sorting by scale score will result in a list of the selected students in order of scale score (ascending or descending – selecting "Scale Score" once sorts in ascending order, selecting twice sorts in descending order).
- **Standard Error:** (gray band in graphic)
- **Performance Levels:**
  - NP = Not Proficient
  - PP = Partially Proficient
  - P = Proficient
  - A = Advanced
- **Growth Score (SGP):** will be available after the initial release of reports.
  - The SGP is sortable. Sorting by SGP will result in a list of selected students in order of SGP (ascending or descending – selecting "SGP" once sorts in ascending order, selecting twice sorts in descending order).
- **Growth Target (AGP):** will be available after the initial release of reports.
  - The AGP is sortable. Sorting by AGP will result in a list of selected students in order of AGP (ascending or descending – selecting "AGP" once sorts in ascending order, selecting twice sorts in descending order).
- **Timeframe:** will be available after the initial release of reports.
  - The Timeframe is sortable. Sorting by Timeframe will result in a list of selected students in order of Timeframe, with AGP as secondary sort (ascending or descending – selecting "Timeframe" once sorts in ascending order, selecting twice sorts in descending order).

Overall Content Performance (Graphic Format)

The performance data for each selected student is also displayed in graphic format. In addition, the ranges for the four performance levels are provided in the legend.

Individual Test Scores and Subscore Data

Individual test scores for Reading, Writing and Language, and Mathematics are provided as scale scores between 6-36. Students at the lowest score bands are beginning to obtain basic foundational skills to be college ready. Increases in the score band indicate that students are capable of more complex college-ready skills.

- The reading component of the Evidence-Based Reading and Writing (EBRW) test measures comprehensive and reasoning skills, focusing on close reading of passages in a wide array of subject areas.
- The Writing and Language component of the EBRW test measures a range of skills including command of evidence, expression of ideas, and the use of standard English conventions in grammar and punctuation.
- The Mathematics test includes a range of mathematics practices, with an emphasis on problem solving, modeling, using tools strategically, and using algebraic structure.

Subscores

Subscores between 1-15 for the Evidenced-Based Reading and Writing and Mathematics provide detail about student performance.

Evidenced-Based Reading and Writing

- **Command of Evidence** – questions focus on the assessment of students' ability to understand, evaluate, and make use of textual evidence (facts, details, statistics, and the like).
- **Words in Context** – questions focus on the assessment of students' ability to interpret words and phrases in context, analyze word choice rhetorically, and use language effectively in writing.
- **Expression of Ideas** – questions focus on the assessment of students' ability to revise multiparagraph texts for development, organization, and rhetorically effective language use.
- **Standard English Conventions** – questions focus on the assessment of students' ability to edit multiparagraph texts to ensure conformity to the conventions of standard written English sentence structure, usage, and punctuation.

Mathematics

- **Heart of Algebra** – questions focus on the assessment of students' skills with linear equations and systems of linear equations.
- **Problem Solving and Data Analysis** – questions focus on the assessment of students' ability to use ratios, percentages, and proportional reasoning, as well as to describe graphical relationships and analyze data.

Menu Options

Filter option information is available in the Dynamic Score Reporting User Guide.

Take Action

The take action menu is enabled after a report is generated and contains the following options for the report:

- **About this Report** – this document
- **CSV Download** – two downloadable files that contain all student data that is contained on the report. One file contains the data in the overall proficiency summary and the other file contains the data from the student roster.
- **CSV File Format** – file that describes the data contained in the CSV downloads.
- **PDF Download** – To view a pdf of the report, select "PDF Download". This will open a pdf document of the reports, according to your selected filters.

Help

- Dynamic Score Reporting User Guide – user guide that describes how to access and navigate the Dynamic Score Reporting Site
- Interpretive Guide to Michigan Grade 8 Testing Reports – provides information on the interpretation and use of grade 8 reports

Report Features

Features of the PSAT Grade 8 Roster Report are described below.

Sort Options

There are several sort options available in the report:

- **Growth Score (SGP)** – Growth Score can be sorted from high to low on the first selection; if selected a second time, the Growth Score sorts from low to high.
- **Growth Target (AGP)** – Growth Target can be sorted from high to low on the first selection; if selected a second time, the Growth Target sorts from low to high.
- **Growth Target Timeframe** – Growth Target Timeframe can be sorted from high to low on the first selection; if selected a second time, the Growth Target sorts from low to high. The secondary sort for Growth Target Timeframe is the Growth Target score.
- **Student Name** – the initial display of the report is in alphabetical order with invalid reports grouped at the bottom of the report. Users can select to sort in reverse alphabetical order; invalid reports will display at the top.
- **Scale Score** – Scale Score can be sorted from high to low on the first click; if selected a second time, the Scale Score sorts from low to high.

Drill Down

The Student Roster Report includes a drill-down feature that enables the user to select the student's name on the Student Roster Report to open an Individual Student Report.

After a user has selected a student name to drill down into the Individual Student Report and the Individual Student Report displays, a breadcrumb area appears below the District/School entity information that displays "Student Roster Report > Individual Student Report". Each report name in the breadcrumb is an active link. To return to the Student Roster Report, the user selects "Student Roster Report".

A user may drill down into a Student Roster Report from the School Demographic Report. When a user accesses the Student Roster Report in this way, the user cannot make any additional filter selections in the report. The user can view the report and use its sorting functionality or drill-down further into an Individual Student Report. However, to use the filter options in the Student Roster Report, the user must select the Student Roster Report from the “Choose Report” drop-down menu.

Student Overview

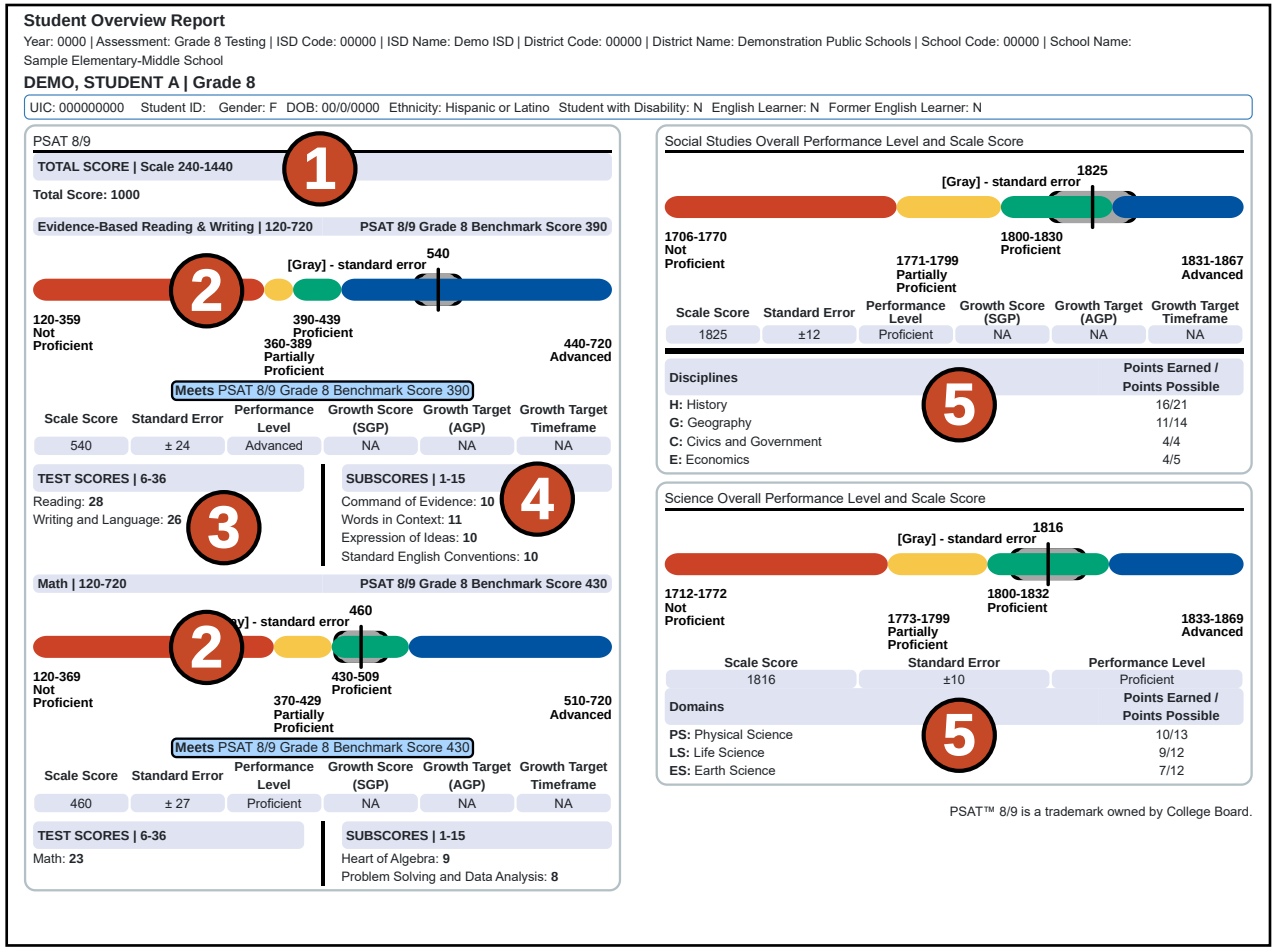
The Grade 8 Student Overview Report provides summary information about student performance on the PSAT™ 8/9 in English language arts and Mathematics and the Michigan Student Test of Educational Progress (M-STEP) in Science, and Social Studies.

The report is divided into two main sections:

1. PSAT Total Score
2. PSAT 8/9 Section Scores
3. Individual Test Scores
4. Subscores
5. M-STEP Subscores

The Total Score is the sum of two section scores: Evidence-based Reading and Writing (EBRW) and Mathematics.

Overall content area scale scores, including standard error and the associated performance level are provided as a graphic and as a table. Scale score ranges for each performance level are also shown on the graphic.



Section Scores

- The Evidence-Based Reading and Writing score is derived from the reading test score and the Writing and Language test score.
- The Mathematics Section Score is derived from the Mathematics test score.
- The PSAT 8/9 Grade 8 benchmark scores are indicators displayed on the student's PSAT Score Report provided by the College Board.
- PSAT Grade 8 benchmarks apply to both to Mathematics and to Evidence-Based Reading and Writing.
- Students meeting the PSAT 8/9 Grade 8 benchmark are on track for college readiness upon graduation from high school.

- The College Board PSAT Grade 8 benchmarks and the MDE proficient cut scores shown on this report are the same.
- Growth Data are available after the initial release of assessment reports and include:
  - Growth Score (SGP)
  - Growth Target Score (AGP)
  - Growth Target Timeframe

  Growth Scores range from one to 99, with 50 being average, and represent the percent of comparable students—that is, who took the same test and had similar prior test scores—who had growth lower than that student. For example, a Growth Score of 60 means the student had higher growth than 60 percent of comparable students.

  Growth Target Scores also range from one to 99 and represent the amount growth above or below average a student needs to maintain year-over-year to reach or maintain proficiency by the end of the set number of years. For example, consider a Growth Target Score of 80. This means the student must maintain considerably above average growth year-over-year to reach or maintain proficiency by the end of the set number of years.

  Growth Target Timeframes range from one to three years and are the number of years expected for a student to reach or maintain proficiency. Growth Target Timeframes are set based on how long it has historically taken similar students to reach or maintain proficiency.

Individual Test Scores

- The Reading component of the Evidence-Based Reading and Writing (EBRW) test measures comprehensive and reasoning skills, focusing on close reading of passages in a wide array of subject areas.
- The Writing and Language component of the EBRW test measures a range of skills including command of evidence, expression of ideas, and the use of standard English conventions in grammar and punctuation.
- The Mathematics test includes a range of mathematics practices, with an emphasis on problem solving, modeling, using tools strategically, and using algebraic structure.

Subscores

The EBRW and Mathematics assessments report multiple subscores for Reading, Writing and Language, and Mathematics, all ranging from one to 15 points. Subscores provide more detail about student achievement.

Subscores of the Reading Test and the Writing and Language Test:

- **Command of Evidence** – questions focus on the assessment of students' ability to understand, evaluate, and make use of textual evidence (facts, details, statistics, and the like.)
- **Words in Context** – questions focus on the assessment of students' ability to interpret words and phrases in context, analyze word choice rhetorically, and use language effectively in writing.

Additional Subscores of the Writing and Language Test:

- **Expression of Ideas** – questions focus on the assessment of students' ability to revise multiparagraph texts for development, organization, and rhetorically effective language use.
- **Standard English Conventions** – questions focus on the assessment of students' ability to edit multiparagraph texts to ensure conformity to the conventions of standard written English sentence structure, usage, and punctuation.

Subscores of the Mathematics Test:

- **Heart of Algebra** – questions focus on the assessment of students' skills with linear equations and systems of linear equations.
- **Problem Solving and Data Analysis** – questions focus on the assessment of students' ability to use ratios, percentages, and proportional reasoning, as well as to describe graphical relationships and analyze data.

M-STEP Subscore (Discipline or Domain) Performance Data

- Social studies content standards are organized by disciplines. Raw scores—that is, points earned out of total points possible—are reported for each discipline and Grade Level Content
- Expectation (GLCE) within the discipline. Raw scores are not comparable across test forms.
- Science content standards are organized by domains. For Spring 2021, domains are reported by raw scores.

Menu Options

Filter option information is available in the Dynamic Score Reporting Site User Guide.

Take Action

The take action menu is enabled after a report is generated and contains the following options for the report:

- **About this Report** – this document
- **PDF Download** – To view a PDF of the report, select "PDF Download". This will open a PDF document of the reports, according to your selected filters. You can print individual or small groups of reports from this option.

Help

- Dynamic Score Reporting User Guide – user guide that describes how to access and navigate the Dynamic Score Reporting Site
- Interpretive Guide to Michigan Grade 8 Testing Reports – provides information on the interpretation and use of grade 8 reports

Report Features

Features of the Student Overview Report are described below.

Go to Student

The Go to Student menu allows the user to go directly to the generated report for the selected student.

About the Data

- Student Overview Reports are available for paper/pencil and online test takers.
- Tests marked "invalid" display the invalid reason.
- Overall content performance is marked on the graphic to indicate the student's overall scale score and standard error.
- Each color band of the graphic indicates a performance level:
  - Blue is Advanced
  - Green is Proficient
  - Yellow is Partially Proficient
  - Red is Not Proficient
- The color bands contain a minimum and maximum scale score range for that performance level.
- A table below the overall content performance graphic provides the overall content performance data in tabular form.
- Growth Score (SGP) (previously called Student Growth Percentiles) will be reported after the initial release of the student reports.
- Growth Target Score (AGP) and Growth Target Timeframe (previously called Adequate Growth Percentiles) will be reported after the initial release of the student reports.
- Social studies report discipline results as raw scores (points earned/points possible).

Data Definitions

- **Discipline:** Disciplines are used as a means to organize content standards and expectations. Disciplines apply to social studies.
- **Domains:** Domains are used to group the three-dimensional science standards using similar disciplinary core ideas. Domains apply to science.
- **Growth Score (SGP):** Growth Scores (previously called Student Growth Percentiles) describe a student's learning over time compared to other students with comparable prior test scores. Percentiles range from 1 to 99 and indicate how many scores in the comparison group are below that score.
- **Growth Target (AGP):** Growth Targets (previously called Adequate Growth Percentiles) the amount of growth necessary to reach or maintain proficiency within a set timeframe. Percentiles range from 1 to 99 and indicate how much growth is required in order for the student to achieve proficiency in the timeframe score.
- **Growth Target (AGP) Timeframe:** Growth Target Timeframes show the amount of time the growth target (AGP) model is expecting the student to take to reach or maintain proficiency. Timeframes range from 1 to 3 and indicate how many years it will take for the student to achieve proficiency if they meet the Growth Target Score.
- **Standard Error:** Educational measurements are attempts to capture a student's true score, or ability, in the area being assessed. The standard error around the student score is an estimate of the range of scores one would expect if the student was to be measured repeatedly with parallel assessments.
- **Raw Score:** Points earned/total points possible. Raw scores are not comparable across different forms of the test.
- **Scale Score:** Scale scores are test scores that have been statistically adjusted to a common scale that allows scores to be compared across different forms of the test.

Student Growth and Proficiency Report

The PSAT™ 8/9 Student Growth and Proficiency Report provides information about student growth by content area. Each student in grade 8 will have a separate Student Growth and Proficiency report for PSAT 8/9 Evidence-Based Reading and Writing (EBRW), PSAT 8/9 Mathematics, and M-STEP Social Studies.

EBRW and Mathematics reports will have Growth Scores and Growth Target. M-STEP Social Studies will have Growth Scores. There is no Student Growth and Proficiency Report for Science because there are no prior year test scores available from which to calculate growth.

Grades 8 and 11 Social Studies do not include Growth Target (AGP) or Growth Target Timeframe data. This is because AGP/Timeframe scores are projections that are reportable based on the prior year assessment score and are based on projections of one to three years. Due to the gap of three years or more between assessments in this content area at these grade levels, MDE does not report Growth Target data for grades 8 and 11 social studies.

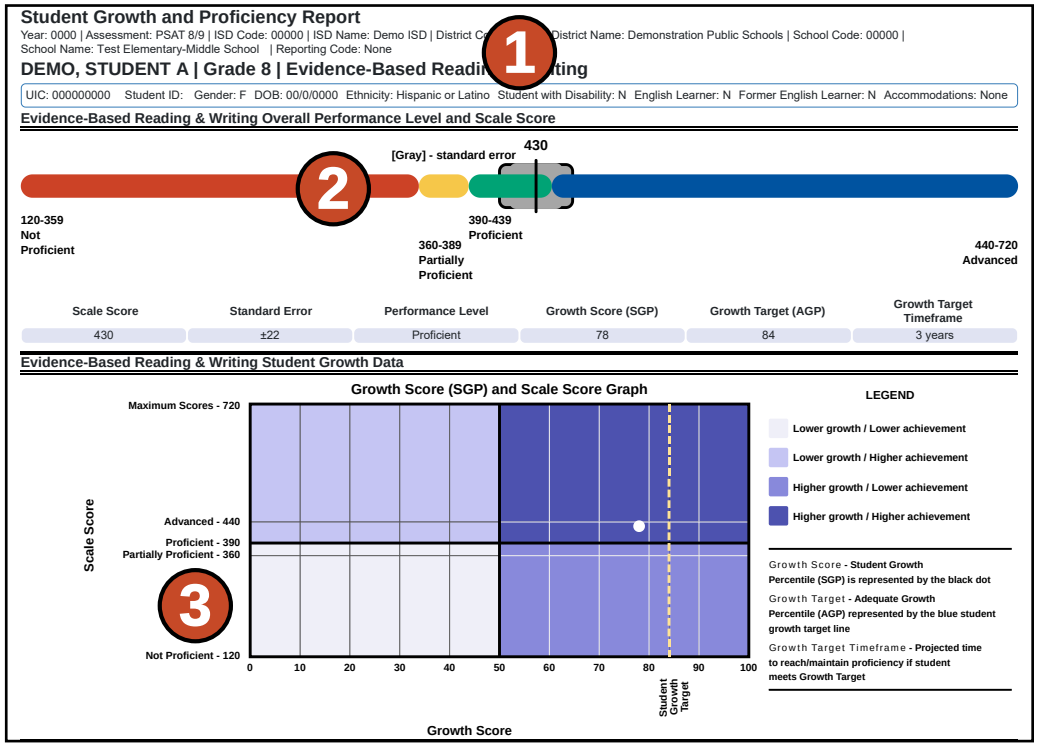
The report is divided into three main sections:

1. Student Demographic Information
2. Overall Content Performance
3. Student Growth Data Graph

Student Demographic Information

This section provides identifying information about the student including name, grade, gender, date of birth, race/ethnicity, Unique Identification Code (UIC), and, if provided by the school, the district student ID. The report will indicate if the student has been marked as a Student with Disability, English Learner, or Former English Learner in the Michigan Student Data System (MSDS). Additionally, any designated supports or accommodations the student received as indicated by the DRC INSIGHT Portal or the paper/pencil Answer Document are displayed. The report will indicate if the student has been marked as a Student with Disability, English Learner, or Former English Learner in the Michigan Student Data System (MSDS).

Also, any designated supports or accommodations the student received will be listed.



Student Growth and Proficiency Report

This report helps schools to:

- view overall summary score and performance level information at a glance
- view a snapshot of student performance
- view a snapshot of student growth target and timeframe to reach or maintain proficiency
- help to inform, along with other local assessment data, student proficiency and progress toward proficiency

Student Growth and Proficiency Report

Schools shouldn't use this report to:

- make program-placement decisions for individual students unless required by law
- make day-to-day instructional decisions for individual students
- make decisions about continuous improvement goals and strategies for schools or districts

Overall Content Performance and Growth Data

Overall content area scale scores, including standard error and the associated performance level are provided as a graphic and as a table. Scale score ranges for each performance level are also shown on the graphic.

Growth Data are available and includes:

- Growth Score (SGP)
- Growth Target Score (AGP)
- Growth Target Timeframe

Growth scores describe a student's learning over time compared to other students who took the same test and had similar prior test scores. Growth Scores are percentiles that range from one to 99 with 50 being the average and indicate how many scores in the comparison group are below that score. For example, a Growth Score of 60 means the student had higher growth than 60 percent of comparable students.

Growth Target Scores also range from one to 99 and represent the amount of growth above or below average a student needs to maintain year-over-year to reach or maintain proficiency by the end of the set number of years. For example, consider a Growth Target Score of 80. This means the student must maintain considerable above average growth year-over-year to reach or maintain proficiency by the end of the set number of years.

Growth Target Timeframes range from one to three and are the number of years expected for a student to reach or maintain proficiency. Growth Target Timeframes are set based on how long it has historically taken similar students to reach or maintain proficiency.

Student Growth Data Graph

The Growth Score (SGP) and Scale Score Graph plots student growth score against student scale score.

The x-axis (horizontal axis) of the graph labels the Growth Scores and ranges from 1-99. Student Growth Target is also displayed with a vertical dotted line.

The y-axis (vertical axis) of the graph labels the student's scale score. Scale score is labeled for each Performance Level range. Scale score ranges for Not Proficient, Partially Proficient, Proficient, and Advanced and are labeled. The highest possible scale score is also labeled. The Proficient label is marked by a bold black line that separates the "lower achievement" sections from the 'higher achievement' sections.

The student's growth score plotted against the scale score is marked by a dot. This dot indicates which section the student's growth and scale score represents. The key to the right of the graph identifies four sections.

Each section is identified:

- Lower growth/lower achievement
- Lower growth/higher achievement
- Higher growth/lower achievement
- Higher growth/higher achievement

The legend to the right of the graph describes each data point for Growth Score, Growth Target, and Timeframe.

Menu Options

Filter option information is available in the Dynamic Score Reporting Site User Guide.

Take Action

The take action menu is enabled after a report is generated and contains the following options for the report:

- **About this Report** – this document
- **PDF Download** – To view a PDF of the report, select "PDF Download". This will open a PDF document of the reports, according to your selected filters. You can print individual or small groups of reports from this option.

Help

- Dynamic Score Reporting User Guide – user guide that describes how to access and navigate the Dynamic Score Reporting Site
- Interpretive Guide to Michigan Grade 8 Testing Reports – provides information on the interpretation and use of grade 8 reports

Report Features

Features of the Student Growth and Proficiency Report are described below.

Go to Student

The Go to Student menu allows the user to go directly to the generated report for the selected student.

About the Data

- Student Growth and Proficiency Reports are available for paper/pencil and online test takers.
- Tests marked "invalid" display the invalid reason.
- Overall content performance is marked on the graphic to indicate the student's overall scale score and standard error.
- Each color band of the graphic indicates a performance level:
  - Blue is Advanced
  - Green is Proficient
  - Yellow is Partially Proficient
  - Red is Not Proficient
- The color bands contain a minimum and maximum scale score range for that performance level.
- A table below the overall content performance graphic provides the overall content performance data in tabular form.
- Growth data is not available for:
  - All grade 3 tests
  - All grade 4 tests in Spring 2021 only due to no prior year assessment data as a result of the cancellation of Spring 2020 testing
  - Grade 5 social studies tests
  - All science tests due to no prior assessment data available (prior science testing was field-test only)

Data Definitions

- **Growth Score (SGP):** (previously called Student Growth Percentiles) describe a student's learning over time compared to other students with comparable prior test scores. Percentiles range from one to 99 and indicate how many scores in the comparison group are below that score.

- **Growth Target (AGP):** (previously called Adequate Growth Percentiles) the amount of growth necessary to reach or maintain proficiency within a set timeframe. Percentiles range from one to 99 and indicate how much growth is required in order for the student to achieve proficiency in the timeframe score.
- **Growth Target (AGP) Timeframe:** the amount of time the growth target (AGP) model is expecting the student to take to reach or maintain proficiency. Timeframes range from 1 to 3 and indicate how many years it would take for the student to achieve proficiency if they meet the Growth Target Score.
- **Standard Error:** Educational measurements are attempts to capture a student's true score, or ability, in the area being assessed. The standard error around the student score is an estimate of the range of scores one would expect if the student was to be measured repeatedly with parallel assessments.
- **Scale Score:** Scale scores are test scores that have been statistically adjusted to a common scale that allows scores to be compared across different forms of the test.

Aggregate Data Reports

IMPORTANT: Aggregate reports may reflect non-random sampling disparities due to changes in instructional programming, quarantine requirements, and assessment participation during the 2020-21 school year. District leaders know best what the 2020-21 school year looked like for their district's students and should interpret results accordingly. Comparisons among school, district, and state results are discouraged this year.

M-STEP Expectation Analysis Report

The Michigan Student Test of Educational Progress (M-STEP) Expectation Analysis Report provides the percentage of points earned by grade and content area expectation in each discipline for social studies, and the number of students scoring in each of four scoring categories. Expectation Analysis Reports are provided for social studies only.

The report is divided into two main sections:

1. Discipline and Expectation Information
2. Aggregate student data by expectation

Schools shouldn't use this report to:

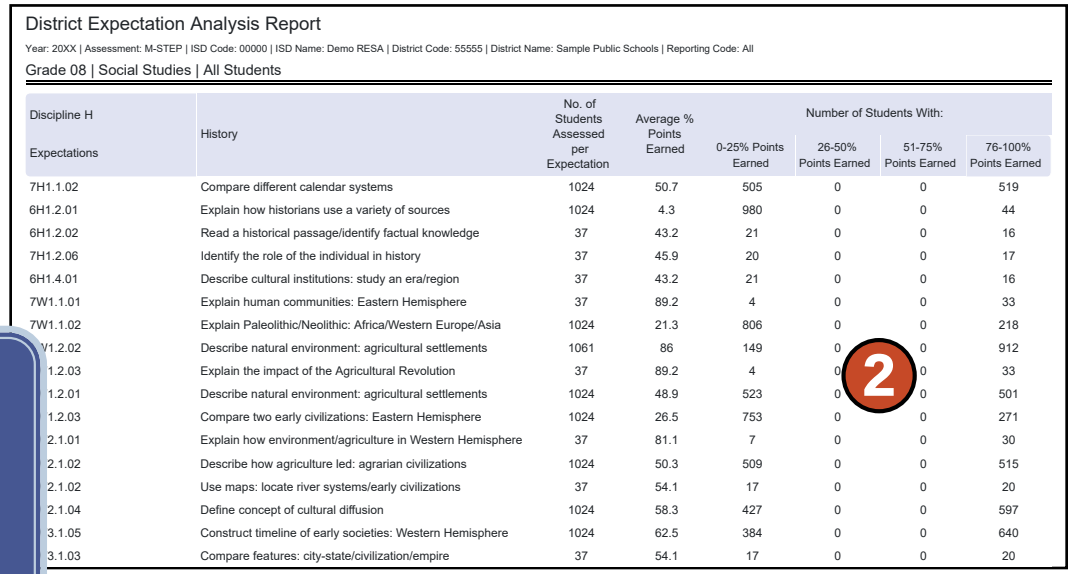
- make program-placement decisions for individual students unless required by law
- conduct item-level analysis or item-type reviews that encourage "teaching to the test" rather than the content standards

Discipline and Expectation Information

The report displays the discipline being reported in the gray heading area. The discipline heading can be collapsed by selecting the caret next to the discipline. Next, the expectations within the discipline are listed, including the Michigan Academic Standard abbreviation and a short description of each expectation.

This report helps schools to:

- identify expectations on which students perform well and expectations on which students do not perform well
- analyze curricular alignment to Michigan Academic Standards



District Expectation Analysis Report

Year: 20XX | Assessment: M-STEP | ISD Code: 00000 | ISD Name: Demo RESA | District Code: 55555 | District Name: Sample Public Schools | Reporting Code: All

Grade 08 | Social Studies | All Students

Discipline H Expectations	History	No. of Students Assessed per Expectation	Average % Points Earned	Number of Students With: 0-25% Points Earned	26-50% Points Earned	51-75% Points Earned	76-100% Points Earned
7H1.1.02	Compare different calendar systems	1024	50.7	505	0	0	519
6H1.2.01	Explain how historians use a variety of sources	1024	4.3	980	0	0	44
6H1.2.02	Read a historical passage/identify factual knowledge	37	43.2	21	0	0	16
7H1.2.06	Identify the role of the individual in history	37	45.9	20	0	0	17
6H1.4.01	Describe cultural institutions: study an era/region	37	43.2	21	0	0	16
7W1.1.01	Explain human communities: Eastern Hemisphere	37	89.2	4	0	0	33
7W1.1.02	Explain Paleolithic/Neolithic: Africa/Western Europe/Asia	1024	21.3	806	0	0	218
V1.2.02	Describe natural environment: agricultural settlements	1061	86	149	0	0	912
1.2.03	Explain the impact of the Agricultural Revolution	37	89.2	4	0	0	33
1.2.01	Describe natural environment: agricultural settlements	1024	48.9	523	0	0	501
1.2.03	Compare two early civilizations: Eastern Hemisphere	1024	26.5	753	0	0	271
2.1.01	Explain how environment/agriculture in Western Hemisphere	37	81.1	7	0	0	30
2.1.02	Describe how agriculture led: agrarian civilizations	1024	50.3	509	0	0	515
2.1.02	Use maps: locate river systems/early civilizations	37	54.1	17	0	0	20
2.1.04	Define concept of cultural diffusion	1024	58.3	427	0	0	597
3.1.05	Construct timeline of early societies: Western Hemisphere	1024	62.5	384	0	0	640
3.1.03	Compare features: city-state/civilization/empire	37	54.1	17	0	0	20

Aggregate student data by expectation

The report displays the Number of Students Assessed in the expectation (not all students were assessed on every expectation), the average percentage of points earned, and the number of students scoring in one of four bands: 0-25%, 26-50%, 51-75%, and 76-100% points earned out of points possible. Individual students may have a different number of points possible associated with an expectation, depending on the test form they received.

Report Features

Features of the Expectation Analysis Report are described below.

Student Population

The population of students to be displayed may be selected by the user from the following student populations:

- All Students – this is the default
- All Except Students with Disabilities – students who are not marked Special Education in the Michigan Student Data System (MSDS) at the time of testing
- Students with Disabilities – students who are marked Special Education in MSDS at the time of testing

Menu Options

Filter option information is available in the Dynamic Score Reporting Site User Guide.

Take Action

The take action menu is enabled after a report is generated and contains the following options for the report:

- **About this Report** – this document
- **CSV Download** – downloadable file that contains all student data that is contained on the report, according to your selected filters.
- **CSV File Format** – file that describes the data contained in the CSV download.
- **PDF Download** – To view a PDF of the report, select "PDF Download". This will open a PDF document of the reports, according to your selected filters.

Help

- Dynamic Score Reporting User Guide – user guide that describes how to access and navigate the Dynamic Score Reporting Site
- Interpretive Guide to Michigan Grade 8 Testing Reports – provides information on the interpretation and use of grade 8 reports

About the Data

- Expectation Analysis Reports are available for paper and pencil and online test takers.
- Expectation Analysis Reports are available for social studies only.
- Only valid test scores are included in the reported results.
- Homeschool students are excluded from the reported results.
- Nonpublic students are included only on the school level reports. They are excluded from district and state level results.
- Data reported for populations fewer than 10 are for school or district use only and should not be disseminated to the public.
- Percentages of the four performance levels may not total 100% due to rounding.

Data Definitions

- **Discipline:** Disciplines are used as a means to organize content standards and expectations. Disciplines apply to social studies.

Demographic Report

The Demographic Report is available both for PSAT 8/9 in Evidence-Based Reading and Writing, and Mathematics and for M-STEP social studies.

The report provides a comparison of students by grade and content, aggregated across selected demographic groups, showing the percentages of students at each performance level (Not Proficient, Partially Proficient, Proficient, Advanced, and Proficient and Advanced Combined). The Demographic Report is available at the school, district, and state levels.

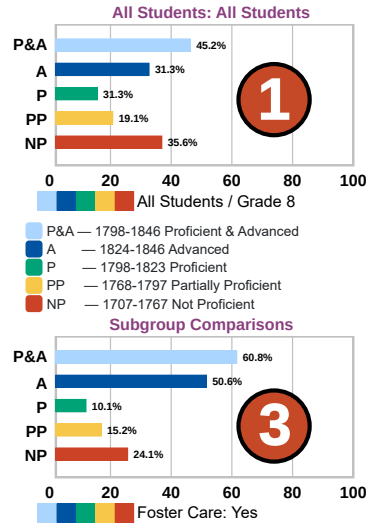
The report is divided into three main sections:

1. Overall Performance Level Percentages Graphic
2. Demographic Subgroup Performance Level Data Table
3. Demographic Subgroup Performance Level Percentages Graphic

School Demographic Report

Year: 20XX | Assessment: M-STEP | ISD Code: 00000 | ISD Name: Demo ISD | District Code: 00000 | District Name: Demo Schools Community District | School Code: 00000 | School Name: Demo Elementary-Middle School

Grade 8 | Science | All Students



Demographic Subgroups	No. of Students Assessed	Mean Scale Score	% at NP	% at PP	% at P	% at A	% at P & A*
All Students / All Grades	1242	1653	36.6	29.7	11.7	22.0	33.7
All Students / Grade 8	721	1790	35.6	19.1	13.9	31.3	45.2
Gender							
Male	371	1790	34.5	20.2	14.3	31.0	45.3
Female	350	1790	36.9	18.0	13.4	31.7	45.1
Ethnicity							
American Indian or Alaska Native	112	1794	31.3	22.3	13.4	33.0	46.4
Asian	94	1788	35.1	20.2	17.0	27.7	44.7
Black or African American	94	1793	36.2	14.9	13.8	35.1	48.9
Hispanic or Latino	110	1790	36.4	14.5	17.3	31.8	49.1
Native Hawaiian or Other Pacific Islander	113	1789	36.3	23.0	12.4	28.3	40.7
Two or More Races	114	1788	36.8	20.2	9.6	33.3	43.0
White	84	1788	38.1	17.9	14.3	29.8	44.0
Additional Reporting Groups							
Economically Disadvantaged: Yes	339	1789	38	.2	14.5	32.7	47.2
Economically Disadvantaged: No	382	1791	33.0	23.6	13.4	30.1	43.5
English Learner: Yes	114	1795	28.1	26.3	11.4	34.2	45.6
English Learner: No	607	1789	37.1	17.8	14.3	30.8	45.1
Former English Learner: Yes	99	1805	25.3	19.2	9.1	46.5	55.6
Former English Learner: No	622	1788	37.3	19.1	14.6	28.9	43.6
Foster Care: Yes	79	1807	24.1	15.2	10.1	50.6	60.8
Foster Care: No	642	1788	37.1	19.6	14.3	29.0	43.3
Homeless: Yes	90	1802	27.8	15.6	7.8	48.9	56.7
Homeless: No	631	1788	36.8	19.7	14.7	28.8	43.6
Migrant: Yes	97	1801	30.9	13.4	13.4	42.3	55.7
Migrant: No	624	1788	36.4	20.0	13.9	29.6	43.6
Military Connected: Yes	103	1797	30.1	21.4	8.7	39.8	48.5
Military Connected: No	618	1789	36.6	18.8	14.7	29.9	44.7
Students with Disabilities: Yes	96	1795	34.4	14.6	13.5	37.5	51.0
Students with Disabilities: No	625	1789	35.8	19.8	13.9	30.4	44.3
Accommodation							
Standard Accommodation - all students	195	1792	39.5	12.3	10.3	37.9	48.2
Standard Accommodation - EL only	35	1810	20.0	22.9	5.7	51.4	57.1

2

* Value may not equal the exact sum of Proficient and Advanced due to rounding.

Date last modified:

Overall Performance Level Percentages Graphic

A horizontal bar graph displays the percentages of Advanced, Proficient, Partially Proficient, and Not Proficient students among all students in the selected student population, grade, and content area. The legend beneath the graph(s) provides the scale score ranges associated with each performance level.

Demographic Subgroup Performance Level Data Table

Performance level data—including the number of students assessed, the mean scale score, and the percentages of students in each performance level (Advanced, Proficient, Partially Proficient, Not Proficient, and Advanced and Proficient Combined)—for all students and for the reported demographic subgroups are displayed in a table.

The demographic subgroups reported are:

- Gender
  - Female
  - Male
- Ethnicity
  - American Indian or Alaska Native
  - Asian
  - Black or African American
  - Hispanic or Latino
  - Native Hawaiian or Other Pacific Islander
  - Two or More Races
  - White
- Additional Reporting Groups
  - Economically Disadvantaged: Yes
  - Economically Disadvantaged: No
  - English Learner: Yes
  - English Learner: No
  - Former English Learner: Yes
  - Former English Learner: No
  - Foster Care: Yes
  - Foster Care: No
  - Homeless: Yes
  - Homeless: No
  - Migrant: Yes
  - Migrant: No
  - Military Connected: Yes
  - Military Connected: No
  - Students with Disabilities: Yes
  - Students with Disabilities: No

Demographic Subgroup Performance Level Percentages Graphic

The user may select up to eight demographic subgroups in the demographic table to compare against the overall student population. Each selected demographic subgroup will be highlighted and a graph entitled “Subgroup Comparisons” with a corresponding horizontal bar

Demographic Report

This report helps schools to:

- compare overall performance for each aggregated group of students if assessment participation and instructional modality were consistent across the school or district
- compare school performance to other schools in the district if assessment participation and instructional modality were consistent across the district
- identify needs for academic program improvement or continuous improvement goals
- analyze summary performance by demographic group while considering assessment participation and instructional modality for the demographic group
- compare demographic group performance to overall performance if assessment participation and instructional modality were consistent across the school or district
- identify areas of strength and weakness by demographic group while considering assessment participation and instructional modality for the demographic group
- analyze curricular alignment and impact by demographic group
- identify achievement gaps by demographic group
- analyze school-level overall performance
- analyze curricular alignment to Michigan Academic Standards

Demographic Report

Schools shouldn’t use this report to:

- make program-placement decisions for individual students unless required by law
- make day-to-day instructional decisions for individual students
- conduct item-level analysis or item-type reviews that encourage “teaching to the test” rather than the content standards
- compare school, district, or state results due to differences in instructional modality and participation

graph will display under the overall performance level graph. Patterns and different colors are applied to represent each subgroup and the legend below the graph is updated to display the color and pattern for each selected demographic subgroup displayed in the graph.

Report Features

Features of the Demographic Report are described below.

Student Population

The population of students to be displayed may be selected by the user. Users may select from the following student populations.

- All Students – this is the default
- All Except Students with Disabilities – students who are not marked Special Education in the Michigan Student Data System (MSDS) at the time of testing
- Students with Disabilities – students who are marked Special Education in MSDS at the time of testing

Menu Options

Filter option information is available in the Dynamic Score Reporting Site User Guide.

Take Action

The take action menu is enabled after a report is generated and contains the following options for the report:

- **About this Report** – this document
- **CSV Download** – downloadable file that contains all student data that is contained on the report, according to your selected filters.
- **CSV File Format** – file that describes the data contained in the CSV download.
- **PDF Download** – To view a PDF of the report, select "PDF Download". This will open a PDF document of the reports, according to your selected filters.

Help

- Dynamic Score Reporting User Guide – user guide that describes how to access and navigate the Dynamic Score Reporting Site
- Interpretive Guide to Michigan Grade 8 Testing Reports – provides information on the interpretation and use of grade 8 reports

Drill Down

The School Demographic Report includes a drill-down feature that enables the user to select the link in the Number of Students Assessed column to open a Student Roster Report, which includes the students represented in the aggregated group. When the Number of Students Assessed is zero, the '0' is not an active link. **Note:** In some instances, the number of students displayed may differ between the School Demographic Report and the generated Student Roster Report. This is because the Demographic Report does not include invalid tests, while the Student Roster Report does include invalid tests.

After a user has selected the link to drill down into the represented aggregate group, a breadcrumb area appears below the District/School entity information that displays "School Demographic Report > Student Roster Report". Each report name in the breadcrumb is an active link. To return to the School Demographic Report, the user selects "School Demographic Report".

A user may drill down into a Student Roster Report from the School Demographic Report. When a user accesses the Student Roster Report in this way, the user cannot make any additional filter selections in the report. The user can view the report and use its sorting functionality or drill-down further into an Individual Student Report. However, to use the filter options in the Student Roster Report, the user must select the Student Roster Report from the "Choose Report" drop-down menu.

The Drill-Down feature is not available on the State or District level Demographic Reports.

About the Data

- Demographic Reports are available for paper and pencil and online test takers.
- Only valid test scores are included in the reported results.
- Homeschool students are excluded from the reported results.
- Nonpublic students are included only on the school level reports. They are excluded from district and state level results.
- Percentages of the four performance levels may not total 100% due to rounding.
- The reported combined percentage of Proficient (P) plus Advanced (A) may not equal the sum due to rounding.
- The first horizontal bar graph displays the percentage of students scoring at each proficiency level for the selected grade, content, and student population (All Students, Students with Disabilities, or All Except Students with Disabilities).
- If a demographic subgroup is selected on the table, the comparison horizontal bar graph will display the same grade, content, and student population for the demographic group selected (an example may be *All* Eighth Grade Students with Disabilities being compared to Eighth Grade *Female* Students with Disabilities).

Data Definitions

- **Mean Scale Score:** The mean scale score for a group of students is determined by summing the valid scale scores across that group (within a grade and content area) and dividing by the number of valid scores used for the summed total.
- **Scale Score:** Scale scores are test scores that have been statistically adjusted to a common scale that allows scores to be compared across different forms of the test.

Comprehensive Report

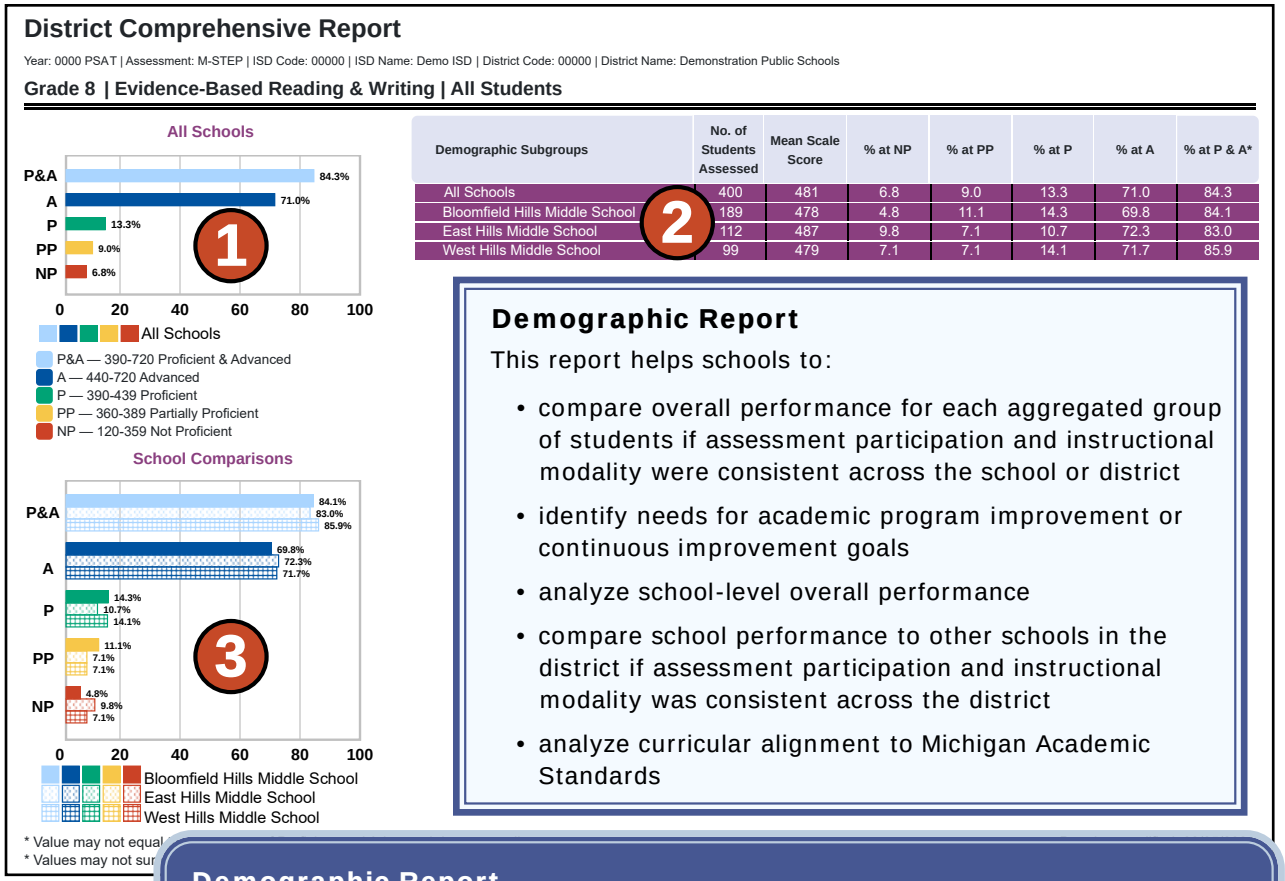
The PSAT 8/9 and the Michigan Student Test of Educational Progress (M-STEP) Comprehensive Reports provide a comparison of students by grade and content, aggregated across schools, showing the percentages proficient at each performance level (Advanced, Proficient, Partially Proficient, and Not Proficient). The Comprehensive Reports are available at the district level.

The report is divided into three main sections:

1. Overall Performance Level Percentages Graphic
2. Entity Performance Level Data Table
3. School Performance Level Percentages Graphic

Overall Performance Level Percentages Graphic

For all students with valid test scores in the selected grade, student population, and displayed content, the percentages of Advanced, Proficient, Partially Proficient, and Not Proficient students are displayed in a horizontal bar graph. The legend beneath the graph provides the scale score ranges associated with each performance level.



Entity Performance Level Data Table

Performance level data are displayed for the schools in the district, excluding nonpublic schools. This data includes the number of students assessed, the mean scale score, and the percentages of students in each performance level—Not Proficient, Partially Proficient, Proficient, Advanced—as well as the combined percentage of Proficient and Advanced.

School Performance Level Percentages Graphic

The user may select a school in the table to compare against the overall district performance data. The selected school will be highlighted, and a corresponding horizontal bar graph of the performance level percentages will display under the overall performance level graph.

Report Features

Features of the Comprehensive Report are described below.

Student Population

The population of students to be displayed may be selected by the user. Users may select from the following student populations.

- All Students – this is the default
- All Except Students with Disabilities – students who are not marked Special Education in the Michigan Student Data System (MSDS) at the time of testing
- Students with Disabilities – students who are marked Special Education in MSDS at the time of testing

Menu Options

Filter option information is available in the Dynamic Score Reporting Site User Guide.

Take Action

The take action menu is enabled after a report is generated and contains the following options for the report:

- **About this Report** – this document
- **CSV Download** – downloadable file that contains all student data that is contained on the report, according to your selected filters.
- **CSV File Format** – file that describes the data contained in the CSV download.
- **PDF Download** – To view a PDF of the report, select "PDF Download". This will open a PDF document of the reports, according to your selected filters.

Help

- Dynamic Score Reporting User Guide – user guide that describes how to access and navigate the Dynamic Score Reporting Site
- Interpretive Guide to Michigan Grade 8 Testing Reports – provides information on the interpretation and use of grade 8 reports

Drill-Down Feature

The District Comprehensive Report includes a drill-down feature that enables the user to select the name of the school in the report to open the School Demographic Report.

After a user has selected the link to drill down into the School Demographic Report, a breadcrumb area appears below the District/School entity information, displaying "District Comprehensive Report > School Demographic Report". Each Comprehensive Report in the breadcrumb is an active link. To return to the District Comprehensive Report, the user selects "District Comprehensive Report".

About the Data

- Comprehensive Reports are available for paper/pencil and online test takers.
- Only valid test scores are included in the reported results.
- Homeschool students are excluded from the reported results.
- Nonpublic students are excluded from reported results.

- Percentages of the four performance levels may not total 100% due to rounding.
- The reported combined percentage of Proficient (P) plus Advanced (A) may not equal the sum due to rounding.

Data Definitions

- **Mean Scale Score:** The mean scale score for a group of students is determined by summing the valid scale scores across that group (within a grade and content area) and dividing by the number of valid scores used for the summed total.
- **Scale Score:** Scale scores are test scores that have been statistically adjusted to a common scale that allows scores to be compared across different forms of the test.

OEAA Secure Site Data Files

Data files are available for download by authorized school and district users under the Reports/Student Test Scores tab on the Office of Educational Assessment and Accountability (OEAA) Secure Site (www.michigan.gov/oeaa-secure).

Student Data File

The Student Data File contains detailed individual student data in an Microsoft Excel file. This data includes school information, student demographic data, test administration data, and student performance data.

School information – student ISD, district, and school codes

Student Demographic Data – includes Grade, Name, Gender, Ethnicity, UIC, Date of Birth; also includes subgroup information including Economically Disadvantaged, Special Education, Limited English Proficiency, Migrant status, and Homeschooled information

Test Administration Data – includes online or paper/pencil format, valid or invalid test (if invalid, includes reason for invalidation of the test), also whether student received accommodations

Student Performance Data – includes student scale score, student growth score, growth target, growth target time frame, and raw score data for social studies

The Student Data File is provided for schools to use as a data resource for school- or district-level data reviews. Schools or districts can use the Student Data File to manipulate and evaluate data in ways that support school improvement goals or other data-based decision making purposes.

PSAT Student Roster (CSV) File Format

The download file containing PSAT 8/9 data is a Comma Delimited File (CSV) with the following fields in order:

PSAT Student Roster (CSV) File Layout

Column	Field Name	Description	Field Type (Length)
A	TestCycle	Spring 21 PSAT	varchar(60)
B	ISDCode	ISD Code	varchar(5)
C	ISDName	ISD Name	varchar(50)
D	DistrictCode	District Code	varchar(5)
E	DistrictName	District Name	varchar(50)
F	SchoolCode	School Code	varchar(5)
G	SchoolName	School Name	varchar(50)
H	Grade	Tested Grade	int(2)
I	ContentArea	Content Area • EL=ELA/EBRW • MA=Math	varchar(2)
J	ReportingCode	Reporting Code	varchar(4)
K	ReportingCodeLabel	Reporting Code Label	varchar(25)
L	LastName	Student Last Name	varchar(30)
M	FirstName	Student First Name	varchar(30)
N	MiddleInitial	Student Middle Initial	varchar(1)
O	UIC	Student Unique Identification Code (UIC)	varchar(10)
P	StudentNumber	Locally assigned student number	varchar(20)
Q	CollegeBoardStudentID	College Board student id number	varchar(7)
R	BirthDate	Student Date of Birth (mm/dd/yyyy)	datetime(8)
S	Gender	Student gender • F = Female • M = Male	varchar(1)
T	Ethnicity	Student ethnicity: • American Indian or Alaska Native • Asian • Black or African American • Hispanic or Latino • Native Hawaiian or Other Pacific Islander • Two or more races • White	varchar(50)
U	EconDisadv	Economically Disadvantaged • Yes • No	varchar(3)
V	EnglishLearner	English Learner • Yes • No	varchar(3)

Aggregate Data File

IMPORTANT: Aggregate reports may reflect non-random sampling disparities due to changes in instructional programming, quarantine requirements, and assessment participation during the 2020-21 school year. District leaders know best what the 2020-21 school year looked like for their district's students and should interpret results accordingly. Comparisons among school, district, and state results are discouraged this year.

The Aggregate Data File contains student performance data used in the selected report. This data includes school information, student population, demographic group, and student performance data.

School information – ISD, district, and school information are included in the selected report

Demographic Data – demographic data—such as Gender, Ethnicity, Economically Disadvantaged, Migrant status, or Other—are included, based on the data contained in the selected report

Student Performance Data – student or student aggregate group scale scores and claim or discipline data are included, based on the data contained in the selected report

The Aggregate Data File is provided for schools to use as a data resource for school- or district-level data reviews. Schools or districts can use the Aggregate Data Files to evaluate data in ways that support school improvement goals or other data-based decision making purposes.

PSAT 8/9 Demographic Downloadable (CSV) File Format

The downloaded file is a Comma Delimited File (CSV) with the following fields in order:

PSAT 8/9, SAT with Essay Demographic Downloadable (CSV) File Layout			
Column	**Field Name**	**Description**	**Field Type (Length)**
A	TestCycle	Spring 20xx PSAT/SAT	varchar(60)
B	ISDCode	ISD Code	char(5)
C	ISDName	ISD Name	varchar(50)
D	DistrictCode	District Code	char(5)
E	DistrictName	District Name	varchar(50)
F	SchoolCode	School Code	char(5)
G	SchoolName	School Name or All Buildings	varchar(50)
H	Assessment	PSAT 8/9 or SAT with Essay	varchar (14)
I	Grade	Tested Grade	int(2)
J	ContentArea	Content Area • EL=ELA/EBRW (Evidenced-Based Reading and Writing) • MA=Math	varchar(2)
K	StudentPopulation	Student Population • All = All Students • SWD = Students with Disabilities • AED = All Except SWD	varchar(3)
L	DemographicGroup	Demographic Groups • All Students/All Grades • All Students/Grade X • Gender • Ethnicity • Economically Disadvantaged • English Learner • Former English Learner • Foster Care • Homeless • Migrant • Military Connected • Students with Disabilities • Standard Accommodation	varchar(30)
M	DemographicSubGroup	For each Demographic Group, the following subgroups are reported: • Gender: o Male o Female • Ethnicity: o American Indian or Alaska Native o Asian	varchar(50)

Section 7: Additional Resources

Additional Sources of Assessment Results

MI School Data

MI School Data (www.michigan.gov/mischooldata) is an online public portal that provides views of Michigan education data, to help make informed educational decisions; to help improve instruction; and to enable school systems to prepare a higher percentage of students to succeed in rigorous high school courses, college, and challenging careers.

MiLearn

Michigan Linked Educational Assessment Reporting Network (MiLearn) is a Michigan Department of Education service that delivers state assessment data electronically to students, parents, and educators directly through the district's Student Information System (SIS). MiLearn is updated daily using the Michigan Data Hub data to reflect student enrollment changes.

When users log into the SIS, no second login or password is needed to access MiLearn. The user clicks a "State Assessment Data" link in the SIS to access MiLearn and their reports. Currently, districts on the Michigan Data Hub that use PowerSchool, MISTAR, Skyward, or Synergy as their SIS are able to integrate this free service. If your district is not yet on the Michigan Data Hub, contact support@michigandatahub.org.

The MiLearn system has been designed with flexibility and convenience for districts. You control who sees the data. District administrative staff configure their system security to locally govern which data is provided to their users. Since MiLearn receives rostering updates nightly, your data is always current and reflects the current school and district enrollment. This also means you will see the available state assessment results for new students in the district the next day.

Currently, MiLearn houses three years' worth of M-STEP results data. Beginning with the Spring 2019 score results, PSAT 8/9 results will be added to the system. For more information on MiLearn, contact Tim Hall at hallt@michigan.gov.

General Resources

General resources are available on the M-STEP web page (www.michigan.gov/mstep) and PSAT web page (www.michigan.gov/psat).

Resources available on the M-STEP web page:

- M-STEP and PSAT Performance Level (PL) Descriptors
- M-STEP Performance Level Scale Score Ranges
- Statewide Summative Assessments Calendars
- Michigan's Education Assessment System: What It Is, What It Means, and What It Offers – presentation
- Online practice for M-STEP science and social studies
- Sample Item Sets
- What Parents Should Know About Assessments
- M-STEP Parent Guides – available in English and translated versions of Spanish and Arabic

Resources available on the PSAT web page:

- PSAT 8/9 Understanding Scores
- Understanding PSAT 8/9 Results for Parents

College Board website (www.collegeboard.org/psat): for PSAT 8/9 information

Guidelines on the Uses of College Board Test Scores and Related Data (https://research.collegeboard.org/pdf/guidelines-uses-college-board-test-scores-and-data.pdf)

For instructions on how to obtain access to the Dynamic Reporting Site, go to Secure Site Training (www.michigan.gov/securesitetraining) and click **How do I get access to the Secure Site?**

Also, be sure to sign up for the OEAA Spotlight on Assessment and Accountability Newsletter (www.michigan.gov/mde-spotlight) for weekly up-to-date information about statewide summative assessments.

Section 8: Glossary

- **Benchmark score:** The PSAT benchmark scores are indicators displayed on the student's PSAT Score Report provided by the College Board. Students meeting the PSAT benchmark are on track for college readiness upon graduation from high school. PSAT benchmarks apply to both Mathematics and to Evidence-Based Reading and Writing. The College Board PSAT benchmarks and the MDE proficient cut scores shown on this report are the same.
- **Discipline:** Disciplines are used as a means of organizing content standards and expectations. Disciplines apply to social studies.
- **Domains:** Domains are used to group the three-dimensional science standards using similar disciplinary core ideas. Domains apply to science.
- **Growth Score (SGP):** (previously called Student Growth Percentiles) SGPs describe a student's learning over time compared to other students with comparable prior test scores. Percentiles range from one to 99 and indicate how many scores in the comparison group are below that score.
- **Growth Target (AGP):** (previously called Adequate Growth Percentiles) This is the amount of growth necessary for the student to reach or maintain proficiency within a set time frame. Percentiles range from one to 99 and indicate how much growth is required in order for the student to achieve proficiency in the time frame score.
- **Growth Target (AGP) Time Frame:** This is the amount of time the growth target (AGP) model expects the student to take to reach or maintain proficiency. Time Frames range from one to three and indicate how many years it would take for the student to achieve proficiency if they meet the Growth Target Score.
- **Interquartile Range:** The graphic "box" in the Science Summary Report representing the middle 50 percent of scores for the aggregate group; represents the range of scores from the lower quartile to the upper quartile.
- **Invalid Test:** A test that was completed by the student but was not administered according to required test administration policies or procedures. The invalid reasons include:
  - **Invalid Return of Materials (Multiple Answer Documents OR Late Returns):** For paper/pencil tests, either multiple answer documents were received for the student or materials were returned after the materials return deadline.
  - **Misadministration:** The test was not administered according to required test administration policies and procedures. Examples of this type of invalidation include, but are not limited to: test directions not read verbatim during testing; students were able to view content-related materials in the classroom during testing; or the testing environment was not conducive to testing or was not appropriate for the test session.
  - **Missing MSDS data:** Data in the Michigan Student Data System is missing.
  - **Nonstandard Accommodation:** The student received an accommodation during testing that is not allowed. For example, a student who tested in grades 3-5 with any type of calculator has received a nonstandard accommodation because this accommodation changes what is being assessed in the test.
  - **Not Tested in Enrolled Grade (Out of Level):** The student's enrolled grade in MSDS does not match the grade-level test taken.
  - **Prohibited Behavior:** The student engaged in not-allowable behavior during the test session. This may include, but is not limited to: disruptions during testing, accessing prohibited electronic devices, or cheating.
  - **Test Not Attempted:** The student did not take the test or did not complete a sufficient portion of the test to receive a score.
- **Item:** A test question or stimulus presented to a student to elicit a response.

- **Standard Error:** Educational measurements are attempts to capture a student's true score, or ability, in the area being assessed. The standard error around the student score is an estimate of the range of scores one would expect if the student was to be measured repeatedly with parallel assessments.
- **Mean Scale Score:** The mean scale score for a group of students is determined by summing the valid scale scores across that group (within a grade and content area) and dividing by the number of valid scores used for the summed total.
- **Michigan's Academic Standards:** The standards outline learning expectations for Michigan students and are intended to guide local curriculum development. They should be used as a framework by schools for curriculum development, with the curriculum itself prescribing instructional resources, methods, progressions, and additional knowledge valued by the local community.
- **Performance Level:** This provides descriptive information about the student's performance on the M-STEP:
  - **Not Proficient** The student's performance is not yet proficient and indicates minimal understanding and application of key academic content standards defined for Michigan students. The student needs intensive intervention and support to improve achievement.
  - **Partially Proficient** The student's performance is not yet proficient, indicating a partial understanding and application of key academic content standards defined for Michigan students. The student needs assistance to improve achievement.
  - **Proficient** The student's performance indicates understanding and application of key academic content standards defined for Michigan students. The student needs continued support to maintain and improve proficiency.
  - **Advanced** The student's performance exceeds academic content standards and indicates substantial understanding and application of key concepts defined for Michigan students. The student needs support to continue to excel.
- **Raw Score:** Points earned/total points possible. Raw scores are not comparable across different forms of the test.
- **Scale Score:** Scale scores are test scores that have been statistically adjusted to a common scale that allows scores to be compared across different forms of the test.

Section 9: Contact Information

School administrators, teachers, and counselors should become familiar with the report layouts and information contained in this document. If you have questions after reviewing this Interpretive Guide to Reports, or need additional information about administration procedures, content, scheduling, and/or appropriate assessment of or accommodations for students with disabilities or English Learners (ELs), contact the Michigan Department of Education Office of Educational Assessment and Accountability (OEAA), using the contact information listed below.

Office of Educational Assessment and Accountability

Andrew Middlestead, Director, OEAA

Kate Cermak, Manager, Test Administration and Reporting

Pietro Semifero, Manager, Online Assessment

Phoebe Gohs, M-STEP Administration and Reporting Consultant

Steven Reed, MME Test Administration and Reporting Consultant

Pietro Semifero, Interim Manager, Test Development

Susan Palmiter, Social Studies Consultant

TJ Heck, Science Consultant

Jennifer Paul, English Learner and Accessibility Assessment Specialist

Ji Zeng, Ph.D., Lead Psychometrician, Psychometrics

Phone: 1-877-560-8378, option 3

Fax: 517-335-1186

Website: www.michigan.gov/mstep

E-mail: mde-oeaa@michigan.gov

Appendix B.4 M-STEP Student Data File Format

M-STEP Student Data File Format

The downloaded file containing student test scores is a Comma Delimited File (CSV) with the following fields in order:

Please note: fields containing "Reporting Level" information are referring to Claims for ELA/Math and Disciplines for Science/Social Studies.

Excel Column	Field	Descriptor	Field Type (length)	Format
A	TestCycleID	M-STEP test period and fiscal year	text(20)	
B	ISDCode	ISD code number	varchar(5)	99999
C	DistrictCode	District code number	varchar(5)	99999
D	SchoolCode	School code number	varchar(5)	99999
E	Grade	Student grade	varchar(2)	99
F	LastName	Student last name	varchar(25)	
G	FirstName	Student first name	varchar(25)	
H	MiddleInitial	Student middle initial	char(1)	9
I	Gender	Student's gender M = Male, F = Female	char(1)	9
J	Ethnicity	Student's ethnic code 0 = Native Hawaiian or Other Pacific Islander 1 = American Indian or Alaska Native 3 = Black or African American 4 = Hispanic or Latino 5 = White 6 = Two or more Races 9 = Asian	int(1)	9
K	UIC	Student UIC	char(10)	9999999999
L	StudentNumber	Student number from local school district	varchar(20)	
M	BirthDate	Student's date of birth	datetime(8)	mm/dd/yyyy
N	Barcode	Student's barcode number	varchar(10)	9999999999
O	ED	Economically disadvantaged Y = Yes, N = No	char(1)	9
P	EL	English learner Y = Yes, N = No	char(1)	9
Q	FEL	Former English learner Y = Yes, N = No	char(1)	9
R	FosterCare	Student is in foster care Y = Yes, N = No	char(1)	9
S	Homeless	Homeless student Y = Yes, N = No	char(1)	9

Excel Column	Field	Descriptor	Field Type (length)	Format
T	HomeSchooled	Homeschooled Y = Yes, N = No *Note: If a student is homeschooled in any subject then a student is considered homeschooled.*	char(1)	9
U	MS	Migrant status Y = Yes, N = No	char(1)	9
V	MilitaryConnected	MilitaryConnected Y = Yes, N = No	char(1)	9
W	SE	Special education Y = Yes, N = No	char(1)	9
X	ContentArea	Content Area MA = Math SC = Science *(not reported for 2018)* SS = Social studies EL = ELA	varchar(2)	99
Y	Online	Online Y = Yes, N = No	char(1)	9
Z	Valid	Valid Y = Yes, N = No	char(1)	9
AA	OutOfLevel	Student was tested out of level Y = Yes, N = No	char(1)	9
AB	Attemptedness	Attempted Y = Yes, N = No	char(1)	9
AC	ProhibitedBehavior	Prohibited behavior Y = Yes, N = No	char(1)	9
AD	Misadministration	Assessment misadministration Y = Yes, N = No	char(1)	9
AE	NonstandardAccommodation	Nonstandard accommodation used Y = Yes, N = No	char(1)	9
AF	InvalidReasonCode	1= Not found in MSDS 5 = Multiple Answer Documents Returned 6 = Late Return 7 = Misadministration 8 = Did not meet attemptedness	varchar(1)	99
AG	StandardAccommodation	Standard accommodation used Y = Yes, N = No	char(1)	9

Excel Column	Field	Descriptor	Field Type (length)	Format
AH	ReportingCode	Reporting code if provided by school	varchar(4)	9999
AI	ReportingCodeLabel	Reporting code label if provided by school	varchar(25)	
AJ	ResearchCode1	Research use code 1 Values 01-10 if provided by school	varchar(2)	99
AK	ResearchCode2	Research use code 2 Values 01-10 if provided by school	varchar(2)	99
AL	FormFixed	Fixed test form *Note: Says "CAT" for CAT tests*	varchar(4)	9999
AM	SS	Scale score	int(4)	9999
AN	SSSE	Scale score standard error	int(3)	999
AO	PL	Performance level 4 = Advanced proficient 3 = Proficient 2 = Partially proficient 1 = Not proficient	varchar(1)	9
AP	GrowthScore	Growth score *Note: NA possible*	varchar(2)	99
AQ	GrowthTarget	Growth target *Note: NA possible*	varchar(2)	99
AR	TargetTimeframe	Target timeframe (years) *Note: NA possible*	varchar(2)	99
AS	TotalPts	Raw-score total points *Note: NA for ELA and Math*	varchar(3)	999
AT	ReportingLevel1Code	Reporting level 1 code	varchar(10)	
AU	ReportingLevel1Description	Reporting level 1 description	varchar(100)	
AV	ReportingLevel1SS	Reporting level 1 scale score *Note: NA for social studies*	varchar(4)	9999
AW	ReportingLevel1SSSE	Reporting level 1 scale score standard error *Note: NA for social studies*	varchar(3)	999
AX	ReportingLevel1PerfIndicator	Reporting level 1 performance indicator: 3 = Adequate progress 2 = Attention may be indicated 1 = Most at risk of falling behind *Note: NA for social studies*	varchar(2)	99

Excel Column	Field	Descriptor	Field Type (length)	Format
AY	ReportingLevel1Pts	Reporting level 1 raw score points *Note: NA for ELA and Math*	varchar(2)	99
AZ	ReportingLevel1PtsPossible	Reporting level 1 raw score points possible *Note: NA for ELA and Math*	varchar(2)	99
BA	ReportingLevel1PctCorrect	Reporting level 1 percent correct *Note: NA for ELA and Math*	varchar(5)	999.9
BB	ReportingLevel2Code	Reporting level 2 code	varchar(10)	
BC	ReportingLevel2Description	Reporting level 2 description	varchar(100)	
BD	ReportingLevel2SS	Reporting level 2 scale score *Note: NA for social studies*	varchar(4)	9999
BE	ReportingLevel2SSSE	Reporting level 2 scale score standard error *Note: NA for social studies*	varchar(3)	999
BF	ReportingLevel2PerfIndicator	Reporting level 2 performance indicator 3 = Adequate progress 2 = Attention may be indicated 1 = Most at risk of falling behind *Note: NA for social studies*	varchar(2)	
BG	ReportingLevel2Pts	Reporting level 2 raw score points *Note: NA for ELA and Math*	varchar(2)	99
BH	ReportingLevel2PtsPossible	Reporting level 2 raw score points possible *Note: NA for ELA and Math*	varchar(2)	99
BI	ReportingLevel2PctCorrect	Reporting level 2 percent correct *Note: NA for ELA and Math*	varchar(5)	999.9
BJ	ReportingLevel3Code	Reporting level 3 code	varchar(10)	
BK	ReportingLevel3Description	Reporting level 3 description	varchar(100)	
BL	ReportingLevel3SS	Reporting level 3 scale score *Note: NA for social studies*	varchar(4)	9999
BM	ReportingLevel3SSSE	Reporting level 3 scale score standard error *Note: NA for social studies*	varchar(3)	999

Excel Column	Field	Descriptor	Field Type (length)	Format
BN	ReportingLevel3PerfIndicator	Reporting level 3 performance indicator 3 = Adequate progress 2 = Attention may be indicated 1 = Most at risk of falling behind *Note: NA for social studies*	varchar(2)	99
BO	ReportingLevel3Pts	Reporting level 3 raw score points *Note: NA for ELA and Math*	varchar(2)	99
BP	ReportingLevel3PtsPossible	Reporting level 3 raw score points possible *Note: NA for ELA and Math*	varchar(2)	99
BQ	ReportingLevel3PctCorrect	Reporting level 3 percent correct *Note: NA for ELA and Math*	varchar(5)	999.9
BR	ReportingLevel4Code	Reporting level 4 code	varchar(10)	
BS	ReportingLevel4Description	Reporting level 4 description	varchar(100)	
BT	ReportingLevel4SS	Reporting level 4 scale score *Note: NA for social studies*	varchar(4)	9999
BU	ReportingLevel4SSSE	Reporting level 4 scale score standard error *Note: NA for social studies*	varchar(3)	999
BV	ReportingLevel4PerfIndicator	Reporting level 4 performance indicator 3 = Adequate progress 2 = Attention may be indicated 1 = Most at risk of falling behind *Note: NA for social studies*	varchar(2)	99
BW	ReportingLevel4Pts	Reporting level 4 raw score points *Note: NA for ELA and Math*	varchar(2)	99
BX	ReportingLevel4PtsPossible	Reporting level 4 raw score points possible *Note: NA for ELA and Math*	varchar(2)	99
BY	ReportingLevel4PctCorrect	Reporting level 4 percent correct *Note: NA for ELA and Math*	varchar(5)	999.9
BZ	ReportingLevel5Code	Reporting level 5 code	varchar(10)	
CA	ReportingLevel5Description	Reporting level 5 description	varchar(100)	

Excel Column	Field	Descriptor	Field Type (length)	Format
CB	ReportingLevel5SS	Reporting level 5 scale score *Note: NA for social studies*	varchar(4)	9999
CC	ReportingLevel5SSSE	Reporting level 5 scale score standard error *Note: NA for social studies*	varchar(3)	99
CD	ReportingLevel5PerfIndicator	Reporting level 5 performance indicator 3 = Adequate progress 2 = Attention may be indicated 1 = Most at risk of falling behind *Note: NA for social studies*	varchar(2)	99
CE	ReportingLevel5Pts	Reporting level 5 raw score points *Note: NA for ELA and Math*	varchar(2)	99
CF	ReportingLevel5PtsPossible	Reporting level 5 raw score points possible *Note: NA for ELA and Math*	varchar(2)	99
CG	ReportingLevel5PctCorrect	Reporting level 5 percent correct *Note: NA for ELA and Math*	varchar(5)	999.9
CH	ReportingLevel6Code	Reporting level 6 code	varchar(10)	
CI	ReportingLevel6Description	Reporting level 6 description	varchar(100)	
CJ	ReportingLevel6SS	Reporting level 6 scale score *Note: NA for social studies*	varchar(4)	9999
CK	ReportingLevel6SSSE	Reporting level 6 scale score standard error *Note: NA for social studies*	varchar(3)	99
CL	ReportingLevel6PerfIndicator	Reporting level 6 performance indicator 3 = Adequate progress 2 = Attention may be indicated 1 = Most at risk of falling behind *Note: NA for social studies*	varchar(2)	99
CM	ReportingLevel6Pts	Reporting level 6 raw score points *Note: NA for ELA and Math*	varchar(2)	99
CN	ReportingLevel6PtsPossible	Reporting level 6 raw score points possible *Note: NA for ELA and Math*	varchar(2)	99

Excel Column	Field	Descriptor	Field Type (length)	Format
CO	ReportingLevel6PctCorrect	Reporting level 6 percent correct *Note: NA for ELA and Math*	varchar(5)	999.9
CP	ReportingLevel7Code	Reporting level 7 code	varchar(10)	
CQ	ReportingLevel7Description	Reporting level 7 description	varchar(100)	
CR	ReportingLevel7SS	Reporting level 7 scale score *Note: NA for social studies*	varchar(4)	9999
CS	ReportingLevel7SSSE	Reporting level 7 scale score standard error *Note: NA for social studies*	varchar(3)	999
CT	ReportingLevel7PerfIndicator	Reporting level 7 performance indicator 3 = Adequate progress 2 = Attention may be indicated 1 = Most at risk of falling behind *Note: NA for social studies*	varchar(2)	99
CU	ReportingLevel7Pts	Reporting level 7 raw score points *Note: NA for ELA and Math*	varchar(2)	99
CV	ReportingLevel7PtsPossible	Reporting level 7 raw score points possible *Note: NA for ELA and Math*	varchar(2)	99
CW	ReportingLevel7PctCorrect	Reporting level 7 percent correct *Note: NA for ELA and Math*	varchar(5)	999.9
CX	EssayPtsEarned	Essay raw score points Condition Codes: B = Blank I = Insufficient L = Nonscorable Language T = Off Topic M = Off Purpose	varchar(2)	99
CY	EssayPtsPossible	Essay points possible	int(2)	99
CZ	CreatedDate	Student data file creation date	datetime(16)	mm/dd/yyyy hh:mm

Modification Log:

1. Initial version created 7/25/16
2. Formatting updated 8/1/16
3. Changed column R, LEP (Limited English proficient), to EL (English learner) 6/19/17

4. Field Type (length) updated to varchar(100) for the following Reporting Level Description fields: AS, BA, BI, BQ, BY, CG, CO; 6/19/17
5. Removed “Spring 2016” from document title 6/19/17
6. Changed document title to “Spring 2018 M-STEP Student Data File Format” 8/2/18
7. Removed the following fields 8/2/18
    a. FeederSchoolCode
    b. Unused
    c. FormPTask
    d. PTPts
    e. EssayTypeCode
    f. EssayTypeDescription
    g. EssayRubric1Code
    h. EssayRubric1Name
    i. EssayRubric1Pts
    j. EssayRubric1PtsPoss
    k. EssayRubric2Code
    l. EssayRubric2Name
    m. EssayRubric2Pts
    n. EssayRubric2PtsPoss
    o. EssayRubric3Code
    p. EssayRubric3Name
    q. EssayRubric3Pts
    r. EssayRubric3PtsPoss
8. Added the following fields 8/2/18
    a. FEL (Q)
    b. FosterCare (R)
    c. MilitaryConnected (V)
    d. ReportingCodeLabel (AI)
9. Demographics fields are now in alphabetical order 8/2/18
10. Field title of EssayTotalPts changed to EssayPtsEarned 8/2/18
11. Field title of EssayTotalPtsPoss changed to EssayPtsPossible 8/2/18
12. The Descriptor for the following fields have changed 8/2/18
    a. EL
    b. FEL
    c. Homeless
    d. HomeSchooled
    e. MS
    f. SE
    g. Valid
    h. OutOfLevel
    i. Attemptedness
    j. ProhibitedBehavior
    k. Misadministration
    l. NonstandardAccommodation

m. StandardAccommodation
n. EssayPtsEarned

13. Changed column AP, SGP (Student Growth percentile), to GrowthScore 7/11/19
14. Added following fields 7/11/19
    a. GrowthTarget (AQ)
    b. TargetTimeframe (AR)

Appendix B.5 M-STEP Aggregate Data File Format

M-STEP Aggregate Data File Format

The downloaded file containing M-STEP aggregate data is a Comma Delimited File (CSV) with the following fields in order:

Excel Column	Field	Descriptor	Field Type and Length
A	TestCycle	Test name and year	text(20)
B	ISDCode	ISD code	varchar(05)
C	ISDName	ISD name	varchar(50)
D	DistrictCode	District code	varchar(05)
E	DistrictName	District name	varchar(50)
F	SchoolCode	School code	varchar(05)
G	SchoolName	School name	varchar(50)
H	Grade	Tested grade	varchar(02)
I	Subject	English Language Arts Mathematics Science *(NA for 2018)* Social Studies	varchar(20)
J	SubGroupType	All Students Economically disadvantaged (ED) English learner (EL) Ethnicity Former English learner (FEL) Foster Care Gender Homeless Migrant (MS) Military Connected Standard Standard - EL	varchar(20)
K	DemographicSubGroup	All Students Female Male Students With Disabilities American Indian or Alaska Native Asian Black or African American Hispanic or Latino Native Hawaiian or Other Pacific Islander Two or More Races White No *(not used for All Students, Ethnicity, Gender)* Yes *(not used for All Students, Ethnicity, Gender)*	char(37)
L	AvgSS	Average scale score of selected group	integer
M	StdDev	Standard deviation of selected group	integer

Excel Column	Field	Descriptor	Field Type and Length
N	NotProficientN	Number of students not proficient in selected group	integer
O	NotProficientPct	Percent of students not proficient in selected group	decimal(8,1)
P	PartiallyProficientN	Number of students partially proficient in selected group	integer
Q	PartiallyProficientPct	Percent of students partially proficient in selected group	decimal(8,1)
R	ProficientN	Number of students proficient in selected group	integer
S	ProficientPct	Percent of students proficient in selected group	decimal(8,1)
T	AdvancedN	Number of students advanced in selected group	integer
U	AdvancedPct	Percent of students advanced in selected group	decimal(8,1)
V	MetStandardsN	Number of students who met standards in selected group	integer
W	MetStandardsPct	Percent of students who met standards in selected group	decimal(8,1)
X	DidNotMeetStandardsN	Number of students who did not meet standards in selected group	integer
Y	DisNotMeetStandardsPct	Percent of students who did not meet standards in selected group	decimal(8,1)
Z	NumberTestedN	Number of students tested in selected group	integer
AA	NumberIncludedN	Number of students included in selected group	integer

Modification Log:

1. Initial version created in December, 2015
2. Formatting revisions made 8/10/16
3. SubGroupType of Foster Care added 8/2018
4. SubGroupType of Military Connected added 8/2018

Appendix C: Target Score Report

Psychometric Analysis Report for the
Michigan 3-7 English Language Arts (ELA) and Mathematics Assessment Target Reporting
2020-2021

December 2021

DRC Psychometric Services Michigan Project Team
Data Recognition Corporation

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Introduction

The assessment target score report is designed to report a group of students' (e.g., at the grade, school, teacher, and/or district levels) relative strength and weakness at the assessment target level. It is for aggregate level reports only.

Unlike the performance categories provided at the total test and claim levels, these strengths and weakness do not imply proficiency. Instead, they show how a group of students' performance is distributed across the content target relatively to their overall performance. For example, a group of students may have performed very well on a subject but performed lower on a target. Thus, performance level code of C not necessarily imply a lack of proficiency, but that these students' performance on that target was lower than their performance across other targets put together. It can be concluded that the students performed lower than expected on that target.

Assessment target score report should serve as a starting point in an overall investigation of students' strengths and weaknesses and constitutes only one of many sources of evidence that should be used in evaluating student performance.

This was conducted for the English Language Arts (ELA) and Mathematics M-STEP assessments.

Considerations with the Covid-19 Pandemic

The spring 2021 assessment results should be interpreted in the context of circumstances related to the COVID-19 pandemic, including the MI sample of students who tested, school closures, nonstandard instruction delivery modes in the 2020–21 school year, potential diminished opportunity to learn for students, and other unknown effects of the pandemic on students and their families.

Methodology

Item response theory (IRT) based residual analysis can be used to conduct analyses for the assessment target score report. The residual is the difference between the observed score and expected score at the item level. The observed score is the score (e.g., 0 to 3) a student submitted for each item. The expected score is derived using the 2 parameter logistic (2PL) model for dichotomously scored items and generalized partial credit model (GPCM) for polytomously scored items.

The expected score for a multiple-choice item (MC, one point item) was computed using the two-parameter logistic (2PL) model as shown below in equation 1.

$$P_i\ (x_i = 1|\theta, a_i, b_i) = \frac{\exp Da_i(\theta - b_i)}{1+\exp Da_i(\theta - b_i)}, \quad (1)$$

where a_i is item discrimination parameter and b_i is item difficulty for item *i*, and p_i is the probability of the item getting correct given the observed overall ability estimate, θ, and *D* is 1.7. The expected score for a constructed response (CR) item, the observed overall ability estimate, θ, was computed with generalized partial credit mode (equation 2).

$$P_{ik}\ (x_i|\theta, a_i, b_{i0}, b_{i1}, \ldots, b_{iK_i}) = P_{ik}\ (\theta) = \frac{\exp Da_i \sum_{k=0}^{x_i}(\theta - b_{ik})}{\sum_{r=0}^{K_i}[\exp \quad {}_k\sum 0_k^{(\theta - b_{ik})}]}, \quad (2)$$

where $\sum_{k=0}^{0}(\theta - b_{ik}) \equiv 0$.

Equation (2) computes the probability of obtaining the score of $0 \leq x_i \leq K_i$ on CR item i. The item discrimination parameter is a_i, and b_{ik} is the category intersection parameter (in SBAC scoring specification, it is referred to step parameters). Equation (1) is a special case of equation (2) with $K_i = 1$. This means that the computation of probability can be completed for both 2PL MC and CR items using equation (2).

For all items, the residual, R_i, is found by using equation (3),

$$R_i = O_i - P_i\ (\theta) \quad (3)$$

where O_i is the observed score for item *i* and $P_i\ (\theta)$ is the expected score for item *i.*

Once the individual residuals were calculated, the weighted average of the residuals were calculated for each assessment target meeting the reporting criteria (see the Reporting Criteria Section below for more details) criteria using equation (4).

$$\bar{R}_{target} = \frac{1}{\sum_{i=1} w_i} \sum_{i=1} R_i \quad (4)$$

where R_i is the residual for item *i* and w_i is the weight associated with item *i* that accounts for the number of score points for that item.

Reporting Criteria

Target assessment results were reported for both ELA and Mathematics. Table 1 provides the claim and target level for which target assessment results were reported. Once the average residual for each assessment target was computed, a flagging criterion of +/- 0.05 was used to indicate the assessment target level performance. Table 2 provides a description of the performance levels.

Table 1: Assessment targets are listed below by content area.

ELA	
Claim	**Assessment Target**
Claim 1	1
	2
	3
	4
	5
	6
	7
	8
	9
	10
	11
	12
	13
	14
Claim 2	1
	2
	3
	4
	6
	7
	8
	9
Claim 3	4
Claim 4	2
	3
	4

Math	
Claim	**Assessment Target**
Claim 1	A
	B
	C
	D
	E
	F
	G
	H
	I
	J
	K
	L
Claim 2	A
	B
	C
	D
Claim 3	A
	B
	C
	D
	E
	F
Claim 4	A
	B
	C
	D
	E
	F

Table 2: Performance level descriptions.

PL Code	Target Level	Description
A	Better than performance on the test as a whole	This target is a relative strength. The group of students performed better on items from this target than they did on the rest of the test, as a whole.
B	Similar to performance on the test as a whole	This target is neither a relative strength nor a relative weakness. The group of students performed about as well on items from this target as they did on the rest of the test, as a whole.
C	Worse than performance on the test as a whole	This target is a relative weakness. The group of students did not perform as well on items from this target as they did on the rest of the test, as a whole.
--	Insufficient Information	Not enough information is available to determine whether this target is a relative strength or weakness.

Additionally, since the M-Step administration was a CAT, the number of items presented in each assessment target varied for each administration. Thus, reporting criteria was used to ensure that a specified number of unique items were presented in order the assessment target results to be provided. The criteria used is listed below:

- Number of unique students per target: n=15
- Number of unique items per target: n=3
- Number of responses per target: n=25
- Use 0.05 criterion on the rescaled residual scale

Exclusions

It should be noted that some students were excluded from the target reporting analysis. Students who were Force Submit or scored at the lowest and highest obtainable scale score (LOSS and HOSS) were excluded from the analysis. Additionally, students with invalid tests and home schooled students were excluded.

Results

Aggregate results were provided to MDE by State, ISD, District, and Building. Private school students were only included in the building level aggregate results. Table 3 shows N count used at the state level and aggregates for all students and without and with disabilities (AED and SWD) and Tables 4 and 5 provide the state level results for ELA and Mathematics. Note that the PL codes in Tables 3 and 4 correspond to those found in Table 2.

Table 3: Valid student counts at the state level by content area and grade.

Content Area	Grade	N	N AED	N SWD
ELA	**3**	71,800	62,864	8,936
ELA	**4**	72,026	62,988	9,038
ELA	**5**	71,506	62,856	8,650
ELA	**6**	69,096	61,224	7,872
ELA	**7**	68,841	61,181	7,660
Mathematics	**3**	71,227	62,490	8,737
Mathematics	**4**	71,813	62,904	8,909
Mathematics	**5**	71,173	62,646	8,527
Mathematics	**6**	68,845	61,237	7,608
Mathematics	**7**	68,824	61,350	7,474

Table 4a: State level aggregate results for ELA.

Claim	Target	Grade 3		Grade 4		Grade 5		Grade 6		Grade 7	
		Valid N	PL Code	Valid N	PL Code	Valid N	PL Code	Valid N	PL Code	Valid N	PL Code
1	**1**	50468	B	69612	B	56376	B	58977	B	68451	B
	2	70124	B	63361	B	57083	B	54039	C	33003	B
	3	64502	B	61184	B	61248	B	65229	B	57721	B
	4	56985	B	49977	B	62984	B	51689	B	53185	D
	5	35159	B	15967	A	9196	B	66614	C	42879	D
	6	17793	B	47856	B	60446	B	53534	B	45237	B
	7	63877	B	61062	B	44220	B	49460	B	50049	B
	8	60379	B	66498	B	63779	B	62031	B	61469	B
	9	59664	B	66894	B	43817	B	51114	B	67731	B
	10	62768	B	68173	B	64058	B	50015	B	54619	A
	11	51161	B	62623	B	59015	B	68771	B	63346	A
	12	50331	B	34385	B	45169	B	6915	B	41050	A
	13	59180	A	38598	B	56065	B	44347	B	42174	B
	14	51243	B	48538	C	62301	B	24867	C	41171	A
2	**1**	69637	C	59086	C	65563	B	61288	B	37895	C
	2										
	3	69588	B	70413	B	65992	C	62285	C	63874	C
	4	71800	A	72026	A	71506	A	69096	B	68841	B
	6	37620	B	50107	C	59068	C	60751	B	67207	C
	8	71800	B	72026	B	71506	B	69096	B	68841	B
	9	71800	C	72026	B	71506	B	69096	B	68841	B
3	**4**	71800	B	72026	B	71506	B	69096	B	68841	B
4	**2**	71795	B	69283	B	70350	B	63124	B	47858	B
	3	56392	B	64373	B	70142	B	69075	B	68294	B
	4	63501	C	71171	B	68479	B	68265	B	68475	B

Table 4b: State level aggregate results for ELA for Students without Disabilities

Claim	Target	Grade 3		Grade 4		Grade 5		Grade 6		Grade 7	
		Valid N	PL Code	Valid N	PL Code	Valid N	PL Code	Valid N	PL Code	Valid N	PL Code
1	**1**	45082	B	61004	B	48773	B	52313	B	60936	B
	2	61540	B	54806	B	50892	B	48555	C	30588	B
	3	56035	B	53052	B	53182	B	57571	B	50419	B
	4	50594	B	44986	B	56527	B	47025	C	47753	D
	5	31938	B	14687	A	8308	B	58846	C	39941	D
	6	14653	B	41290	B	52853	B	46603	B	40057	B
	7	55489	B	53225	B	38312	B	43499	B	43767	B
	8	53644	B	58459	B	56224	B	54749	B	54086	B
	9	51969	B	58609	B	37250	B	46342	B	60108	B
	10	54274	B	59367	A	55902	B	43680	B	48109	A
	11	45989	B	55560	B	52784	B	60994	B	56915	A
	12	44226	B	29365	B	41680	B	6368	B	36748	A
	13	51320	A	33204	B	48228	B	38607	B	37856	B
	14	44279	B	40923	C	54815	B	20608	C	35467	A
2	**1**	60924	C	50873	C	57586	B	53685	B	34633	C
	2										
	3	60915	B	61566	B	57670	C	55511	C	56445	C
	4	62864	A	62988	A	62856	A	61224	B	61181	B
	6	32839	B	44857	C	52600	C	54295	B	59856	C
	8	62864	B	62988	B	62856	B	61224	B	61181	B
	9	62864	C	62988	B	62856	B	61224	B	61181	B
3	**4**	62864	B	62988	B	62856	B	61224	B	61181	B
4	**2**	62860	B	60961	B	61780	B	55877	B	42610	B
	3	48438	B	55768	B	61569	B	61203	B	60640	B
	4	55918	C	62250	B	60807	B	60517	B	60936	B

Table 4c: State level aggregate results for ELA for Students with Disabilities

Claim	Target	Grade 3		Grade 4		Grade 5		Grade 6		Grade 7	
		Valid N	PL Code	Valid N	PL Code	Valid N	PL Code	Valid N	PL Code	Valid N	PL Code
1	**1**	5386	B	8608	B	7603	B	6664	A	7515	B
	2	8584	C	8555	B	6191	B	5484	B	2415	B
	3	8467	B	8132	B	8066	B	7658	B	7302	A
	4	6391	B	4991	B	6457	B	4664	B	5432	D
	5	3221	B	1280	B	888	B	7768	B	2938	D
	6	3140	B	6566	B	7593	B	6931	B	5180	B
	7	8388	B	7837	B	5908	B	5961	B	6282	A
	8	6735	A	8039	B	7555	A	7282	A	7383	B
	9	7695	B	8285	B	6567	A	4772	B	7623	B
	10	8494	B	8806	B	8156	B	6335	B	6510	A
	11	5172	B	7063	B	6231	B	7777	B	6431	B
	12	6105	A	5020	B	3489	B	547	B	4302	A
	13	7860	A	5394	B	7837	A	5740	C	4318	B
	14	6964	B	7615	B	7486	B	4259	C	5704	A
2	**1**	8713	B	8213	B	7977	B	7603	B	3262	B
	2										
	3	8673	B	8847	C	8322	B	6774	B	7429	C
	4	8936	A	9038	A	8650	B	7872	B	7660	B
	6	4781	B	5250	C	6468	B	6456	B	7351	B
	8	8936	B	9038	B	8650	B	7872	B	7660	B
	9	8936	C	9038	B	8650	C	7872	B	7660	C
3	**4**	8936	B	9038	B	8650	B	7872	B	7660	B
4	**2**	8935	B	8322	B	8570	B	7247	B	5248	A
	3	7954	B	8605	B	8573	B	7872	B	7654	B
	4	7583	B	8921	B	7672	B	7748	B	7539	B

Table 5a: State level aggregate results for Mathematics.

Claim	Target	Grade 3		Grade 4		Grade 5		Grade 6		Grade 7	
		Valid N	PL Code	Valid N	PL Code	Valid N	PL Code	Valid N	PL Code	Valid N	PL Code
1	A	71227	B	57872	B	16334	A	68845	B	68732	B
	B	25204	B	43364	C	1364	B	43451	B	68272	B
	C	60953	B	14778	B	68858	B	63152	B	67276	B
	D	65622	B	71813	A	52356	B	68845	B	68521	B
	E	70137	B	40279	B	70864	B	48671	B	58330	B
	F	58910	B	66234	B	71173	B	68765	B	62975	B
	G	60121	A	71813	A	50124	B	66051	B	44701	B
	H	71227	B	71813	B	45231	A	51983	B	24168	C
	I	28524	B	70393	B	62100	B	15600	B	44890	B
	J	25060	C	13671	B	70440	B	34852	B		
	K	21540	A	36173	B	24128	C				
	L			71809	B						
2	A	71227	B	71813	B	71173	B	68845	B	68824	B
	B	55059	B	10471	B	26667	B	30594	B	32540	B
	C	41631	B	67953	B	34388	B	34258	B	40451	B
	D	12942	B	15229	B	54492	B	47669	B	44105	B
3	A	63530	B	68495	B	63924	B	68061	B	63891	B
	B	65279	B	60890	B	44785	B	26543	B	14133	D
	C	51681	B	48198	B	55066	B	47842	B	47820	B
	D	64598	B	58310	B	62867	B	43650	B	59658	B
	E	62934	B	67734	B	69090	B	68808	B	68824	B
	F	52218	B	61080	B	52856	B	50497	B	40342	B
	G							13470	B	28377	B
4	A	44821	B	67184	B	57146	B	66330	B	57978	B
	B	973	B	13699	B	26335	C	9919	B	8577	B
	C	40921	B	47245	B	36598	B	21204	B	34182	B
	D	61979	B	34863	B	52378	B	27928	B	46586	B
	E	70254	B	58114	B	44838	B	58930	B	60252	B
	F	30306	B	24568	B	34575	B	47641	B	34642	B

Table 5b: State level aggregate results for Mathematics for Students without Disabilities.

Claim	Target	Grade 3		Grade 4		Grade 5		Grade 6		Grade 7	
		Valid N	PL Code	Valid N	PL Code	Valid N	PL Code	Valid N	PL Code	Valid N	PL Code
1	A	62490	B	49613	B	12541	A	61237	B	61269	B
	B	21359	B	36380	C	911	B	39961	B	60874	B
	C	52735	B	13531	B	60843	B	55728	C	59956	B
	D	57173	B	62904	A	44818	B	61237	B	61144	B
	E	61735	B	35965	B	62407	B	42661	B	51659	B
	F	52280	B	59204	B	62646	B	61158	B	56257	B
	G	53764	A	62904	A	44174	B	58597	B	38829	B
	H	62490	B	62904	B	41233	A	47907	B	22206	C
	I	25439	B	61844	B	54146	B	13265	B	40617	B
	J	21046	C	12993	B	61941	B	29453	B		
	K	16955	B	30653	B	21074	C				
	L			62904	B						
2	A	62490	B	62904	B	62646	B	61237	B	61350	B
	B	47892	B	9947	B	22875	B	26676	B	29197	B
	C	36991	B	59238	B	29519	B	31805	B	35417	B
	D	11136	B	14257	B	48944	B	41654	B	39693	B
3	A	55843	B	59910	B	56343	B	60661	B	57061	B
	B	57317	B	53606	B	40094	B	24606	B	13710	D
	C	44363	B	41921	B	47816	B	42411	B	42559	B
	D	56548	B	51142	B	55134	B	38256	B	53066	B
	E	55049	B	59252	B	60642	B	61202	B	61350	B
	F	46699	B	53736	B	47315	B	45119	B	35992	B
	G							11832	B	25303	B
4	A	39029	B	58792	B	50372	B	59082	B	51931	B
	B	846	B	12966	B	23658	C	8971	B	7231	B
	C	35517	B	40653	B	31270	B	18298	B	30276	B
	D	54556	B	30657	B	46006	B	24549	B	41145	B
	E	61644	B	49938	B	38988	B	52266	B	54119	B
	F	26973	B	22251	B	31376	B	42939	B	31074	B

Table 5c: State level aggregate results for Mathematics for Students with Disabilities.

Claim	Target	Grade 3		Grade 4		Grade 5		Grade 6		Grade 7	
		Valid N	PL Code	Valid N	PL Code	Valid N	PL Code	Valid N	PL Code	Valid N	PL Code
1	A	8737	B	8259	B	3793	A	7608	B	7463	B
	B	3845	A	6984	C	453	B	3490	B	7398	B
	C	8218	C	1247	B	8015	B	7424	B	7320	B
	D	8449	B	8909	B	7538	C	7608	B	7377	B
	E	8402	B	4314	B	8457	B	6010	B	6671	B
	F	6630	B	7030	B	8527	B	7607	B	6718	B
	G	6357	B	8909	B	5950	C	7454	B	5872	B
	H	8737	B	8909	B	3998	A	4076	B	1962	C
	I	3085	B	8549	B	7954	B	2335	B	4273	B
	J	4014	C	678	B	8499	B	5399	B		
	K	4585	A	5520	B	3054	C				
	L			8905	B						
2	A	8737	B	8909	B	8527	B	7608	B	7474	B
	B	7167	B	524	B	3792	C	3918	B	3343	B
	C	4640	B	8715	B	4869	B	2453	B	5034	B
	D	1806	B	972	C	5548	B	6015	B	4412	B
3	A	7687	B	8585	B	7581	B	7400	B	6830	B
	B	7962	B	7284	B	4691	B	1937	B	423	D
	C	7318	B	6277	B	7250	B	5431	B	5261	B
	D	8050	B	7168	B	7733	B	5394	A	6592	B
	E	7885	A	8482	B	8448	B	7606	B	7474	B
	F	5519	B	7344	B	5541	B	5378	B	4350	B
	G							1638	B	3074	B
4	A	5792	B	8392	B	6774	B	7248	B	6047	B
	B	127	A	733	B	2677	B	948	B	1346	A
	C	5404	B	6592	B	5328	B	2906	B	3906	B
	D	7423	B	4206	B	6372	B	3379	B	5441	B
	E	8610	B	8176	B	5850	A	6664	B	6133	B
	F	3333	A	2317	B	3199	B	4702	B	3568	B

Considerations and Cautions

Unlike the performance levels provided at the total test and claim levels, these strengths and weakness do not imply proficiency. Instead, they show how a group of students' performance is distributed across the content target relatively to their overall performance. For example, a group of students may have performed very well on a subject but performed lower on a target. Thus, a target performance code of C a target does not necessarily imply a lack of proficiency, but that these students' performance on that target was lower than their performance across other targets put together. In other words, the students performed lower than expected on that target. Although the students are doing well, the educators may still want to focus instruction on the targets with performance code C.

Assessment target score report should serve as a starting point in an overall investigation of students' strengths and weaknesses and constitutes only one of many sources of evidence that should be used in evaluating student performance.

Appendix D: M-STEP SGP and AGP Report

Psychometric Analysis Report for the
Michigan English Language Arts (ELA), Mathematics, Science, and SAT
Student Growth Percentile and Adequate Growth Percentile Reporting
2020-2021

December 2021

DRC Psychometric Services Michigan Project Team
Data Recognition Corporation

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Introduction

The use of student growth models is common in K-12 testing. The most commonly used approaches by states are conditional growth percentile models, which include student growth percentiles (SGPs, Betebenner, 2008; 2009; 2011) or an alternative known as percentile rank residuals (Castellano & Ho, 2013). Both models attempt to describe individual student growth relative to other students who are academically similar by using prior test scores as predictors. Adequate growth percentiles (AGPs, Betebenner, 2008; 2009; 2011) which use quantile regression models, provide the likelihood students are on track to reaching or maintaining proficiency at some time point in the future. Individual level results from these models can be aggregated at a group level.

SGP analyses were conducted for the M-STEP, SAT, and WIDA, and PRR analysis was conducted for MI-Access assessments. AGP analyses were conducted for M-STEP.

Considerations with the Covid-19 Pandemic

The spring 2021 assessment results should be interpreted in the context of circumstances related to the COVID-19 pandemic, including the MI sample of students who tested, school closures, nonstandard instruction delivery modes in the 2020–21 school year, potential diminished opportunity to learn for students, and other unknown effects of the pandemic on students and their families.

Additionally, the Spring 2020 MSTEP and MIAccess administrations were canceled and therefore, for Spring 2021, the MSTEP and MIAccess prior year is 2019. This will be referred to as skip-year growth throughout this report.

Methodology

Student Growth Percentiles (SGP)

For assessments with a sufficient sample size (M-STEP, SAT, and WIDA Access) student growth percentiles (SGPs) were calculated using the R SGP package (Betebenner et. al., 2015) version 1.9-3.13 as compiled from the master branch of the SGP GitHub repository. SGPs defined this way take a normative approach.

Specially, let Y_t denote an assessment score at time $\boldsymbol{t}$, the expected value of Y_t at the $\boldsymbol{\tau}$-th quantile, $Q_{Y_t}(\tau|Y_{t-1},...,Y_1)$ based on prior assessment scores $Y_{t-1},...,Y_1$, is then given by (Betebenner, 2011, p17)

$$Q_{Y_t}(\tau|Y_{t-1},...,Y_1) = \sum_{j=1}^{t-1}\sum_{i=1}^{3}\phi_{ij}(Y_j)\beta_{ij}(\tau) \quad (1)$$

Where ϕ_{ij}, $i=1,2,3$ and $j=1,\ldots,t-1$ denote the B-spline basis functions for quantile τ. For instance, for τ =.5, Q_{Y_t} returns the estimated median expectation of Y_t for any combination of $Y_{t-1},...,Y_1$. This analysis used the default parameters of the SGP package which generates 1+7*(number of pretest)

parameters per quantile. For example, for a 3-pretest model we have 1+7*3 = 22 parameters per quantile and we estimate 100 quantiles independently (from 0.005 to 0.995 in 0.01 increments).

Calculating a SGP from equation 1 requires prior test score information to determine predicted scores. The SGP for a student is defined as the midpoint of the (ranked) two quantiles between which the student's score falls.

$$SGP_i = (\max\ \tau_{i,}\widehat{Q}_\tau(Y|X = x_i) < y_i\} + \min(\ \tau_{i,}\widehat{Q}_\tau(Y|X = x_i) > y_i\}\ * \frac{100}{2} \qquad (2)$$

Where x_i is the student *i's* vector of prior test scores.

Growth Targets (AGP)

Using the same methodology as described above for calculating SGPs, to calculate a projection or the trajectory a student needs to meet a certain target. An adequate growth percentile, AGP, is the SGP that a student needs to have to meet or exceed the proficient cut score (or any pre-determined achievement target) within a specified time frame (number of academic years).

Betebenner (2011) contextualizes AGPs in terms of "catch-up", "keep-up", or "move-up." Suppose that an growth target is calculated for a given students Y years away. The following would apply:

> **Catch-Up** is used for students currently not proficient who are expected to reach proficient within *Y* years or by the time they have finished their education, whichever comes first
>
> **Keep-Up** is used for students currently at or above proficient who are expected to remain at or above proficient for all *Y* years or by the time they have finished their education, whichever comes first.
>
> **Move-Up** is used for students currently proficient who are expected to advance beyond proficient within *Y* years or by the time they have finished their education, whichever comes first.

Additionally, a lagged growth target is also calculated and this value is similar to the AGP. But in this case the current year AGP (i.e. 2021) using the quantile regression model. This gives information to determine if students are on track to reaching proficiency or if they will maintain proficiency over a specified number of years.

Baseline SGP and AGP

Baseline SGP and AGPs are growth norms and targets created from historical (i.e., pre-COVID; 2019) cohorts of students. Due to the calculations being based in the historical data, and in this case, the academic peer group that the 2021 students are compared to is the 2019 peer group under a skip year model. The sequence for the baseline data includes the terminal year as Spring 2019 and the adjacent administration as Spring 2017; this is done to account so that the skip year data observed with the terminal year as Spring 2021 and the adjacent administration is Spring 2019.

Percentile Rank Residuals (PRR)

For assessments with small sample sizes (MI-Access), the PRR method (Castellano & Ho, 2013) was used to estimate the conditional student growth percentiles. This method uses an ordinary least squares (OLS) model, where the predictors consist of past student achievement data.

$$Y_{it} = \beta_0 + \beta_1 y_{i(t-1)} + \beta_2 y_{i(t-2)} + \varepsilon_{it} \quad (5)$$

where Y_{it} is the observed score on the assessment at time *t* for student *i*, $Y_{i,\,t-1}$ is the observed score at prior time 1 and $Y_{i,\,t-2}$ is the observed score at prior time 2.The βs are the regression coefficients, and $\varepsilon_{it}$is a residual error.

After estimating Equation 5, the residuals are calculated using Equation 6:

$$\hat{\varepsilon}_{it} = y_{it} - \hat{y}_{it} \quad (6)$$

where $\hat{\varepsilon}_{it}$is the residual for student *i* at time *t*, $\hat{y}_{it}$is the predicted score from equation 5.

Next, the residuals are rank ordered (Castellano & Ho, 2013, p. 195).

$$PRR_{it} = F(\hat{\varepsilon}_{it}) \times 100 = \frac{\#residuals \leq \hat{\varepsilon}_{it}}{n} \times 100 \quad (7)$$

where $\hat{\varepsilon}_{it}$is the residual for student *i* at time *t* and *n* is the total sample size for all students with MI-Access FI results for a given posttest in 2018-19.

A standard error of measurement can be obtained by simulation for this method. Specifically, for a given posttest, y_{it}, and $CSEM(y_{it})$ 100 posttest were simulated such that they follow a normal distribution given by Equation 8:

$$y_{its} \sim N(mean = y_{it}, sd = CSEM(y_{it})) \quad (8)$$

For each simulated y_{its}, calculate the corresponding PRR using equations 5-7 while holding all other student data constant. Repeat this for each student.

Reporting Results

Results were reported at both the student and aggregate levels. This section provides a brief overview of the results provided to MDE.

For each assessment, results were reported for different content areas. Table 1 provides a list of the assessment and content areas combinations for which SGPs or PRRs were provided. Table 1 provides a list of the grades and domains for which results were reported. Content areas for which AGPs are calculated are also noted in Table 1.

Table 1: Applicable assessments by grade

Grade	M-STEP	SAT	PSAT	MI-Access	WIDA
K					Overall Composite
1					Overall Composite
2					Overall Composite
3					Overall Composite
4					Overall Composite
5	ELA, Math			ELA, Math	Overall Composite
6	ELA, Math			ELA, Math	Overall Composite
7	ELA, Math			ELA, Math, Science	Overall Composite
8	Social Studies		ELA, Math	ELA, Math Social Studies	Overall Composite
11	Social Studies	ELA, Math		ELA, Math, Science, Social Studies	Overall Composite
12					Overall Composite

AGP Projections

For ELA and Math grades 3 through 8, AGP targets and/or lagged targets were computed for 1 to 3 years from 2021 or 8th grade, whichever comes first. For example, a grade 4 student had AGPs to grades 5, 6, and 7. While a grade 6 student had an AGP to 7th grade. Lagged AGP targets are calculated for Grades 4 through 7. Tables 2 and 3 show the grade progressions for AGP and AGP lagged targets. Note that all AGP Projections were calculated under the baseline model.

Table 2: M-STEP Math and ELA AGP baseline targets by grade, projection year, and grade projected to

Grade	1 Year 2022	2 Year 2023	3 Year 2024
5	6th grade	7th grade	8th grade
6	7th grade	8th grade	
7	8th grade		

Table 3: M-STEP Math and ELA AGP lagged baseline targets by grade and projection year

	Projected AGP Lagged Target Year	
Grade 2019	**Current Year 2021**	**Current +1 Year 2022**
5	7th grade	8th grade
6	8th grade	

Categorization of Individual (Level) Growth Percentiles

Individual (level) growth percentiles (either SGP or PRR) will also be assigned one of three categorical descriptors based on MDE reporting policies, which are defined as:

- Low: SGP 1-29
- Medium: SGP 30-69
- High: SGP 70-99

Additionally, individual (level) growth percentiles (either SGP or PRR) will also be assigned one of five categorical descriptors based on historical MDE accountability policies. These five categorical descriptors are no longer used in MDE accountability processes but were still calculated for analysis purposes. The five categorical descriptors are defined as:

- Significant Decline (SGP 0-19)
- Decline (SGP 20-39)
- Maintain (SGP 40-59)
- Improvement (SGP 60-79)
- Significant Improvement (SGP 80-99)

Valid Test Sequence Rules

Identified suitable pathways and their information can be found in Table 4 for the SGP method (M-STEP/SAT), the PRR approach (MI-Access FI), and the SGP method (WIDA Access).

Table 4: M-STEP Testing Program Valid Sequence for SGP/AGP calculations

Program	Grade 2021	Prior Year 1	Prior Year 2
M-STEP ELA & Math	5	M-STEP 3rd grade Spring 2019	
	6	M-STEP 4th grade Spring 2019	M-STEP 3rd grade Spring 2018
	7	M-STEP 5th grade Spring 2019	M-STEP 4th grade Spring 2018
PSAT 8	8	M-STEP 6th grade Spring 2019	M-STEP 5th grade Spring 2018
SAT	11	M-STEP 8th grade Spring 2016	M-STEP 7th grade Spring 2015
M-STEP Social Studies	8	M-STEP 6th grade Spring 2016	
	11	M-STEP 8th grade Spring 2016	M-STEP 6th grade Spring 2014
MI-Access ELA & Math	5	MI-Access 3rd grade Spring 2019	
	6	MI-Access 4th grade Spring 2019	MI-Access 3rd grade Spring 2018
	7	MI-Access 5th grade Spring 2019	MI-Access 4th grade Spring 2018
	8	MI-Access 6th grade Spring 2019	MI-Access 5th grade Spring 2018
	11	MI-Access 8th grade Spring 2018	MI-Access 7th grade Spring 2017
MI-Access Science	7	MI-Access 4th grade Spring 2019	
	11	MI-Access 7th grade Spring 2017	MI-Access 5th grade Spring 2015
MI-Access Social Studies	8	MI-Access 5th grade Spring 2018	
	11	MI-Access 8th grade Spring 2018	
WIDA	1	WIDA Kindergarten Spring 2020	
	2	WIDA 1st grade Spring 2020	WIDA Kindergarten Spring 2019
	3	WIDA 2nd grade Spring 2020	WIDA 1st grade Spring 2019
	4	WIDA 3rd grade Spring 2020	WIDA 2nd grade Spring 2019
	5	WIDA 4th grade Spring 2020	WIDA 3rd grade Spring 2019
	6	WIDA 5th grade Spring 2020	WIDA 4th grade Spring 2019
	7	WIDA 6th grade Spring 2020	WIDA 5th grade Spring 2019
	8	WIDA 7th grade Spring 2020	WIDA 6th grade Spring 2019
	9	WIDA 8th grade Spring 2020	WIDA 7th grade Spring 2019
	10	WIDA 9th grade Spring 2020	WIDA 8th grade Spring 2019
	11	WIDA 10th grade Spring 2020	WIDA 9th grade Spring 2019
	12	WIDA 11th grade Spring 2020	WIDA 10th grade Spring 2019

Minimum Number of Students

A minimum of 5,000 students will be required for the SGP M-STEP & SAT run.
A minimum of 1,000 students is preferred for the MI-Access FI PRR run.
A minimum of 2,000 students will be required for the SGP WIDA Access for ELLs 2.0 run.

Repeat Test Takers

Students who repeated the grade immediately before the posttest will not be included in either the SGP or the PRR analysis, thus the SGPs were not calculated for these students. For instance, if posttest score (Y_t) and prior 1 year score (Y_{t-1}) are with the same grade, the student is not included in the analysis and does not receive an SGP.

Skipped Grades

Students who skipped the grade immediately prior to the posttest will not be included in the analysis (i.e. 5th grade posttest following skipping 4th grade in the previous example.) In addition, if a student has a test sequence with a skipped grade, only the grade prior will be used to calculate the SGP.

Gaps in Test Sequence

Some students in the dataset are missing certain years of test scores, in addition to the Spring 2020. This may be due to student mobility, missed test windows, or other factors. Students with a gap in addition to the Spring 2020 will not be included unless they have a recent, valid sequence leading up to the posttest.

Home School and Private School Exclusion

All home schooled and private school test records will be excluded from computing SGP. MDE will ensure that students who were previously tested as home schooled or at a private school are also excluded from the data pull.

Student Level Results for SGPs and PRRs

Student level results provided to MDE for SGPs and PRRs included:

1. Demographic and assessment information
2. SGPs
3. SGP standard errors
4. SGP Growth Level Code
5. SGP Norm Group
6. Estimation Method
7. Prior achievement information used

Student Level Results for AGPs

Student level results provided to MDE for AGPs included:

1. Demographic and assessment information
2. AGP Years Projected (1-4)
3. AGP Target
4. AGP Lagged Target
5. AGP Stay/Move Up Target
6. AGP Lagged Stay/Move Up Target

Quality Control

DRC's psychometric team verified the data coming from MDE followed the rules, structure, and specifications agreed upon by both DRC and MDE. Any issues around unexpected data or missing fields were addressed by MDE.

To ensure that the proper growth model was used, base R code was written by the psychometrician and verified by a consultant and a statistical analyst. The code for each subject was reviewed and SGP, PRR, or AGP values were internally checked for reasonability.

Summary of Results

Tables 5 through 7 provide the summary of number of students and median growth (SGP or PRR) by testing program, calculation method, content area, and grade. As expected with these methods, the median values tend to be near 50 for WIDA since the WIDA analyses are cohort referenced. However, the baseline median values are lower for most grades for M-STEP, PSAT8, SAT, and MI-Access as expected. This is due to the difference in the educational experience the students had during the 2020-2021 school year. This could be one way to quantify the learning differences between Spring 2021 and Spring 2019 for most of the grades presented.

Table 5: Number of cases and median baseline SGP by testing program, content area, and grade.

Testing Program	Content Area	Grade	N	Median
M-STEP	English Language Arts	5	68,741	40
		6	67,031	37
		7	66,955	45
	Mathematics	5	68,365	33
		6	66,811	30
		7	66,809	35
	Social Studies	8	67,800	44
		11	52,404	38
PSAT	English Language Arts	8	74,046	50
	Mathematics	8	74,154	33
SAT	English Language Arts	11	74,377	56
	Mathematics	11	74,409	41

Table 6: Number of cases and median cohort referenced SGP for WIDA by grade.

Testing Program	Content Area	Grade	N	Median
WIDA	Reading	1	5,361	50
		2	5,605	50
		3	6,094	50
		4	6,054	50
		5	4,482	51
		6	3,561	51
		7	4,228	51
		8	4,181	50
		9	3,516	50
		10	3,451	50
		11	2,756	50
		12	2,177	50

Table 7: Number of cases and median baseline PRR by testing program, content area, and grade.

Testing Program	Content Area	Grade	N	Median
MI-Access	English Language Arts	5	405	41
		6	456	51
		7	466	45
		8	562	46
		11	534	44
	Mathematics	5	446	45
		6	497	42
		7	539	45
		8	613	36
		11	599	46
	Science	7	403	43
		11	575	53
	Social Studies	8	485	49
		11	579	49

Goodness of Fit

To examine the fit of the growth models, the correlations between the outcome score (2019) and the prior achievement score was calculated. Tables 8 and 9 provide the correlations by program, content area, and grade. All correlations compare non-adjacent years, except for WIDA. The correlations are acceptable and within the moderate range. For the M-STEP/PSAT 8 programs, all correlations are consistent within content area. All MSTEP correlations are at or above 0.74 and the same is true for PSAT 8. With the SAT correlations similar with a correlation of 0.79 for English Language Arts and 0.82 for Mathematics. WIDA correlations range from 0.53 to 0.77. Finally, the correlations for MI-Access are consistent within content area but lower ranging from 0.51 to 0.64 for English Language Arts, from 0.44 to 0.49 for Mathematics, 0.50 to 0.53 for Science and 0.45 to 0.55 for Social Studies.

Table 8: Correlation between current SS and prior SS by testing program, content area, and grade for SGP models.

Testing Program	Content Area	Grade	N	Correlation
M-STEP	English Language Arts	5	68,741	0.79
		6	67,031	0.78
		7	66,955	0.79
	Mathematics	5	68,365	0.77
		6	66,811	0.79
		7	66,809	0.80
	Social Studies	8	67,800	0.75
		11	52,404	0.74
PSAT	English Language Arts	8	74,046	0.77
	Mathematics	8	74,154	0.74
8SAT	English Language Arts	11	74,377	0.79
	Mathematics	11	74,409	0.82
WIDA	WIDA	1	5,361	0.68
		2	5,605	0.53
		3	6,094	0.64
		4	6,054	0.67
		5	4,482	0.60
		6	3,561	0.63
		7	4,228	0.68
		8	4,181	0.73
		9	3,516	0.74
		10	3,451	0.75
		11	2,756	0.77
		12	2,177	0.72

Table 9: Correlation between current SS and prior SS by testing program, content area, and grade for PRR model.

Testing Program	Content Area	Grade	N	Correlation
MI-Access	English Language Arts	5	405	0.51
		6	456	0.55
		7	466	0.58
		8	562	0.64
		11	534	0.57
	Mathematics	5	446	0.45
		6	497	0.44
		7	539	0.48
		8	613	0.49
		11	599	0.44
	Science	7	403	0.53
		11	575	0.50
	Social Studies	8	485	0.45
		11	579	0.55

Checks for Neutrality

Since the growth models used in this analysis do not control for demographic variables, particularly those that may have some impact on student growth rates and trajectories, it is unknown whether the results are biased, especially when aggregated at the school or district level (Education Analytics, 2015). Thus, it is important to look at the relationship between the aggregated growth measure, in this case median SGP and the variables of interest that were not controlled for in the growth models. It is important to note that it is unknown what the correlations "should be." Tables 10 and 11 provide the correlations between the median SGP for a school or a district (with more than 20 students) related to the percentage of each demographic for that building or district. Graphs of these relationships can be found in the appendix.

Table 10: Correlations between Median SGP and Demographic at the school level. [1]

Content Area	ED	SE	LEP	Non-White
English Language Arts	-0.41	-0.15	-0.12	-0.21
Mathematics	-0.44	-0.12	-0.16	-0.31
Social Studies	-0.30	-0.13	-0.06	-0.10
WIDA	-0.55	-0.02		0.07

Table 11: Correlations between Median SGP and Demographic at the district level.

Content Area	ED	SE	LEP	Non-White
English Language Arts	-0.38	-0.08	-0.07	-0.21
Mathematics	-0.46	0.02	-0.13	-0.37
Social Studies	-0.33	-0.13	-0.02	-0.13
WIDA	-0.53	0.01		-0.02

When aggregating growth model outcomes, it is also important to note that growth models, as with most regression models, have issues (more variability or less precision) when sample sizes are small. This is also true when aggregating growth model results at the school level. Figure 1 provides the relationship between the number of students and SGP. This shows that there is less variability in median (cohort or baseline) SGP as the number of students increase.

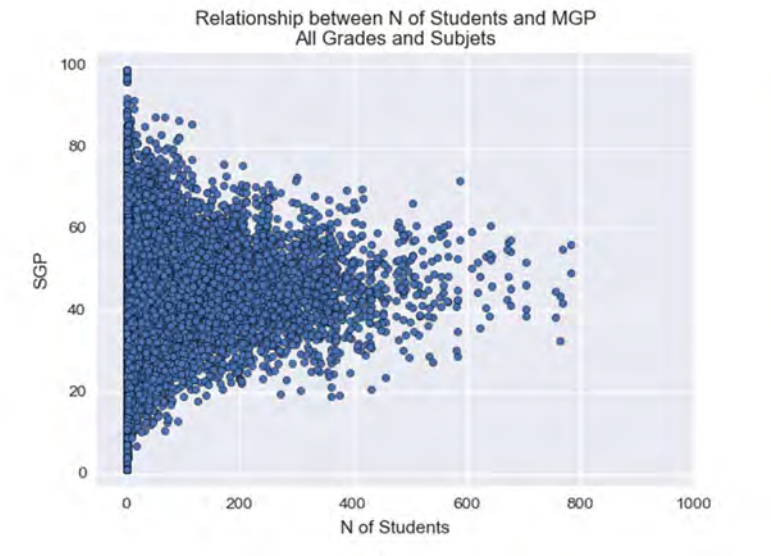


Figure 1. Number of Students versus SGP

AGP Outcomes

In 2021, bassline AGPs and baseline target AGPs were computed for M-STEP ELA and Mathematics, grades 5 through 7. The number of years projected in the model was varied between 1 and 4. Details can be found in Tables 2 and 3. One way to aggregate these results is to compare the percentage of students meeting targets by their 2021 performance level, grade, and years projected. Tables 12 and 13 do this by showing the percentage of students, by grade, who have a 2021 SGP greater than their 2021 lagged AGP, broken down by proficiency level, grade, and years projected.

For example, in Grade 5 ELA, 60% of proficient students are on track to remain proficient (or reach advanced) in three years' time. These tables show that students who end in the highest performance level (Advanced) do so because they consistently grew at levels surpassing that which was necessary to achieve and maintain proficiency. Similarly, they also show that students who end in the lowest performance level (Not Proficient) do so because they consistently grew at levels well below what was necessary to reach proficiency.

Note that the interpretations and comparisons of these results to past years are not appropriate due to several factors related to the ongoing Coivd-19 pandemic. Factors related to the pandemic creates additional uncertainty around measuring student achievement and predicting future performance.

Table 12: Percentage of students whose 2021 SGP exceeds their lagged by performance level and years projected for M-STEP ELA.

		Not Proficient		Partially Proficient		Proficient		Advanced	
Grade	Years Projected	N Total	% 2019 SGP Exceeds Lagged AGP	N Total	% 2019 SGP Exceeds Lagged AGP	N Total	% 2019 SGP Exceeds Lagged AGP	N Total	% 2019 SGP Exceeds Lagged AGP
5	1	46,968	0%	30,000	10%	37,680	66%	22,834	99%
	2	46,968	0%	30,000	17%	37,680	60%	22,834	97%
	3	46,968	6%	30,000	37%	37,680	60%	22,834	96%
	4	46,968	7%	30,000	37%	37,680	60%	22,834	95%
6	1	44,974	0%	37,192	14%	36,606	75%	15,290	100%
	2	44,974	4%	37,192	34%	36,606	75%	15,290	100%
	3	44,974	6%	37,192	35%	36,606	72%	15,290	99%
	4	44,974	6%	37,192	35%	36,606	66%	15,290	96%
7	1	41,068	3%	38,094	40%	40,848	91%	13,900	100%
	2	41,068	6%	38,094	42%	40,848	86%	13,900	100%
	3	41,068	7%	38,094	42%	40,848	77%	13,900	99%
	4	41,068	7%	38,094	42%	40,848	70%	13,900	97%

Table 13: Percentage of students whose 2021 SGP exceeds their lagged by performance level and years projected for M-STEP Math.

		Not Proficient		Partially Proficient		Proficient		Advanced	
Grade	Years Projected	N Total	% 2019 SGP Exceeds Lagged AGP	N Total	% 2019 SGP Exceeds Lagged AGP	N Total	% 2019 SGP Exceeds Lagged AGP	N Total	% 2019 SGP Exceeds Lagged AGP
5	1	41,068	3%	38,094	40%	40,848	91%	13,900	100%
	2	41,068	6%	38,094	42%	40,848	86%	13,900	100%
	3	41,068	7%	38,094	42%	40,848	77%	13,900	99%
	4	41,068	7%	38,094	42%	40,848	70%	13,900	97%
6	1	51,808	0%	43,454	7%	22,428	64%	15,932	99%
	2	51,808	1%	43,454	16%	22,428	60%	15,932	97%
	3	51,808	2%	43,454	21%	22,428	56%	15,932	93%
	4	51,808	2%	43,454	21%	22,428	41%	15,932	83%
7	1	52,310	0%	37,846	17%	26,284	71%	17,178	99%
	2	52,310	2%	37,846	24%	26,284	67%	17,178	96%
	3	52,310	2%	37,846	24%	26,284	48%	17,178	84%
	4	52,310	3%	37,846	24%	26,284	46%	17,178	79%

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Appendix

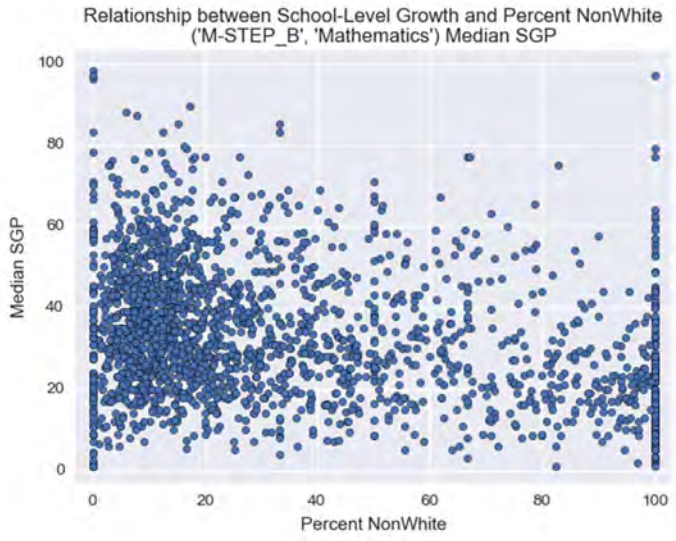


Figure A.1. M-STEP Median School SGP versus Percentage of Non-White Students for Mathematics

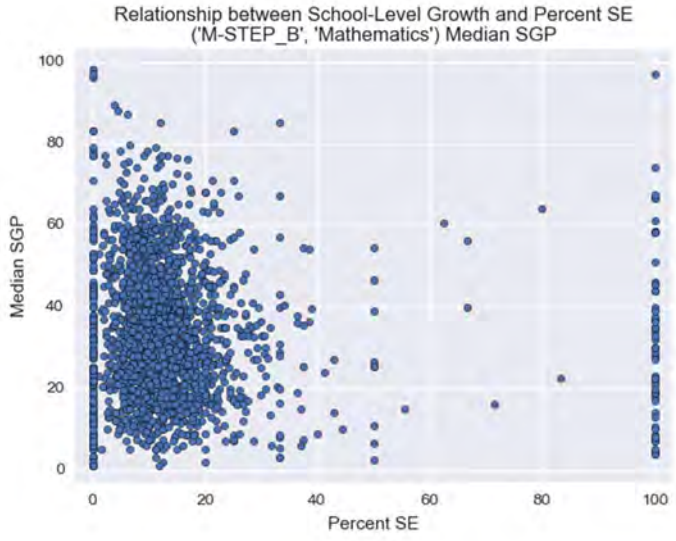


Figure A.2. Median School SGP versus Percentage of Special Education Students for Mathematics

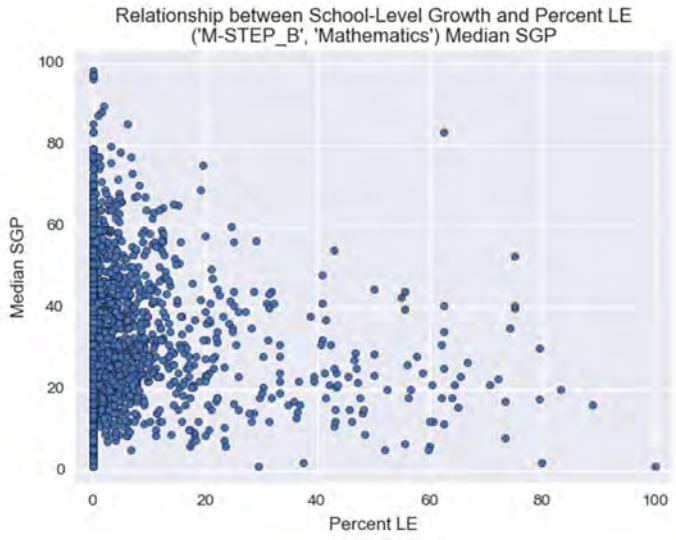


Figure A.3 Median School SGP versus Percentage of Limited English Proficient Students for Mathematics

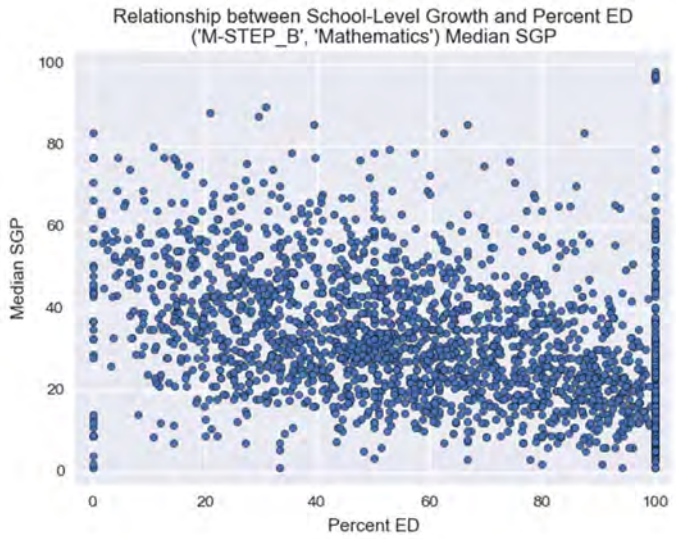


Figure A.4. Median School SGP versus Percentage of Economically Disadvantaged Students for Mathematics

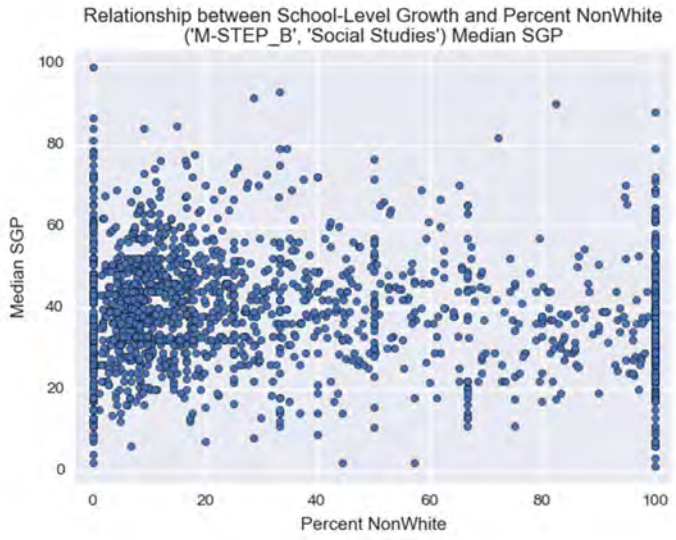


Figure A.5. Median School SGP versus Percentage of Non-White Students for Social Studies

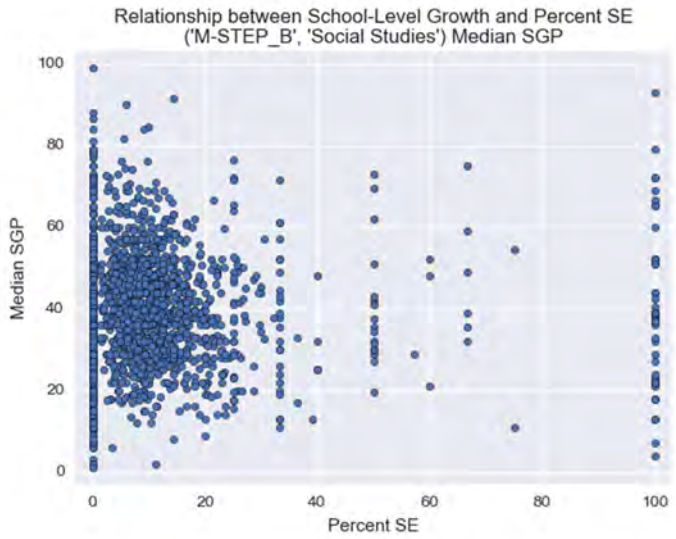


Figure A.6. Median School SGP versus Percentage of Special Education Students for Social Studies

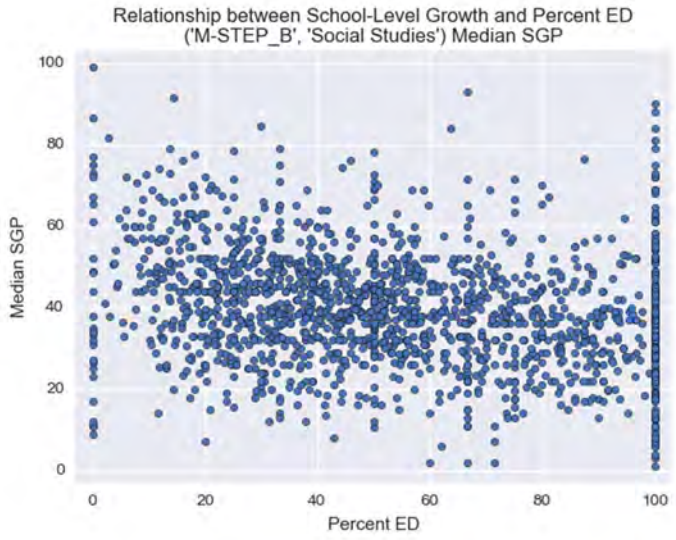


Figure A.7. Median School SGP versus Percentage of Economically Disadvantaged Students for Social Studies

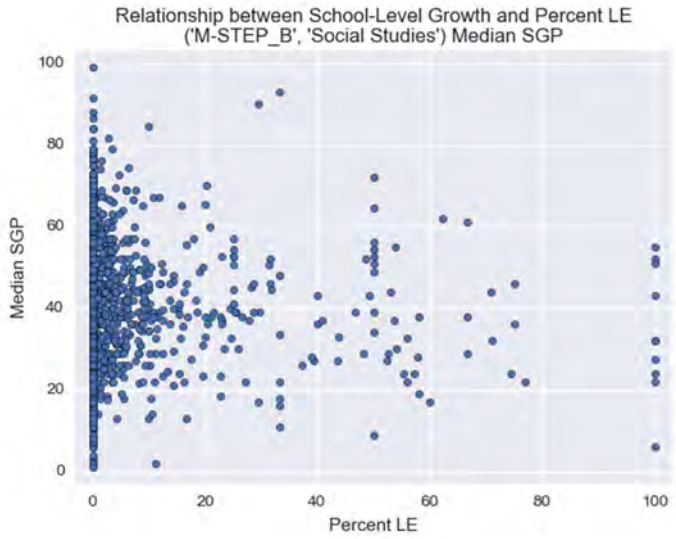


Figure A.8. Median School SGP versus Percentage of Limited English Proficient Students for Social Studies

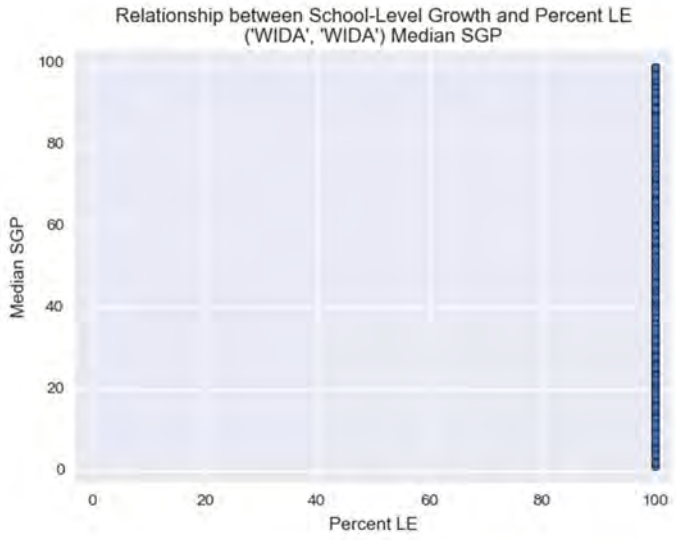


Figure A.9. Median School SGP versus Percentage of Limited English Proficient Students for WIDA[2]

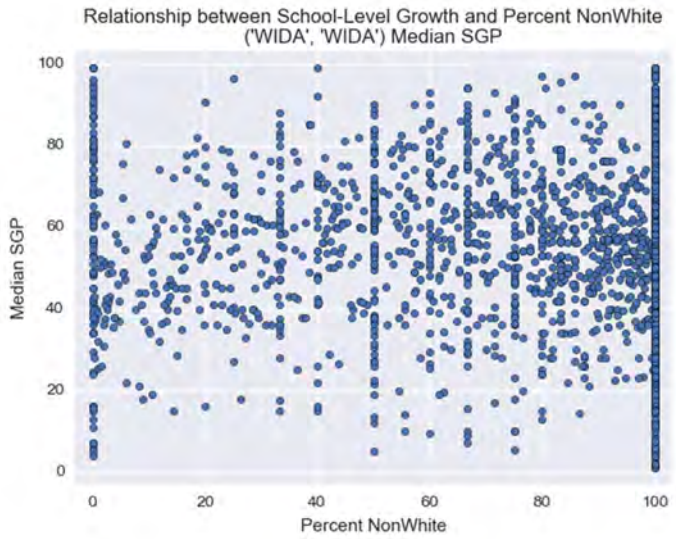


Figure A.10. Median School SGP versus Percentage of Non-White Students for WIDA

[2] Note that the WIDA assessment is administered to only LEP students

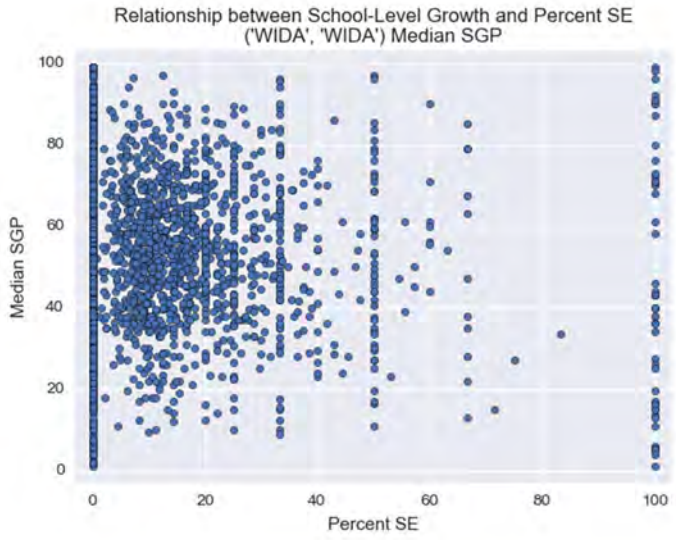


Figure A.11. Median School SGP versus Percentage of Special Education Students for WIDA

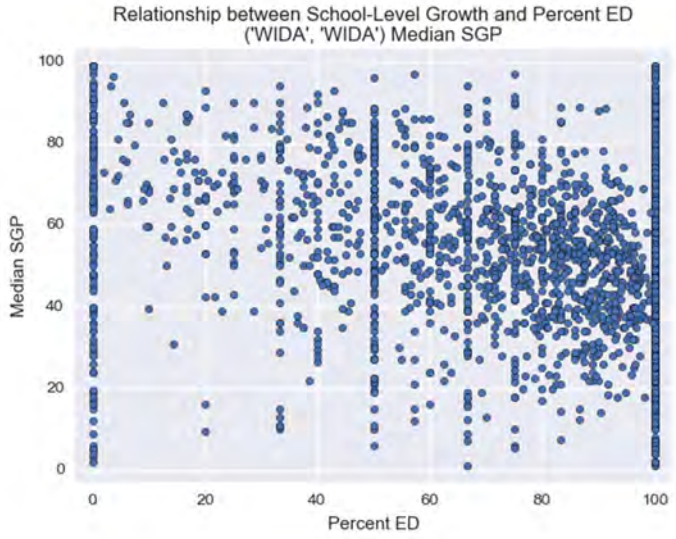


Figure A.12. Median School SGP versus Percentage of Economically Disadvantaged Students for WIDA

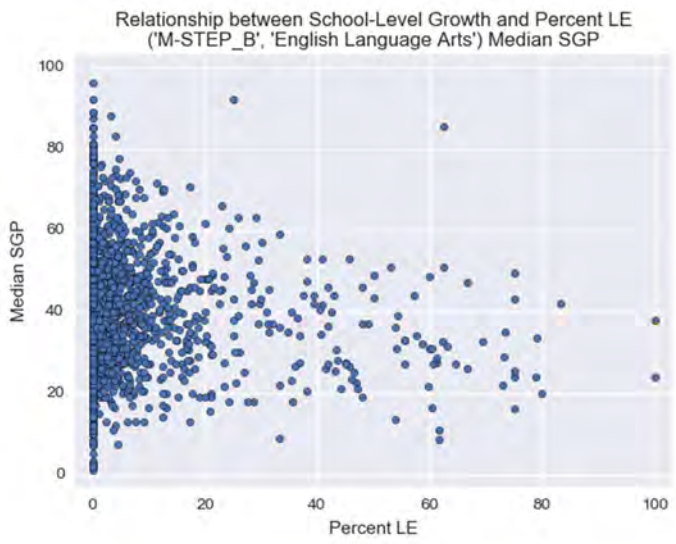


Figure A.13. Median School SGP versus Percentage of Limited English Proficient Students for English Language Arts

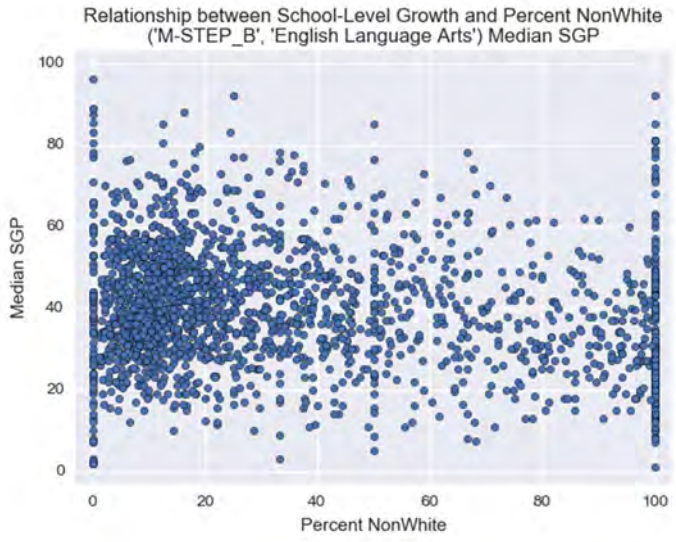


Figure A.14. Median School SGP versus Percentage of Non-White Students for English Language Arts

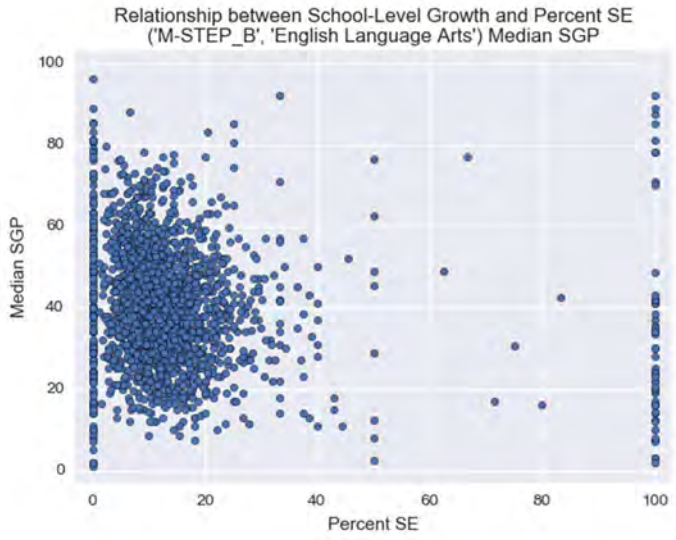


Figure A.15. Median School SGP versus Percentage of Special Education Students for English Language Arts

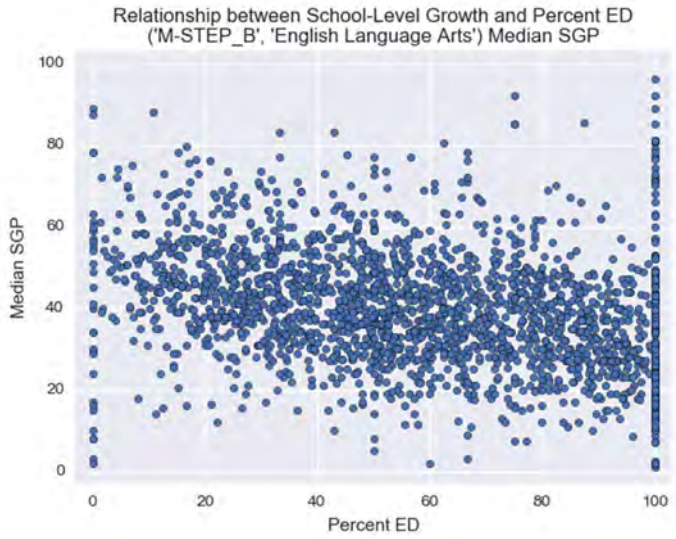


Figure A.16. Median School PRR versus Percentage of Economically Disadvantaged Students for English Language Arts

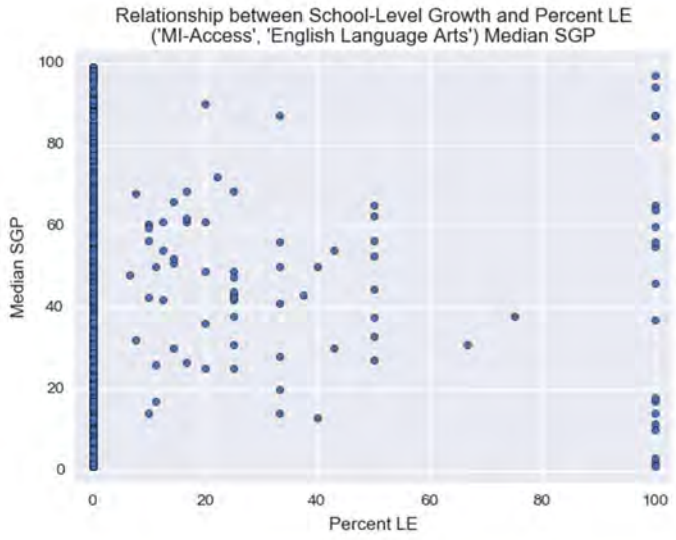


Figure A.17. Median School PRR versus Percentage of Limited English Proficient Students for English Language Arts, MI-Access

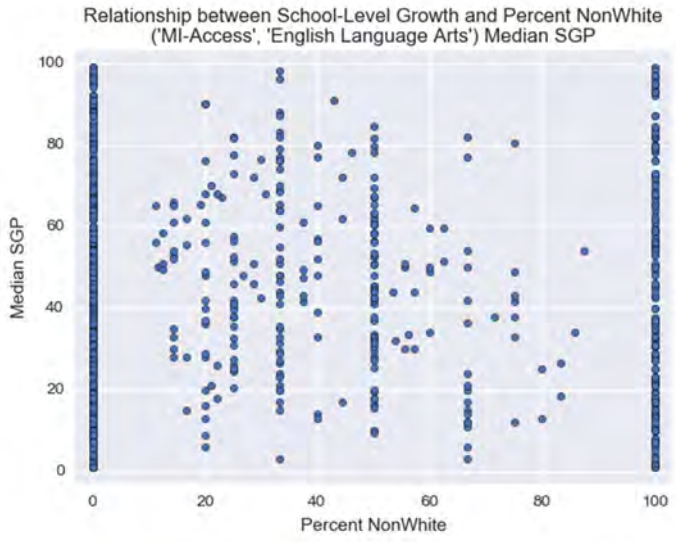


Figure A.18. Median School PRR versus Percentage of Non-White Students for English Language Arts, MI-Access

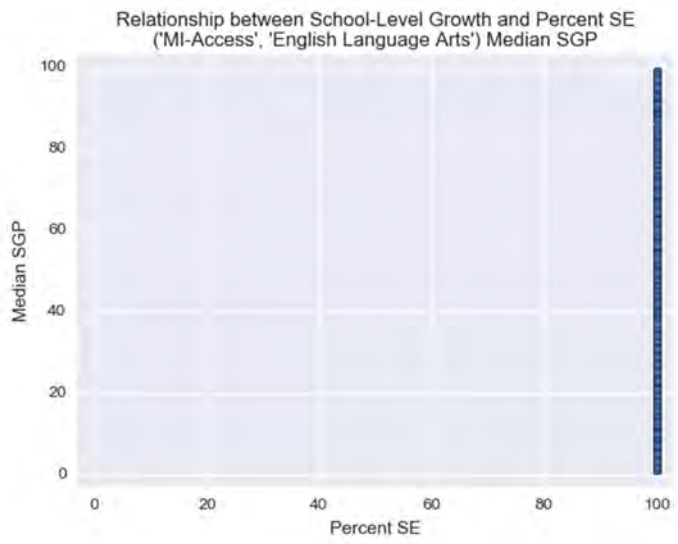


Figure A.19. Median School PRR versus Percentage of Special Education Students for English Language Arts, MI-Access[i]

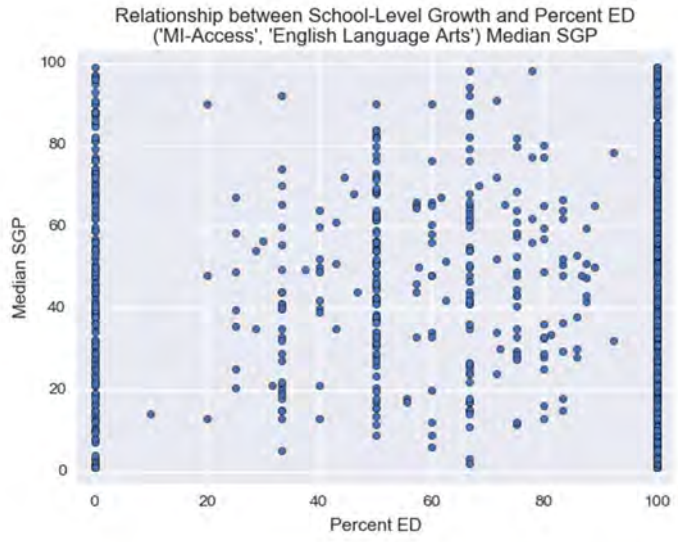


Figure A.20. Median School PRR versus Percentage of Economically Disadvantaged Students for English Language Arts, MI-Access

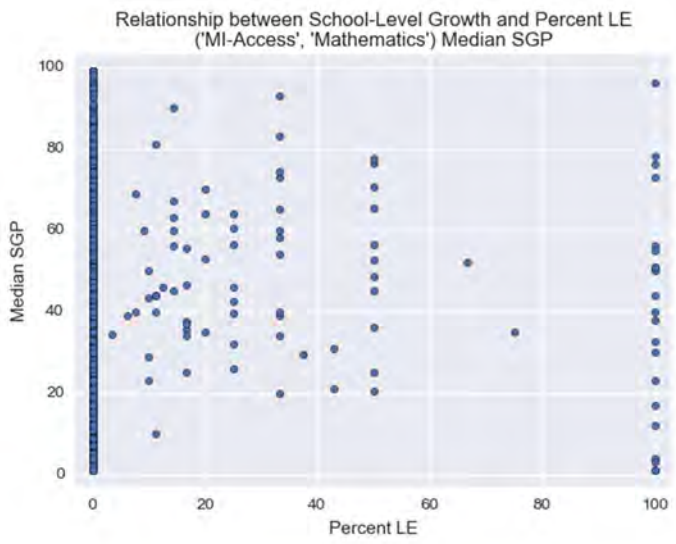


Figure A.21. Median School PRR versus Percentage of Limited English Proficient Students for Mathematics, MI-Access

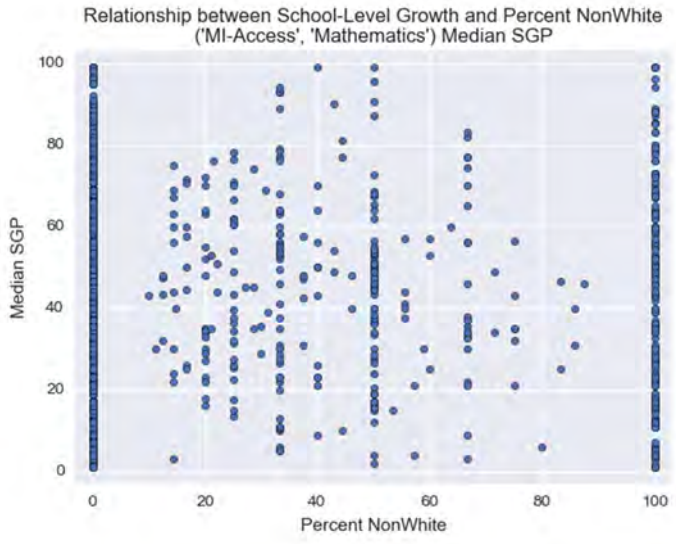


Figure A.22. Median School PRR versus Percentage of Non-White Students for Mathematics, MI-Access

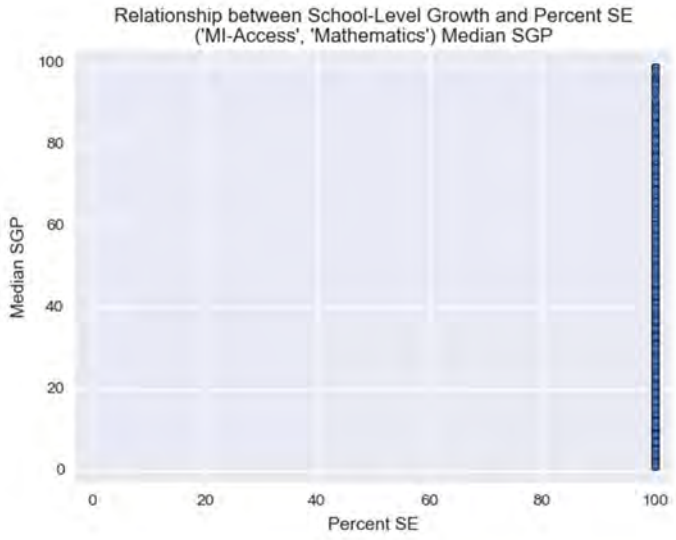


Figure A.23. Median School PRR versus Percentage of Special Education Students for Mathematics, MI-Access[ii]

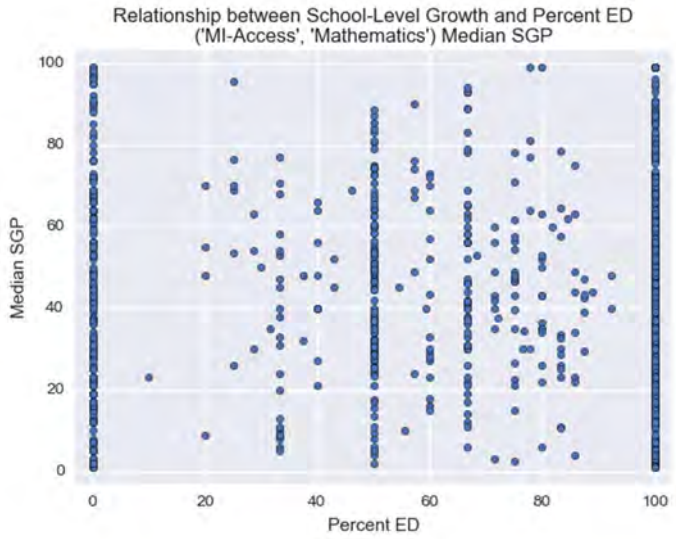


Figure A.24. Median School PRR versus Percentage of Economically Disadvantaged Students for Mathematics, MI-Access

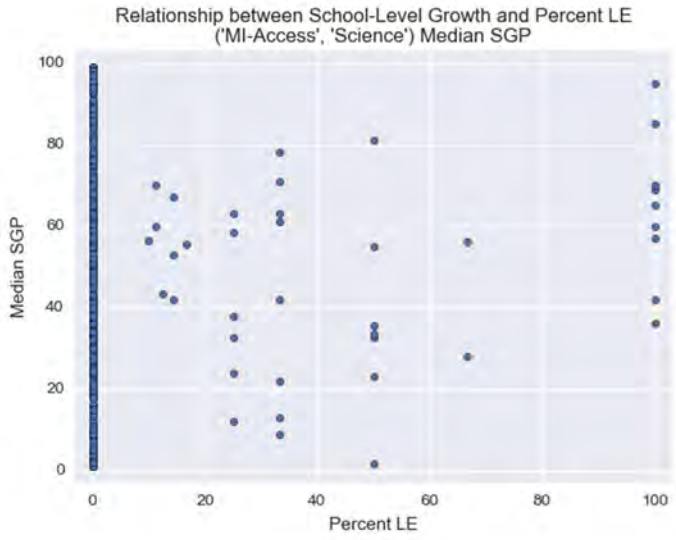


Figure A.25. Median School PRR versus Percentage of Limited English Proficient Students for Science, MI-Access

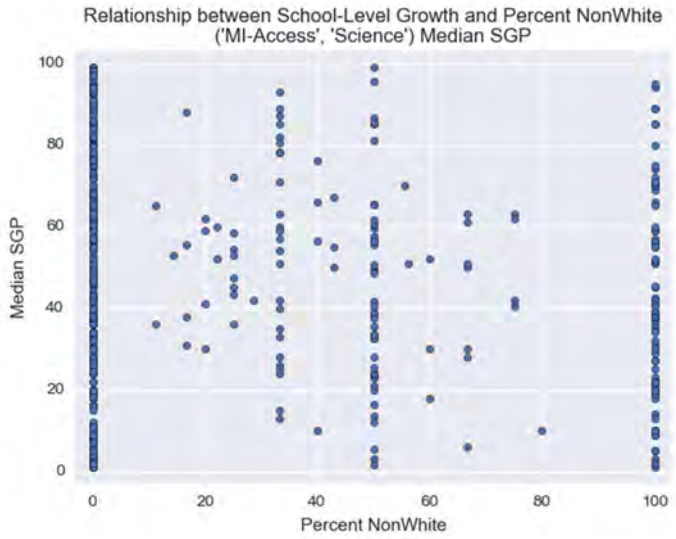


Figure A.26. Median School PRR versus Percentage of Non-White Students for Science, MI-Access

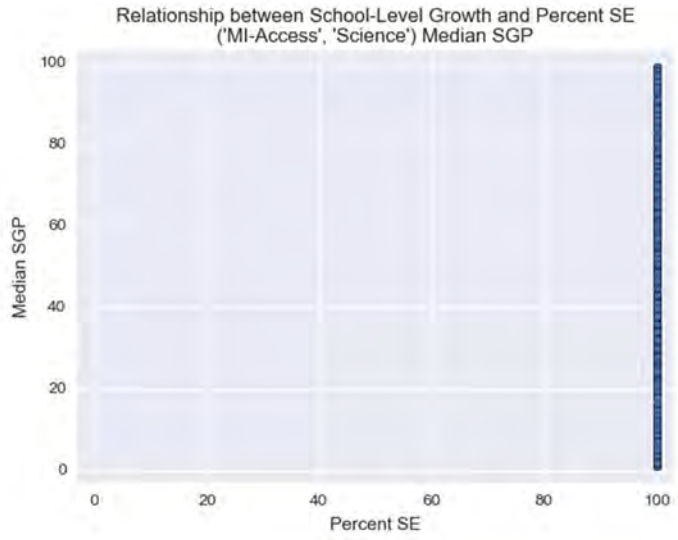


Figure A.27. Median School PRR versus Percentage of Special Education Students for Science, MI-Access[iii]

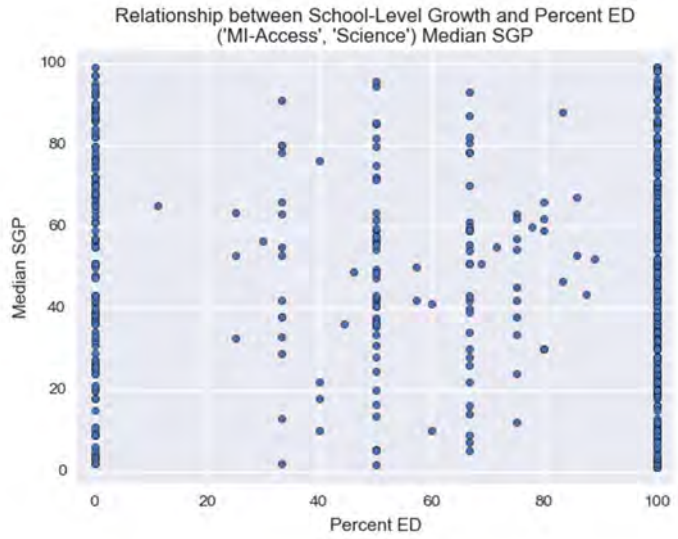


Figure A.28. Median School PRR versus Percentage of Economically Disadvantaged Students for Science, MI-Access

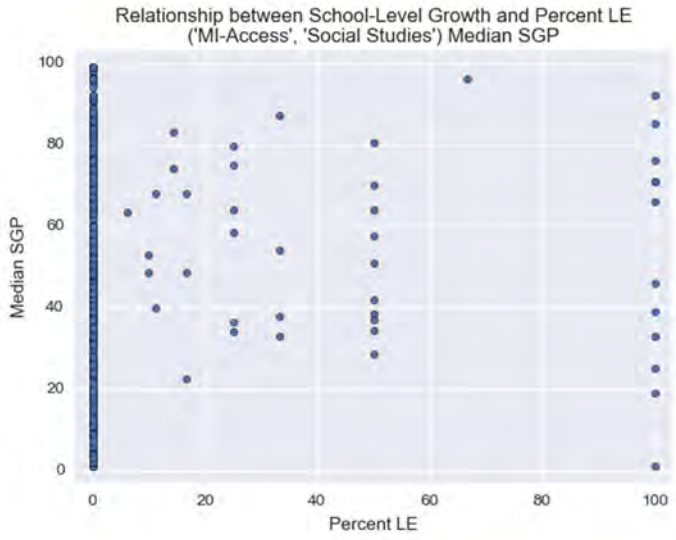


Figure A.29. Median School PRR versus Percentage of Limited English Proficient Students for Social Studies, MI-Access

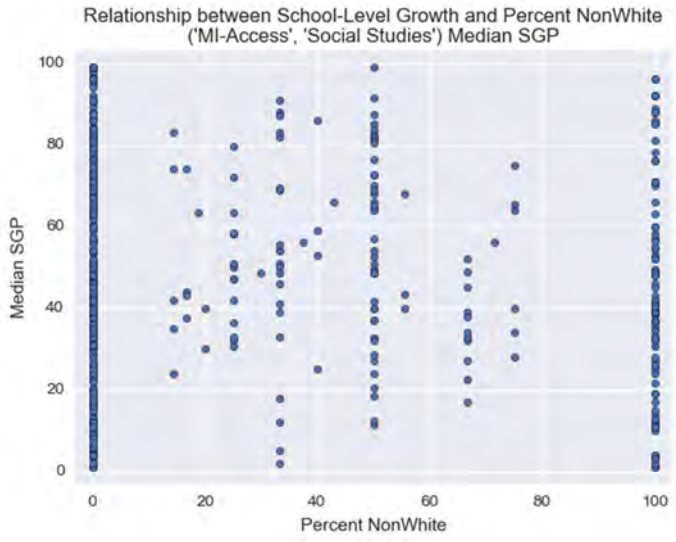


Figure A.30. Median School PRR versus Percentage of Non-White Students for Social Studies, MI-Access

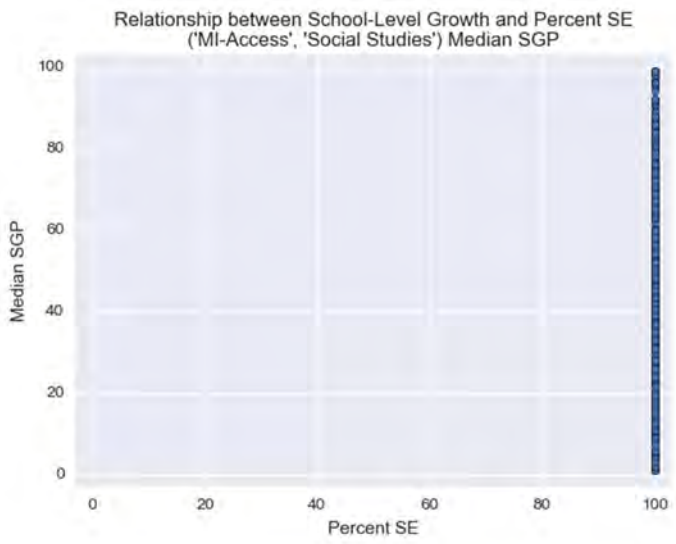


Figure A.31. Median School PRR versus Percentage of Special Education Students for Social Studies, MI-Access[iv]

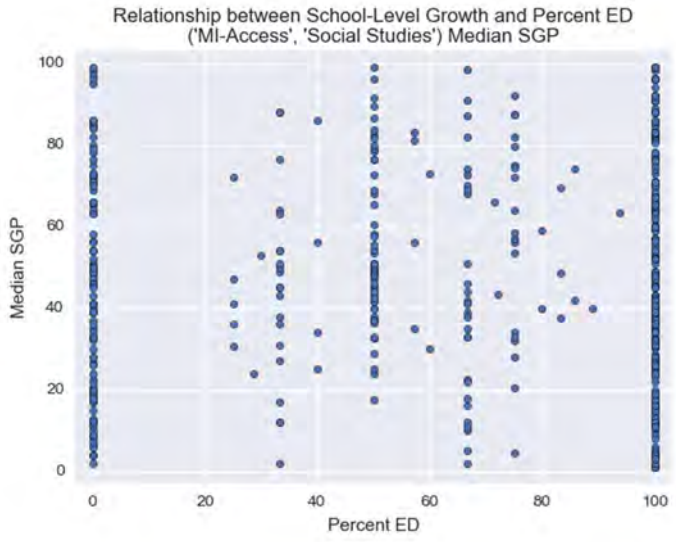


Figure A.32. Median School PRR versus Percentage of Economically Disadvantaged Students for Social Studies, MI-Access

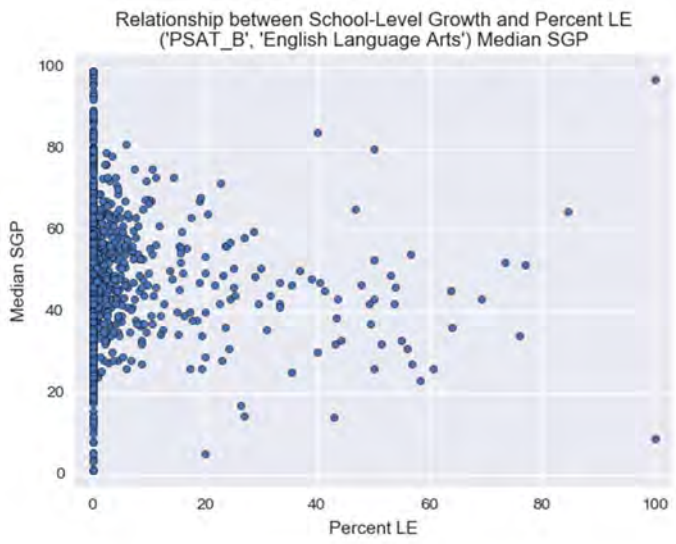


Figure A.33. Median School SGP versus Percentage of Limited English Proficient Students for English Language Arts, PSAT 8

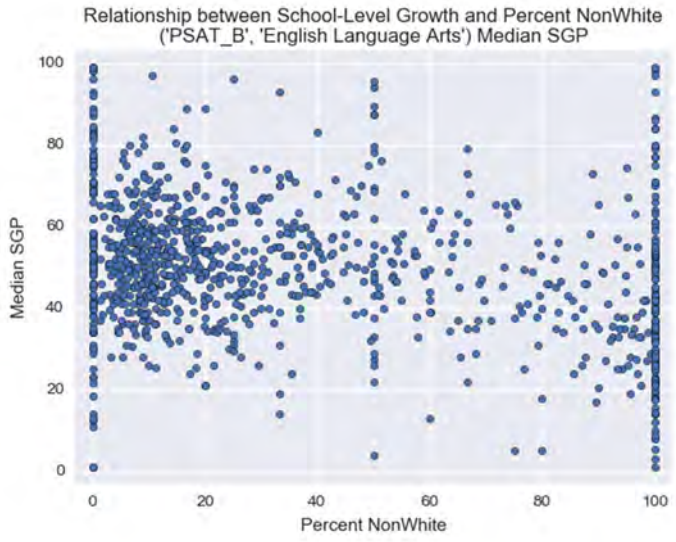


Figure A.34. Median School SGP versus Percentage of Non-White Students for English Language Arts, PSAT 8

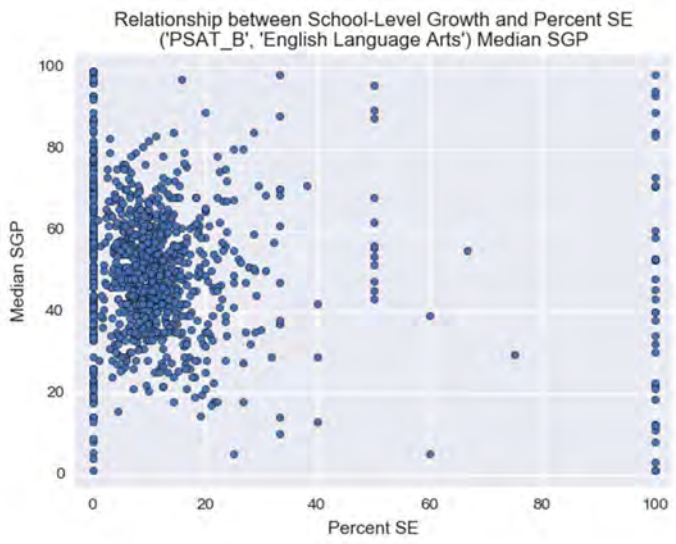


Figure A.35. Median School SGP versus Percentage of Special Education Students for English Language Arts, PSAT 8

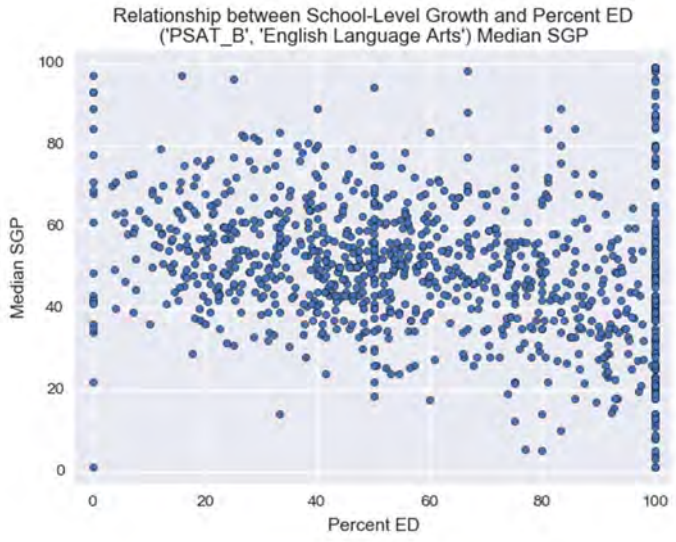


Figure A.36. Median School SGP versus Percentage of Economically Disadvantaged Students for English Language Arts, PSAT 8

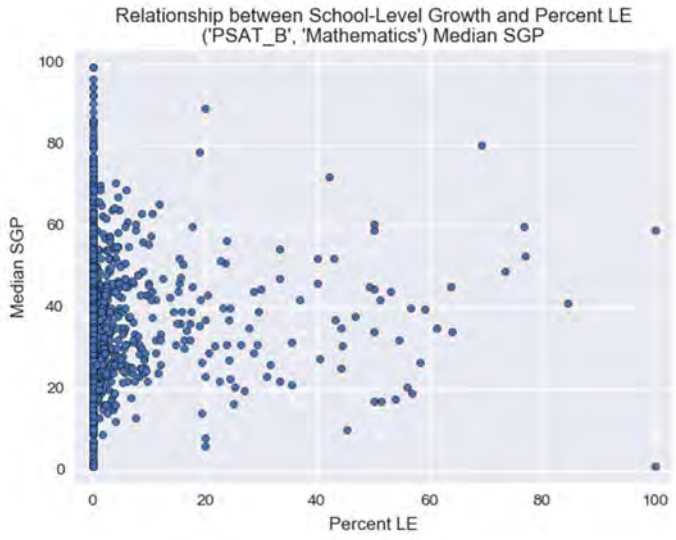


Figure A.37. Median School SGP versus Percentage of Limited English Proficient Students for Mathematics, PSAT 8

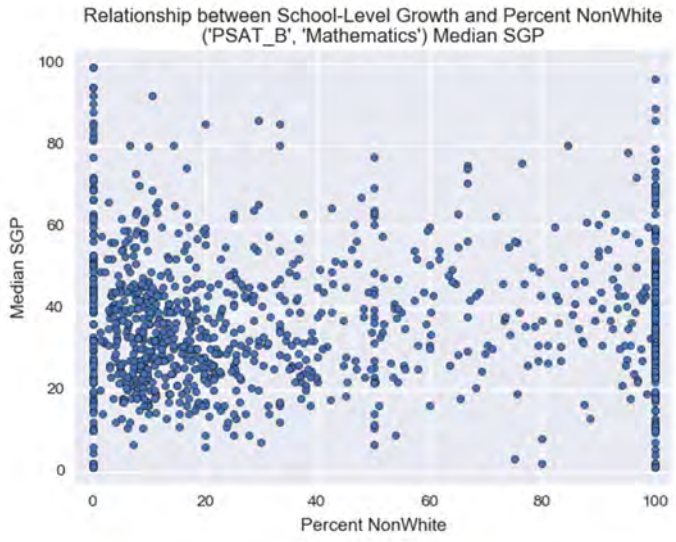


Figure A.38. Median School SGP versus Percentage of Non-White Students for Mathematics, PSAT 8

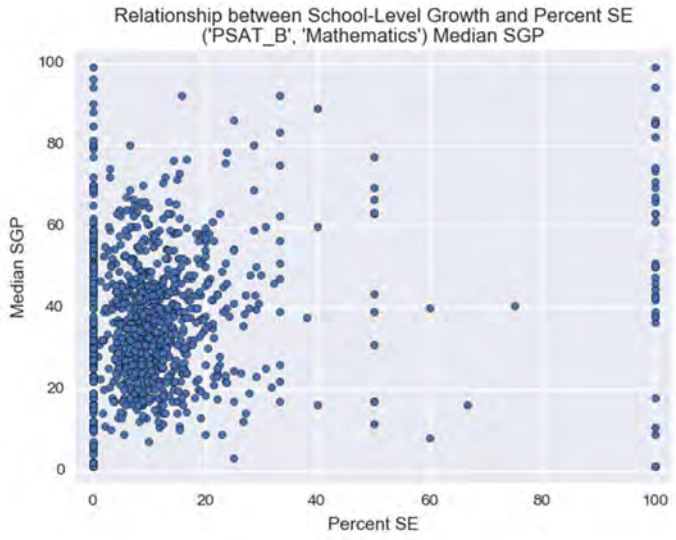


Figure A.39. Median School SGP versus Percentage of Special Education Students for Mathematics, PSAT 8

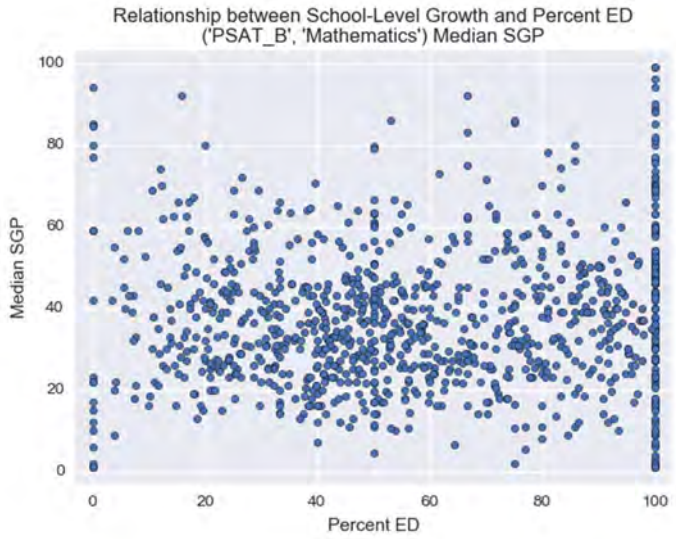


Figure A.40. Median School SGP versus Percentage of Economically Disadvantaged Students for Mathematics s, PSAT 8

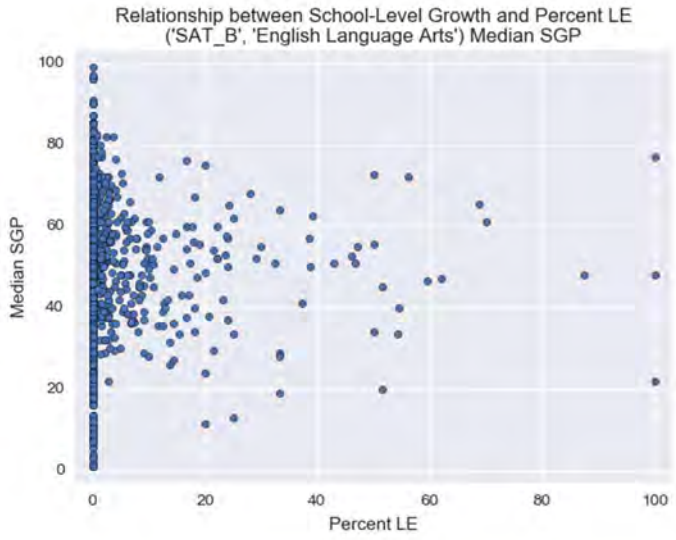


Figure A.41. Median School SGP versus Percentage of Limited English Proficient Students for English Language Arts, SAT

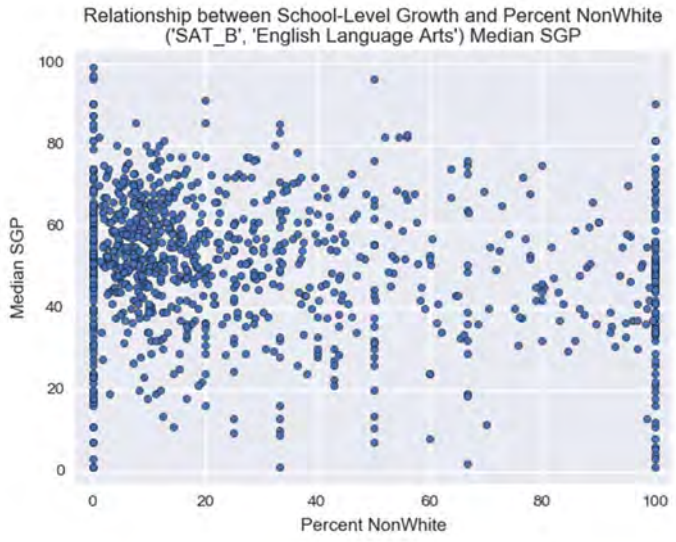


Figure A.42. Median School SGP versus Percentage of Non-White Students for English Language Arts, SAT

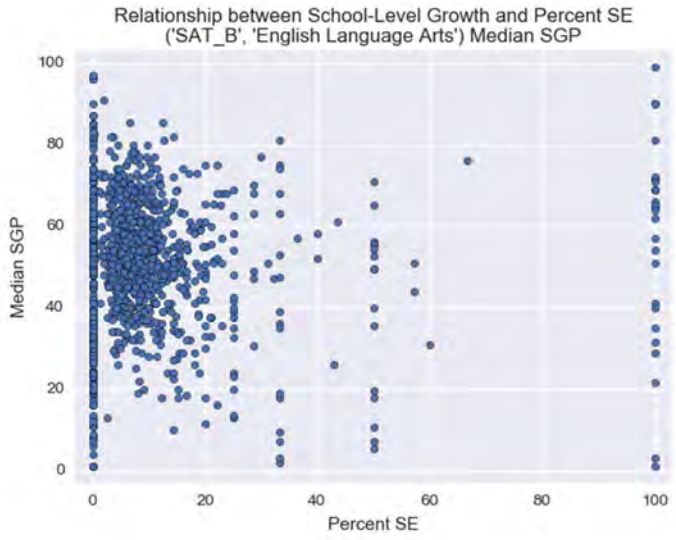


Figure A.43. Median School SGP versus Percentage of Special Education Students for English Language Arts, SAT

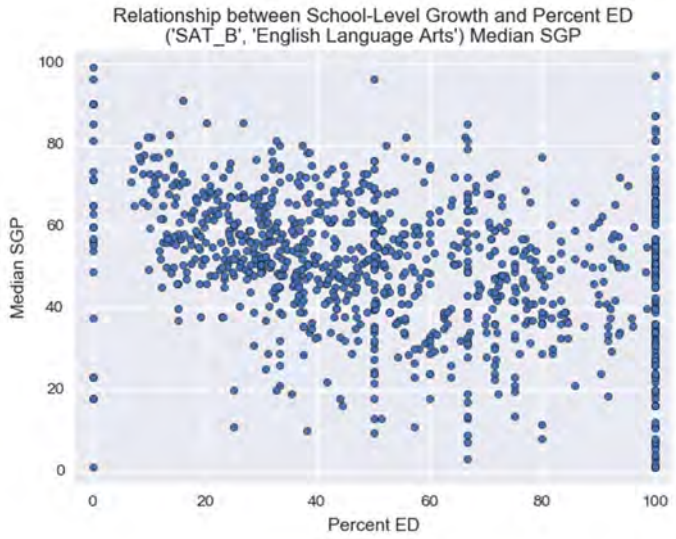


Figure A.44. Median School SGP versus Percentage of Economically Disadvantaged Students for English Language Arts, SAT

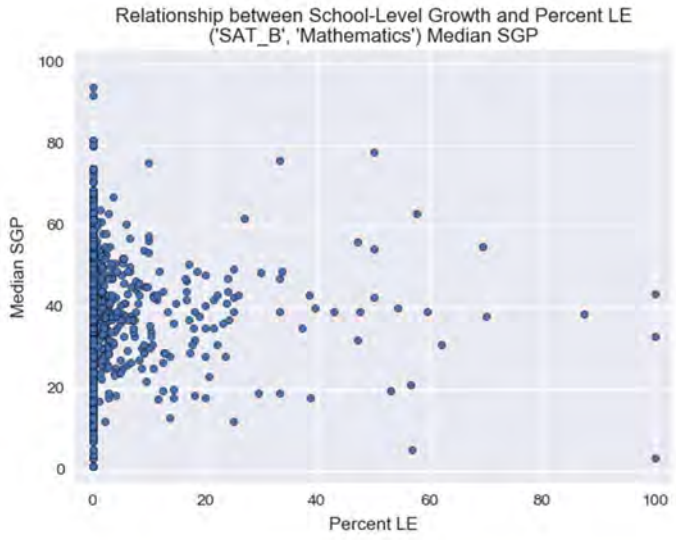


Figure A.45. Median School SGP versus Percentage of Limited English Proficient Students for Mathematics, SAT

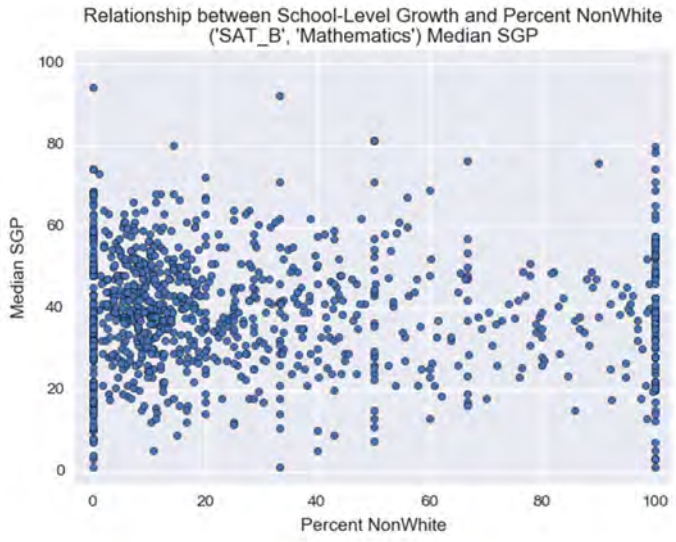


Figure A.46. Median School SGP versus Percentage of Non-White Students for Mathematicts, SAT

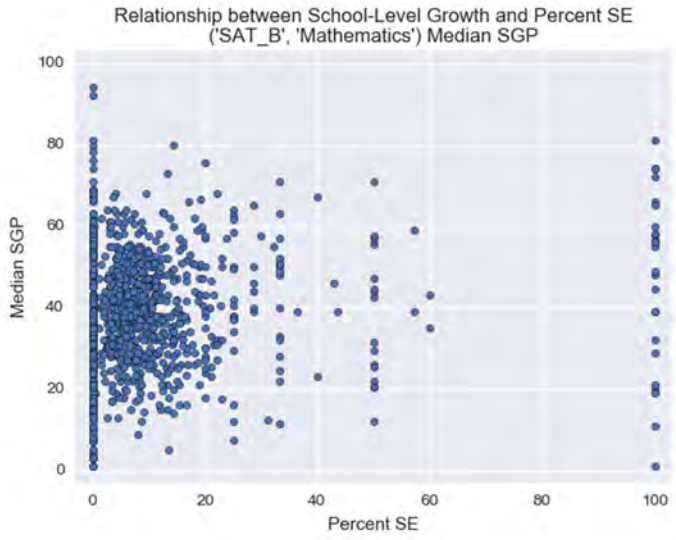


Figure A.47. Median School SGP versus Percentage of Special Education Students for Mathematics, SAT

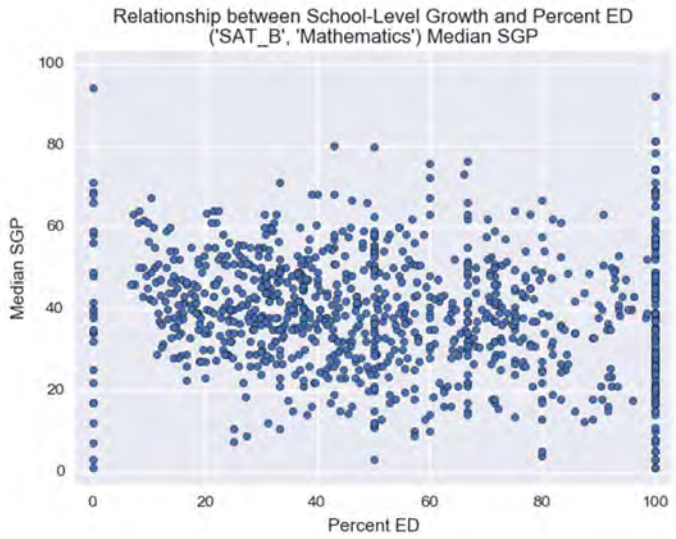


Figure A.48. Median School SGP versus Percentage of Economically Disadvantaged Students for Mathematics, SAT

[i] All MI-Access Students are classified as special education students.
[ii] All MI-Access Students are classified as special education students.
[iii] All MI-Access Students are classified as special education students.
[iv] All MI-Access Students are classified as special education students.

Appendix E: M-STEP Standards Validation

Appendix E-1. Validity Evidence for English Language Arts and Mathematics Cut Scores

Ricardo Mercado, Jessalyn Smith, Sara Kendallen, Mayuko Simon, Alassane Savadogo, and Ben Sorenson *Data Recognition Corporation*

July 15, 2018

Appendix E-2 Summary

- On July 9–12, 2018, the Michigan Department of Education (MDE) partnered with Data Recognition Corporation (DRC) to conduct a standards validation for the Michigan Student Test of Educational Progress (M-STEP) tests of English language arts (ELA) and mathematics for grades 3–8.
- The *standards validation* was needed because of test-length reductions implemented in spring 2018. Specifically, proportional reductions in the number of items by reporting category were implemented for mathematics; and for ELA, new passage-based writing items replaced other performance tasks.
- The purpose of the standards validation workshop was to determine whether the existing M STEP cut scores were still valid for continued use on the updated tests.
- Participants' recommendations at the standards validation were consistent with the existing cut scores, providing evidence of their validity for continued use.

Appendix E-3 Background

The M-STEP is administered to assess Michigan students' mastery of the Michigan Academic *Standards*. The assessments began as an implementation of the Smarter Balanced Assessment Consortium's (SBAC) ELA and mathematics tests. The current cut scores for the tests are taken from the SBAC tests.

Over the course of several years, important changes have been made to the assessments to make them more meaningful to Michigan educators. These include the alignment of the test items to the Michigan Academic *Standards*, the implementation of a Michigan-specific test blueprint, and a reduction in the number of performance tasks used in ELA to reduce overall test time. These changes were made cautiously and deliberately with the active involvement of Michigan educators and stakeholders.

In school year 2017–18, the tests in grades 3–8 were shortened to reduce the time burden on students and schools. To do so, all performance tasks in ELA were replaced with passage-based writing items, a new item type for Michigan. The ELA test blueprints were adjusted to accommodate the new item type and the reduction in test length. In grades 3–8 mathematics, the test was also shortened to reduce overall testing time, but this change did not involve adding new test items or significantly altering the test blueprint.

Appendix E-4 Standards Validation Methodology

The purpose of the standards validation was to determine whether the current M-STEP cut scores for grades 3–8 ELA and mathematics were still valid for continued use, given the 2018 updates to the tests.

A total of 54 Michigan educators engaged in a modification of the Bookmark Standard Setting Procedure (Lewis, Mitzel, & Green, 1996; Lewis, Mitzel, Mercado, & Schulz, 2012) to validate the cut scores. This method has been used on large-scale assessments in Michigan and across the nation, including for SBAC.

Participants studied the existing Michigan performance level descriptors (PLDs) and Michigan Learning *Standards* to review the knowledge, skills, and abilities expected of students in each performance level. The four performance levels on M-STEP are Not Proficient, Partially Proficient, Proficient, and Advanced. Each performance level is associated with a level of mastery of the Michigan Learning *Standards*. Participants then discussed the content-based expectations for students at the threshold of each performance level (e.g., a student who is just Proficient). To support their discussions of these threshold students, participants were provided with the SBAC achievement level descriptors (ALDs). These SBAC ALDs were used at the original standard setting where the cut scores were established.

Participants studied collections of test items that were ordered in terms of difficulty. The existing cut scores were presented as benchmarks for participants' consideration: participants were asked to consider the knowledge and skills that students would need to demonstrate on the updated ELA and mathematics tests, as based on the benchmarked (existing) cut scores. Then, participants compared these expectations against the content-based expectations for students at the thresholds of each performance level. Participants were instructed to recommend retaining the existing cut scores if there was good correspondence between the benchmarks and these content-based expectations, or to recommend alternative cut scores that reflect better correspondence. Participants engaged in two rounds of individual judgments and group discussion. (The grade 5 mathematics committee engaged in three rounds of judgments to accommodate additional discussion.) The committees' median judgments were taken as their final recommendations.

Before the workshop, it was hypothesized that participants would recommend cut scores which were similar to, but not exactly equal to, the existing cut scores. The rationale behind this hypothesis was that nearly any group of educators going through an iterative, judgmental process like the Bookmark Procedure will tend to arrive at slightly different judgments at the end of the process. Accordingly, it was not expected that standards validation participants would recommend cut scores exactly equal to the existing cut scores: slight differences in cut score recommendations could be attributed to random statistical errors. This hypothesis was later used to inform the interpretation of the workshop results, presented under the heading "Review of Recommendations Made at the *Standards* Validation."

Table E-1 shows the median recommended cut scores from the standards validation workshop plus the associated impact data for ELA and mathematics using Spring 2018 administration data. Impact data are the percentages of students who would be classified in each performance level if the cut scores were applied to students' scores. Note that the impact data presented in this document are based on the test data available at the time of the standards validation, so they should not be considered final; however, these impact data provide a reasonable estimate of the percentages of students that would be included in each performance level based on the cut scores shown.

Table E-1a. Cut Scores Associated with Participants' Median Recommendations

Content	Grade	Partially Proficient	Proficient	Advanced
ELA	3	1279	1299.5	1316
ELA	4	1382	1399.5	1417
ELA	5	1481	1499.5	1521
ELA	6	1578	1599.5	1624
ELA	7	1679	1699.5	1726
ELA	8	1775	1794	1828
Math	3	1281	1299.5	1321
Math	4	1376	1397	1417
Math	5	1475	1496	1515
Math	6	1579	1599.5	1614
Math	7	1679	1699.5	1715
Math	8	1777	1799.5	1815

Table E-1b. Impact Data Associated with Participants' Median Recommendations

Content	Grade	Not Proficient	Partially Proficient	Proficient	Advanced
ELA	3	29.70%	25.80%	21.10%	23.30%
ELA	4	32.60%	22.30%	21.50%	23.60%
ELA	5	32.10%	21.20%	25.30%	21.40%
ELA	6	31.30%	27.30%	28.20%	13.20%
ELA	7	29.20%	27.30%	30.70%	12.80%
ELA	8	27.50%	22.50%	38.20%	11.80%
Math	3	27.80%	26.40%	27.20%	18.60%
Math	4	24.70%	28.70%	26.90%	19.70%
Math	5	33.50%	26.60%	23.30%	16.60%
Math	6	34.40%	30.90%	18.60%	16.00%
Math	7	36.20%	28.00%	18.30%	17.50%
Math	8	36.50%	30.80%	14.90%	17.80%

Appendix E-5 Review of the Recommendations Made at the Standards Validation

As hypothesized, educators at the content-based standards validation workshop recommended cut scores that were similar to the existing cut scores. MDE and DRC evaluated the recommendations in context. Table E-2 shows the difference between the median cut score recommendations and the existing cut scores, expressed in multiples of the conditional standard error of measurement (CSEM). The CSEM quantifies the amount of statistical error associated with the test. If a student were tested many times, one would expect her scores to fall within a range of ±1.0 CSEM about 2/3 of the time.

Figures E-1 and E-2 show a graphical representation of the existing cut scores beside the recommended cut scores and their associated CSEM.

Table E-2a. Median Cut Score Recommendations from the Standards Validation, Existing ELA and Math Cut Scores, and Differences in Terms of Conditional Standard Error of Measurement (CSEM)

Content	Grade	Partially Proficient	Proficient	Advanced
ELA	3	1279	1299.5	1316
ELA	4	1382	1399.5	1417
ELA	5	1481	1499.5	1521
ELA	6	1578	1599.5	1624
ELA	7	1679	1699.5	1726
ELA	8	1775	1794	1828
Math	3	1281	1299.5	1321
Math	4	1376	1397	1417
Math	5	1475	1496	1515
Math	6	1579	1599.5	1614
Math	7	1679	1699.5	1715
Math	8	1777	1799.5	1815

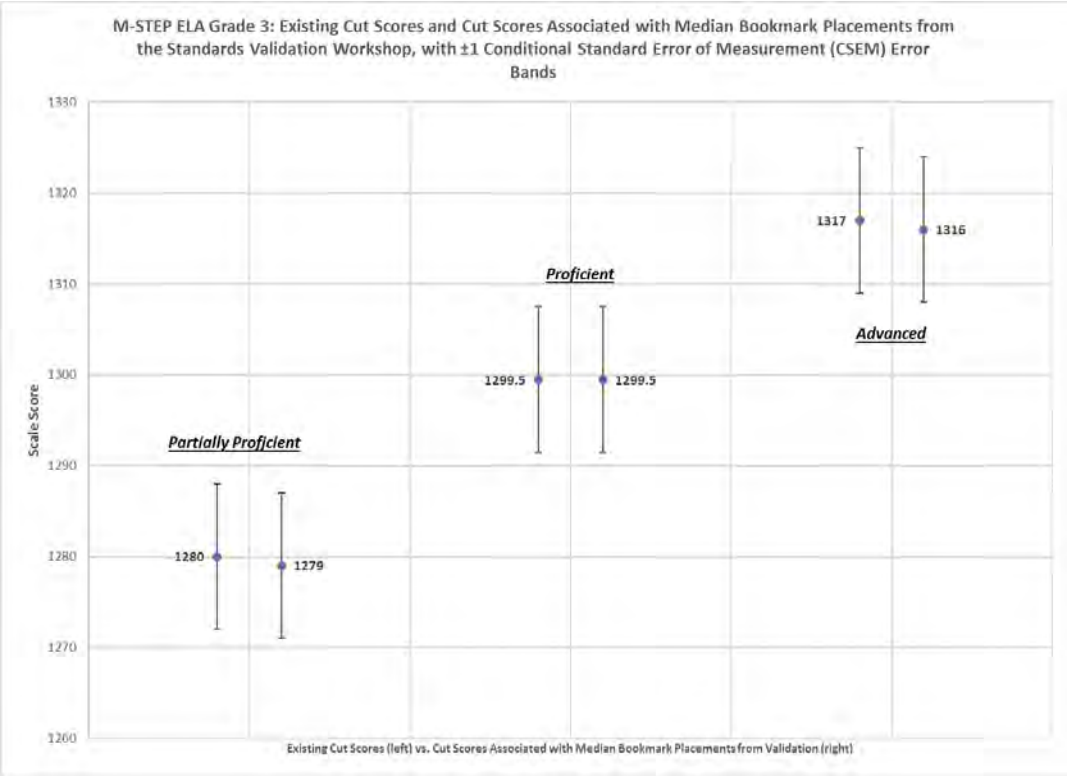
Table E-2b. Median ELA and Math Cut Scores

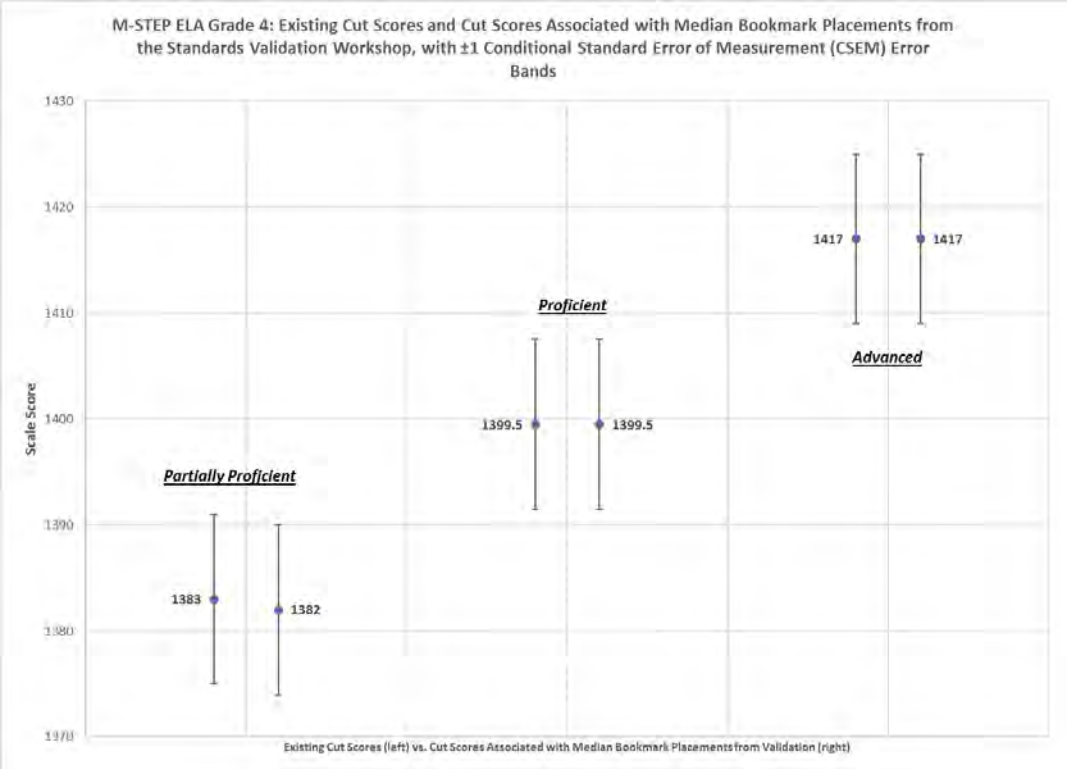
Content	Grade	Partially Proficient	Proficient	Advanced
ELA	3	1280	1299.5	1317
ELA	4	1383	1399.5	1417
ELA	5	1481	1499.5	1524
ELA	6	1578	1599.5	1624
ELA	7	1679	1699.5	1726
ELA	8	1777	1799.5	1828
Math	3	1281	1299.5	1321
Math	4	1376	1399.5	1420
Math	5	1478	1499.5	1515
Math	6	1579	1599.5	1614
Math	7	1679	1699.5	1716
Math	8	1780	1799.5	1815

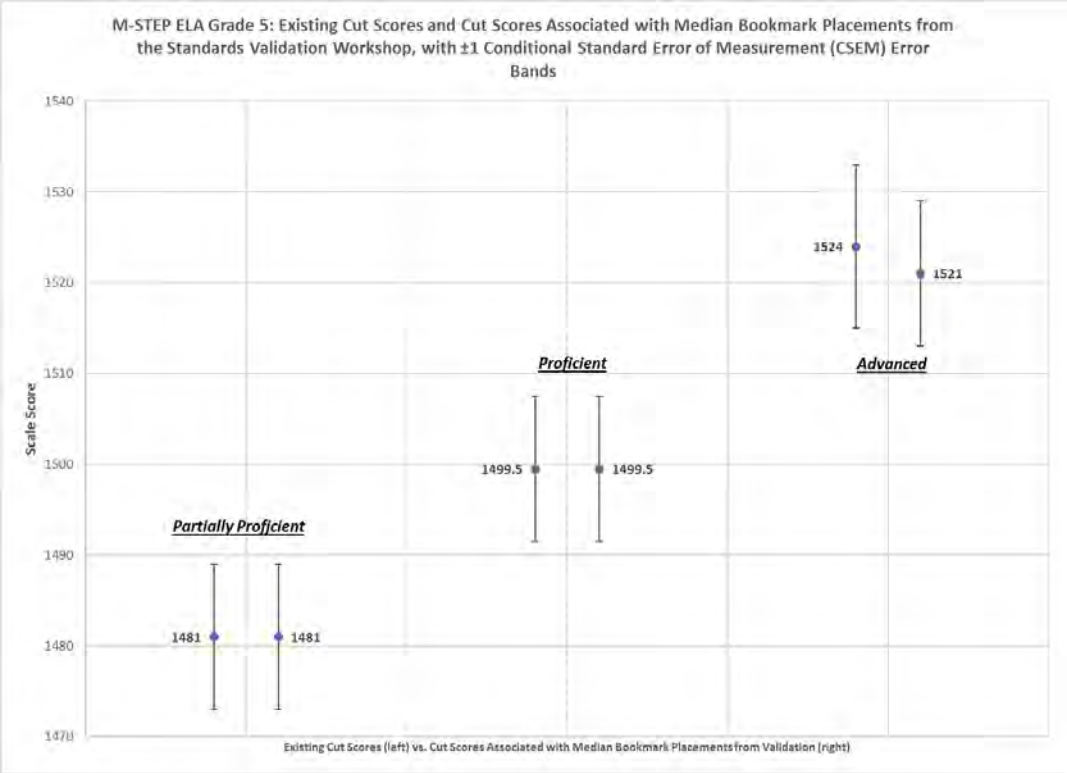
Table E-2c. Differences between Existing and Recommended Cut Scores in Terms of Conditional Standard Error of Measurement (CSEM)

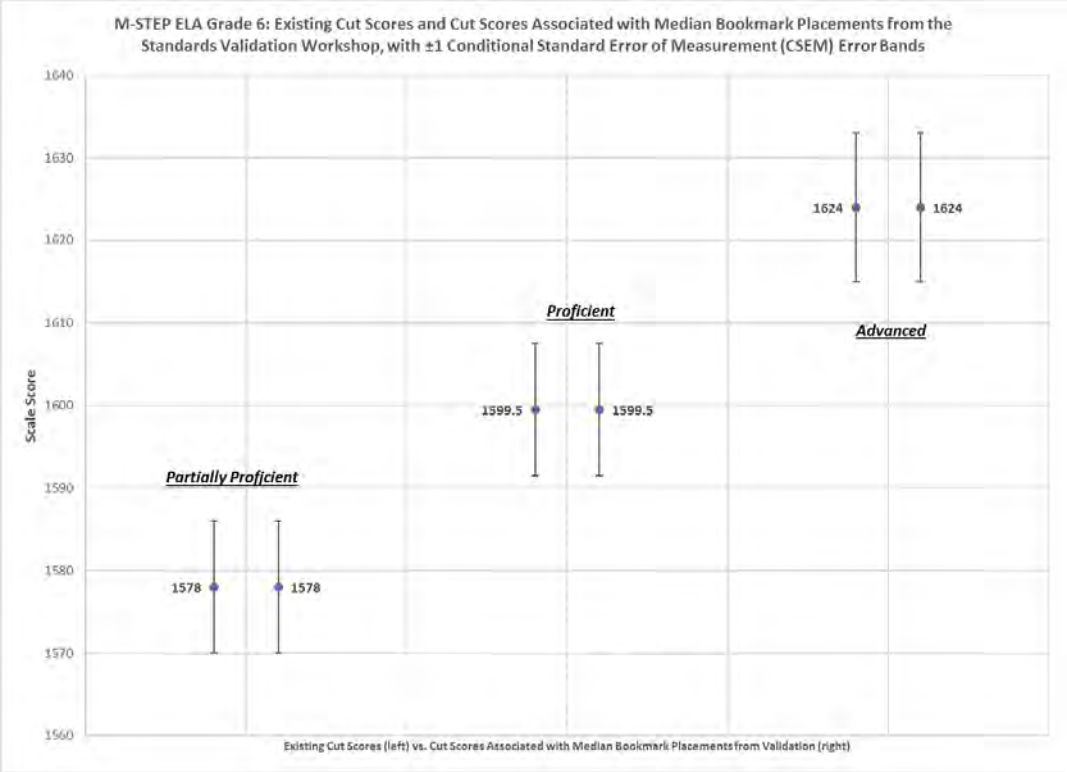
Content	Grade	Partially Proficient	Proficient	Advanced
ELA	3	-0.13	0	-0.13
ELA	4	-0.13	0	0
ELA	5	0	0	-0.38
ELA	6	0	0	0
ELA	7	0	0	0
ELA	8	-0.22	-0.69	0
Math	3	0	0	0
Math	4	0	-0.42	-0.43
Math	5	-0.33	-0.44	0
Math	6	0	0	0
Math	7	0	0	-0.17
Math	8	-0.33	0	0

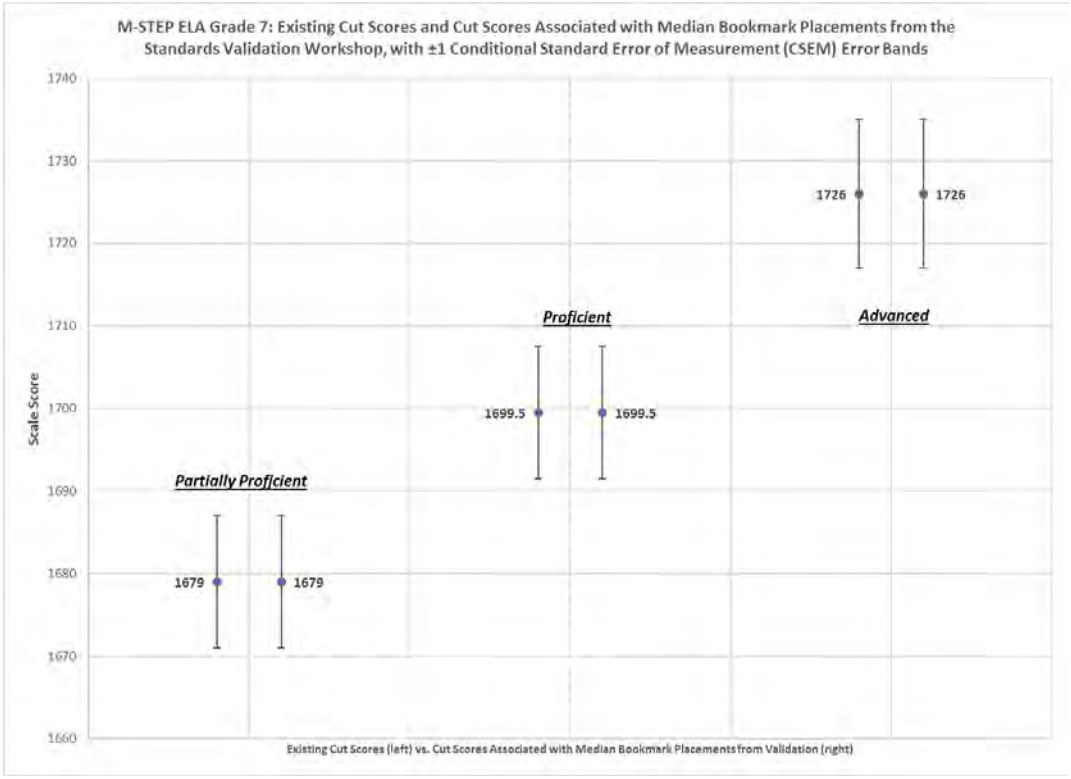
Figure E-1. ELA Comparison of Median Cut Score Recommendations and Existing Cut Scores, with Differences Expressed in Terms of Conditional Standard Error of Measurement (CSEM)






M-STEP ELA Grade 5: Existing Cut Scores and Cut Scores Associated with Median Bookmark Placements from the Standards Validation Workshop, with ±1 Conditional Standard Error of Measurement (CSEM) Error Bands
Scale Score
1540
1530
1520
1510
1500
1490
1480
1470
Partially Proficient
Proficient
Advanced
1481
1481
1499.5
1499.5
1524
1521
Existing Cut Scores (left) vs. Cut Scores Associated with Median Bookmark Placements from Validation (right)


M-STEP ELA Grade 6: Existing Cut Scores and Cut Scores Associated with Median Bookmark Placements from the Standards Validation Workshop, with ±1 Conditional Standard Error of Measurement (CSEM) Error Bands
Scale Score
1640
1630
1620
1610
1600
1590
1580
1570
1560
Partially Proficient
Proficient
Advanced
1578
1578
1599.5
1599.5
1624
1624
Existing Cut Scores (left) vs. Cut Scores Associated with Median Bookmark Placements from Validation (right)


M-STEP ELA Grade 7: Existing Cut Scores and Cut Scores Associated with Median Bookmark Placements from the Standards Validation Workshop, with ±1 Conditional Standard Error of Measurement (CSEM) Error Bands
Scale Score
1740
1730
1720
1710
1700
1690
1680
1670
1660
Partially Proficient
Proficient
Advanced
1679
1679
1699.5
1699.5
1726
1726
Existing Cut Scores (left) vs. Cut Scores Associated with Median Bookmark Placements from Validation (right)

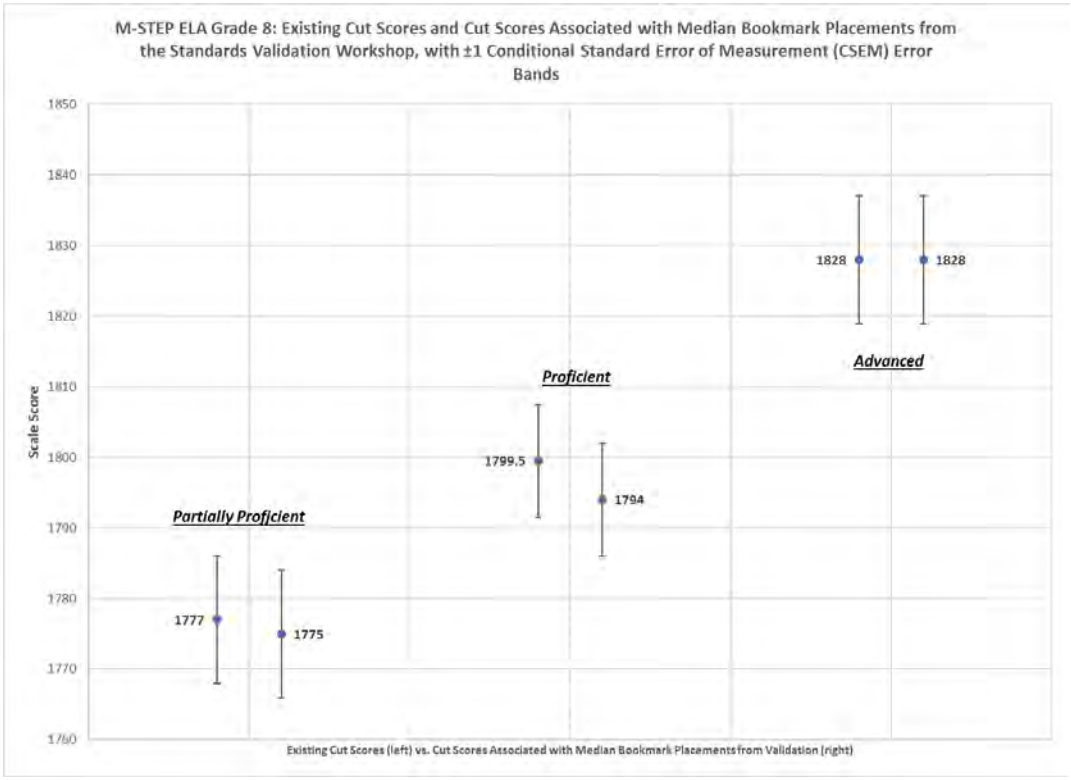
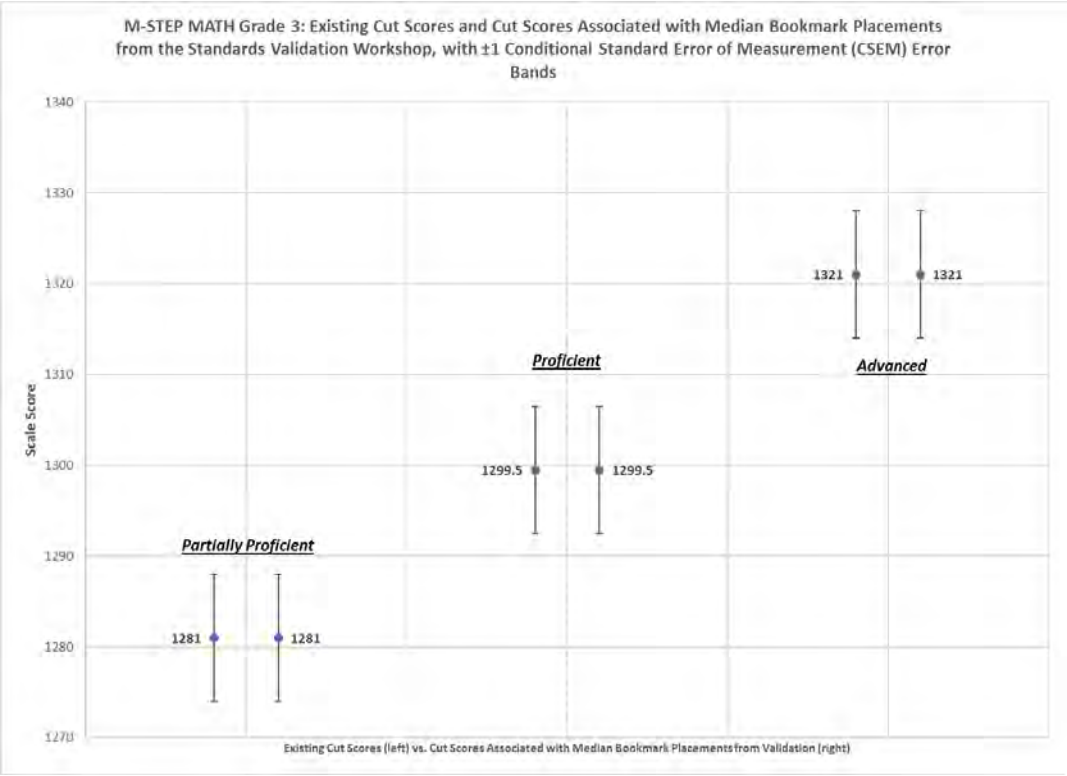
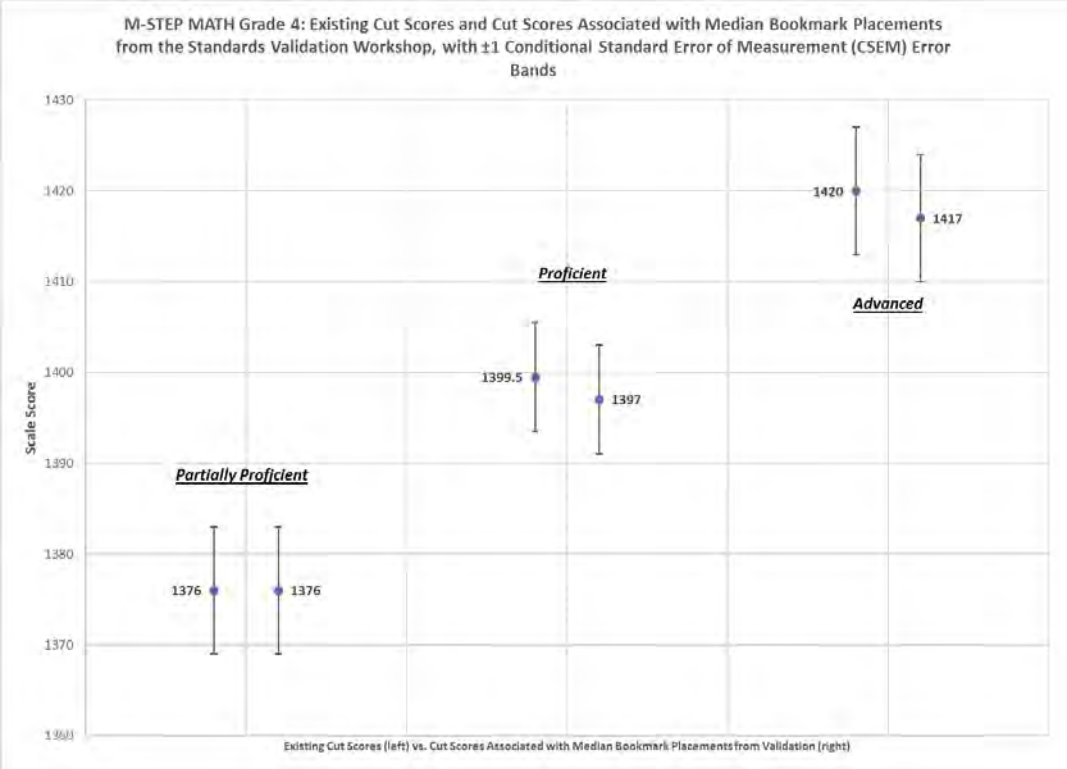
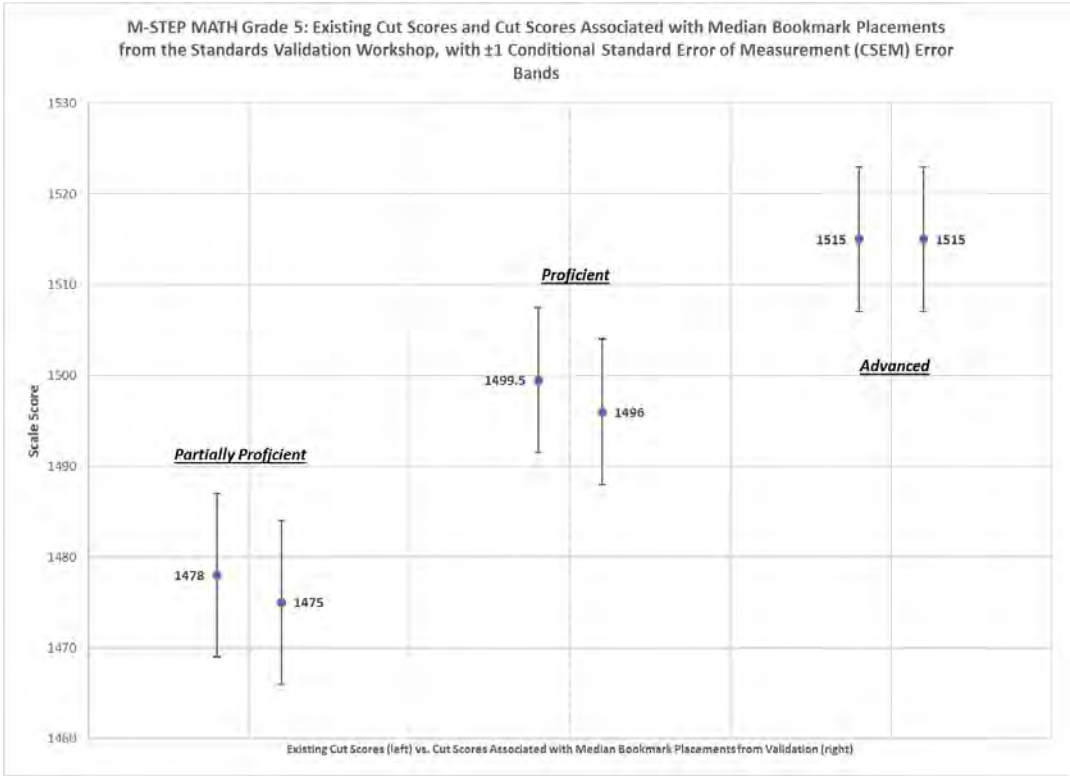
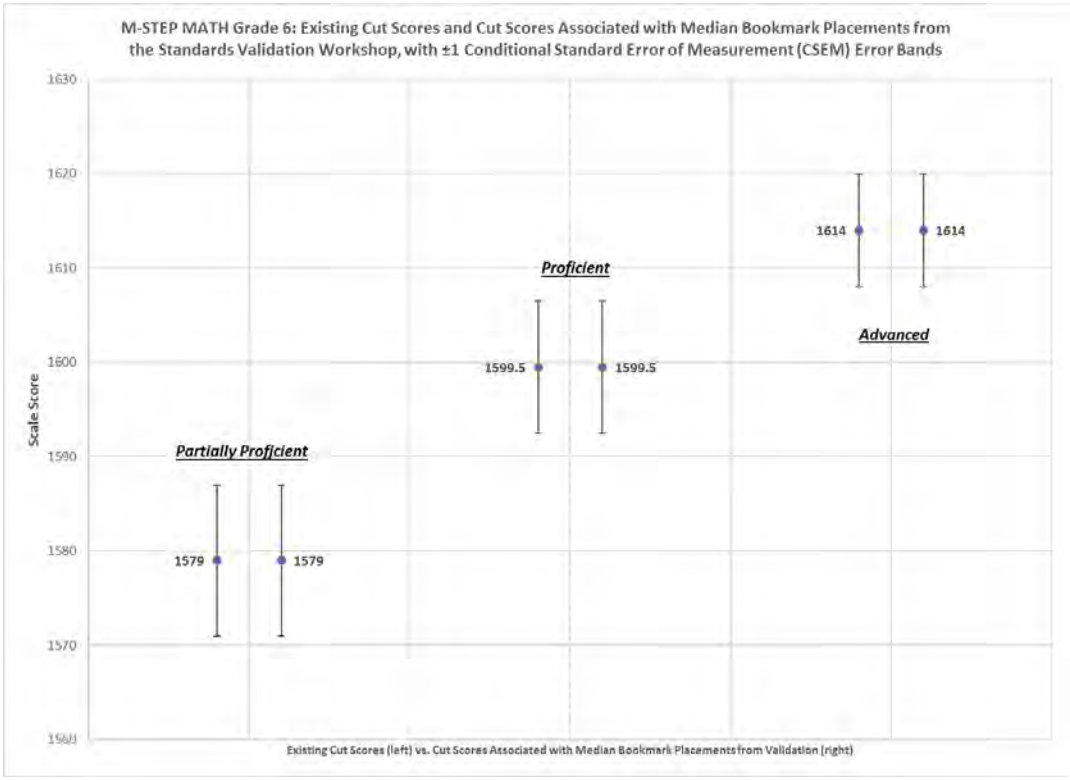

M-STEP ELA Grade 8: Existing Cut Scores and Cut Scores Associated with Median Bookmark Placements from the Standards Validation Workshop, with ±1 Conditional Standard Error of Measurement (CSEM) Error Bands
Scale Score
1850
1840
1830
1820
1810
1800
1790
1780
1770
1760
Partially Proficient
Proficient
Advanced
1777
1775
1799.5
1794
1828
1828
Existing Cut Scores (left) vs. Cut Scores Associated with Median Bookmark Placements from Validation (right)

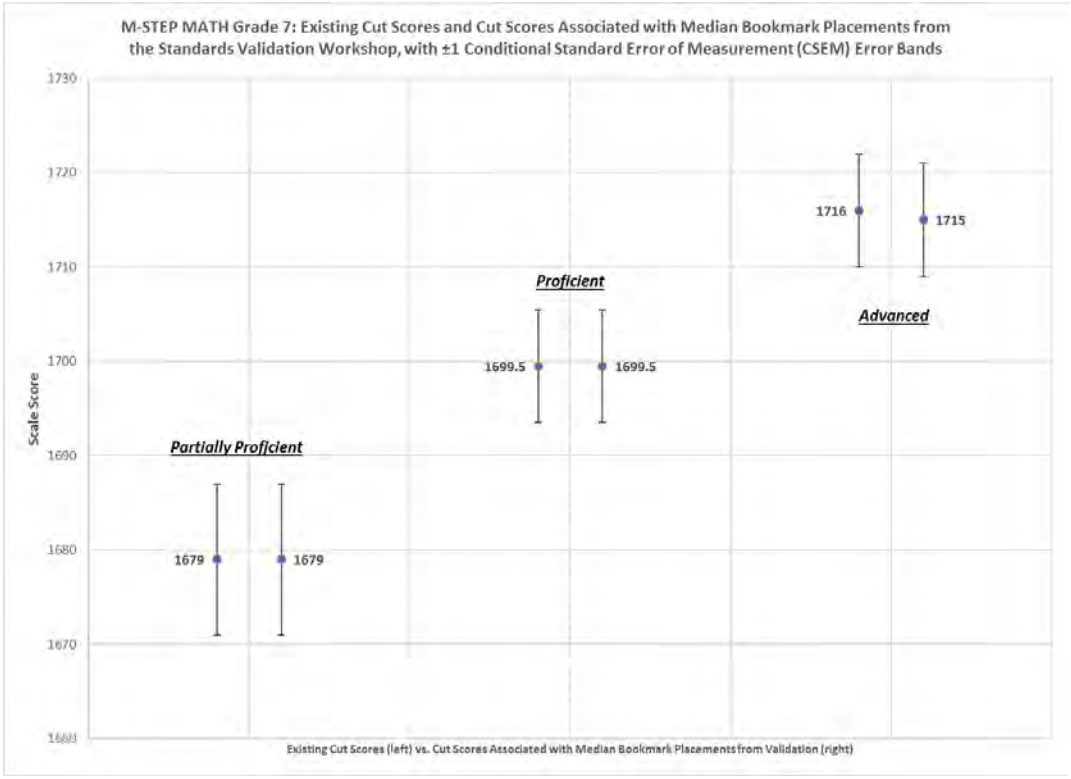
Figure E-2. Mathematics Comparison of Median Cut Score Recommendations and Existing Cut Scores, with Differences Expressed in Terms of Conditional Standard Error of Measurement (CSEM)

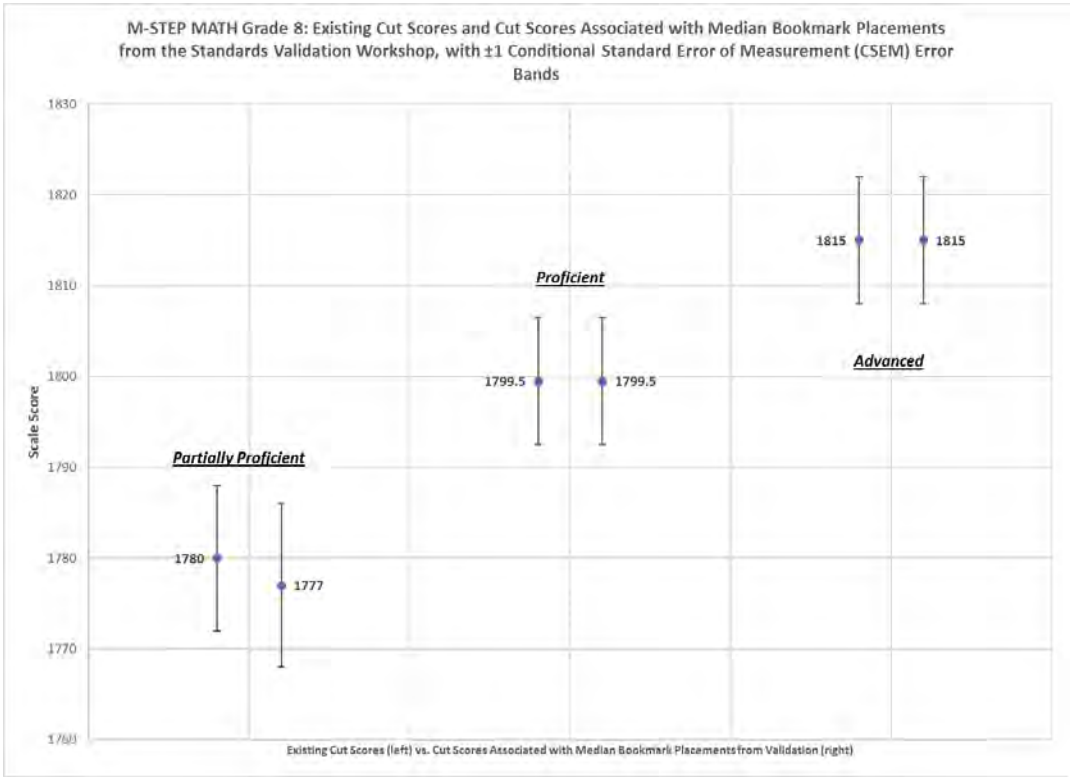





M-STEP MATH Grade 5: Existing Cut Scores and Cut Scores Associated with Median Bookmark Placements from the Standards Validation Workshop, with ±1 Conditional Standard Error of Measurement (CSEM) Error Bands
Scale Score
1530
1520
1510
1500
1490
1480
1470
1460
Partially Proficient
Proficient
Advanced
1478
1475
1499.5
1496
1515
1515
Existing Cut Scores (left) vs. Cut Scores Associated with Median Bookmark Placements from Validation (right)


M-STEP MATH Grade 6: Existing Cut Scores and Cut Scores Associated with Median Bookmark Placements from the Standards Validation Workshop, with ±1 Conditional Standard Error of Measurement (CSEM) Error Bands
Scale Score
1630
1620
1610
1600
1590
1580
1570
1560
Partially Proficient
Proficient
Advanced
1579
1579
1599.5
1599.5
1614
1614
Existing Cut Scores (left) vs. Cut Scores Associated with Median Bookmark Placements from Validation (right)


M-STEP MATH Grade 7: Existing Cut Scores and Cut Scores Associated with Median Bookmark Placements from the Standards Validation Workshop, with ±1 Conditional Standard Error of Measurement (CSEM) Error Bands
Scale Score
1730
1720
1710
1700
1690
1680
1670
1660
Partially Proficient
1679
1679
Proficient
1699.5
1699.5
Advanced
1716
1715
Existing Cut Scores (left) vs. Cut Scores Associated with Median Bookmark Placements from Validation (right)


M-STEP MATH Grade 8: Existing Cut Scores and Cut Scores Associated with Median Bookmark Placements from the Standards Validation Workshop, with ±1 Conditional Standard Error of Measurement (CSEM) Error Bands
Scale Score
1830
1820
1810
1800
1790
1780
1770
1760
Partially Proficient
1780
1777
Proficient
1799.5
1799.5
Advanced
1815
1815
Existing Cut Scores (left) vs. Cut Scores Associated with Median Bookmark Placements from Validation (right)

The MDE considered the recommendations made by the standards validation committee and the existing cut scores. Working with DRC, MDE made three primary findings:

1. The content-based expectations for students in each performance level have not changed significantly since the cut scores were established. Although the tests are now shorter and passage-based writing items have been introduced on the ELA tests, the underlying expectations for students in each performance level have not changed.

2. The impact data observed in spring 2018 is similar to those from the 2017 administration of the tests when the existing cut scores were applied. This similarity supports the contention that the expectations for students in each performance level have not changed, and that the existing cut scores are valid for continued use.

3. The median cut score recommendations were all very close to the existing cut scores, to the point of being statistically indistinguishable. As shown in Table E-2, the average difference from the existing cut scores was -0.11 CSEM, and all were within a range of ±0.7 CSEM. Within this narrow range, it is difficult to argue that scale scores are significantly different.

The available validity evidence suggests that there were no significant differences between the updated ELA and mathematics assessments and the content assessed by the prior assessments; and that the differences between the judgments made at the 2018 standards validation workshop and the existing cut scores were not statistically different. That is, the recommendations made by Michigan educators during the standards validation were consistent with the existing cut scores, and the validity evidence collected during this process supports the continued use of the cut scores.

Table E-3 shows the existing cut scores and associated impact data for ELA and mathematics using spring 2018 administration data. Figures E-3 and E-4 show a graphical representation of the existing cut scores and their associated impact data from spring 2018.

Table E-3a. Existing ELA and Mathematics Cut Scores

Content	Grade	Partially Proficient	Proficient	Advanced
ELA	3	1280	1299.5	1317
ELA	4	1383	1399.5	1417
ELA	5	1481	1499.5	1524
ELA	6	1578	1599.5	1624
ELA	7	1679	1699.5	1726
ELA	8	1777	1799.5	1828
Math	3	1281	1299.5	1321
Math	4	1376	1399.5	1420
Math	5	1478	1499.5	1515
Math	6	1579	1599.5	1614
Math	7	1679	1699.5	1716
Math	8	1780	1799.5	1815

Table E-3b. Associated Impact Data for M-STEP Spring 2018

Content	Grade	Not Proficient	Partially Proficient	Proficient	Advanced
ELA	3	30.90%	24.60%	22.40%	22.10%
ELA	4	33.80%	21.10%	21.50%	23.60%
ELA	5	32.10%	21.20%	28.70%	17.90%
ELA	6	31.30%	27.30%	28.20%	13.20%
ELA	7	29.20%	27.30%	30.70%	12.80%
ELA	8	29.90%	27.30%	31.10%	11.80%
Math	3	27.80%	26.40%	27.20%	18.60%
Math	4	24.70%	33.20%	25.70%	16.40%
Math	5	37.00%	28.50%	17.80%	16.60%
Math	6	34.40%	30.90%	18.60%	16.00%
Math	7	36.20%	28.00%	19.50%	16.40%
Math	8	40.90%	26.30%	14.90%	17.80%

Figure E-3. Existing, Validated Cut Scores and Associated Impact Data for Spring 2018 ELA

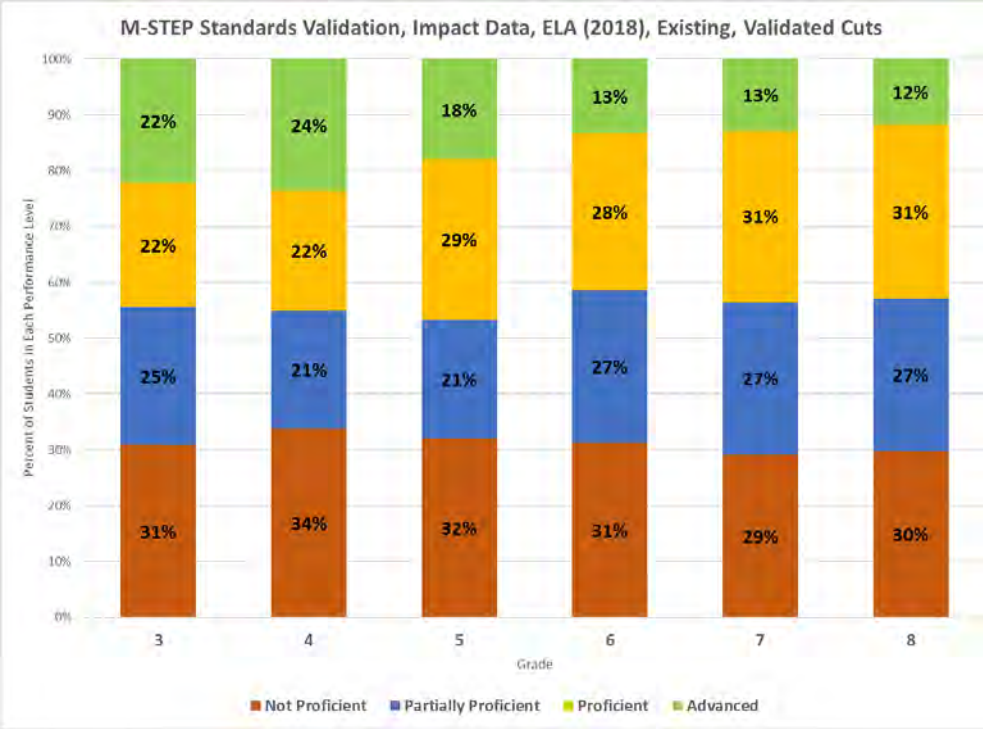
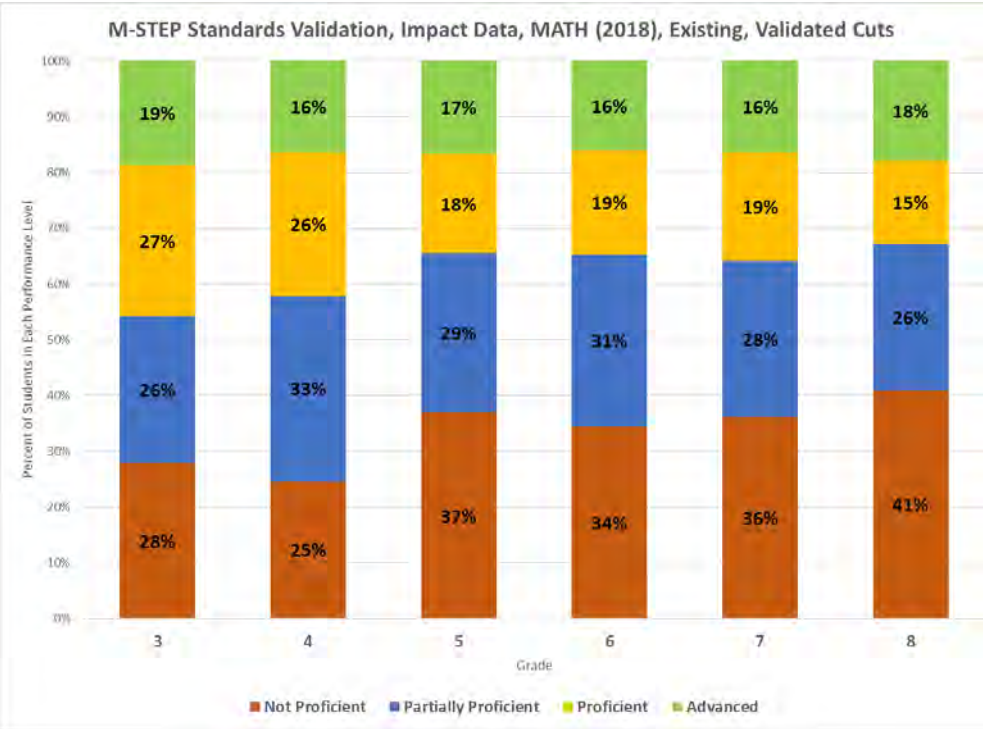


Figure E-4. Existing, Validated Cut Scores and Associated Impact Data for Spring 2018 Mathematics



Appendix E.6 References

Lewis, D. M., Mitzel, H. C., & Green, D. R. (1996). *Standard setting: A Bookmark approach. Symposium* presented at the Council of Chief State School Officers National Conference on Large-Scale Assessment: Phoenix, AZ.

Lewis, D. M., Mitzel, H. C., Mercado, R. L., & Schulz, E. M. (2012). The bookmark standard setting procedure. In G. J. Cizek (Ed.), *Setting performance standards: Foundations, methods, and innovations* (2nd ed., pp. 225–253). New York: Routledge.

Appendix F: Michigan Assessment System Participant Groups

This appendix provides more details on the stake holders and participants involved in the Michigan Assessment System.

Appendix F.1 Michigan Educators

Michigan educators (including classroom teachers from K–12 and higher education, curriculum specialists, and administrators) play a vital role in all phases of the test development process. Committees of Michigan educators review the test specifications and provide advice on the model or structure for assessing each content area. They also work to ensure that test content and question types align closely with best practices in classroom instruction.

Appendix F.2 Technical Advisory Committee

Michigan's Technical Advisory Committee (TAC) serves as an advisory body to MDE. The TAC provides recommendations on technical aspects of large-scale assessments, including item development, test construction, administration procedures, scoring and equating methodologies, and standard-setting workshops. The TAC also provides guidance on other technical matters, such as practices not already described in the *Standards for Educational and Psychological Testing* (AERA, APA, & NCME, 2014), and continues to provide advice and consultation on the implementation of new assessments and adherence to the federal requirements set forth by the Every Student Succeeds Act. Table F-1 can be referenced for TAC member information.

Table F-1. Technical Advisory Committee

Name	Position	Organization
Dr. Mark Reckase, Chair	Distinguished Professor of Measurement and Quantitative Methods (retired)	Michigan State University
Dr. Damian Betebenner	Senior Associate	National Center for the Improvement of Educational Assessment
Dr. Gregory J. Cizek	Distinguished Professor of Educational Measurement and Evaluation	University of North Carolina, Chapel Hill
Dr. George E. Engelhard, Jr.	Professor Emeritus of Educational Measurement and Policy	University of Georgia
Dr. Christine Carrino Gorowara	Interim Director	Delaware Center for Teacher Education, University of Delaware
Dr. Joseph Martineau	Senior Associate	National Center for the Improvement of Educational Assessment
Dr. Dave Treder	Coordinator of Research, Evaluation, and Assessment	Genesee Intermediate School District, Flint, Michigan

Appendix F.3 Michigan's Division of Educator, Student, and School Supports (DESSS) Advisory Committee

The DESSS Advisory Committee meets quarterly to provide input, ideas, expert advice, and/or recommendations to MDE and DESSS on matters related to assessment and accountability, professional preparation, educator evaluations, assessment policy, and related communications to the field. The committee also meets to keep its respective organizations abreast of changes to the above areas that will affect Michigan's schools and students. The committee comprises representatives from educational agencies, organizations, and representatives from both two-year and four-year colleges and universities across the state. Table F-2 shows the members of the DESSS Advisory Committee.

Table F-2. Division of Educator, Student, and School Supports Advisory Committee

Last Name	First Name	Organization
Anand	Johanna	Michigan Department of Education/Low Incidence Outreach
Arnswald	Jennifer	Michigan Science Teachers Association
Berry	Kathy	Michigan Council of Teachers of Mathematics
Clingman	Cindy	Michigan Reading Association
Cox	Mary	Michigan Council of Teachers of English
Czerwinski	Harvey	Michigan Education Research Association
Dewsbury-White	Kathryn	Michigan Assessment Consortium
DeYoung	Ann	Michigan Elementary and Middle School Principals Association
Flukes	Jonathan	Michigan Education Research Association
Gordon	Casey	MI Council of Teachers of English to Speakers of Other Languages
Greer	Doug	Oakland Area Intermediate School District
Kher	Neelam	Michigan State University
Koekkoek	Matthew	Michigan Association of Administrators of Special Education
Langdon	Thomas	Michigan Association of School Administrators
Mastie	Marge	Washtenaw Intermediate School District - Retired
McIntyre	Rebecca	Michigan Association of Administrators of Special Education
Miller	Kathy	Michigan School Facilitators Network
Trout	Kelly	Ingham Intermediate School District
Vespremi	Stacy	Michigan Association of State and Federal Programs Specialists
Vorenkamp	Ellen	Wayne Regional Educational Services Agency
Zdeb	Wendy	Michigan Association of Secondary School Principals
Substitutes		
McGoran	Holly	Michigan Science Teachers Association
Musial	Joe	Wayne Regional Educational Services Agency
Ripmaster	Colin	Michigan Association of Secondary School Principals
Taraskiewicz	Cindy	Wayne Regional Educational Services Agency

Appendix G: Psychometric Verification of the Michigan Student Test of Educational Progress (M-STEP) for Spring 2021 Administration



UCLA | CRESST NATIONAL CENTER FOR RESEARCH ON EVALUATION, STANDARDS, AND STUDENT TESTING

PSYCHOMETRIC VERIFICATION OF THE MICHIGAN STUDENT TEST OF EDUCATIONAL PROGRESS (M-STEP) FOR SPRING 2021 ADMINISTRATION

CRESST Psychometrics Team

NOVEMBER 2021

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3. Verification Results and Conclusions 2
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Psychometric Verification of the Michigan Student Test of Educational Progress (M‑STEP) for Spring 2021 Administration

CRESST Psychometrics Team

CRESST/University of California, Los Angeles

Executive Summary

The National Center for Research on Evaluation, Standards, and Student Testing (CRESST) at the University of California, Los Angeles (UCLA) conducted an independent psychometric verification of two testing programs under contract with the Michigan Department of Education (MDE) from May to July of 2021. The two testing programs were the Michigan Student Test of Educational Progress (M-STEP) and Michigan's Alternate Assessment Program (MI-ACCESS).

Due to the global COVID-19 pandemic, the administration of the spring statewide assessment in Michigan deviated from the typical administration in a normal year. Consequently, some changes related to the Michigan psychometric work took place and verification tasks were modified accordingly. For each testing program, the verification work consisted of two steps: (a) creation of pre-equated raw-to-scale-score (RSS) tables and (b) creation of a Microsoft Excel file that combined the RSS tables for all grade levels and all forms in a specified layout.

This report documents the psychometric verification of the M-STEP testing program. Based upon the agreement with MDE, two software programs—flexMIRT 3.62 and R 4.1.0—were used for the verification work. The verification work comprised conducting psychometric analyses by applying the same approach and methodology as MDE, evaluating statistical methods, and comparing results between CRESST and MDE at each subtask stage and at the completion of the task.

During the process, very detailed and careful alignment of the analytic approaches was occasionally required to produce the exact same numerical results. Through active discussion and exchange of feedback regarding soundness of the procedures and results, CRESST and MDE adequately resolved discrepancies.

The verification of the M-STEP testing program showed that the psychometric analyses conducted by CRESST and MDE yielded the exact same numerical results. The verification results indicated that the psychometric analyses of the M-STEP testing program were performed with high precision and were successfully verified.

Further detailed descriptions are provided in the body of the report, including methodology, verification results, and conclusions. The table in the Appendix outlines the detailed account of the verification procedure and key findings.

Psychometric Verification of the Michigan Student Test of Educational Progress (M-STEP) for Spring 2021 Administration

CRESST Psychometrics Team

CRESST/University of California, Los Angeles

1. Introduction

The National Center for Research on Evaluation, Standards, and Student Testing (CRESST) at the University of California, Los Angeles (UCLA) conducted an independent psychometric verification of two testing programs under contract with the Michigan Department of Education (MDE) from May to July of 2021. The two testing programs were the Michigan Student Test of Educational Progress (M-STEP) and Michigan's Alternate Assessment Program (MI-ACCESS). For each testing program, the verification work consisted of two steps: (a) creation of pre-equated raw-to-scale-score (RSS) tables and (b) creation of a Microsoft Excel file that combined the RSS tables for all grade levels and all forms in a specified layout.

This report documents the verification activities of the Michigan Student Test of Educational Progress (M-STEP) administered in 2021. Due to the global COVID-19 pandemic, the administration of the spring statewide assessment in Michigan deviated from the typical administration in a normal year. Consequently, some changes related to the Michigan psychometric work took place and verification tasks were modified accordingly. The two major changes were (a) the RSS table creation procedure was changed from post-equating to pre-equating and (b) the computation of item statistics for the item bank system (IBS) was entirely excluded for this administration. Furthermore, it was decided to exclude the science assessments from the verification work due to the projected test participation rate. The final verification work involved the following tasks for social studies:

1. Pre-equating scoring via flexMIRT to obtain summed score to expected a posteriori (EAP) conversion tables
2. Creation of pre-equated RSS tables
3. Creation of an Excel file in the required layout with all grade levels and all forms combined

Based upon the agreement with the Michigan Department of Education (MDE), two software programs—flexMIRT® 3.62 (Cai, 2021) and R 4.1.0 (R Core team, 2021)—were used for

the verification work. A two-parameter logistic (2PL) model with flexMIRT was used for pre-equating scoring.

To ensure careful alignment of analytic approaches between CRESST and MDE, supporting documents such as the description of analysis procedures, test maps, and a subset of the flexMIRT output files were provided to CRESST by MDE.

2. Methodology

CRESST received test maps for online and emergency forms (i.e., paper-pencil form 2) for Grades 5, 8, and 11 for social studies. Each test map included item metadata such as item IDs, item types, and parameters for operational items.

flexMIRT scoring runs were first conducted to generate the summed score to EAP conversion tables using the pre-equated item parameters (i.e., item bank values). Specifically, for each combination of grades and forms, all the operational item parameters were fixed to the corresponding parameter values in the test map. We note that data were not required for these scoring runs as we bypassed individual scoring and produced only the necessary tables for this year's verification work.

The EAP scores were then converted to scale scores via a linear transformation with prespecified scaling constants (see Table 10-1 in the technical report for value details) in order to create the pre-equated RSS tables. The corresponding performance levels were also obtained based on the scale score ranges associated with each performance level by grade.

It should be noted that in each grade level, the same conversion table obtained from the online form was applied to other forms, paper-pencil form 1 and the Braille form. Technically, it is possible to have different pre-equated conversion tables for the paper-pencil and Braille forms. However, to avoid future confusion from the field, the approach of reporting the same RSS table across modes per grade was adopted for social studies, with the exception of the emergency forms.

The comprehensive Excel file in the required layout was created using R by combining the pre-equated RSS tables along with raw-to-performance-level tables for all the grade levels and forms.

3. Verification Results and Conclusions

During the verification process, very detailed and careful alignment of the analytic approaches was occasionally required to produce the matching numerical results. CRESST and MDE adequately resolved discrepancies by examining the software files (e.g., flexMIRT command, parameter, and output files) and maintaining the same level of precision (i.e., decimal places) through active discussion and exchange of feedback.

The verification of the M-STEP testing program indicated that the psychometric analyses conducted by CRESST yielded the exact same numerical results as MDE, including the summed score to EAP conversion tables, pre-equated RSS tables, and the final Excel file. In summary, the verification results indicated that the M-STEP psychometric analyses were performed with high precision and were successfully verified.

References

Cai, L. (2021). *flexMIRT® version 3.62: Flexible multilevel multidimensional item analysis and test scoring* [Computer software]. Vector Psychometric Group.

R Core Team. (2021). *R: A language and environment for statistical computing.* R Foundation for Statistical Computing. https://www.R-project.org/

Appendix:
2021 M-STEP Verification Activities

M-STEP Conversion Tables Verification	Start	End	Dependencies	Verification	Conclusion	Status
						Green
• Pre-equating flexMIRT scoring runs • Creation of pre-equated RSS tables • Creation of an Excel file in the required layout			• CBT test maps (5/11), Emergency form test maps (5/14), and flexMIRT ssc files (5/17). • RSS tables and updated ssc files after software upgrade and prm file modifications to keep the exact same number of decimal places for item parameters (6/3).	• provided the verification results for RSS table (6/14), which were confirmed by MDE (6/14).	• CRESST and MDE resolved discrepancies in the flexMIRT ssc files (6/2). • The RSS tables exactly matched.	
FTP link to Deliverables:/michigan/ 2021_M-STEP/from CRESST			CRESST M-STEP Conversion Tables Verification (6-14-2021).xlsx			
2. Science						Green
It was as decided to exclude the science assessments from the verification work due to the projected test participation rate.						



UCLA

CRESST

NATIONAL CENTER FOR RESEARCH ON EVALUATION, STANDARDS, AND STUDENT TESTING

National Center for Research on Evaluation,
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Appendix H: Science Development

Appendix H.1 Michigan Cluster Development Process

Michigan Cluster Development Process

In this section, I will describe the decisions made leading to the structure of the new Michigan science assessment. I address the process for forming cluster writing teams, and the decisions leading to the development of clusters for the 2017 Michigan Science Pilot Test. Two of these clusters are the subject of this research project.

Topic Bundles

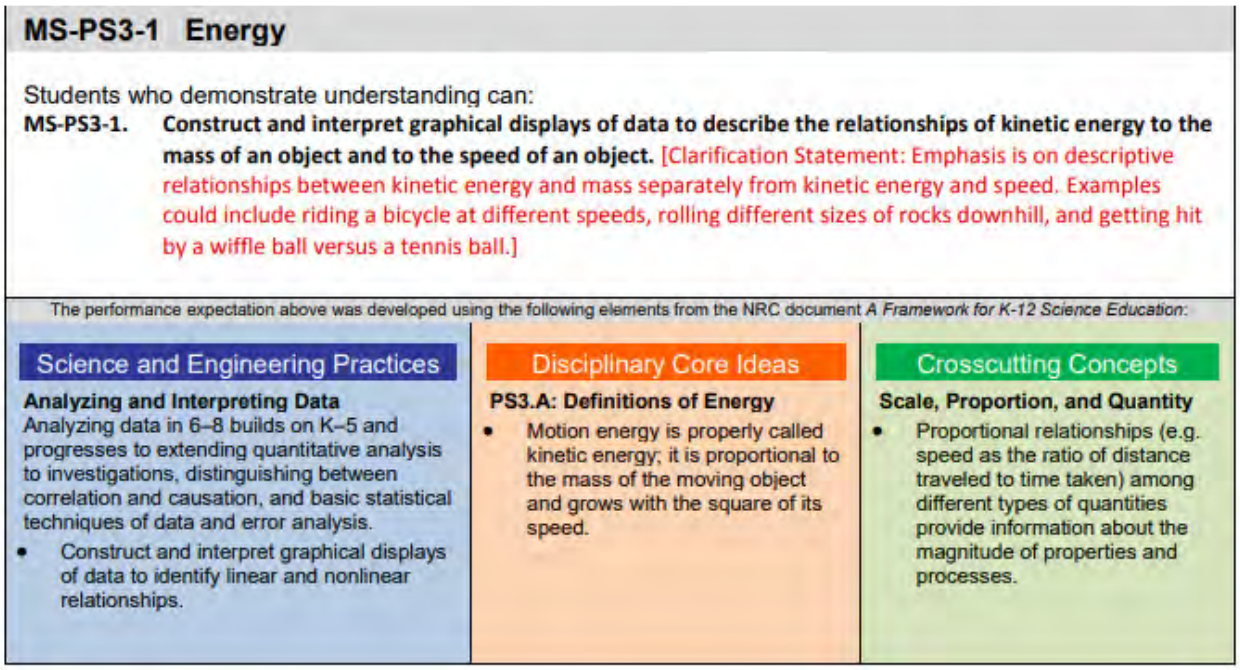
To determine the blueprint and specifications of the new science assessment for Michigan, the Michigan Science Assessment Advisory Committee (Advisory Committee) was formed. This group, consisting of science education researchers, state assessment specialists, and assessment contractors, was gathered to determine the goals and structure of the new science assessment for the State of Michigan. Researchers brought forward empirical studies regarding assessment design and implementation and state assessment specialists discussed considerations with respect to testing time, budget, and political considerations. The Advisory Committee decided to utilize the "cluster" structure as recommended by the Science Assessment Item Collaborative (SAIC) Assessment Framework (CCSSO, 2015). The idea of clusters builds on the recommendations of the Board on Testing and Assessment (BOTA) Report (NRC, 2013) to group items together to coherently assess the complex performance expectations in a manner that forefronts phenomena. Each cluster includes set of five to eight items based on a common stimulus that is written to assess all dimensions of the selected standards.

Assessment contractors discussed the implications of using cluster as the base unit for assessments. The initial focus of the meeting was to determine how the NGSS performance expectations, which Michigan adopted as the Michigan K-12 Science Standards (MSS) would be

assessed (example Figure 1). It was quickly determined that creating a group of items to assess each performance expectation would result in too many clusters for a once-a-year state summative assessment. The Advisory Committee agreed that the performance expectations should be “bundled” to facilitate assessment via a single natural phenomenon or engineering problem that is presented within a stimulus (SAIC, 2015). The SAIC (2015) suggested that one approach is bundling the performance expectations to intentionally utilize one of the three dimensions that crossed different performance expectations. For example, performance expectations could be bundled by common Science and Engineering Practices (SEPs). Therefore, two performance expectations with Developing and Using Models as the SEP would be bundled leaving differences in Disciplinary Core Ideas (DCIs) and Cross Cutting Concepts (CCCs). The rationale for this approach was to leverage common dimensions to lessen the task requirements for the students. Similarly, suggestions to bundle performance expectations by DCIs or CCCs were considered.

Figure 1

Example of performance expectation from nextgenscience.org



MS-PS3-1 Energy

Students who demonstrate understanding can:

MS-PS3-1. **Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass of an object and to the speed of an object.** [Clarification Statement: Emphasis is on descriptive relationships between kinetic energy and mass separately from kinetic energy and speed. Examples could include riding a bicycle at different speeds, rolling different sizes of rocks downhill, and getting hit by a wiffle ball versus a tennis ball.]

The performance expectation above was developed using the following elements from the NRC document *A Framework for K-12 Science Education*:

Science and Engineering Practices

Analyzing and Interpreting Data

Analyzing data in 6–8 builds on K–5 and progresses to extending quantitative analysis to investigations, distinguishing between correlation and causation, and basic statistical techniques of data and error analysis.

- Construct and interpret graphical displays of data to identify linear and nonlinear relationships.

Disciplinary Core Ideas

PS3.A: Definitions of Energy

- Motion energy is properly called kinetic energy; it is proportional to the mass of the moving object and grows with the square of its speed.

Crosscutting Concepts

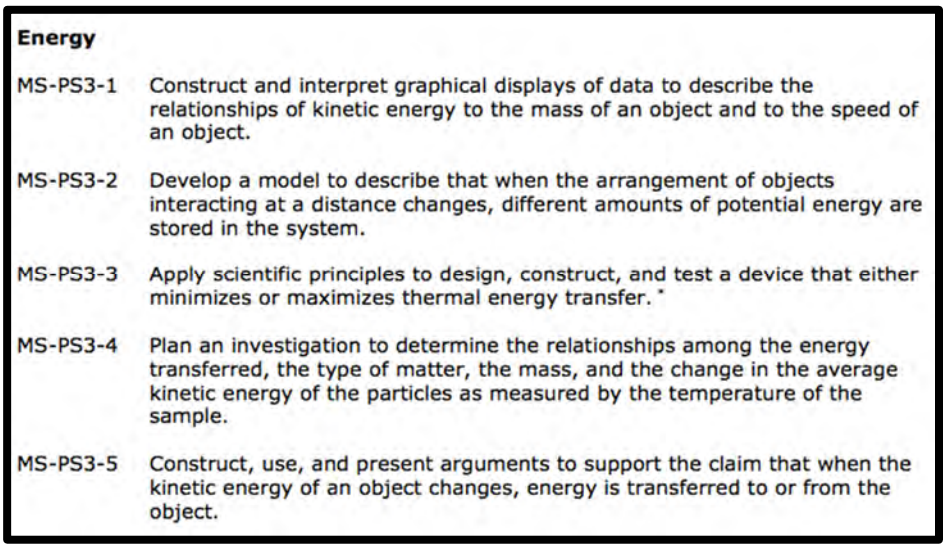
Scale, Proportion, and Quantity

- Proportional relationships (e.g. speed as the ratio of distance traveled to time taken) among different types of quantities provide information about the magnitude of properties and processes.

Ultimately, the Advisory Committee decided to utilize the structure of topic bundles as presented in the MSS for the state assessment. The MSS is structured using the "topic" format of the NGSS (2013). Each topic bundle consists of multiple performance expectations, which are grouped together based on a particular science topic. For example, in middle school, one topic bundle, *Energy*, is categorized in the Physical Science domain and includes five PEs (Figure 2.2).

Figure 2

Middle School Energy Topic Bundle



Energy	
MS-PS3-1	Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass of an object and to the speed of an object.
MS-PS3-2	Develop a model to describe that when the arrangement of objects interacting at a distance changes, different amounts of potential energy are stored in the system.
MS-PS3-3	Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer. *
MS-PS3-4	Plan an investigation to determine the relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic energy of the particles as measured by the temperature of the sample.
MS-PS3-5	Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.

Utilizing the topic bundle structure posed promises and challenges. By bundling multiple performance expectations, the shared dimensions could be leveraged to reduce the number of tasks required to assess the whole of the topic bundle. Additionally, utilizing the existing structure of the adopted document for the MSS did not require clarification to stakeholders regarding bundling of performance expectations for the state assessment. The most daunting challenge, however, was determining a process to ensure all the dimensions included in a topic bundle were assessed within a single cluster. Table 1 outlines all the dimensions that are part of the middle school *Energy* topic bundle to illustrate this point. Within this topic bundle there are no common SEPs. However, all the performance expectations include the DCI PS3.A, three performance expectations contain PS3.B, and one instance each of PS3.C and ETS1A-B. Moreover, two of the CCCs are represented in two different performance expectations. Therefore, when this cluster is reduced to only one of each unique dimension, there are twelve unique components instead of fifteen. Leveraging this reduction of unique assessable dimensions

or elements of dimensions in a large-scale assessment context provides the opportunity to assessment more efficiently on various components of the performance expectations. In Michigan, we consider *The Framework*, the NGSS performance expectations, the assessment boundaries and clarification statements found in the NGSS, and the learning progression information found in Appendices E, F, and G of the NGSS.

Figure 3 illustrates how the dimensions of each performance expectation are assessed in the items of a cluster. Each of the SEPs, DCIs, and CCCs are integrated with one another regardless of the structure of the original performance expectation. For example, item three integrates PS3.A, SEP 6, and CCC 3 in a three-dimensional assessment item. However, none of the performance expectations are written with those three dimensions together. The flexibility in this assessment design allows for the MSS to stay true to The Framework (NRC, 2012) which intends for all the practices and crosscutting concepts to be applied to any core idea depending on the phenomena or problem in question.

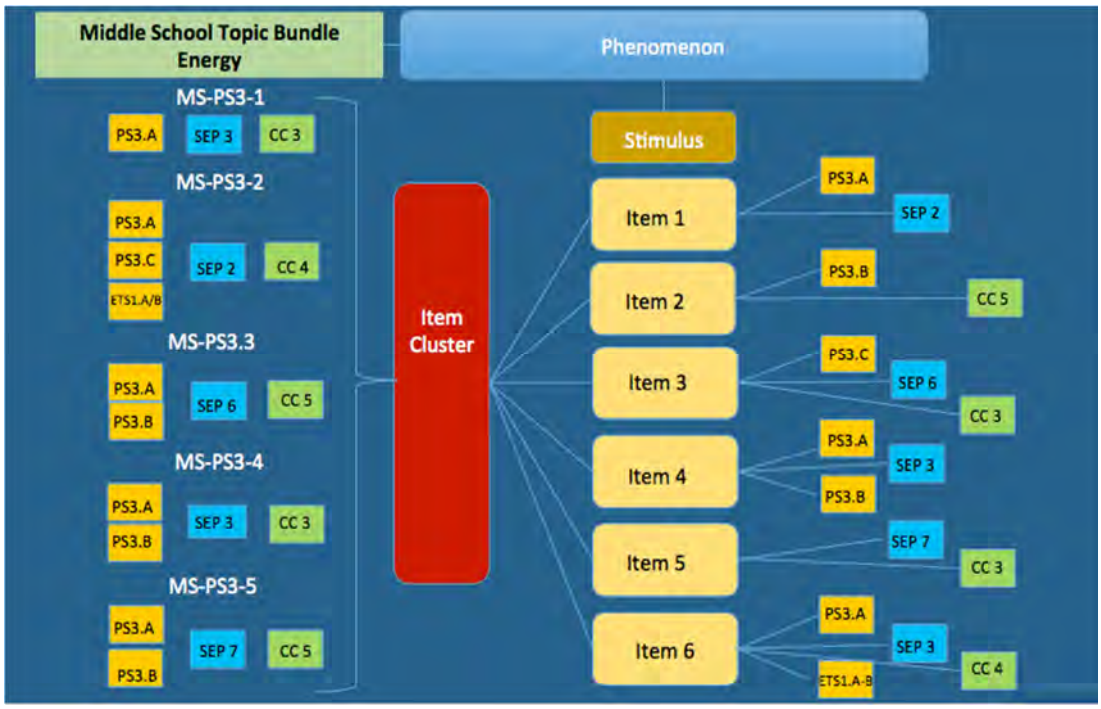
Table 1

Example Topic Bundle: Middle School Energy

Standard	Science and Engineering Practice	Disciplinary Core Idea	Cross Cutting Concept
MS-PS3-1	4. Analyzing and interpreting data	PS3.A	3. Scale, proportion, and quantity
MS-PS3-2	2. Developing and using models	PS3.A; PS3.C; ETS1.A-B	4. System and System Models
MS-PS3-3	6. Constructing explanations and designing solutions	PS3.A; PS3.B	5. Energy and Matter
MS-PS3-4	3. Planning and carrying out investigations	PS3.A; PS3.B	3. Scale, proportion, and quantity
MS-PS3-5	7. Engaging in argument from evidence	PS3.A; PS3.B	5. Energy and Matter

Figure 3

Example Topic Bundle to Cluster Map



Cluster Writer Recruitment

After deciding on the structure of the assessment, we needed to determine a way to recruit qualified writers to develop the clusters. First, the concept of research-practice partnerships (Coburn et al., 2013) influenced the decision for both practitioners and researchers to be involved in the Michigan cluster writing process. For the clusters to represent the true nature of the *Framework* (NRC, 2012), teachers are needed to understand the implications of assessment tasks on students in varying grade levels and contexts. Therefore, practitioner expertise is a crucial element of the process. Additionally, the foundational research and theoretical knowledge possessed by educational researchers is essential to bring forward the intricacies and intent of the Framework (NRC, 2012). By pairing these professionals throughout

the process, a wealth of knowledge can be shared and utilized to develop meaningful clusters. Teachers (active classroom science teachers or science curriculum consultants) and researchers (science education graduate students or professors of science education) interested in becoming cluster writers were screened using an application to determine their teaching experience and exposure to NGSS professional development opportunities. The purpose of the screening was to ensure that all participants had prior knowledge of the NGSS and were familiar with the structure of the standards. After screening, teachers and researchers were surveyed to determine their area of expertise (i.e., Earth Science, Physical Science, Life Science, and Engineering) and grade level to determine which topic bundle would best fit their knowledge and expertise.

Following, one teacher and one researcher were paired to create a cluster writing team (writers). Writers were grouped by grade level (grades 5 and 8) and each grade level group learned how to design one cluster over the course of one week. Table 2 summarizes the cluster writer participants and the number of topic bundles addressed during the five 2016 Cluster Workshops. It was intended for teachers and researchers to be paired in every instance, however, over time, the pool of researchers available was less than the number of teachers available. In some cases, teachers who had participated in the cluster workshops during a previous week returned and were paired with a new teacher to act as the mentor. Many of the researchers participated in multiple weeks of the workshop thereby adding to the percent returning noted in Table 2.

Table 2

2016 Cluster Writing Participants

Grade Level	Teachers	Researchers	% Returning	Topic Bundles Addressed
Grade 5	10	8	17%	9
Grade 8	12	8	25%	11
Grade 11	21	9	47%	15

Structure of Cluster Writing

Much of the initial thinking around training teachers and researchers to write clusters for the state stemmed from collaboration with the State of Washington. After contacting many states that had adopted the NGSS, Washington was one of the few states where teachers were involved in all aspects of the item development. Educator involvement is an important part of how Michigan designs their assessments as well. After observing Washington's cluster writing process, many of the tools and resources were adopted to suit the needs in Michigan. The Washington State Science Assessment Consultants paved the way for Michigan to engage in developing new science assessments by sharing their work.

Table 3

Cluster Writing Workshop Agenda

Day	Activity	Description	Learning Goal for ICW teams
Monday	Training	Michigan Assessment Update	Understand the history and process of the State of Michigan Science Assessment and the implementation timeline for the new science assessment.

Day	Activity	Description	Learning Goal for ICW teams
		New Michigan K-12 Science	Understand that the new Michigan K-12 Science Standards are the performance expectations from the NGSS formatted in the Nov. 2015 adoption document.
		Standards Structure	Review the three-dimensional nature of the performance expectations.
		Evidence Centered Design	Understand the rationale of using ECD to inform the over arching process for developing claims for the assessment.
		Topic Bundles	Understand the structure of the performance expectations being used for the state assessment.
		Clusters	Understand the structure of assessment tasks they will be designing.
		Item Pool	Utilize existing assessment items as models for three-dimensional questions.
		Unpacking	Begin a domain analysis of the topic bundle to understand the Disciplinary Core Ideas that must be assessed.
	Writing	Phenomenon Brainstorm	Understand the characteristics of an anchoring phenomenon for use on large-scale assessments and determine several options for phenomena that can be explained by the content of their assigned topic bundle.
		Stimulus Draft	Understand the relationship between phenomenon and stimulus and the characteristics of a good stimulus. Create a stimulus to drive the cluster.
Tuesday	Training	Bias and Sensitivity Training	Understand the equity issues associated with large-scale assessment and determine ways of

Day	Activity	Description	Learning Goal for ICW teams
			developing items that are fair for the targeted population of students.
		Item Type Training	Understand how to utilize the various item types in order to elicit evidence from students in the task design process.
	Writing	Unpacking	Continue a domain analysis of the topic bundle to understand all of the elements that must be assessed.
		Cluster Outline	Begin development of the cluster including the story line, the stimulus, and item types designed to assess the topic bundle.
		Item Templates	Understand how to use to the item templates to present item types and make alignment of the item explicit while stating the evidence that the task elicits to support a claim about what students know and can do in science.
Wednesday	Writing	Cluster writing	Continue development of the cluster including the story line, the stimulus, and item types designed to assess the topic bundle.
	Peer Review	View and provide feedback on one cluster developed in same domain	Exchange feedback with another ICW team to gain perspective on the extent to which the cluster assessed the intended topic bundle.
Thursday	Writing	Incorporate feedback from peer review into cluster	Utilize feedback from peer review to enhance and further develop cluster.
	Content Review	View and provide feedback on all clusters in domain	Exchange feedback with other ICW teams to gain perspective on the extent to which the cluster assessed the intended topic bundle. Make policy-capturing decisions to influence future cluster development and item specifications.

Day	Activity	Description	Learning Goal for ICW teams
Friday	Revise	Make revisions to cluster	Utilize feedback from content review to enhance and complete development of cluster.
	Submit	Submit final draft of all stimuli and items to MDE	Complete a cluster for use on Michigan Science Assessment.

Each cluster writing workshop occurred over the course of one week consisting of five days of intense cluster design work (Table 3). The overall goals were to train teachers and researchers to unpack the NGSS topic bundles to determine what evidence students should be able to provide that would substantiate a claim about what they know and can do in science. The teacher-researcher teams completed one cluster that contained tasks designed to elicit evidence of students three-dimensional thinking centered on investigating phenomenon and designing solutions to problems.

Resources Available to Cluster Writing Teams

To develop the clusters, we provided writers with several different resources: an item pool, unpacking process and documents, the *Framework* (NRC, 2012), the NGSS and supporting documentation, and ample feedback loops. Below I describe each of the resources and processes.

Item Pool. Working together with the Advisory Committee, we offered writers access to item pools from various research projects that developed two or three-dimensional items in various science domains. The item pool was collected and organized by a team of graduate and undergraduate students and then made available to the cluster writer teams for reference and use

in the development process. The item pool was a crucial tool in determining what two and three-dimensional items look like along with providing examples of phenomena.

Unpacking process. Understanding all that is contained in the NGSS poses challenges for teachers and researchers. One of the resources utilized to help writing teams think through the information contained in the topic bundles was the unpacking process developed the Next Generation Science Assessment Project (NGSA, 2016). Built on the principles of Evidence Centered Design (ECD, Mislevy & Haertel, 2017), the prompts encourage science educators to unpack the content to understand all the complexities involved with a particular topic bundle. Writing teams described evidence one might need from a student to support a claim that the student could demonstrate their understanding of a topic bundle or parts of it. This way, when writing teams developed the tasks, they had the target evidence in mind. This process helps to support a claim about what the ability of the item to elicit specific aspects of what a student knows and can do with respect to a topic bundle. The writing teams worked through documents that pushed them to think about the underlying elements in each of the three-dimensions, what previous knowledge students may possess, specific vocabulary that is necessary for communication of understanding, the progression of learning that would occur overtime, and more. Such documents included the Framework for K-12 Science Education (NRC, 2011), the Next Generation Science Standards (States, 2013) including appendices E, F, and G, the American Association for the Advancement of Science Project 2061 Science Assessment Topics (AAAS, 2017), and STEM Teaching Tools (Research and Practice Collaboratory, 2016).

While the unpacking process can seem tedious and overwhelming, especially when unpacking an entire topic bundle, the process offers teachers and researchers the time and tools needed to really dig into the NGSS and understand their complexity. The unpacking process is an essential

step in the item writing process because ideas about instruction and assessment stem from understanding what the NGSS entail.

Role of Phenomenon and Stimulus. Defining a phenomenon is a difficult endeavor. Several scholars and researchers have attempted to define a phenomenon for instruction for the three-dimensional science standards. Creating a working definition of phenomenon was an essential part of cluster design. In Michigan, we began with the generalized definition: "a natural event that is observable and repeatable" (Krajcik, personal communication, 2016). However, even this simplistic definition was difficult for teachers and researchers to grasp when it came to microscopic phenomena that are not always directly "observable" or behaviors that are not always "repeatable" due to uncontrollable variables. Therefore, the working definition of phenomenon that grew out of the cluster development process is "something someone can observe and wonder how or why it happens" (Policy capturing process, Summer 2016). After using the unpacking process, writing teams would brainstorm four to six phenomenon that would apply to their topic bundle. These phenomena were shared among the larger group where discussion would weed out the phenomena that may not be as strong as others. Content and assessment specialists provided feedback on phenomena that may pose equity, bias or sensitivity issues on a large-scale assessment. Eventually, after collaborative discussion, the writing teams decided on one phenomenon that would best suit their topic bundle.

After deciding the phenomena, writing teams determined the way the phenomenon could be presented to students on a large-scale assessment so that all students would have access to the phenomenon. One way that the writing teams discussed doing this was to identify the phenomenon and then begin with "Once upon a time, students were…." This "story lining" process helped writing teams develop several contexts or stimuli that were relatable and

interesting for students. Again, through collaborative feedback and careful consideration, the writing teams determined which stimulus held the most promise for the development of a full cluster.

Item / Task Types. An essential part of large-scale assessment writing is understanding the item types available for the assessment as well as common equity issues developers observe. The state contractor, Data Recognition Corporation (DRC), is currently responsible for training Michigan item writers on "bias and sensitivity" and the item types available within their system. The DRC science consultant led the description of these item types while describing the affordances and constraints of each item type. This was especially important when demonstrating technology-enhanced (TE) item types, which are different from the typical, multiple choice or constructed response item types that many assessments utilize. Technology-enhanced item types range from multi-select items, where students must choose more than one correct answer to a question, to drag and drop items, where students move graphics or text into a predetermined space to respond to a question.

The equity portion of the training focused on bias and sensitivity issues and Universal Design features that must be considered on large-scale assessments. Writing teams were taught to look for issues around race, gender, regionalism, religion, socioeconomic status, physical disability, and others. Additionally, writing teams were made aware of ways they can intentionally design tasks to be inclusive of all students using common, relatable phenomenon and by including engineering tasks. Writing teams were actively challenged from the beginning of the week to think about how to give students similar experiences through the crafting of the stimulus that does not advantage one child over another.

Draft stimulus share. Throughout the week, several opportunities were given for writing teams to discuss the development of the stimuli prepared for the clusters with peers and consultants. The feedback offered within and among teams provided writing teams the opportunity to reflect on the engagement, vocabulary, equity, and necessity of the information within the stimuli.

Item templates and alignment tools. Once the writing teams were ready to write the individual tasks within the cluster, item templates were used and adapted to help guide their process. The item templates included the specifics of task ordering, dimension alignment, and the assessment claim provided by the task design that would supports claims about students understanding of the stated dimensions. The assessment claims written by the writing teams are essential to verifying the alignment of each cluster. Additionally, writing teams developed their own tools to track alignment. During the second week of writing, one group designed a matrix used to map the items within the cluster and the elements of the dimensions to which they aligned (Appendix C). This Cluster Mapping Tool was utilized by every writing team moving forward as a verification of assessment and alignment for all dimensions of the topic bundle.

Research and Practice Collaboratory tools. The Research and Practice Collaboratory (Penuel, Bell, et al., 2016) offered many resources and insights for the Michigan item development process. The STEM teaching tools developed by the Research and Practice Collaboratory were also utilized in the process. STEM Teaching Tool #41 – Prompts for integrating Crosscutting Concepts into Assessment and Instruction (Penuel & Van Horne, 2016) and STEM Teaching Tool # 30 - Integrating Science Practices into Assessment Tasks (Van Horne, Penuel, and Bell, 2016) were valuable resources as the writing teams worked to craft

tasks for the clusters. These resources were used both as a reference and to ensure that the SEPs and CCCs were being explicitly assessed.

Peer and content review. Built into the initial week of cluster development is dedicated time and protocol for both small and large group content review. After working on their clusters for two and a half days, writing teams would be paired with another team with similar content focus (i.e., the teams working on life science topic bundles would be paired). The writing teams shared their cluster and received feedback from their partner group. This early feedback session gave writing teams the opportunity to "try out" their stimulus and tasks with another group to determine if there were flaws in either the content or storyline of the cluster. Each group was given one hour to present their work and receive feedback. Specific protocol was followed which allowed for groups to focus on grade appropriate content, engaging phenomenon, and task alignment to the NGSS. After the peer feedback was received, the writing teams revised their clusters. The following day, the revised clusters were then presented by a facilitator (science education assessment consultant) and reviewed by a larger group. In this content review, a similar protocol was followed as with the peer review by all participants. After feedback was gathered by all writing teams, the teams revised their clusters to prepare for submission.

Policy capturing process. A policy capturing process (a method used by researchers to assess how decision makers use information when making evaluative judgements – Zedeck,& Kafry, 1977) was utilized to collect data and determine some of the item specifications and requirements for the grade levels and clusters (Aiman-Smith, Scullen, & Barr, 2002). Throughout the process of cluster design, the writing teams encountered questions that puzzled or stumped them. These questions were added to the "Questions / Decisions" board for later discussion. At the end of each day, the whole group discussed the “Questions / Decisions” made

for the day. On the last day of the week, any remaining "Questions / Decisions" were discussed and recorded. For example, the grade 11 writing teams learned that there were several different opinions in the group regarding the use of calculators and formulas. While some writing teams thought that fundamental mathematical equations were fair for the science assessment, applicable under the SEP of Computational and Mathematical Thinking, others expressed their concern for the focus on memorization of a formula at the expense of conceptual understanding. These discussions helped MDE determine some of the item specifications for the new science assessments.

Cluster Refinement

Internal revisions and graphics. After the clusters were submitted by the writing teams, the content specialists (state and vendor), worked through each cluster line by line to prepare the clusters for the test engine. Graphic artists from MDE utilized the graphic descriptions provided by the writing teams to create original graphics for the clusters. Once the cluster was prepared in the test engine, a live version of the cluster could be reviewed and interacted with online.

Committee Review Process. Fully developed clusters are required to be reviewed by educator committees with diverse membership that may include state education agency staff, state educators, trained assessment specialists (e.g., district administrators or test coordinators), content specialists, and curriculum developers. Review panels should consider cluster length, readability, format/style, typography, content, vocabulary, sentence complexity, concept load or density, and cohesiveness (SAIC, 2016).

To heed the advice of the SAIC, equity (bias and sensitivity) experts were chosen based on their areas of expertise in visual impairments, English language learners, hearing

impairments, urban school settings, and other special education learning situations. For each of the grade levels 5, 8 and 11, five Equity Review Committee members reviewed the three interactive clusters. One goal of equity review is to allow the committee members to see and interact with the cluster as if they were the student. Therefore, student facing clusters were presented through the contractor's test engine in the same manner as the students' experience. First, the Equity Review Committee engaged with the cluster as if they were a student. Next, each member presented written comments as feedback regarding each stimulus and item in the cluster. All the comments populated a spreadsheet in which the facilitator (science education assessment consultant) could read and review all the feedback. Finally, the facilitator reviewed the feedback with the Equity Review Committee members as a whole and documented consensus notes. Over the course of a day, the Equity Review Committee provided feedback regarding any biases or sensitivity issues identified within the clusters. These consensus notes were then used to make revisions on the clusters following the review process.

The Content Review Committee worked in a similar manner. Science education experts (researchers, teachers, and curriculum coordinators) worked in groups of six to review the three (grade 5, 8, and 11) grade-level specific clusters in the online test engine. Like the Equity Review Committee, the Content Review Committee engaged with the clusters as if they were students, provided written feedback, and engaged in discourse about the feedback as a whole group with the guidance of a facilitator. Because of the in-depth nature of the three-dimensional clusters, Content Review Committee occurred over the course of two days. The consensus notes from the Content Review Committee also influenced revisions to clusters following the review process.

Internal revisions. Following the committee reviews, the clusters were sent back to the content specialists (state and vendor) for revisions. These revisions reflected the comments provided by both committees. Graphics, wording, and task types were revised based on the feedback from the committees. Following, the clusters were once more rendered the interactive test engine.

Internal review. The final layer of review for the clusters was an internal review by the state's English language learner specialist, English Language Arts specialists, Mathematics consultants, and assessment editors. Here, fine grain edits were made to each item within the clusters to ensure accessibility to the largest group of students possible. Following this final review, the clusters were moved to production in the testing engine enabling students to participate in the pilot test.

In summary, the process used by the State of Michigan to develop clusters for the large-scale science assessment provides important contextual information to better understand the research presented here. Next, I will present the methods used to gather evidence about the extent to which two of the clusters developed through this process were aligned with the claims of the writers.

Appendix H.2 Michigan Science Standard Setting



Michigan Student Test of Educational Progress

Grades 5, 8, & 11 Science

Standard Setting
2021
Technical Report

Prepared for the
Michigan Department of Education

Data Recognition Corporation
Maple Grove, MN 55311



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A

Executive Summary

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M-STEP Science Standard Setting
Executive Summary

Introduction

On August 2–4, 2021, Michigan Department of Education (MDE) sponsored a standard setting Michigan Student Test of Educational Progress (M-STEP) Science. A total of 18 Michigan science educators recommended cut scores for grades 5, 8, and 11 science.

The workshop took place at the DRC offices in Lansing, Michigan. During the workshop, educators (a) discussed the content-based expectations for students in each performance level[1] (i.e., *Not Proficient, Partially Proficient, Proficient,* and *Advanced*) and (b) engaged in the modified Angoff procedure to recommend *cut scores* for each test that aligned to these content-based expectations.

Educators' recommended cut scores are shown in Table 1. In the table, the cut scores are expressed on the untransformed scale metric (i.e., the *theta metric*). The *impact data* associated with the cut scores are also shown in the table. Impact data are the percentages of students who would be classified in each performance level if the recommended cut scores were implemented.

Table 1. Recommended cut scores and associated impact data for M-STEP Science

	Recommended Cut Scores			Associated Impact Data			
Grade	**Partially Proficient**	**Proficient**	**Advanced**	**Not Proficient**	**Partially Proficient**	**Proficient**	**Advanced**
Grade 5	-0.664	0.591	2.07	26.0%	45.4%	27.2%	1.4%
Grade 8	-0.2885	0.7435	1.992	39.1%	38.3%	20.8%	1.8%
Grade 11	-0.104	0.994	2.255	46.8%	37.7%	14.7%	0.9%

In Table 2, the recommendations are shown on the transformed metric (i.e., the *reporting metric*).

Table 2. Recommended cut scores on a reporting metric

	Cut Scores on Reporting Metric		
Grade	**Partially Proficient**	**Proficient**	**Advanced**
Grade 5	1467	1500	1539
Grade 8	1773	1800	1833
Grade 11	2071	2100	2133

[1] At the workshop, the performance levels were sometimes referred to as *Level 1, Level 2, Level 3,* and *Level 4.* These labels were used interchangeably with *Not Proficient, Partially Proficient, Proficient,* and *Advanced,* respectively.

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Workshop Committee

The workshop committees comprised 18 educators recruited from across the state of Michigan. Of the 18 participants, 13 participants were female and five were male; 13 were white, three were Black, and two were of other races. Eleven were general education teachers, four were curriculum staff members, two worked in higher education, and one worked as a school-level administrator. Seven participants worked in urban school systems, six in rural systems, and five in suburban systems. 67% of participants worked in education for 16 or more years, and 44% of them worked in education for 21 or more years.

Standard Setting Procedure

On the first day of the workshop, the MDE welcomed participants, and DRC trained the committee in the workshop methodology. On the first day of the three-day workshop, all participants collaborated to discuss the knowledge, skills, and understandings expected of students in each performance level for grade 8; and then the committee subdivided into two equally-sized groups to discuss the content-based expectations for students in grades 5 and 11. On the second and third days of the workshop, all participants collaborated to recommend cut scores for grade 8. Then the committee divided again to recommend cut scores for grades 5 and 11. To make its recommendations, the committee engaged in the modified Angoff procedure. This procedure was selected because (a) it lets educators consider the knowledge and skills expected of students who meet the performance requirements; and (b) it reduces reliance on item statistics derived from the spring 2021 assessments, statistics which may not be generalizable to test administrations in the next few years. To do so, the committee engaged in the activities listed here.

1. Participants examined the performance-level descriptors (PLDs) and discussed the expectations of students on the threshold (point-of-entry) of meeting the requirements for each performance level.
2. Participants examined the items from a form of the grade 8 test. Participants noted the knowledge and skills needed to answer each item correctly.
3. For each item, participants considered how likely a student on the threshold of meeting the proficiency requirements (i.e., the "threshold *Proficient* student") would be expected to answer the item correctly. Participants expressed these likelihood estimates as probabilities between 0 and 1. Participants made these judgments for each combination of item and threshold student.
4. Participants made their judgments independently and recorded them electronically.
5. Participants discussed their judgments in three rounds of discussions and judgments. After each round, participants worked individually to revise their item-level judgments.
6. In each round, each participant's recommended cut scores were defined as the sum of his or her item-level judgments for each threshold student (i.e., the *expected number correct* for students at the point-of-entry for each performance level).
7. After each round, participants were shown a histogram of recommended cut scores from the entire committee.
8. After Round 1, participants were shown the rank-order difficulty of each item. Specifically, participants were shown which item was easiest for students, which was next easiest, and so on.

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9. After Round 2, participants convened as a committee to discuss their judgments, and then updated their ratings individually.
10. After the process was complete for round 3, the committee subdivided into two groups of equal size, and the process was repeated for grades 5 and 11.

During the workshop, participants were shown their recommendations only in terms of raw score. Participants were told that their task was to focus predominantly on the content expected of students in each performance level. The committee recommendation for each grade/content area was defined as the median recommendation from round 3 of the modified Angoff process.

At the end of the workshop, all participants were shown the *impact data* associated with the cut score recommendations. Participants were asked to consider the impact data, and whether they would recommend any adjustments to the cut scores to promote consistency across grades (i.e., vertical articulation) while still recommending cut scores which were closely aligned with the content standards and tested content. During this conversation, the committee recommended adjustments to two cut scores, both to improve the articulation of the performance standards across grades.

- Grade 11, *Partially Proficient* cut score adjusted from 18 to 16, a difference of two raw score points. This adjustment was within the range of cut scores recommended by participants in the final round of the process and still reflected the content expected of *Partially Proficient* students.
- Grade 11, *Proficient* cut score adjusted from 30 to 29, a difference of one raw score point. This adjustment was within the range of cut scores recommended by participants in the final round of the process and still reflected the content expected of *Proficient* students.

The committee gave its assent to these recommendations, and the adjustments are reflected in Table 1.

Participant Evaluations

Participants were generally satisfied with the process and with their recommendations. In an evaluation of the process, participants were asked to agree or strongly agree with various statements. These statements and the responses are shown below.

- “The performance standards represent a reasonable profile of performance at each level.” 78% agreed or strongly agreed.
- “During the workshop, my opinions were considered.” 100% agreed or strongly agreed.
- “My group’s work was reflected in the presentation of recommendations.” 100% agreed or strongly agreed.

Typically, all or nearly all participants described being “confident” or “very confident” in their cut score recommendations (i.e., 90% or more of participants reporting as such). As a whole, the evaluation results showed that participants were generally satisfied with the standard setting process and were satisfied with their recommendations.

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B

Standard Setting Methodology and Recommendations

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Standard Setting Methodology

On August 2–4, 2021, the Michigan Department of Education (MDE) and Data Recognition Corporation (DRC) conducted a standard setting for the Michigan Student Test of Educational Progress (M-STEP) tests of grades 5, 8, and 11 science. The purpose of the standard setting was to develop performance standards for these three assessments, including the development of cut scores which divide students into four performance levels: *Not Proficient, Partially Proficient, Proficient,* and *Advanced*[1]. A total of 18 Michigan educators worked individually and in committees to recommend performance standards for the tests.

This section describes the standard setting process, the materials produced to implement the workshop, and the results of the standard setting. Selected materials used for the workshop and detailed data from the workshop are presented in subsequent sections of this report.

Background

In November 2015, the MDE adopted new content standards for K–12 students in science, the *Michigan Science Standards*. These standards, inspired by the Next Generation Science Standards (NGSS) and its multi-dimensional Framework, map student performance expectations onto three dimensions: cross-cutting concepts (CCC), disciplinary core ideas (DCI), and science and engineering practices (SEP).

Each M-STEP test of science assesses the science standards for multiple grades: the grade 5 science test assesses the *Michigan Science Standards* for grades K–5 (with an emphasis on grades 3–5); the grade 8 test assesses the *Standards* for grades 6–8; and the grade 11 test assesses grades 9–11 standards.

To measure the three dimensions of the *Michigan Science Standards* in a cohesive manner, the M-STEP science tests feature in-depth science stimuli that are shared by 6–10 items each. These *clusters* of stimuli and items allow students to demonstrate their knowledge and skills of the CCC, DCI, and SEP in an authentic way. Specifically, each cluster contains one or two stimuli, and the associated 6–10 items engage with those stimuli.

Items aligned to the new *Michigan Science Standards* were piloted on M-STEP in 2017 and were field-tested in 2018 and 2019. The MDE had expected to conduct the first operational administration of the new science assessments in 2020. However, due to the COVID-19 pandemic, the M-STEP administration planned for spring 2020 was cancelled. Accordingly, the spring 2021 administration of the tests represent the first operational administration of the tests which align to the new *Michigan Science Standards.* As discussed at the end of this section, the spring 2021 administration of the test is seen as a transitional one: although it is considered an operational assessment, the spring 2022 administration will establish a baseline for the testing system. Nonetheless, a standard setting was required in 2021 to establish cut scores for the science tests, permitting score reporting with performance standards. This

[1] At the standard setting, these performance levels were sometimes referred to as *Level 1, Level 2, Level 3,* and *Level 4*, respectively. These alternative names were used for convenience in conversations with standard setting participants. Both sets of names appear in this report and should be considered to carry the same meaning.

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report details the August 2021 standard setting for M-STEP grades 5, 8, and 11 science.

Selecting the Standard Setting Methodology

The modified Angoff (1971) procedure is one of the most implemented methods to establish performance standards on educational assessments. In the procedure, panelists review each item and estimate what proportion of a hypothetical group of hypothetical threshold examinees would answer each item correctly (Livingston & Zieky, 1982; Zieky, 2012).

The modified Angoff method is well-suited to assessments comprised entirely (or predominantly) of single-point items with standardized administrations, and it was selected for this reason. Specifically, the M-STEP Science tests are each composed of approximately 50 automatically-scored items—with items clustered in groups around shared stimuli—and each item is worth a single raw-score point.

The modified Angoff procedure was selected over other standard setting methods, notably item-mapping procedures like the Bookmark Standard Setting Procedure (Lewis, Mitzel, & Green, 1996). Item-mapping procedures were not selected because of questions about the stability of the test data collected in spring 2021. Specifically, at the time of the standard setting, it was not known whether the test data collected during the spring 2021 administration—item parameters and impact data alike—would be directly comparable to future administrations because of the unprecedented disruption to instruction associated with COVID-19. Had an item-mapping procedure been used, it was unknown whether the ordering of test items (by difficulty using their parameters) would be comparable with future forms of the test. Accordingly, an item-mapping procedure was not used, in favor of a method which did not rely on mapped test items.

Performance Level Descriptors

Performance level descriptors (PLDs) are a key input into the standard setting process. PLDs summarize the knowledge, skills, and understandings expected of students in each performance level. Egan, Schneider, and Ferrara (2012) suggest a framework of four types of PLDs, described here.

1) *Policy PLDs* summarize the state's definition for each performance level, providing information to stakeholders on the state's suggested interpretation of each level. They are typically not specific to any given grade or content area.

2) *Range PLDs* summarize the knowledge, skills, and understandings expected of students in a given performance level on a specific test. The range PLDs show the types of content, as informed by the content standards, that should be mastered by students in each performance level on the test at hand.

3) *Threshold PLDs* are based on the range PLDs and summarize the knowledge, skills, and understandings expected of students who are at the point-of-entry (the *threshold*) of each performance level. For any given test, these descriptors show the types of skills needed just to be classified in a given performance level (e.g., just to be classified as *Proficient*).

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4) *Reporting PLDs* are the version of the PLDs used for score reporting. Typically, a version of the policy or range PLDs are used, and the language in the reporting PLDs is adjusted to be accessible to a wide audience that may not have in-depth content knowledge. (Reporting PLDs were not part of the scope of the standard setting.)

Prior to the standard setting, MDE collaborated with DRC to develop range PLDs for the three science assessments. To do so, MDE first examined similar descriptors from other states that had adopted NGSS-style science standards. Taking inspiration from them, and using the policy PLDs established in Michigan for the M-STEP tests of English language arts and mathematics, science policy PLDs were drafted for three levels:

- *Partially Proficient* (sometimes called *Level 2*)
- *Proficient* (sometimes called *Level 3*)
- *Advanced* (sometimes called *Level 4*)

The range PLDs are presented in Section E of this report. For each topic bundle (or *target*), the range PLDs describe the types of knowledge, skills, and understandings that students in each performance level should have and be able to do. The expectations are grouped by *claim* (e.g., life science, earth and space science) to mirror the structure of the item clusters on the tests.

Among the range PLDs, it is assumed that students in higher performance levels will have the same knowledge and skills as students in lower levels, plus additional ones. Although no descriptor was explicitly created for *Not Proficient* (sometimes called *Level 1*), it was understood that students in this lowest performance level were still working to learn the prerequisite knowledge and skills needed to become *Partially Proficient* or higher on the tests, but these students had not yet achieved them.

Standard Setting Workshop Materials

All of the materials used at the standard setting workshop were based on test items and results from the Spring 2021 administration of the M-STEP Science assessments.

Michigan Science Standards

The Michigan Science Standards formed the basis for all decisions at the standard setting. These content standards detail the knowledge, skills, and understandings that students should be taught in each grade. Copies of the content standards were distributed to workshop participants.

Performance Level Descriptors (PLDs)

As described under the heading “Performance Level Descriptors,” participants were provided with the range PLDs. Participants considered these descriptors to create threshold PLDs during the standard setting workshop.

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Test Forms

The test form is a key component of the modified Angoff method. A test form contains the items from a test, just as a student saw them.

The M-STEP Science assessments are computer-based and fixed-form, with a paper option for accessibility. At the standard setting, participants were presented with a single form of the test, each with seven clusters of items and stimuli. The forms contained 47–51 items each:

- Grade 5: 47 items
- Grade 8: 47 items
- Grade 11: 51 items

The items were presented in their original order to preserve the associations between items and stimuli.

Item Maps

The item map summarizes information about the items in a test form. For each item, the item map indicates: the item number, the name of the cluster, the correct response for the item, and the primary content standard alignment for the item.

The operational item maps incorporate secure test information and are not included in this report.

Standard Setting Hub

At the standard setting, each participant was assigned a laptop which could access *the Standard Setting Hub*, a specially designed website which contained materials accessible to standard setting participants. Participants used the Hub to access selected materials (e.g., content standards), view test items, and enter standard setting judgments. Access to the Hub was limited to workshop participants by DRC.

DRC recognized that participants would benefit from having certain frequently referenced materials (e.g., PLDs) available as hardcopies. These materials were provided on paper and also on the Hub.

Standard Setting Staff and Participants

Staff members from DRC served as facilitators and in support roles during the standard setting. These staff members worked in facilitative roles and did not contribute to the cut score recommendations during the workshop. Selected MDE staff members were also present onsite to observe the workshop and participated in nightly debrief meetings with DRC staff.

MDE Staff

MDE staff members attended the workshop to monitor the process, answer assessment- and standards-based questions, and address MDE policy questions.

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MDE was represented at the workshop by Andrew Middlestead, State Assessment Director; Tamara "T.J." Heck, Ph. D., Science Education Research Consultant; and Pietro Semifero, Online Assessment Manager.

DRC Staff

The DRC Standard Setting Team was composed of Ricardo Mercado, Research Director; Jessalyn Smith, Ph. D., Research Scientist; Scott Li, Research Analyst; Sara Kendallen, Sr. Research Analyst; and Julie Pointner, of Psychometrics. Prior to the standard setting, this team prepared the materials for the workshop. During the workshop, they were responsible for facilitating the workshop, training participants, entering participant results into a database, performing data analyses, and tracking secure materials: Ms. Kendallen and Ms. Pointner supported the workshop remotely. Following the workshop, the team prepared this report.

Content experts from DRC Test Development worked with the groups at the workshop to provide content-based support: David Durette, Sr. Test Development Director; and Erica Hyland, Test Development Science Manager.

Participants

MDE provided a list of qualified educators to serve as workshop participants. DRC, in collaboration with MDE, invited final workshop participants from this list. The recruitment process strived to empanel a sample of participants for the standard setting with diverse demographics (e.g., ethnicity, gender) and diverse points-of-view (e.g., geographic location).

Participants were asked to self-report their demographic characteristics (e.g., ethnicity, number of years in the profession) as part of the pre-session participant survey. The results of the participant survey can be found in Section H of this report.

Configuration of the Committee

The workshop committee was composed of a total of 18 educators. Two groups were convened for the standard setting, as listed here.

- Grades 5 & 8 (9 participants)
- Grades 8 & 11 (9 participants)

Both groups collaborated to recommend cut scores for grade 8. For grades 5 and 11, participants divided into their pre-assigned groups to repeat the process.

Participants in each group were divided into two tables. One participant at each table served as the table leader. Table leaders moderated discussions at their tables and helped the workshop staff distribute and collect the secure workshop materials. The table leaders were not members of the workshop staff, and they contributed to their committees' recommendations.

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Standard Setting Workshop

The standard setting workshop for science took place over a three-day period. The workshop agenda is included in Section C. The workshop took place in-person in Lansing, Michigan.

Participant Training

All participants began the workshop with an opening session led by MDE. During this session, Mr. Middlestead welcomed the participants to the workshop and described the purpose of the workshop. Mr. Middlestead reminded participants that the Department recognized that the COVID-19 pandemic had an impact on teaching and learning and described the recent changes to the standards, and he described how valuable the participating educators' recommendations would be in identifying new cut scores for the tests.

Mr. Mercado from DRC then introduced the standard setting methodology. Participants were introduced to the materials that would be used during the rest of the workshop. The training presentation and selected materials are included in Section D of this report.

Participants were instructed that their goal for the workshop was to set cut scores for the M-STEP Science tests. Participants understood that they would consider the knowledge and skills expected of students in each performance level, and they would engage in the modified Angoff method to make cut score judgments.

Participants were told that MDE recognized that student performance in 2021 may not be as high as teachers might have expected had COVID-19 not occurred, but that it was important to use content as a basis for the performance standards. Participants were encouraged to imagine that students had received normal fulltime instruction in the *Michigan Science Standards* throughout the school year, and to use the content-based expectations for these hypothetical students in each performance level to make their cut score recommendations.

Workshop Structure

Participants were told that they would consider the performance standards individually, in small groups, and as a large committee. Specifically, participants were told that they would all collaborate on the cut score recommendations for grade 8, and then they would divide into two pre-assigned groups to recommend cut scores for grades 5 and 11. Participants were reminded that throughout the process, they would be asked to make individual judgments which would then be aggregated to make cut score recommendations for the committee.

To begin the process, participants were told they would all collaborate on an exploration of the content standards and range PLDs for grade 8, and that they would then develop the threshold PLDs for grade 8. Then, the group would subdivide and create threshold PLDs for grades 5 and 11. Afterwards, the group would: reconvene to recommend cut scores for grade 8; subdivide to recommend cut scores for grades 5 and 11; and then reconvene a final time to review the recommendations across grades.

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Discussion of the Content Standards and the Threshold Students

To begin the workshop, the participants then spent several hours studying the *Michigan Science Standards* and range PLDs, and then developing threshold PLDs for the three tests. The group started its work as a single group to consider the knowledge and skills expected of the grade 8 student.

DRC instructed participants to read the *Michigan Science Standards* and range PLDs for grade 8, and to consider the knowledge, skills, and understandings that students were expected to demonstrate at the threshold of each performance level. Specifically, participants were asked to use the range PLDs and content standards to develop informal threshold PLDs.

Participants engaged in structured discussions about the knowledge, skills, and understandings they expected to be demonstrated by each of the three threshold students. The three threshold students were just barely *Partially Proficient (Level 2),* just barely *Proficient (Level 3),* and just barely *Advanced (Level 4)*. To engage in these discussions, participants referred to the policy and range PLDs, the content standards, and their knowledge of students.

As a group, participants discussed the PLD for each performance level and the differences between them. During this discussion, participants considered the overall level of rigor implied by each range PLD. To focus participants on the lines of demarcation between the performance levels, participants were asked to discuss the knowledge, skills, and understandings that separated students in one performance level from those in another. For example, participants were asked to discuss the knowledge, skills, and understandings that separated the highest performing *Partially Proficient* student from the lowest performing *Proficient* student. All participants were instructed to refer to the content standards during this discussion.

Facilitators recorded participants' expectations for students at the thresholds of each performance level on shared electronic documents posted to the Hub. Participants were encouraged to review these descriptions frequently throughout the workshop and to consider the threshold students when they made their cut score recommendations.

After considering the PLDs for grade 8, the group sub-divided and repeated the process for grade 5 and for grade 11. Participants were encouraged to consider the knowledge and skills expected of grade 8 students as they considered the threshold PLDs for grades 5 and 11, thereby beginning the process of *across-grade articulation*.

By the end of this discussion, participants had thoroughly considered the range PLDs, content standards, and threshold students; and they reached an understanding of the types of skills that the threshold student for each performance level should have.

After these discussions, participants reconvened into a single committee to begin the standard setting process for grade 8. The participants met in a single, large room; they were divided into four tables.

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Study of the Test Items and Item Maps

Participants at each table examined the test items in terms of what each item measured. Participants were instructed to take notes on the item maps about the knowledge, skills, and understandings required to answer the items correctly.

Secondary Training on Angoff Ratings

Mr. Mercado provided the participants with additional training for Angoff ratings. Participants were reminded how Angoff ratings would be used to make cut score recommendations. The training presentation and training materials are included in Section D.

Following training, participants were tested on their understanding of Angoff ratings with a short quiz, termed a *mid-process evaluation.* Afterwards, participants were provided the correct answers for the mid-process evaluation, as well as explanations of those answers. The mid-process evaluation and results are presented in Section D of this report and under the heading “Committee Training."

Round 1

Participants then made their Round 1 Angoff ratings. Participants were informed that Angoff rating is an individual activity. They referred to their test books, item maps, PLDs, and content standards.

To make their Round 1 Angoff ratings, participants considered the knowledge, skills, and understandings needed to answer each item correctly. Then participants considered a single threshold student, the student who was just barely *Proficient* (i.e., just barely in *Level 3*). For each item, participants considered the likelihood that this threshold student would answer the item correctly, expressed as a proportion between 0 (representing no likelihood of answering the item correctly) to 1 (representing a certainty of answering the item correctly). However, participants were cautioned against making extreme ratings, as guessing was a factor in any set of automatically scored test items. After making Angoff ratings for the just *Proficient* threshold student for all items, participants repeated the process for the just *Advanced* threshold student and for the just *Partially Proficient* threshold student.

Participants recorded their Angoff ratings for each item on their item maps. Participants were given a Post-Round Survey to complete while they waited for their fellow participants to complete their Angoff ratings. In this survey, participants indicated which elements of the standard setting (e.g., items, PLDs) were particularly influential. Results of these surveys are shown in Section H of this report.

Presentation of Round 1 Recommendations

Following Round 1, DRC calculated the cut score recommendations. To do so for each participant, the Angoff ratings for each threshold student were summed (e.g., the Angoff ratings made by a single participant for the just *Proficient* student for all of the items). This sum represented the number of raw-score points that the hypothetical threshold student was expected to earn on the test.

Participants were presented with a summary of their Round 1 recommendations. Specifically, participants were shown their calculated cut score recommendation and the overall median cut score

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recommendation for the group. Participants were also shown a histogram of the range of the group's Round 1 cut score recommendations. Detailed participant judgments and graphical representation of participant judgments are presented in Sections F and G of this report, respectively.

To provide participants more information about student performance on the test, DRC then shared the rank-order difficulty for each item. Each item's rank-order difficulty was based on its *p*-value: the item with the highest *p*-value was given a rank-order difficulty of 1, the item with the next-highest *p*-value received a 2, and so on. Participants were told these indications of difficulty were taken from the spring 2021 test administration and that they should be used as a guide when evaluating their Angoff ratings during Round 2.

Round 2

For each item, participants discussed the rationales behind their Round 1 Angoff ratings. Participants were instructed to engage in a content-based discussion by focusing on the items in the test book that had the most disagreement between participants. These content-based discussions took place at each table. Participants referred to their items, item maps, rank-order difficulties, PLDs, and the content standards throughout the discussions.

Following this discussion, participants made their Round 2 Angoff ratings. Participants were reminded that making Angoff ratings is an individual activity. Participants were also reminded that they would be free to retain their Angoff ratings for any item from Round 1 or to change one or more of them; however, in either case, participants would need to have content-based rationales for their decisions.

Participants were given a Post-Round Survey for them to complete while they waited for their fellow participants to complete their Angoff ratings. Results of these surveys are shown in Section H.

Presentation of Round 2 Recommendations

Following Round 2, DRC calculated the Angoff cut score recommendations. Participants were presented with their calculated cut score recommendation, the overall median cut score recommendation for the group, and histogram representation of the range of their cut score recommendations.

Round 3

For each item, participants discussed the rationales behind their Round 2 Angoff ratings. Participants were instructed to engage in a content-based discussion by focusing on the items that had the most disagreement between participants. These content-based discussions took place as a group. Participants referred to their items, item maps, rank-order difficulties, PLDs, and the content standards.

Following this discussion, participants made their Round 3 Angoff ratings. Participants were reminded that Angoff rating is an individual activity. Participants were also reminded that they would be free to retain their Angoff ratings for any or all items from Round 2 or to change one or more of them; however, in either case, participants would need to have content-based rationales for their decisions.

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Participants were given a Post-Round Survey for them to complete while they waited for their fellow participants to complete their Angoff ratings. Results of these surveys are shown in Section H.

Presentation of Round 3 Recommendations

Following Round 3, DRC calculated the cut score recommendations. Participants were presented with a summary of their Round 3 cut score recommendations and histogram representation of the range of their cut score recommendations.

Repeating the Process for Remaining Grades

Participants were then divided into groups, and they repeated the modified Angoff process. Participants were encouraged to consider the articulation between the performance standards for their grades, and they were reminded that there would be an opportunity at the end of the process to suggest adjustments to the cut scores, if needed, to promote better articulation across the grades.

Review of Recommendations

After making their cut score recommendations in their groups, participants were presented with the cut score recommendations for all grades. DRC also presented the *impact data* for each test. Impact data are the percentage of students classified in each performance level based on a set of cut scores for the test. To calculate these impact data, DRC found the median cut score recommendations from Round 3, and then applied them to the data from the spring 2021 administration.

Participants were cautioned to consider the impact data carefully. The committee understood that the impact data were calculated from the spring 2021 administration, and that this administration was the first since the disruptions in normal instruction and learning due to COVID-19. DRC instructed participants that it was unknown whether the spring 2021 test results would be similar to those in future years, so the impact data must be considered as potentially anomalous. However, the impact data represented the most up-to-date representation of student performance that were available.

To help participants contextualize the impact data, participants were also shown the M-STEP Science results from 2017, the last year that M-STEP Science results were published. Participants were reminded that these impact data were from several years ago, and that the test then measured a very different set of content standards.

Participants were instructed to consider the impact data carefully as they considered their content-based cut score recommendations. For example, participants were told that if they saw a surprising number of students classified in *Advanced* in the impact data, they should reconsider the types of knowledge, skills, and understandings they expected of the *Level 4* threshold student.

Participants were informed that they could recommend adjustments to the cut scores, if needed, to promote better articulation across grades. However, participants were cautioned against suggesting adjustments which were inconsistent with the content: any adjusted cut score recommendation should still be within the range of their Angoff ratings and link the PLDs, tested content, and content standards.

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DRC reminded participants that no group reached consensus on their cut score recommendations: all groups had a range of cut score recommendations, even at the end of Round 3. Although the median cut score recommendations were used to calculate the impact data for presentation, any cut scores within the range of cut score recommendations made by participants would still reflect the voice of the participating educators.

Mr. Mercado of DRC facilitated a wide-ranging discussion on the articulation of the cut scores. The participants considered several adjustments to their cut scores, all to promote better articulation across grades. Participants were reminded that these recommendations would then be presented to MDE.

Workshop Evaluation

All participants were thanked for their time and effort during the standard setting. To conclude the workshop, participants were asked to complete an evaluation. Selected results are presented later in this section. The complete results of the evaluations are included in Section H of this report.

Workshop Security

Throughout the workshop, security was of paramount importance. At all times, DRC staff monitored the meeting rooms to prevent the removal of secure materials. At the end of each day of the workshop, each participant's materials were collected and inventoried against a master list. Between workshop days, the standard setting Hub was deactivated, and participants were not granted access to the electronic materials.

In addition, participants were required to sign non-disclosure agreements to participate in the workshop. These agreements were signed by participants and were collected by the DRC staff at the beginning of the workshop.

Results

The standard setting was conducted according to the plans created by DRC and approved by MDE prior to the workshop. The results of the workshop are presented in this section.

Participants' Recommendations After Round 1

Table 1 shows participants' recommendations from Round 1 of the modified Angoff procedure, expressed in terms of the raw-score metric (i.e., number correct). Table 2 shows the same recommendations expressed on the untransformed scale metric (i.e., theta metric), as well as the impact data associated with these recommendations. All of the impact data shown in this section are based on Michigan students' performance in spring 2021.

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Table 1. Cut score recommendations from Round 1 on the raw-score metric

	Raw-Score Cut Scores		
Grade	***Part. Prof.***	***Proficient***	***Advanced***
5	13	25	38
8	15.5	25	36.5
11	19	30	41

Table 2. Cut score recommendations and associated impact data from Round 1

	Recommended Cut Scores			*Associated Impact Data*			
Grade	***Part. Prof.***	***Proficient***	***Advanced***	***Not Prof.***	***Part Prof.***	***Proficient***	***Advanced***
5	-0.557	0.591	2.07	30.43%	41.01%	27.16%	1.40%
8	-0.1335	0.792	2.0545	45.08%	33.34%	20.23%	1.35%
11	0.155	1.082	2.255	56.80%	30.07%	12.23%	0.90%

Participants' Recommendations After Round 2

Table 3 shows participants' recommendations from Round 2 of the modified Angoff procedure in terms of raw score. Table 4 expresses the recommendations on the untransformed scale and also presents the associated impact data.

Participants' individual recommendations from all rounds may be found in Section F of this report. During the workshop, participants were shown their cut score recommendations in total points earned.

Table 3. Cut score recommendations from Round 2 on the raw-score metric

	Raw-Score Cut Scores		
Grade	***Part. Prof.***	***Proficient***	***Advanced***
5	12	25	38
8	14.5	24	36.5
11	19	31	41

Table 4. Cut score recommendations and associated impact data from Round 2

	Recommended Cut Scores			*Associated Impact Data*			
Grade	***Part. Prof.***	***Proficient***	***Advanced***	***Not Prof.***	***Part Prof.***	***Proficient***	***Advanced***
5	-0.664	0.591	2.07	25.99%	45.45%	27.16%	1.40%
8	-0.2355	0.695	2.0545	40.57%	36.82%	21.26%	1.35%
11	0.155	1.173	2.255	56.80%	30.93%	11.37%	0.90%

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Participants' Recommendations After Round 3

Table 5 shows participants' recommendations from Round 3 of the modified Angoff procedure in terms of raw score. Table 6 expresses the recommendations on the untransformed scale and also presents the associated impact data.

Participants' individual recommendations from all rounds may be found in Section F of this report. During the workshop, participants were shown their cut score recommendations in total points earned.

Table 5. Cut score recommendations from Round 3 on the raw-score metric

	Raw-Score Cut Scores		
Grade	***Part. Prof.***	***Proficient***	***Advanced***
5	12	25	38
8	14	24.5	36
11	18	30	41

Table 6. Cut score recommendations and associated impact data from Round 3

	Recommended Cut Scores			*Associated Impact Data*			
Grade	***Part. Prof.***	***Proficient***	***Advanced***	***Not Prof.***	***Part Prof.***	***Proficient***	***Advanced***
5	-0.664	0.591	2.07	26.0%	45.4%	27.2%	1.4%
8	-0.2885	0.7435	1.992	39.1%	38.3%	20.8%	1.8%
11	0.071	1.082	2.255	53.5%	33.3%	12.2%	0.9%

Recommendations from the Articulation Discussion

Throughout the standard setting process, participants were informed they would have an opportunity at the end of the workshop to consider the across-grade articulation of the performance standards. Participants were told that performance standards were well-articulated when the impact data associated with a set of cut scores formed a reasonable, explainable pattern across grades.

Participants inspected the impact data associated with their recommendations. Participants were generally satisfied with their cut score recommendations. After a whole-group discussion about the cut score recommendations, each committee noted that (a) they had engaged in an in-depth, content-focused standard setting process, and (b) they were generally satisfied with their recommendations. However, the group also noted that there were relatively many students classified as *Not Proficient* and *Partially Proficient* in grade 11 when compared with grades 5 and 8; and although they expected more students in these categories, the magnitude of the difference gave them pause.

After a wide-ranging discussion, the group considered adjustments to two cut scores, shown here on the untransformed scale metric (and on the raw-score metric):

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- Grade 11 *Partially Proficient*, adjusting downward from +0.071 to -0.104 (from 18/51 to 16/51)
- Grade 11 *Proficient*, adjusting downward from +1.082 to +0.994 (from 30/51 to 29/51)

The group noted these adjustments would still mean there were fewer students classified as *Proficient* in grade 11 than in the other grades, but that the resulting proportions would be closer to their experience and expectations. The grade 11 group endorsed the adjustments, and the entire group gave their assent to the adjusted set of cut scores. Accordingly, the cut scores shown in Table 7 represented the group's final recommendations.

DRC and MDE thanked participants for their time and expertise. DRC reminded participants that staff from MDE would review their cut score recommendations, and that the MDE had the final responsibility to implement cut scores for M-STEP using participants' recommendations as a guide.

Table 7. Cut score recommendations and associated impact data from across-grade discussion

	Recommended Cut Scores			***Associated Impact Data***			
Grade	***Part. Prof.***	***Proficient***	***Advanced***	***Not Prof.***	***Part Prof.***	***Proficient***	***Advanced***
5	-0.664	0.591	2.07	26.0%	45.4%	27.2%	1.4%
8	-0.2885	0.7435	1.992	39.1%	38.3%	20.8%	1.8%
11	-0.104	0.994	2.255	46.8%	37.7%	14.7%	0.9%

Table 8 shows the conditional standard error of measurement (CSEM) values associated with the committee's recommended cut scores. CSEM values quantify the amount of statistical precision associated with test scores, such as a set of cut scores. If a student were to be tested many times using forms of the test, one would expect his or her test score each time to be similar (but not exactly the same) each time, and the distribution of the test scores is described by the CSEM.

Table 8. Conditional standard errors of measurement (CSEM) associated with cut scores

	CSEM Values		
Grade	***Part. Prof.***	***Proficient***	***Advanced***
5	0.315	0.297	0.403
8	0.299	0.299	0.357
11	0.270	0.274	0.366

Using the values in Table 8, one can see that the adjustments recommended by participants after Round 3 were small in comparison to the associated CSEM values. Specifically, the adjustment recommended for grade 11 *Partially Proficient* is approximately 0.65 CSEM, and for grade 11 *Proficient* is approximately 0.32 CSEM. Adjustments of less than 1.0 CSEM are often seen as small, and both adjustments are well in line with participants' recommendations from the modified Angoff procedure.

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After the Standard Setting

After the standard setting, MDE reviewed the recommendations from the standard setting participants. After consideration, MDE chose to accept the recommendations from the standard setting committee, including adjustments made by participants after Round 3 of the modified Angoff process.

To follow a longstanding practice in reporting test scores, MDE took participants' recommendations and transformed them onto the final reporting metric. The final reporting metric takes the cut scores from the untransformed metric and uses linear transformation to express the *Proficient* cut scores as 1500 for grade 5, 1800 for grade 8, and 2100 for grade 11. This linear transformation, similar to the way temperatures can be transformed from degrees Fahrenheit to Celsius, does not change the underlying value or meaning of the cut score, but instead changes the way it appears to readers of test scores. The final, approved cut scores on the final reporting metric are shown in Table 9.

Table 9. Final, approved cut scores for M-STEP Science

	Approved Cut Scores		
Grade	***Part. Prof.***	***Proficient***	***Advanced***
5	1467	1500	1539
8	1773	1800	1833
11	2071	2100	2133

Evidence of Procedural Validity

The standard setting was conducted using a diverse, well-trained committee, and was perceived as valid by participants. This section supports these claims.

Committee Diversity

As part of the pre-session workshop survey, participants were asked about their backgrounds. The self-reported demographic characteristics of the participants are documented in this section. All 18 participants responded to a request on the first day of the workshop to share background and demographic information.

Of the 18 participants, 13 participants were female and five were male; 13 were white, three were Black, and two were of other races. Eleven were general education teachers, four were curriculum staff members, two worked in higher education, and one worked as a school-level administrator.

Seven participants worked in urban school systems, six in rural systems, and five in suburban systems. 67% of participants worked in education for 16 or more years, and 44% of them worked in education for 21 or more years.

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Committee Training

During the standard setting workshop, it was clear to the facilitators that participants understood how to make judgments as part of the standard setting methodology (e.g., Angoff ratings).

To confirm participants' knowledge of the methodology, participants were given a short quiz, termed a *mid-process evaluation*, after training. The mid-process evaluation and detailed results are shown in Section D.

Participants answered items 1–4 on the mid-process evaluation correctly nearly all of the time. This indicates that participants were well prepared to make judgments and that the training was effective. Results of the mid-process evaluation are shown in Table 10. All questions on the mid-process evaluation were scored dichotomously.

Table 10. Participants answering each item correctly on the training mid-process evaluation

N	#1	#2	#3	#4
18	100%	100%	94.4%	100%

The mid-process evaluation also asked participants if they felt the goals of the standard setting were made clear, and if they felt ready to proceed. All submitted evaluations indicated the committee felt prepared and ready to proceed with Angoff ratings.

Participants' Perceived Validity of the Workshop

Participants indicated their perceived validity of the workshop and their recommendations as part of the post-session workshop evaluation. Hambleton (2001) noted that evaluations are important evidence for establishing the validity of performance levels.

Generally, participants were satisfied with their recommendations and with the workshop as a whole. Table 11 shows participants' level of satisfaction with their recommendations. In addition, as shown in Section H, all or nearly all participants described being "confident" or "very confident" in their cut score recommendations (i.e., 90% or more of participants reporting as such).

As a whole, the evaluation results showed that participants were generally satisfied with the standard setting process and were satisfied with their recommendations.

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Table 11. Participants' agreement with various statements on the post-session workshop evaluation regarding their satisfaction with the process and the final recommendations

Statement	Strongly Disagree	Disagree	Agree	Strongly Agree	Agree + Strongly Agree
The performance standards represent a reasonable profile of performance at each level.	0	4	8	6	*14 (78%)*
During the workshop, my opinions were considered.	0	0	9	9	*18 (100%)*
The descriptions of the threshold students were useful during the process.	0	0	8	10	*18 (100%)*
The facilitator provided clear instructions.	0	2	7	9	*16 (89%)*
I believe this process will yield defensible cut scores.	0	1	11	6	*17 (94%)*

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C

Agenda

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Workshop Agenda

Michigan Student Test of Educational Progress
Science Grades 5, 8, & 11

Standard Setting Workshop
Lansing, MI
August 2–4, 2021

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Welcome to the M-STEP Science 2021 standard setting workshop! The Michigan Department of Education (MDE) and Data Recognition Corporation (DRC) would like to thank you for your time and expertise during this important process. Please use this agenda to orient yourself during the workshop. If you have any questions or concerns, please do not hesitate to contact a facilitator.

Monday, August 2

Welcome!

8:00 AM **Registration**
Participants are seated, sign into their DRC-assigned workstation, start the Pre-Workshop Survey, e-sign the confidentiality agreement, and meet their colleagues.

8:30 AM **Opening Session**
MDE welcomes participants, overviews the testing program, discusses the reasons for the standard setting, and describes the desired outcome of the workshop.

9:00 AM **Standard Setting Training**
DRC introduces participants to the modified Angoff process and shows how cut scores can be recommended by considering the test items and the content-based expectations for the threshold students.

10:15 AM **Break**

10:30 AM **Study Content Standards and Range PLDs for Grade 8**
On their own, participants study the content standards and the range performance level descriptors (PLDs).

- Participants read the grade 8 science content standards to review the knowledge and skills that students should learn in the course.
- Then participants begin to consider the content-based expectations for students in each performance level.

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PLDs and Threshold Students for Grade 8

10:45 AM **Discuss the PLDs and Threshold Students for Grade 8**

In tables, participants discuss the content-based expectations for each threshold student, starting with the threshold *Proficient* student.

- Each table should consider the knowledge, skills, and abilities expected of the *Proficient* threshold student; that is, a student who is just entering *Proficient.*
- On a large piece of paper, the table should create a brief, bulleted list that describes the skills expected of the threshold *Proficient* student.
- Participants should then continue by discussing the content-based expectations of the threshold *Advanced* student and then the *Partially Proficient* student.
- To engage in this discussion, participants refer to the PLDs, the content standards, and their knowledge of students.

11:15 PM **Discuss the Threshold Students as a Group for Grade 8**

The facilitator asks each table to share their threshold student descriptions, starting with threshold *Proficient* and continuing with threshold *Advanced* and then *Partially Proficient.*

- A spokesperson from each table should be prepared to report some of the highlights from the table's discussion of the threshold students.
- Each table should take notes during the discussion and update their bulleted lists of the skills expected of each of the three threshold students.

Noon **Lunch**

The group breaks for 30 minutes.

12:30 PM **Study Content Standards and Range PLDs for Grade 5/11**

The committee breaks into two subgroups to study either grade 5 or 11. On their own, participants study the content standards and the range PLDs.

- Participants read the science grade 5/11 content standards to review the knowledge and skills that students should learn in the course.
- Then participants begin to consider the content-based expectations for students in each performance level.

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PLDs and Threshold Students for Grade 5/11

12:45 PM **Discuss the PLDs and Threshold Students for Grade 5/11**

In tables, participants discuss the content-based expectations for each threshold student, starting with the threshold *Proficient* student.

- Each table should consider the knowledge, skills, and abilities expected of the *Proficient* threshold student; that is, a student who is just entering *Proficient.*
- On a large piece of paper, the table should create a brief, bulleted list that describes the skills expected of the threshold *Proficient* student.
- Participants should then continue by discussing the content-based expectations of the threshold *Advanced* student and then the *Partially Proficient* student.
- To engage in this discussion, participants refer to the PLDs, the content standards, and their knowledge of students.

1:15 PM **Discuss the Threshold Students as a Group for Grade 5/11**

The facilitator asks each table to share their threshold student descriptions, starting with threshold *Proficient* and continuing with threshold *Advanced* and then *Partially Proficient.*

- A spokesperson from each table should be prepared to report some of the highlights from the table's discussion of the threshold students.
- Each table should take notes during the discussion and update their bulleted lists of the skills expected of each of the three threshold students.

2:00 PM **Break**

2:15 PM **Across Grade Discussion of PLDs and Threshold Students**

Participants discuss the PLDs and threshold students across the three grades of.

- Participants should share the key points from their previous discussions.
- Participants should note of how the knowledge and skills increase throughout the grades.

4:25 PM **Secure Workstations**

Participants log-off of their workstations.

4:30 PM **Dismissal**

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Tuesday, August 3

Orientation to the Modified Angoff Process

8:00 AM **Sign-In**
Participants return to their designated workstation from the previous day.

8:30 AM **Orientation to the Modified Angoff Process**
As a committee, DRC introduces modified Angoff ratings, reminding participants how one studies each item and considers how the threshold student would perform.

- After the training, a brief evaluation is administered.

9:30 AM **Start Studying the Student Test for Grade 8**
Participants examine the test items from the student's perspective.

- Participants should briefly review these items to get a general sense of what is measured by the test and how it is measured.
- Participants should make notes on their item maps.

10:15 AM **Break**

10:30 AM **Finishing Studying the Student Test for Grade 8**
Participants examine the test items from the student's perspective.

- If finished early, participants should review their item-level notes.

11:00 AM **Round 1 for Grade 8**
Participants complete their Round 1 modified Angoff ratings for Grade 8.
Working individually, participants complete the modified Angoff task for each item.

- Participants begin by considering the threshold *Proficient* student. For each item on the test, participants estimate how likely it is that the threshold *Proficient* student will answer each question correctly.
- Then participants repeat the process, considering the threshold *Advanced* student and then the *Partially Proficient* student.
- Round 1 is an individual round. Participants should not discuss their ratings with their colleagues until Round 1 is complete.
- All modified Angoff ratings should be recorded on the electronic item map.
- Participants complete the Post-Round Survey when finished.

Noon **Lunch**
The group breaks for 30 minutes.

12:30 PM **Presentation of Feedback from Round 1 for Grade 8**
The facilitator presents feedback from Round 1.

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Round 2 for Grade 8

12:45 PM **Discuss Round 1 as a Table for Grade 8**

The facilitator shares feedback from Round 1. Then in tables, participants discuss their modified Angoff ratings for each item.

- Participants should discuss their modified Angoff ratings with their colleagues.
- Starting with item 1, participants should share their ratings with the table. If the table generally agrees on their modified Angoff ratings, discussion should continue with the next item. If there is disagreement, participants should share why they made their ratings the way they did.
- Participants do *not* have to agree on their modified Angoff ratings as a table.
- Making modified Angoff ratings is always an individual activity.

1:30 PM **Round 2 for Grade 8**

Working individually, participants complete the modified Angoff task for each item.

- Participants begin by considering the threshold *Proficient* student.
- Then participants repeat the process, considering the threshold *Advanced* student and the threshold *Partially Proficient* student.
- Round 2 is an individual round. Participants should not discuss their ratings with their colleagues until Round 2 is complete.
- All modified Angoff ratings should be recorded in the electronic item map.
- Please do *not* change your ratings for the previous round.
- Participants complete the Post-Round Survey when finished.

2:00 PM **Break**

2:15 PM **Discuss Round 2 for Grade 8**

The facilitator shares feedback from Round 2. Then the facilitator invites each table to share elements from their discussions after Round 1, including any items for which participants disagreed on their modified Angoff ratings. Finally, participants complete the modified Angoff task for each item.

- Participants do *not* have to agree on their modified Angoff ratings as a group.
- Making modified Angoff ratings is always an individual activity.
- Ratings should be indicated for each cut score, even if the ratings for an item are the same as from Rounds 1 or 2.

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Round 3 for Grade 8

3:15 PM **Round 3 for Grade 8**

Working individually, participants complete the modified Angoff task for each item.

- Participants begin by considering the threshold *Proficient* student. For each item on the test, participants estimate the likelihood that the threshold *Proficient* student will answer each item correctly.
- Then participants repeat the process, considering the threshold *Advanced* student and then the *Partially Proficient* student.
- Round 3 is an individual round. Participants should not discuss their ratings with their colleagues until Round 3 is complete.
- All modified Angoff ratings should be recorded on the electronic item map.
- Participants complete the Post-Round Survey when finished.

3:45 PM **Begin Studying the Student Test for Grade 5/11**

Participants examine the test items from the student's perspective.

- Participants should briefly review these items to get a general sense of what is measured by the test and how it is measured, making notes on their item maps.

4:25 PM **Secure Workstations**

Participants log-off of their workstations.

4:30 PM **Dismissal**

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Round 1 for Grade 5/11

8:00 AM **Sign-In**
Participants return to their designated workstation from the previous day.

8:30 AM **PLD and Threshold Student Refresher for Grade 5/11**
Participants revisit the PLDs and threshold student descriptors for grade 5/11 from the prior day to prepare for round 1.

9:00 AM **Finish Studying the Student Test for Grade 5/11**
Participants examine the test items from the student's perspective.

- Participants should briefly review these items to get a general sense of what is measured by the test and how it is measured, making notes on their item maps.

9:30 AM **Round 1 for Grade 5/11**
Participants complete their Round 1 modified Angoff ratings for Grade 5/11.
Working individually, participants complete the modified Angoff task for each item.

- Participants begin by considering the threshold *Proficient* student. For each item on the test, participants estimate the likelihood that the threshold *Proficient* student will answer each item correctly.
- Then participants repeat the process, considering the threshold *Advanced* student and then the *Partially Proficient* student.
- Round 1 is an individual round. Participants should not discuss their ratings with their colleagues until Round 1 is complete.
- All modified Angoff ratings should be recorded in the electronic item map.
- Participants complete the Post-Round Survey when finished.

10:15 AM **Break**

10:30 AM **Discuss Round 1 as a Table for Grade 5/11**
The facilitator shares feedback from Round 1. Then in tables, participants discuss their modified Angoff ratings for each item.

- Participants should discuss their modified Angoff ratings with their colleagues.
- Starting with item 1, participants should share their ratings with the table. If the table generally agrees on their ratings, discussion should continue with the next item. If there is disagreement, participants should share why they made their ratings the way they did.
- Participants do *not* have to agree on their modified Angoff ratings as a table.
- Making modified Angoff ratings is always an individual activity.

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Round 2 for Grade 5/11

11:30 AM **Round 2 for Grade 5/11**

Working individually, participants complete the modified Angoff task for each item.

- Participants begin by considering the threshold *Proficient* student. For each item on the test, participants estimate the likelihood that the threshold *Proficient* student will answer each item correctly.
- Then participants repeat the process, considering the threshold *Advanced* student and then the *Partially Proficient* student.
- Round 2 is an individual round. Participants should not discuss their ratings with their colleagues until Round 2 is complete.
- All modified Angoff ratings should be recorded in the electronic item map.
- Please do *not* change your ratings for the previous round.
- Participants complete the Post-Round Survey when finished.

Noon **Lunch**

The group breaks for 30 minutes.

12:30 PM **Discuss Round 2 for Grade 5/11**

The facilitator shares feedback from Round 2. Then the facilitator invites each table to share elements from their discussions after Round 1, including any items for which participants disagreed on their modified Angoff ratings. Finally, participants complete the modified Angoff task for each item.

- Participants do *not* have to agree on their modified Angoff ratings as a group.
- Making modified Angoff ratings is always an individual activity.
- Ratings should be indicated for each cut score, even if the ratings for an item are the same as from Round 1.

1:30 PM **Round 3 for Grade 5/11**

Working individually, participants complete the modified Angoff task for each item.

- Participants begin by considering the threshold *Proficient* student. For each item on the test, participants estimate the likelihood that the threshold *Proficient* student will answer each item correctly.
- Then participants repeat the process, considering the threshold *Advanced* student and then the *Partially Proficient* student.
- Round 3 is an individual round. Participants should not discuss their ratings with their colleagues until Round 3 is complete.
- All modified Angoff ratings should be recorded in the electronic item map.
- Please do *not* change your ratings for the previous rounds.
- Participants complete the Post-Round Survey when finished.

2:15 PM **Break**

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2:30 PM **Presentation of Recommendations**

The facilitator presents a summary of the recommendations from all grades. Participants are encouraged to consider whether the recommendations form a clear, explainable pattern across grades and share their thoughts.

- Table leaders make note of their participants' thoughts for use during the across-grade discussion.

3:00 PM **Across-Grade Discussion**

In a general session, the table leaders from each group discuss their groups' recommendations and the consistency across grades. If needed, the committee recommends adjustments to their recommendations to improve across-grade consistency (*articulation*).

4:00 PM **Post-Workshop and Articulation Evaluation**

Each participant completes an evaluation of the standard setting. Each table leader completes an evaluation of the across-grade discussion.

4:30 PM **Dismissal**

Participants are dismissed with the thanks of MDE and DRC.

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Agenda at a Glance
M-STEP Science Standard Setting

Monday, August 2

8:00 AM	Registration
8:30 AM	Opening Session
9:00 AM	Standard Setting Training
10:15 AM	Break
10:30 AM	Study Content Standards and Range PLDs for Grade 8
10:45 AM	Discuss the PLDs and Threshold Students for Grade 8
11:15 PM	Discuss the Threshold Students as a Group for Grade 8
Noon	Lunch
12:30 PM	Study Content Standards and Range PLDs for Grade 5/11
12:45 PM	Discuss the PLDs and Threshold Students for Grade 5/11
1:15 PM	Discuss the Threshold Students as a Group for Grade 5/11
2:00 PM	Break
2:15 PM	Across Grade Discussion of PLDs and Threshold Students
4:25 PM	Secure Workstations
4:30 PM	Dismissal

Tuesday, August 3

8:00 AM	Sign-In
8:30 AM	Orientation to the Modified Angoff Process
9:30 AM	Start Studying the Student Test for Grade 8
10:15 AM	Break
10:30 AM	Finishing Studying the Student Test for Grade 8
11:00 AM	Round 1 for Grade 8
Noon	Lunch
12:30 PM	Presentation of Feedback from Round 1 for Grade 8
12:45 PM	Discuss Round 1 as a Table for Grade 8
1:30 PM	Round 2 for Grade 8
2:00 PM	Break
2:15 PM	Discuss Round 2 for Grade 8
3:15 PM	Round 3 for Grade 8
3:45 PM	Begin Studying the Student Test for Grade 5/11
4:25 PM	Secure Workstations
4:30 PM	Dismissal

Wednesday, August 4

8:00 AM	Sign-In
8:30 AM	PLD and Threshold Student Refresher for Grade 5/11
9:00 AM	Finish Studying the Student Test for Grade 5/11
9:30 AM	Round 1 for Grade 5/11
10:15 AM	Break
10:30 AM	Discuss Round 1 as a Table for Grade 5/11
11:30 AM	Round 2 for Grade 5/11
Noon	Lunch
12:30 PM	Discuss Round 2 for Grade 5/11
1:30 PM	Round 3 for Grade 5/11
2:15 PM	Break
2:30 PM	Presentation of Recommendations
3:00 PM	Across-Grade Discussion
4:00 PM	Post-Workshop and Articulation Evaluation
4:30 PM	Dismissal

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Training Presentation and Materials

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1

Workshop Goal

To recommend cut scores that categorize students into one of four performance levels:

- Not Proficient
- Partially Proficient
- Proficient
- Advanced

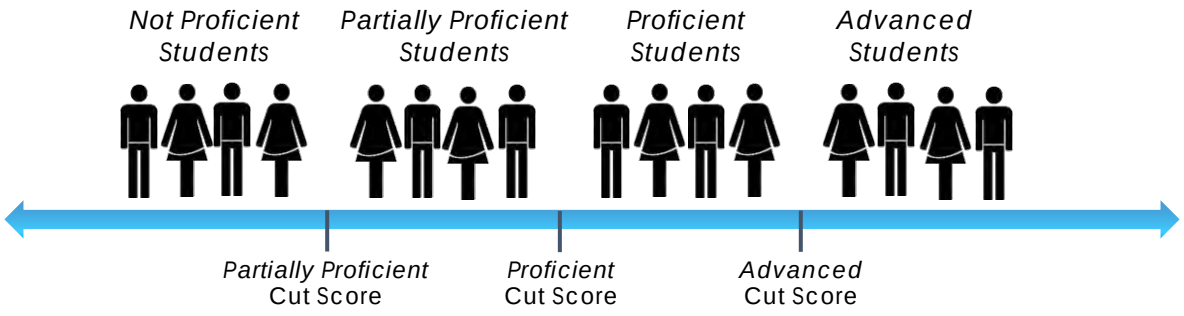
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Cut Scores & Performance Levels

Three *cut scores* divide students' test scores into four performance levels.

- The PLDs describe the range of student performance in each level.



3

Modified Angoff Procedure


Item-centered method


Content-based recommendations


Iterative process

4

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Process Overview

Today

- Discuss the threshold students for grade 8
- Divide into two groups
- Discuss the threshold students for grades 5 & 11

Tomorrow

- Study the test items for grade 8
- Round 1: Recommend cut scores on your own
- Discuss recommendations in your table
- Round 2: Recommend cut scores on your own
- Discuss recommendations with the committee
- Round 3: Recommend cut scores on your own

Wednesday

- Repeat the process for grade 5 or 11
- Review the group's recommendations
- Evaluate the workshop

5

Performance Level Descriptors (PLDs)

PLDs describe the knowledge, skills, and understandings expected of students in each performance level.

They are linked to the content standards.

PLDs describe students in the middle of each level, not on the *thresholds*.

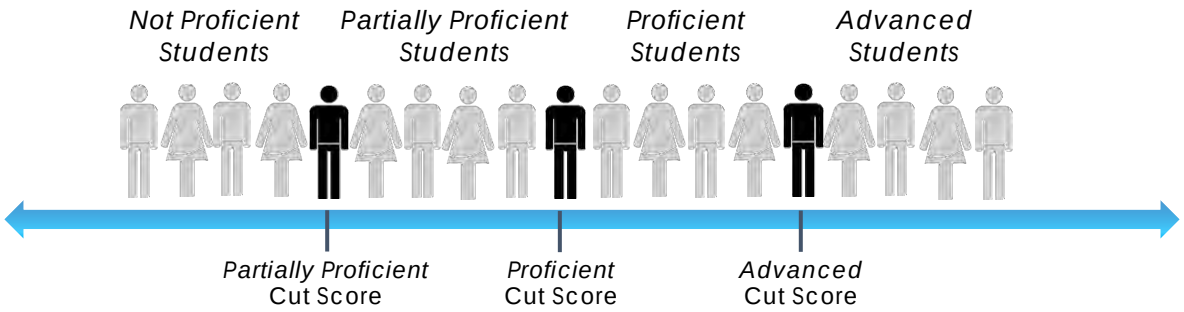
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PLDs and Performance Levels

PLDs describe the student in the middle of each performance level.

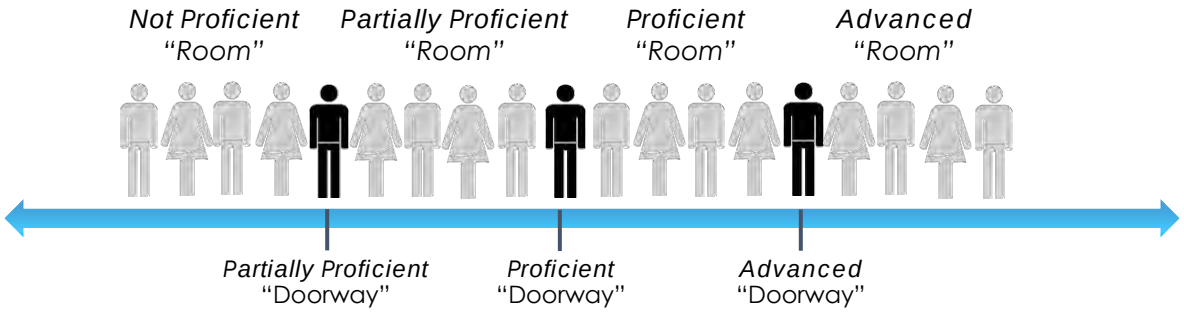


7

Rooms and Doorways

Imagine that you could watch as a student gained knowledge and skills along the test scale.

- He or she might pass through a series of "rooms."



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Three Threshold Students

Threshold students are those just barely leaving one level and entering the next level.

-The PLDs do *not* describe these students directly.

-There are three threshold students.

Threshold Partially Proficient Student	Threshold Proficient Student	Threshold Advanced Student

9

Examine the Test Items

By examining the test questions, you will better understand students' testing experience during the assessment.

Then you will consider how the three hypothetical threshold students are expected to perform.



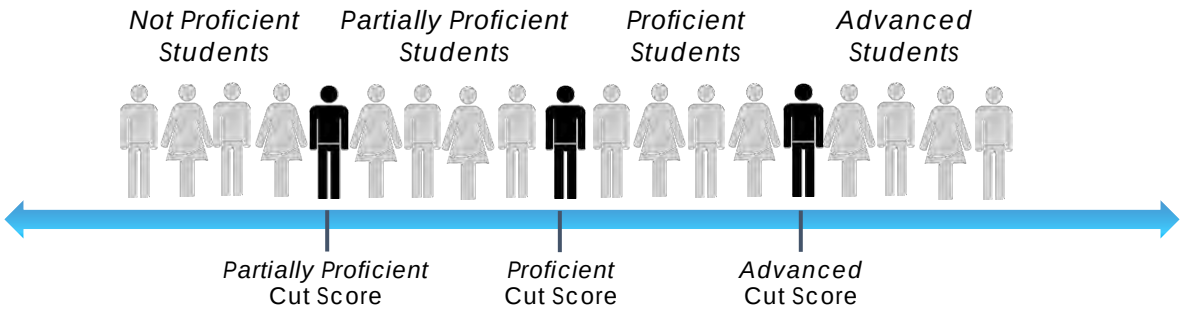
10

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Threshold Students and Ratings

Angoff ratings and cut scores are linked to the student *just* in each level.



11

Three Rounds

Round 1	• Study the PLDs, threshold students, and test items • Make your own Angoff ratings
Round 2	• See feedback • Discuss your ratings with your breakout room • Make your own Angoff ratings
Round 3	• See feedback • Discuss your ratings with the committee • Make your own Angoff ratings
Review	• Repeat for grade 5 or 11 • Review recommended cut scores • Evaluate the workshop

12

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Roles and Responsibilities

You will recommend performance standards to MDE.

During the workshop, remember to:

- Contribute to discussions at your table
- Participate in group-wide discussions
- Make your Angoff ratings independently
- Ask a member of staff any questions
- Use workshop materials only in meeting rooms
- Keep workshop conversations confidential

13

Workshop Security

Always leave the workshop materials in the meeting rooms.

Feel free to make notes on your printed workshop materials. Your facilitator will collect all the materials at the end of the workshop.

Do not share or discuss the contents of the materials outside your meeting room.

Do not access the electronic materials after the workshop.

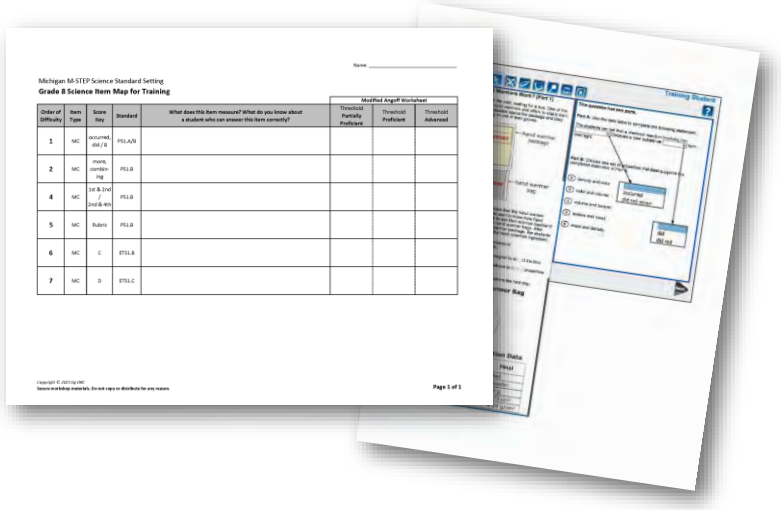
You are welcome to use your personal electronic devices when you are *away* from the meeting tables.

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Training Materials

- Item map
- Training items



15

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Item Map

Michigan M-STEP Science Standard Setting

Grade 8 Science Item Map for Training

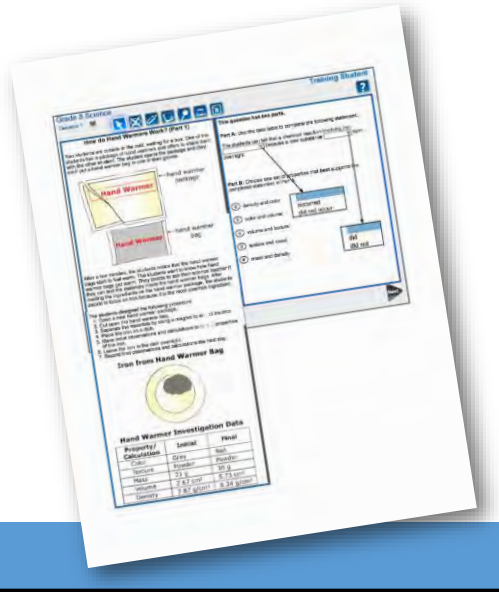
Order of Difficulty	Item Type	Score Key	Standard	What does this item measure? What do you know about a student who can answer this item correctly?	Modified Angoff Worksheet: Threshold Partially Proficient	Threshold Proficient	Threshold Advanced
1	MC	occurred, did / B	PS1.A/B				
2	MC	more, combin-ing	PS1.B				
4	MC	1st & 2nd / 2nd & 4th	PS1.B				
5	MC	Rubric	PS1.B				
6	MC	C	ETS1.B				
7	MC	D	ETS1.C				

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Examining an Item and Making Ratings



Make a brief note to yourself about what the item measures.

Consider a threshold student. Ask yourself how likely it is that the threshold student will answer the item correctly.

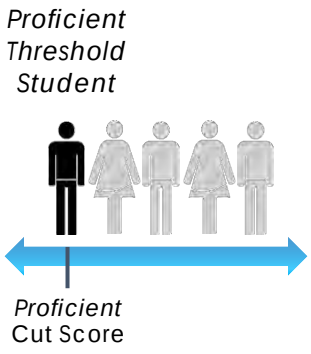
Record your judgment on your item map, then go on to the next item.

17

Items and the Threshold Student

Remember to consider the threshold student, not the student in the middle of the performance level.

- For example, estimate the likelihood that the threshold *Proficient* student is expected to answer item #1 correctly.



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Recording Your Angoff Ratings

Use the item map to record your judgments.

- Express your Angoff judgments as probabilities between 0.00 and 1.00.
- If possible, round your estimate to the nearest 0.05.



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Accessing Workshop Materials

The Hub is a participants-only website that holds workshop materials.

- Please do *not* share the Hub with anyone outside the workshop.
- To access the Hub, use the shortcut on your desktop.

You will use the Hub to access item maps, items, surveys, and more!



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Health & Safety

Throughout the workshop, please:

- Keep a reasonable physical distance from your colleagues.
- Participate actively in your group's discussions.
- Do not use personal electronic devices at your table.
- Do not remove workshop materials from the room.
- Contact DRC if you feel unwell.

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Recap

Steps in Round 1:

- Discuss expectations for the threshold students
- Examine the test items
- Consider the three threshold students
- Review each test item
- Ask yourself how each threshold student would be expected to perform on each item
- Record judgments on the item map
- Complete the post round survey

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Mid-Process Evaluation

This section of the evaluation asks a few questions about the Angoff process, just to make sure everyone understands the process. Don't worry: you learned everything you needed to know during the training.

Try your best on the questions. You'll see the answers after you finish the evaluation.

What is your full name? *

Your answer

To which group have you been assigned?

- ◯ Science Grades 5 & 8
- ◯ Science Grades 8 & 11

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A participant is considering her Angoff ratings. Read the questions below and choose the best answer.

The correct responses for these questions will be shown after you submit the survey.

When making her ratings, which of these students should the participant mostly keep in mind? * 1 point

- ◯ Threshold students
- ◯ Mid-range students
- ◯ High-achieving students

The participant thinks the threshold Proficient student will get an item correct. She types in 0.30 under Proficient for that item. What does her rating mean? * 1 point

- ◯ The threshold Proficient student is expected to have a 30% chance of answering the item correctly.
- ◯ The threshold Proficient student MUST answer this particular item correctly to be in the Proficient level.
- ◯ Students in Advanced will have a 30% chance of answering the item correctly, but no Proficient students will get it right.
- ◯ The threshold Proficient student is expected to have a 70% chance of answer the item correctly.

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For another item, the participant makes a rating of 0.65 for the threshold Proficient student. Which of these ratings would be appropriate for the threshold Advanced student for the same item? * 1 point

- ◯ 0.70
- ◯ 0.60
- ◯ 0.50

The participant is considering her Angoff rating for a multiple-choice item with four answer choices. If a student were to guess randomly, what is the likelihood that a student would answer the item correctly? * 1 point

- ◯ 0.00
- ◯ 0.25
- ◯ 0.33

Next

Page 1 of 3

Clear form

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About Your Experience So Far

For this section, think about your experiences with the opening training, the performance level descriptors (PLDs), and this supplemental training.

Please consider the statements below and mark your level of agreement or disagreement you have with each. *

	Strongly Disagree	Disagree	Agree	Strongly Agree
The training provided a clear description of the workshop goals.	○	○	○	○
The training session leader clearly explained the standard setting procedure.	○	○	○	○
The training session leader clearly explained the materials used in the standard setting process.	○	○	○	○

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The training addressed many of my questions and concerns.	○	○	○	○
The practice exercises were useful.	○	○	○	○
The opening session provided a clear overview of the standard setting process.	○	○	○	○
My role in the standard setting was well described.	○	○	○	○
I feel prepared to complete the standard setting task.	○	○	○	○
The performance level descriptors (PLDs) are clear.	○	○	○	○
Adequate information was provided regarding the PLDs.	○	○	○	○
The PLDs communicate a reasonable profile of students' performance at each level.	○	○	○	○

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Readiness

Before the committee begins Round 1, the facilitators want to make sure everyone feels reasonably comfortable with the process. In this section, indicate whether you are ready to proceed.

Are you ready to proceed with Round 1? *

- ◯ Yes, I am ready.
- ◯ Not yet: I have questions.

If not ready to proceed, please write your questions here. Questions will be addressed as a group.

Your answer

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M-STEP Mid-Process Evaluation

Legend: Correct: Incorrect: Distractors Chosen More than Correct Answer: Changed Answer:

When making her ratings, which of these students should the participant mostly keep in mind?

Response	Frequency	Percent
**** Threshold students***	18	100.00
Mid-range students	0	0.00
High-achieving students	0	0.00

The participant thinks the threshold Proficient student will get an item correct. She types in 0.30 under Proficient for that item. What does her rating mean?

Response	Frequency	Percent
**** The threshold Proficient student is expected to have a 30% chance of answering the item correctly.***	18	100.00
The threshold Proficient student MUST answer this particular item correctly to be in the Proficient level.	0	0.00
Students in Advanced will have a 30% chance of answering the item correctly but no Proficient students will get it right.	0	0.00
The threshold Proficient student is expected to have a 70% chance of answer the item correctly.	0	0.00

For another item, the participant makes a rating of 0.65 for the threshold Proficient student. Which of these ratings would be appropriate for the threshold Advanced student for the same item?

Response	Frequency	Percent
**** 0.70***	17	94.44
0.60	1	5.56
0.50	0	0.00

The participant is considering her Angoff rating for a multiple-choice item with four answer choices. If a student were to guess randomly, what is the likelihood that a student would answer the item correctly?

Response	Frequency	Percent
0.00	0	0.00
**** 0.25***	18	100.00
0.33	0	0.00

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M-STEP Mid-Process Evaluation

To which group have you been assigned?

Response	Frequency	Percent	Mean: 1.56
Science Grades 5 & 8	8	44.44	
Science Grades 8 & 11	10	55.56	

The training provided a clear description of the workshop goals.

Response	Frequency	Percent	Mean: 3.44
Strongly Disagree	0	0.00	
Disagree	1	5.56	
Agree	8	44.44	
Strongly Agree	9	50.00	

The training session leader clearly explained the standard setting procedure.

Response	Frequency	Percent	Mean: 3.50
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	9	50.00	
Strongly Agree	9	50.00	

The training session leader clearly explained the materials used in the standard setting process.

Response	Frequency	Percent	Mean: 3.44
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	10	55.56	
Strongly Agree	8	44.44	

The training addressed many of my questions and concerns.

Response	Frequency	Percent	Mean: 3.50
Strongly Disagree	0	0.00	
Disagree	2	11.11	
Agree	5	27.78	
Strongly Agree	11	61.11	

The practice exercises were useful.

Response	Frequency	Percent	Mean: 3.56
Strongly Disagree	0	0.00	
Disagree	1	5.56	
Agree	6	33.33	
Strongly Agree	11	61.11	

The opening session provided a clear overview of the standard setting process.

Response	Frequency	Percent	Mean: 3.39
Strongly Disagree	0	0.00	
Disagree	2	11.11	
Agree	7	38.89	
Strongly Agree	9	50.00	

My role in the standard setting was well described.

Response	Frequency	Percent	Mean: 3.56
Strongly Disagree	0	0.00	
Disagree	1	5.56	
Agree	6	33.33	
Strongly Agree	11	61.11	

I feel prepared to complete the standard setting task.

Response	Frequency	Percent	Mean: 3.11
Strongly Disagree	0	0.00	
Disagree	1	5.56	
Agree	14	77.78	
Strongly Agree	3	16.67	

The performance level descriptors (PLDs) are clear.

Response	Frequency	Percent	Mean: 3.11
Strongly Disagree	0	0.00	
Disagree	3	16.67	
Agree	10	55.56	
Strongly Agree	5	27.78	

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Adequate information was provided regarding the PLDs.

Response	Frequency	Percent	Mean: 3.33
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	12	66.67	
Strongly Agree	6	33.33	

The PLDs communicate a reasonable profile of students' performance at each level.

Response	Frequency	Percent	Mean: 3.06
Strongly Disagree	0	0.00	
Disagree	3	16.67	
Agree	11	61.11	
Strongly Agree	4	22.22	

Are you ready to proceed with Round 1?

Response	Frequency	Percent	Mean: 1.00
Yes I am ready.	18	100.00	
Not yet: I have questions.	0	0.00	

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E

Performance Level Descriptors (PLDs)

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Grade 5 Michigan Draft Science Performance Level Descriptors

	Level 2	Level 3	Level 4
Claim 1: Physical Science	**Students in this range can consistently use scientific and engineering practices and crosscutting concepts to make sense of problems and phenomena of low complexity and can inconsistently use these dimensions to make sense of problems and phenomena of moderate complexity in the physical sciences (targets A–D).**	**Students in this range can consistently use scientific and engineering practices and crosscutting concepts to make sense of problems and phenomena of moderate complexity and can inconsistently use these dimensions to make sense of problems and phenomena of high complexity in the physical sciences (targets A–D).**	**Students in this range can consistently use scientific and engineering practices and crosscutting concepts to make sense of problems and phenomena of high complexity in the physical sciences (targets A–E).**
Target A: Forces and Interactions	**Students can do the following:** **Conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object** **Identify appropriate methods and/or tools for collecting data on an object's motion to provide evidence that a pattern can be used to predict future motion** **Identify a question to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other** **Identify a simple design problem that can be solved by applying scientific ideas about magnets**	**Students can do the following:** **Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object** **Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion** **Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other** **Define a simple design problem that can be solved by applying scientific ideas about magnets**	**Students can do the following:** **Evaluate and refine an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object** **Plan and conduct an investigation of an object's motion to provide evidence that a pattern can be used to predict future motion** **Evaluate questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other** **Develop a solution to a simple design problem that applies scientific ideas about magnets**

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Grade 5 Michigan Draft Science Performance Level Descriptors

	Level 2	Level 3	Level 4
Target B: Energy	**Students can do the following:** **Use evidence to identify an explanation relating the speed of an object to the energy of that object** **Identify observations that provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents** **Identify questions and predict outcomes about the changes in energy that occur when objects collide** **Test a device that converts energy from one form to another** **Obtain and use information to describe that energy and fuels are derived from natural resources and their uses affect the environment**	**Students can do the following:** **Use evidence to construct an explanation relating the speed of an object to the energy of that object** **Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents** **Ask questions and predict outcomes about the changes in energy that occur when objects collide** **Apply scientific ideas to design, test, and refine a device that converts energy from one form to another** **Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment**	**Students can do the following:** **Evaluate the evidence used to construct an explanation relating the speed of an object to the energy of that object** **Plan and conduct an investigation to collect evidence that energy can be transferred from place to place by sound, light, heat, and electric currents** **Evaluate questions and predict outcomes about the changes in energy that occur when objects collide** **Optimize a device based on multiple criteria that converts energy from one form to another** **Communicate information to describe that energy and fuels are derived from natural resources and their uses affect the environment**

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Grade 5 Michigan Draft Science Performance Level Descriptors

	Level 2	Level 3	Level 4
Target C: Waves	**Students can do the following:** **Use a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move** **Compare multiple solutions that use patterns to transfer information**	**Students can do the following:** **Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move** **Generate and compare multiple solutions that use patterns to transfer information**	**Students can do the following:** **Revise a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move** **Refine a solution that uses patterns to transfer information**
Target D: Structure and Properties of Matter	**Students can do the following:** **Use a model to describe that matter is made of particles too small to be seen** **Graph data to display evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved** **Identify observations and measurements that can be used to identify materials based on their properties** **Identify tools and/or methods for an investigation to determine whether the mixing of two or more substances results in new substances**	**Students can do the following:** **Develop a model to describe that matter is made of particles too small to be seen** **Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved** **Make observations and measurements to identify materials based on their properties** **Conduct an investigation to determine whether the mixing of two or more substances results in new substances**	**Students can do the following:** **Revise a model based on evidence to describe that matter is made of particles too small to be seen** **Analyze and interpret data to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved** **Plan and conduct an investigation to identify materials based on their properties** **Plan and conduct an investigation to determine whether the mixing of two or more substances results in new substances**

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Grade 5 Michigan Draft Science Performance Level Descriptors

	Level 2	Level 3	Level 4
Claim 2: Life Science	**Students in this range can consistently use scientific and engineering practices and crosscutting concepts to make sense of problems and phenomena of low complexity and can inconsistently use these dimensions to make sense of problems and phenomena of moderate complexity in the life sciences (targets A–D).**	**Students in this range can consistently use scientific and engineering practices and crosscutting concepts to make sense of problems and phenomena of moderate complexity and can inconsistently use these dimensions to make sense of problems and phenomena of high complexity in the life sciences (targets A–D).**	**Students in this range can consistently use scientific and engineering practices and crosscutting concepts to make sense of problems and phenomena of high complexity in the life sciences (targets A–D).**
Target A: Interdependent Relationships in Ecosystems	**Students can do the following:** **Identify evidence that supports an argument that some animals form groups that help members survive** **Use data from fossils to provide evidence of the organisms and the environments in which they lived long ago** **Identify evidence that supports an argument that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all** **Use evidence to support a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change**	**Students can do the following:** **Construct an argument that some animals form groups that help members survive** **Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago** **Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all** **Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change**	**Students can do the following:** **Evaluate competing arguments based evidence that some animals form groups that help members survive** **Compare multiple sources of data from fossils to provide evidence of the organisms and the environments in which they lived long ago** **Refine an argument based on evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all** **Evaluate the evidence used to make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change**

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Grade 5 Michigan Draft Science Performance Level Descriptors

	Level 2	Level 3	Level 4
Target B: Inheritance and Variation of Traits: Life Cycles and Traits	**Students can do the following:** **Use models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death** **Use data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms** **Identify evidence that supports the explanation that traits can be influenced by the environment** **Use evidence to support an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing**	**Students can do the following:** **Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death** **Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms** **Use evidence to support the explanation that traits can be influenced by the environment** **Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing**	**Students can do the following:** **Revise models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death** **Compare multiple sources of data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms** **Use evidence to construct an explanation that traits can be influenced by the environment** **Evaluate and revise an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing**

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Grade 5 Michigan Draft Science Performance Level Descriptors

	Level 2	Level 3	Level 4
Target C: Structure, Function, and Information Processing	**Students can do the following:** **Use a model to describe that light reflecting from objects and entering the eye allows objects to be seen** **Identify evidence to support an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction** **Use a model to identify that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways**	**Students can do the following:** **Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen** **Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction** **Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways**	**Students can do the following:** **Revise a model to describe that light reflecting from objects and entering the eye allows objects to be seen** **Revise an argument based on evidence that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction** **Develop a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways**
Target D: Matter and Energy in Organisms and Ecosystems	**Students can do the following:** **Use models to identify that energy in animals' food (used for body repair, growth, and motion and to maintain body warmth) was once energy from the sun** **Identify evidence that supports an argument that plants get the materials they need for growth chiefly from air and water** **Use a model to describe the movement of matter among plants, animals, decomposers, and the environment**	**Students can do the following:** **Use models to describe that energy in animals' food (used for body repair, growth, and motion and to maintain body warmth) was once energy from the sun** **Support an argument that plants get the materials they need for growth chiefly from air and water** **Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment**	**Students can do the following:** **Revise models to describe that energy in animals' food (used for body repair, growth, and motion and to maintain body warmth) was once energy from the sun** **Construct an argument that plants get the materials they need for growth chiefly from air and water** **Revise a model to describe the movement of matter among plants, animals, decomposers, and the environment**

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Grade 5 Michigan Draft Science Performance Level Descriptors

	Level 2	Level 3	Level 4
Claim 3: Earth and Space Science	**Students in this range can consistently use scientific and engineering practices and crosscutting concepts to make sense of problems and phenomena of low complexity and can inconsistently use these dimensions to make sense of problems and phenomena of moderate complexity in the Earth and space sciences (targets A–D).**	**Students in this range can consistently use scientific and engineering practices and crosscutting concepts to make sense of problems and phenomena of moderate complexity and can inconsistently use these dimensions to make sense of problems and phenomena of high complexity in the Earth and space sciences (targets A–D).**	**Students in this range can consistently use scientific and engineering practices and crosscutting concepts to make sense of problems and phenomena of high complexity in the Earth and space sciences (targets A–D).**
Target A: Weather and Climate	**Students can do the following:** **Use data in tables and graphical displays to describe typical weather conditions expected during a particular season** **Obtain and use information to describe climates in different regions of the world** **Use evidence to support a claim about the merit of a design solution that reduces the impacts of a weather-related hazard**	**Students can do the following:** **Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season** **Obtain and combine information to describe climates in different regions of the world** **Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard**	**Students can do the following:** **Analyze and interpret data in tables and graphical displays to predict typical weather conditions expected during a particular season** **Communicate information to describe climates in different regions of the world** **Evaluate a claim about the merit of a design solution that reduces the impacts of a weather-related hazard**
Target B: Earth's Systems: Processes That Shape the Earth	**Students can do the following:** **Use evidence from patterns in rock formations and fossils in rock layers to identify changes in a landscape over time** **Identify observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation** **Use data from maps to describe patterns of Earth's features** **Compare multiple solutions to reduce the impacts of natural Earth processes on humans**	**Students can do the following:** **Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time** **Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation** **Analyze and interpret data from maps to describe patterns of Earth's features** **Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans**	**Students can do the following:** **Use evidence from patterns in rock formations and fossils in rock layers to construct an explanation for changes in a landscape over time** **Plan and conduct an investigation to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation** **Compare multiple sources of data from maps to describe patterns of Earth's features** **Refine a solution that reduces the impacts of natural Earth processes on humans**

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Grade 5 Michigan Draft Science Performance Level Descriptors

	Level 2	Level 3	Level 4
Target C: Earth's Systems	**Students can do the following:** **Use a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact** **Use a graph to identify the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth** **Obtain and use information about ways individual communities use science ideas to protect the Earth's resources and environment**	**Students can do the following:** **Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact** **Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth** **Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment**	**Students can do the following:** **Revise a model to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact** **Analyze and interpret data about the amounts and percentages of water and fresh water in various reservoirs to use as evidence to support claims about the distribution of water on Earth** **Communicate information about ways individual communities use science ideas to protect the Earth's resources and environment**
Target D: Space Systems: Stars and the Solar System	**Students can do the following:** **Identify evidence to support an argument that the gravitational force exerted by Earth on objects is directed down** **Identify evidence to support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from Earth** **Use data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky**	**Students can do the following:** **Support an argument that the gravitational force exerted by Earth on objects is directed down** **Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from Earth** **Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky**	**Students can do the following:** **Construct an argument that the gravitational force exerted by Earth on objects is directed down** **Construct an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from Earth** **Analyze patterns in data to predict daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky**

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Grade 8 Michigan Draft Science Performance Level Descriptors

	Level 2	Level 3	Level 4
Claim 1: Physical Science	**Students in this range can consistently use scientific and engineering practices and crosscutting concepts to make sense of problems and phenomena of low complexity and can inconsistently use these dimensions to make sense of problems and phenomena of moderate complexity in the physical sciences (targets A–E).**	**Students in this range can consistently use scientific and engineering practices and crosscutting concepts to make sense of problems and phenomena of moderate complexity and can inconsistently use these dimensions to make sense of problems and phenomena of high complexity in the physical sciences (targets A–E).**	**Students in this range can consistently use scientific and engineering practices and crosscutting concepts to make sense of problems and phenomena of high complexity in the physical sciences (targets A–E).**
Target A: Structure and Properties of Matter	**Students can do the following:** **Use models to identify the atomic composition of simple molecules and extended structures** **Use information to identify that synthetic materials come from natural resources and impact society** **Use a model to describe changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed**	**Students can do the following:** **Develop models to describe the atomic composition of simple molecules and extended structures** **Gather and make sense of information to describe that synthetic materials come from natural resources and impact society** **Develop a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed**	**Students can do the following:** **Revise models to describe the atomic composition of simple molecules and extended structures** **Critically compare multiple sources of information about synthetic materials to evaluate potential impacts to society and the environment** **Revise a model to explain changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed**
Target B: Chemical Reactions	**Students can do the following:** **Use data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred** **Use a model to identify that the total number of atoms does not change in a chemical reaction and thus mass is conserved** **Test a given device that either releases or absorbs thermal energy by chemical processes**	**Students can do the following:** **Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred** **Develop and use a model to describe how the total number of atoms does not change in a chemical reaction and thus mass is conserved** **Undertake a design project to construct, test, and modify a device that either releases or absorbs thermal energy by chemical processes**	**Students can do the following:** **Determine the limitations of data describing the properties of substances before and after the substances interact in determining if a chemical reaction has occurred** **Revise a model to explain how the total number of atoms does not change in a chemical reaction and thus mass is conserved** **Design and optimize a device that either releases or absorbs thermal energy by chemical processes**

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Grade 8 Michigan Draft Science Performance Level Descriptors

	Level 2	Level 3	Level 4
Target C: Forces and Interactions	**Students can do the following:** **Apply Newton's Third Law to test a solution to a problem involving the motion of two colliding objects** **Conduct an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object** **Identify a question about data to determine the factors that affect the strength of electric and magnetic forces** **Identify evidence that supports an argument that gravitational interactions are attractive and depend on the masses of interacting objects** **Conduct an investigation to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact**	**Students can do the following:** **Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects** **Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object** **Ask questions about data to determine the factors that affect the strength of electric and magnetic forces** **Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects** **Conduct an investigation and evaluate the experimental design to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact**	**Students can do the following:** **Apply Newton's Third Law to refine the design of a solution to a problem involving the motion of two colliding objects** **Plan an investigation and analyze the data to explain that the change in an object's motion depends on the sum of the forces on the object and the mass of the object** **Evaluate questions about data to determine the factors that affect the strength of electric and magnetic forces** **Evaluate arguments based on evidence to identify which argument supports the claim that gravitational interactions are attractive and depend on the masses of interacting objects** **Revise an experimental design to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact**

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Grade 8 Michigan Draft Science Performance Level Descriptors

	Level 2	Level 3	Level 4
Target D: Energy	**Students can do the following:** **Interpret graphical displays of data to identify the relationships of kinetic energy to the mass of an object and to the speed of an object** **Use a model to describe that when the arrangement of objects interacting at a distance changes, different amounts of potential energy are stored in the system** **Test a device that either minimizes or maximizes thermal energy transfer** **Conduct an investigation to determine the relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic energy of the particles as measured by the temperature of the sample** **Use evidence to support an argument that when the kinetic energy of an object changes, energy is transferred to or from the object**	**Students can do the following:** **Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass of an object and to the speed of an object** **Develop a model to describe that when the arrangement of objects interacting at a distance changes, different amounts of potential energy are stored in the system** **Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer** **Plan an investigation to determine the relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic energy of the particles as measured by the temperature of the sample** **Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object**	**Students can do the following:** **Compare multiple graphical displays of data to explain the relationships of kinetic energy to the mass of an object and to the speed of an object** **Evaluate and refine models to describe that when the arrangement of objects interacting at a distance changes, different amounts of potential energy are stored in the system** **Evaluate and optimize a device that either minimizes or maximizes thermal energy transfer** **Manipulate variables in an investigation and collect data to determine the relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic energy of the particles as measured by the temperature of the sample** **Evaluate multiple arguments to identify which argument supports the claim that when the kinetic energy of an object changes, energy is transferred to or from the object**

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Grade 8 Michigan Draft Science Performance Level Descriptors

	Level 2	Level 3	Level 4
Target E: Waves and Electromagnetic Radiation	**Students can do the following:** **Use mathematical representations to identify a simple model for waves that includes how the amplitude of a wave is related to the energy in a wave** **Use a model to describe that waves are reflected, absorbed, or transmitted through various materials** **Use information to explain why digitized signals are a more reliable way to encode and transmit information than analog signals**	**Students can do the following:** **Use mathematical representations to describe a simple model for waves that includes how the amplitude of a wave is related to the energy in a wave** **Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials** **Integrate qualitative scientific and technical information to support the claim that digitized signals are a more reliable way to encode and transmit information than analog signals**	**Students can do the following:** **Develop mathematical representations to describe a simple model for waves that includes how the amplitude of a wave is related to the energy in a wave** **Revise models to describe that waves are reflected, absorbed, or transmitted through various materials** **Collect and synthesize multiple sources of qualitative scientific and technical information to make an argument for the reliability of digitized signals over analog signals to encode and transmit information**

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Grade 8 Michigan Draft Science Performance Level Descriptors

	Level 2	Level 3	Level 4
Claim 2: Life Science	**Students in this range can consistently use scientific and engineering practices and crosscutting concepts to make sense of problems and phenomena of low complexity and can inconsistently use these dimensions to make sense of problems and phenomena of moderate complexity in the life sciences (targets A–E).**	**Students in this range can consistently use scientific and engineering practices and crosscutting concepts to make sense of problems and phenomena of moderate complexity and can inconsistently use these dimensions to make sense of problems and phenomena of high complexity in the life sciences (targets A–E).**	**Students in this range can consistently use scientific and engineering practices and crosscutting concepts to make sense of problems and phenomena of high complexity in the life sciences (targets A–E).**
Target A: Structure, Function, and Information Processing	**Students can do the following:** **Use evidence to identify that living things are made of cells; either one cell or many different numbers and types of cells** **Use a model to describe the function of a cell as a whole and ways parts of cells contribute to the function** **Identify evidence that supports an argument that the body is a system of interacting subsystems composed of groups of cells** **Use scientific information to identify that sensory receptors respond to stimuli by sending messages to the brain for immediate behavior or storage as memories**	**Students can do the following:** **Conduct an investigation to provide evidence that living things are made of cells; either one cell or many different numbers and types of cells** **Develop and use a model to describe the function of a cell as a whole and ways parts of cells contribute to the function** **Use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells** **Gather and synthesize information that sensory receptors respond to stimuli by sending messages to the brain for immediate behavior or storage as memories**	**Students can do the following:** **Plan and conduct an investigation to provide evidence that living things are made of cells; either one cell or many different numbers and types of cells** **Refine a model to describe the function of a cell as a whole and ways parts of cells contribute to the function** **Evaluate and refine an argument by using evidence for how the body is a system of interacting subsystems composed of groups of cells** **Gather and synthesize multiple sources of information to make an argument about how different sensory receptors respond to stimuli by sending messages to the brain for immediate behavior or storage as memories**

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	Level 2	Level 3	Level 4
Target B: Matter and Energy in Organisms and Ecosystems	**Students can do the following:** **Use evidence to describe the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms** **Use a model to describe how food is rearranged through chemical reactions forming new molecules that support growth and/or release energy as this matter moves through an organism** **Use data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem** **Use a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem** **Identify evidence that supports an argument that changes to physical or biological components of an ecosystem affect populations**	**Students can do the following:** **Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms** **Develop a model to describe how food is rearranged through chemical reactions forming new molecules that support growth and/or release energy as this matter moves through an organism** **Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem** **Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem** **Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations**	**Students can do the following:** **Analyze and compare scientific explanations based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms** **Revise a model to describe how food is rearranged through chemical reactions forming new molecules that support growth and/or release energy as this matter moves through an organism** **Determine the limitations of data that provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem** **Revise a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem** **Evaluate competing arguments supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations**
Target C: Interdependent Relationships in Ecosystems	**Students can do the following:** **Use an explanation that predicts patterns of interactions among organisms across multiple ecosystems** **Identify a design solution given a set of criteria for maintaining biodiversity and ecosystem services**	**Students can do the following:** **Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems** **Evaluate competing design solutions for maintaining biodiversity and ecosystem services**	**Students can do the following:** **Evaluate the evidence used in explanations that predict patterns of interactions among organisms across multiple ecosystems** **Develop or refine design solutions for maintaining biodiversity and ecosystem services**

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	Level 2	Level 3	Level 4
Target D: Growth, Development, and Reproduction of Organisms	**Students can do the following:**	**Students can do the following:**	**Students can do the following:**
	Identify evidence that supports an argument for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively	**Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively**	**Develop or refine an argument based on empirical evidence and scientific reasoning for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively**
	Use evidence to identify an explanation for how environmental and genetic factors influence the growth of organisms	**Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms**	**Evaluate and revise explanations based on evidence for how environmental and genetic factors influence the growth of organisms**
	Use a model to describe why structural changes to genes (mutations) located on chromosomes may affect proteins and may result in harmful, beneficial, or neutral effects to the structure and function of the organism	**Develop and use a model to describe why structural changes to genes (mutations) located on chromosomes may affect proteins and may result in harmful, beneficial, or neutral effects to the structure and function of the organism**	**Evaluate and revise models to describe why structural changes to genes (mutations) located on chromosomes may affect proteins and may result in harmful, beneficial, or neutral effects to the structure and function of the organism**
	Use a model to identify that asexual reproduction results in offspring with identical genetic information and sexual reproduction results in offspring with genetic variation	**Develop and use a model to describe why asexual reproduction results in offspring with identical genetic information and sexual reproduction results in offspring with genetic variation**	**Evaluate and revise models to describe why asexual reproduction results in offspring with identical genetic information and sexual reproduction results in offspring with genetic variation**
	Obtain and use information to identify that technologies have changed the way humans influence the inheritance of desired traits in organisms	**Gather and synthesize information about the technologies that have changed the way humans influence the inheritance of desired traits in organisms**	**Evaluate competing information about how different technologies have changed the way humans influence the inheritance of desired traits in organisms**

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	Level 2	Level 3	Level 4
Target E: Natural Selection and Adaptations	**Students can do the following:** **Use data to identify patterns in the fossil record that document the existence, diversity, extinction, and change of life forms throughout the history of life on Earth under the assumption that natural laws operate today as in the past** **Use evidence to identify anatomical similarities and differences among modern organisms and between modern and fossil organisms to infer evolutionary relationships** **Use displays of pictorial data to compare how patterns of similarities in the embryological development across multiple species can be used to identify relationships not evident in the fully formed anatomy** **Use evidence to identify that genetic variations of traits in a population increase some individuals' probability of surviving and reproducing in a specific environment** **Use mathematical representations to identify how natural selection may lead to increases and decreases of specific traits in populations over time**	**Students can do the following:** **Analyze and interpret data for patterns in the fossil record that document the existence, diversity, extinction, and change of life forms throughout the history of life on Earth under the assumption that natural laws operate today as in the past** **Apply scientific ideas to construct an explanation for the anatomical similarities and differences among modern organisms and between modern and fossil organisms to infer evolutionary relationships** **Analyze displays of pictorial data to compare patterns of similarities in the embryological development across multiple species to identify relationships not evident in the fully formed anatomy** **Construct an explanation based on evidence that describes how genetic variations of traits in a population increase some individuals' probability of surviving and reproducing in a specific environment** **Use mathematical representations to support explanations of how natural selection may lead to increases and decreases of specific traits in populations over time**	**Students can do the following:** **Evaluate multiple sources of data to determine patterns in the fossil record that document the existence, diversity, extinction, and change of life forms throughout the history of life on Earth under the assumption that natural laws operate today as in the past** **Revise explanations for the anatomical similarities and differences among modern organisms and between modern and fossil organisms to infer evolutionary relationships** **Develop displays of pictorial data to compare patterns of similarities in the embryological development across multiple species to identify relationships not evident in the fully formed anatomy** **Evaluate competing explanations that describe how genetic variations of traits in a population increase some individuals' probability of surviving and reproducing in a specific environment** **Develop or modify mathematical representations to support explanations of how natural selection may lead to increases and decreases of specific traits in populations over time**

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	Level 2	Level 3	Level 4
Claim 3: Earth and Space Science	**Students in this range can consistently use scientific and engineering practices and crosscutting concepts to make sense of problems and phenomena of low complexity and can inconsistently use these dimensions to make sense of problems and phenomena of moderate complexity in the Earth and space sciences (targets A–E).**	**Students in this range can consistently use scientific and engineering practices and crosscutting concepts to make sense of problems and phenomena of moderate complexity and can inconsistently use these dimensions to make sense of problems and phenomena of high complexity in the Earth and space sciences (targets A–E).**	**Students in this range can consistently use scientific and engineering practices and crosscutting concepts to make sense of problems and phenomena of high complexity in the Earth and space sciences (targets A–E).**
Target A: Space Systems	**Students can do the following:** **Use a model of the Earth-sun-moon system to identify the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons** **Use a model to describe the role of gravity in the motions within galaxies and the solar system** **Use data to determine scale properties of objects in the solar system**	**Students can do the following:** **Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons** **Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system** **Analyze and interpret data to determine scale properties of objects in the solar system**	**Students can do the following:** **Revise a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons** **Revise a model to explain the role of gravity in the motions within galaxies and the solar system** **Construct and use graphical displays of data to explain scale properties of objects in the solar system**

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	Level 2	Level 3	Level 4
Target B: History of Earth	**Students can do the following:** **Use evidence from rock strata to identify an explanation for how the geologic time scale is used to organize Earth's 4.6-billion-year-old history** **Use evidence to identify an explanation for how geoscience processes have changed Earth's surface at varying time and spatial scales** **Use data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of the past plate motions**	**Students can do the following:** **Construct a scientific explanation based on evidence from rock strata for how the geologic time scale is used to organize Earth's 4.6-billion-year-old history** **Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales** **Analyze and interpret data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of the past plate motions**	**Students can do the following:** **Revise scientific explanations based on evidence from rock strata for how the geologic time scale is used to organize Earth's 4.6-billion-year-old history** **Evaluate competing explanations for how geoscience processes have changed Earth's surface at varying time and spatial scales** **Construct and use graphical displays of data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of the past plate motions**
Target C: Earth's Systems	**Students can do the following:** **Use a model to describe the cycling of Earth's materials and the flow of energy that drives this process** **Use a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity** **Use evidence to identify an explanation for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes**	**Students can do the following:** **Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process** **Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity** **Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes**	**Students can do the following:** **Revise a model to describe the cycling of Earth's materials and the flow of energy that drives this process** **Revise a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity** **Revise scientific explanations based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes**

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	Level 2	Level 3	Level 4
Target D: Weather and Climate	**Students can do the following:** **Use data to describe how the motions and complex interactions of air masses results in changes in weather conditions** **Use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates** **Ask questions to identify the factors that have caused the rise in global temperatures over the past century**	**Students can do the following:** **Collect data to provide evidence for how the motions and complex interactions of air masses results in changes in weather conditions** **Develop and use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates** **Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century**	**Students can do the following:** **Construct and use graphical displays of data to predict how the motions and complex interactions of air masses will result in changes in weather conditions** **Revise a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates** **Evaluate questions to support investigations into determining the factors that have caused the rise in global temperatures over the past century**
Target E: Human Impacts	**Students can do the following:** **Use data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects** **Compare methods for monitoring and minimizing a human impact on the environment** **Use evidence to identify an argument for how increases in human population and per-capita consumption of natural resources impact Earth's systems**	**Students can do the following:** **Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects** **Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment** **Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems**	**Students can do the following:** **Evaluate multiple sources of data on natural hazards to forecast future catastrophic events and optimize current technologies to mitigate their effects** **Optimize a design solution to monitor and minimize a human impact on the environment** **Revise an argument based on evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems**

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	Level 2	Level 3	Level 4
Claim 1: Physical Science	**Students in this range can consistently use scientific and engineering practices and crosscutting concepts to make sense of problems and phenomena of low complexity and can inconsistently use these dimensions to make sense of problems and phenomena of moderate complexity in the physical sciences (targets A–E).**	**Students in this range can consistently use scientific and engineering practices and crosscutting concepts to make sense of problems and phenomena of moderate complexity and can inconsistently use these dimensions to make sense of problems and phenomena of high complexity in the physical sciences (targets A–E).**	**Students in this range can consistently use scientific and engineering practices and crosscutting concepts to make sense of problems and phenomena of high complexity in the physical sciences (targets A–E).**
Target A: Structure and Properties of Matter	**Students can do the following:** **Use the periodic table as a model to describe the relative chemical and atomic properties of elements based on the patterns of electrons in the outermost energy level of atoms** **Conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles** **Use models to identify the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay** **Communicate information that describes that the molecular-level structure is important in the functioning of designed materials**	**Students can do the following:** **Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms** **Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles** **Develop models to illustrate the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay** **Communicate scientific and technical information about why the molecular-level structure is important in the functioning of designed materials**	**Students can do the following:** **Use the periodic table as a model to explain the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms** **Evaluate and improve the design of an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles** **Develop models to compare the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay and the impact of these processes on humans** **Evaluate the function of designed materials based on their molecular-level structures**

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	Level 2	Level 3	Level 4
Target B: Chemical Reactions	**Students can do the following:**	**Students can do the following:**	**Students can do the following:**
	Describe the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties	**Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties**	**Construct and revise an explanation using quantitative evidence for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties**
	Use a model to identify that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy	**Develop a model to illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy**	**Evaluate the merits of two or more models that illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy**
	Describe the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs	**Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs**	**Taking into account unintended side effects, provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs**
	Identify a change in conditions that would produce increased amounts of products at equilibrium	**Refine the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium**	**While prioritizing trade-offs and criteria, refine the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium**
	Identify a mathematical representation that supports the claim that atoms, and therefore mass, are conserved during a chemical reaction	**Use mathematical representations to support the claim that atoms, and therefore mass, are conserved during a chemical reaction**	**Use mathematical representations to construct the claim that atoms, and therefore mass, are conserved during a chemical reaction**

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	Level 2	Level 3	Level 4
Target C: Forces and Interactions	**Students can do the following:** **Use data to describe how Newton's second law of motion describes the mathematical relationship among the net force on a macroscopic object, its mass, and its acceleration** **Identify mathematical representations that support the claim that the total momentum of a system of objects is conserved when there is no net force on the system** **Apply science and engineering ideas to design a device that minimizes the force on a macroscopic object during a collision** **Use mathematical representations of Newton's Law of Gravitation and Coulomb's Law to identify the gravitational and electrostatic forces between objects** **Conduct an investigation to provide evidence that an electric current can produce a magnetic field and that a changing magnetic field can produce an electric current**	**Students can do the following:** **Analyze data to support the claim that Newton's second law of motion describes the mathematical relationship among the net force on a macroscopic object, its mass, and its acceleration** **Use mathematical representations to support the claim that the total momentum of a system of objects is conserved when there is no net force on the system** **Apply science and engineering ideas to design, evaluate, and refine a device that minimizes the force on a macroscopic object during a collision** **Use mathematical representations of Newton's Law of Gravitation and Coulomb's Law to describe and predict the gravitational and electrostatic forces between objects** **Plan and conduct an investigation to provide evidence that an electric current can produce a magnetic field and that a changing magnetic field can produce an electric current**	**Students can do the following:** **Compare various types of data sets that support the claim that Newton's second law of motion describes the mathematical relationship among the net force on a macroscopic object, its mass, and its acceleration** **Create or revise a computational model or simulation to support the claim that the total momentum of a system of objects is conserved when there is no net force on the system** **Apply science and engineering ideas to compare competing designs of a device that minimizes the force on a macroscopic object during a collision** **Create or revise a computational model or simulation of Newton's Law of Gravitation and Coulomb's Law to describe and predict the gravitational and electrostatic forces between objects** **Taking into account the limitations of data collection methods, compare competing designs for investigations that provide evidence an electric current can produce a magnetic field and that a changing magnetic field can produce an electric current**

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	Level 2	Level 3	Level 4
Target D: Energy	**Students can do the following:** **Use a computational model to calculate the change in the energy of one component in a system when the change in energy of the other component(s) and energy flows in and out of the system are known** **Use models to illustrate that energy at the macroscopic scale can be accounted for as a combination of energy associated with the motion of particles (objects) and energy associated with the relative position of particles (objects)** **Design a device that works within given constraints to convert one form of energy into another form of energy** **Conduct an investigation to provide evidence that the transfer of thermal energy when two components of different temperature are combined within a closed system results in a more uniform energy distribution among the components in the system (second law of thermodynamics)** **Use a model of two objects interacting through electric or magnetic fields to illustrate the forces between objects and the changes in energy of the objects due to the interaction**	**Students can do the following:** **Create a computational model to calculate the change in the energy of one component in a system when the change in energy of the other component(s) and energy flows in and out of the system are known** **Develop and use models to illustrate that energy at the macroscopic scale can be accounted for as a combination of energy associated with the motion of particles (objects) and energy associated with the relative position of particles (objects)** **Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy** **Plan and conduct an investigation to provide evidence that the transfer of thermal energy when two components of different temperature are combined within a closed system results in a more uniform energy distribution among the components in the system (second law of thermodynamics)** **Develop and use a model of two objects interacting through electric or magnetic fields to illustrate the forces between objects and the changes in energy of the objects due to the interaction**	**Students can do the following:** **Apply techniques of algebra and functions to calculate the change in the energy of one component in a system when the change in energy of the other component(s) and energy flows in and out of the system are known** **Evaluate competing models that illustrate that energy at the macroscopic scale can be accounted for as a combination of energy associated with the motion of particles (objects) and energy associated with the relative position of particles (objects)** **Evaluate competing designs of devices that work within given constraints to convert one form of energy into another form of energy** **Taking into account the limitations of data collection methods, compare competing designs for investigations that provide evidence that the transfer of thermal energy when two components of different temperature are combined within a closed system results in a more uniform energy distribution among the components in the system (second law of thermodynamics)** **Evaluate competing models of two objects interacting through electric or magnetic fields to illustrate the forces between objects and the changes in energy of the objects due to the interaction**

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	Level 2	Level 3	Level 4
Target E: Waves and Electromagnetic Radiation	**Students can do the following:** **Use mathematical representations to identify a claim regarding relationships among the frequency, wavelength, and speed of waves traveling in various media** **Ask questions about the advantages of using digital transmission and storage of information** **Identify the claims, evidence, and reasoning that support the idea that electromagnetic radiation can be described either by a wave model or a particle model, and that for some situations one model is more useful than the other** **Identify relevant published materials about the effects that different frequencies of electromagnetic radiation have when absorbed by matter** **Gather, read, and evaluate technical information about how some technological devices use the principles of wave behavior and wave interactions with matter to transmit and capture information and energy**	**Students can do the following:** **Use mathematical representations to support a claim regarding relationships among the frequency, wavelength, and speed of waves traveling in various media** **Evaluate questions about the advantages of using digital transmission and storage of information** **Evaluate the claims, evidence, and reasoning behind the idea that electromagnetic radiation can be described either by a wave model or a particle model, and that for some situations one model is more useful than the other** **Evaluate the validity and reliability of claims in published materials of the effects that different frequencies of electromagnetic radiation have when absorbed by matter** **Communicate technical information about how some technological devices use the principles of wave behavior and wave interactions with matter to transmit and capture information and energy**	**Students can do the following:** **Create or revise a computational model or simulation to support a claim regarding relationships among the frequency, wavelength, and speed of waves traveling in various media** **Evaluate questions that challenge the premise(s) of an argument about the advantages or disadvantages of using digital transmission and storage of information** **Construct, use, or present an oral or written argument or counterargument based on data and evidence about the idea that electromagnetic radiation can be described either by a wave model or a particle model, and that for some situations one model is more useful than the other** **Communicate information about the effects that different frequencies of electromagnetic radiation have when absorbed by matter** **Use multiple formats to communicate technical information about how some technological devices use the principles of wave behavior and wave interactions with matter to transmit and capture information and energy**

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	Level 2	Level 3	Level 4
Claim 2: Life Science	**Students in this range can consistently use scientific and engineering practices and crosscutting concepts to make sense of problems and phenomena of low complexity and can inconsistently use these dimensions to make sense of problems and phenomena of moderate complexity in the life sciences (targets A–E).**	**Students in this range can consistently use scientific and engineering practices and crosscutting concepts to make sense of problems and phenomena of moderate complexity and can inconsistently use these dimensions to make sense of problems and phenomena of high complexity in the life sciences (targets A–E).**	**Students in this range can consistently use scientific and engineering practices and crosscutting concepts to make sense of problems and phenomena of high complexity in the life sciences (targets A–E).**
Target A: Structure and Function	**Students can do the following:** **Identify evidence that supports a claim for how the structure of DNA determines the structure of proteins, which carry out the essential functions of life through systems of specialized cells** **Use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms** **Conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis**	**Students can do the following:** **Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins, which carry out the essential functions of life through systems of specialized cells** **Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms** **Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis**	**Students can do the following:** **Compare competing explanations based on evidence for how the structure of DNA determines the structure of proteins, which carry out the essential functions of life through systems of specialized cells** **Refine a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms** **Compare competing designs for investigation that provide evidence that feedback mechanisms maintain homeostasis**

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Target B: Matter and Energy in Organisms and Ecosystems	**Students can do the following:** **Identify a model that illustrates how photosynthesis transforms light energy into stored chemical energy** **Construct an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules** **Identify a model that illustrates that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed, resulting in a net transfer of energy** **Construct an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions** **Identify mathematical representations that support claims for the cycling of matter and flow of energy among organisms in an ecosystem** **Use a model to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere**	**Students can do the following:** **Use a model to illustrate how photosynthesis transforms light energy into stored chemical energy** **Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules** **Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed, resulting in a net transfer of energy** **Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions** **Use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem** **Develop a model to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere**	**Students can do the following:** **Develop and use a model to illustrate how photosynthesis transforms light energy into stored chemical energy** **Evaluate and refine explanations based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules** **Develop and use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed, resulting in a net transfer of energy** **Evaluate and refine explanations based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions** **Develop and use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem** **Refine a model to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere**

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	Level 2	Level 3	Level 4
Target C: Interdependent Relationships in Ecosystems	**Students can do the following:** **Identify mathematical and/or computational representations that support explanations of factors that affect carrying capacity of ecosystems at different scales** **Identify claims, evidence, and reasoning about the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem** **Identify a solution for reducing the impacts of human activities on the environment and biodiversity** **Identify evidence for the role of group behavior on individual and species' chances to survive and reproduce** **Use a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity**	**Students can do the following:** **Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales** **Evaluate claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem** **Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity** **Evaluate evidence for the role of group behavior on individual and species' chances to survive and reproduce** **Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity**	**Students can do the following:** **Develop and use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales** **Construct, use, or present an oral or written argument or counterargument that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem** **Compare competing solutions for reducing the impacts of human activities on the environment and biodiversity, considering given constraints and trade-offs** **Construct an argument using evidence for the role of group behavior on individual and species' chances to survive and reproduce** **Optimize a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity**

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	Level 2	Level 3	Level 4
Target D: Inheritance and Variation of Traits	**Students can do the following:** **Identify a model that illustrates the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms** **Identify questions that clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring** **Identify a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors** **Analyze and interpret data to explain the variation and distribution of expressed traits in a population**	**Students can do the following:** **Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms** **Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring** **Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors** **Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population**	**Students can do the following:** **Develop and use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms** **Ask questions to clarify relationships and refine models that show the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring** **Compare and evaluate competing arguments based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors** **Consider the limitations of data analysis used to explain the variation and distribution of expressed traits in a population**

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Grade 11 Michigan Draft Science Performance Level Descriptors

	Level 2	Level 3	Level 4
Target E: Natural Selection and Evolution	**Students can do the following:** **Gather, read, and evaluate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence** **Identify an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment** **Analyze and interpret data to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait** **Identify an explanation based on evidence for how natural selection leads to adaptation of populations** **Identify evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species**	**Students can do the following:** **Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence** **Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment** **Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait** **Construct an explanation based on evidence for how natural selection leads to adaptation of populations** **Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species**	**Students can do the following:** **Evaluate the validity and reliability of scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence** **Evaluate an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment** **Consider the limitations of data that support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait** **Compare competing explanations based on evidence for how natural selection leads to adaptation of populations** **Construct an argument that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species**

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Grade 11 Michigan Draft Science Performance Level Descriptors

	Level 2	Level 3	Level 4
Claim 3: Earth and Space Science	**Students in this range can consistently use scientific and engineering practices and crosscutting concepts to make sense of problems and phenomena of low complexity and can inconsistently use these dimensions to make sense of problems and phenomena of moderate complexity in the Earth and space sciences (targets A–E).**	**Students in this range can consistently use scientific and engineering practices and crosscutting concepts to make sense of problems and phenomena of moderate complexity and can inconsistently use these dimensions to make sense of problems and phenomena of high complexity in the Earth and space sciences (targets A–E).**	**Students in this range can consistently use scientific and engineering practices and crosscutting concepts to make sense of problems and phenomena of high complexity in the Earth and space sciences (targets A–E).**
Target A: Space Systems	**Students can do the following:** **Use a model based on evidence to illustrate the life span of the sun and the role of nuclear fusion in the sun's core to release energy that eventually reaches Earth in the form of radiation** **Identify an explanation of the Big Bang theory based on astronomical evidence of light spectra, motion of distant galaxies, and composition of matter in the universe** **Gather, read, and evaluate scientific ideas about the way stars, over their life cycle, produce elements** **Identify mathematical or computational representations that predict the motion of orbiting objects in the solar system**	**Students can do the following:** **Develop a model based on evidence to illustrate the life span of the sun and the role of nuclear fusion in the sun's core to release energy that eventually reaches Earth in the form of radiation** **Construct an explanation of the Big Bang theory based on astronomical evidence of light spectra, motion of distant galaxies, and composition of matter in the universe** **Communicate scientific ideas about the way stars, over their life cycle, produce elements** **Use mathematical or computational representations to predict the motion of orbiting objects in the solar system**	**Students can do the following:** **Refine a model based on evidence to illustrate the life span of the sun and the role of nuclear fusion in the sun's core to release energy that eventually reaches Earth in the form of radiation** **Compare competing explanations of the Big Bang theory based on astronomical evidence of light spectra, motion of distant galaxies, and composition of matter in the universe** **Evaluate the validity and reliability of scientific information about the way stars, over their life cycle, produce elements** **Develop and use mathematical or computational representations to predict the motion of orbiting objects in the solar system**

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Grade 11 Michigan Draft Science Performance Level Descriptors

	Level 2	Level 3	Level 4
Target B: History of Earth	**Students can do the following:** **Identify evidence of the past and current movements of continental and oceanic crust and the theory of plate tectonics to explain the ages of crustal rocks** **Identify scientific reasoning and evidence from ancient Earth materials, meteorites, and other planetary surfaces to construct an account of Earth's formation and early history** **Use a model to illustrate how Earth's internal and surface processes operate at different spatial and temporal scales to form continental and ocean-floor features**	**Students can do the following:** **Evaluate evidence of the past and current movements of continental and oceanic crust and the theory of plate tectonics to explain the ages of crustal rocks** **Apply scientific reasoning and evidence from ancient Earth materials, meteorites, and other planetary surfaces to construct an account of Earth's formation and early history** **Develop a model to illustrate how Earth's internal and surface processes operate at different spatial and temporal scales to form continental and ocean-floor features**	**Students can do the following:** **Construct an argument relating to the past and current movements of continental and oceanic crust and the theory of plate tectonics to explain the ages of crustal rocks** **Revise an explanation based on evidence from ancient Earth materials, meteorites, and other planetary surfaces to construct an account of Earth's formation and early history** **Compare models that illustrate how Earth's internal and surface processes operate at different spatial and temporal scales to form continental and ocean-floor features**

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Grade 11 Michigan Draft Science Performance Level Descriptors

	Level 2	Level 3	Level 4
Target C: Earth's Systems	**Students can do the following:** **Use geoscience data to make the claim that one change to Earth's surface can create feedbacks that cause changes to other Earth systems** **Use a model based on evidence of Earth's interior to describe the cycling of matter by thermal convection** **Conduct an investigation of the properties of water and its effects on Earth materials and surface processes** **Use a quantitative model to describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere** **Evaluate evidence about the simultaneous coevolution of Earth's systems and life on Earth**	**Students can do the following:** **Analyze geoscience data to make the claim that one change to Earth's surface can create feedbacks that cause changes to other Earth systems** **Develop a model based on evidence of Earth's interior to describe the cycling of matter by thermal convection** **Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes** **Develop a quantitative model to describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere** **Construct an argument based on evidence about the simultaneous coevolution of Earth's systems and life on Earth**	**Students can do the following:** **Evaluate the impact of new geoscience data to make the claim that one change to Earth's surface can create feedbacks that cause changes to other Earth systems** **Refine a model based on evidence of Earth's interior to describe the cycling of matter by thermal convection** **Revise an investigation by manipulating the variables and collecting data about the properties of water and its effects on Earth materials and surface processes** **Evaluate the merits and limitations of two different quantitative models that describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere** **Revise an argument based on evidence about the simultaneous coevolution of Earth's systems and life on Earth**
Target D: Weather and Climate	**Students can do the following:** **Identify a model that describes how variations in the flow of energy into and out of Earth's systems result in changes in climate** **Use geoscience data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth systems**	**Students can do the following:** **Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate** **Analyze geoscience data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth systems**	**Students can do the following:** **Develop and use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate** **Evaluate the impact of new geoscience data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth systems**

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Grade 11 Michigan Draft Science Performance Level Descriptors

	Level 2	Level 3	Level 4
Target E: Human Sustainability	**Students can do the following:** **Identify an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity** **Develop a design solution for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios** **Use a computational simulation to illustrate the relationships among the management of natural resources, the sustainability of human populations, and biodiversity** **Develop a technological solution that reduces impacts of human activities on natural systems** **Identify a computational representation that illustrates the relationships among Earth systems and how those relationships are being modified due to human activity**	**Students can do the following:** **Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity** **Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios** **Create a computational simulation to illustrate the relationships among the management of natural resources, the sustainability of human populations, and biodiversity** **Evaluate or refine a technological solution that reduces impacts of human activities on natural systems** **Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity**	**Students can do the following:** **Revise an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity** **Optimize a design solution for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios** **Refine a computational simulation to illustrate the relationships among the management of natural resources, the sustainability of human populations, and biodiversity** **Compare competing technological solutions that reduce impacts of human activities on natural systems, considering given constraints and trade-offs** **Develop and use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity**

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Detailed Reports of Participants' Judgments

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Raw Recommendations by Round and Participant for Grade 5 Science

Raw Recommendations on the Raw Score Metric

		Round 1			Round 2			Round 3		
Panelist #	Table	Threshold PartProf	Threshold Prof.	Threshold Adv.	Threshold PartProf	Threshold Prof.	Threshold Adv.	Threshold PartProf	Threshold Prof.	Threshold Adv.
101	1	10.65	25.90	39.95	10.95	25.25	37.45	10.95	25.25	37.15
102	1	13.22	25.21	33.12	13.18	26.02	34.32	13.23	26.02	34.49
103	1	13.30	28.35	36.95	12.20	25.80	36.45	12.15	25.65	36.50
104	1	13.50	29.75	39.60	11.95	27.75	38.90	11.95	27.75	38.90
105	2	14.60	22.55	31.05	14.20	24.00	33.10	14.30	24.10	33.30
106	2	9.40	20.35	39.75	11.65	22.20	38.65	11.65	22.20	38.65
107	2	16.80	26.95	39.25	13.50	24.60	39.35	13.50	24.60	39.35
108	2	12.20	22.30	37.60	12.40	22.85	38.30	12.40	22.90	38.15
116	2	13.65	24.35	35.50	13.30	23.30	38.30	13.25	23.30	38.20

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Summaries of Recommendations by Round for Grade 5 Science

Recommendations on the Raw Score Metric

		Round 1			Round 2			Round 3		
Group	**Statistic**	**Threshold PartProf**	**Threshold Prof.**	**Threshold Adv.**	**Threshold PartProf**	**Threshold Prof.**	**Threshold Adv.**	**Threshold PartProf**	**Threshold Prof.**	**Threshold Adv.**
All Partici-pants	**Median**	**13**	**25**	**38**	**12**	**25**	**38**	**12**	**25**	**38**
	Minimum	9	20	31	11	22	33	11	22	33
	25th %ile	12	23	36	12	23	36	12	23	37
	75th %ile	14	27	40	13	26	39	13	26	39
	Maximum	17	30	40	14	28	39	14	28	39
	S.D.	2.32	3.12	3.26	1.01	1.87	2.24	1.01	1.87	2.2
	N	9	9	9	9	9	9	9	9	9

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Summaries of Recommendations by Table for Grade 5 Science

Recommendations on the Raw Score Metric

		Round 1			Round 2			Round 3		
Table	Statistic	Threshold PartProf	Threshold Prof.	Threshold Adv.	Threshold PartProf	Threshold Prof.	Threshold Adv.	Threshold PartProf	Threshold Prof.	Threshold Adv.
1	Median	13	27	38.5	12	26	36.5	12	26	37
	Minimum	11	25	33	11	25	34	11	25	34
	25th %ile	12.5	25.75	36	11.75	25.75	35.5	11.75	25.75	36.25
	75th %ile	13.25	28.5	40	12.25	26.5	37.5	12.25	26.5	37.5
	Maximum	14	30	40	13	28	39	13	28	39
	S.D.	1.26	2.22	3.32	0.82	1.26	2.08	0.82	1.26	2.06
	N	4	4	4	4	4	4	4	4	4
2	Median	14	23	38	13	23	38	13	23	38
	Minimum	9	20	31	12	22	33	12	22	33
	25th %ile	12	22	36	12	23	38	12	23	38
	75th %ile	15	24	39	14	24	39	14	24	39
	Maximum	17	27	40	14	25	39	14	25	39
	S.D.	3.05	2.59	3.56	1	1.14	2.51	1	1.14	2.51
	N	5	5	5	5	5	5	5	5	5

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Raw Recommendations by Round and Participant for Grade 8 Science

Raw Recommendations on the Raw Score Metric

		Round 1			Round 2			Round 3		
Panelist #	Table	Threshold PartProf	Threshold Prof.	Threshold Adv.	Threshold PartProf	Threshold Prof.	Threshold Adv.	Threshold PartProf	Threshold Prof.	Threshold Adv.
101	3	8.65	19.70	37.10	9.40	21.50	35.65	9.40	21.60	35.45
102	3	11.09	23.95	31.14	11.17	23.83	31.11	11.24	23.86	31.16
103	3	13.50	26.55	38.40	11.15	23.50	34.00	11.15	23.40	34.20
104	3	9.40	21.80	31.75	9.50	21.85	31.80	9.20	22.00	32.40
105	3	16.25	24.95	31.90	13.75	24.20	32.20	13.40	23.60	32.10
106	4	11.10	19.30	39.90	12.10	21.95	39.15	12.10	21.95	39.15
107	4	10.70	20.05	37.30	12.75	22.30	38.85	12.75	22.20	38.80
108	4	13.95	25.45	37.90	13.45	24.20	38.70	13.45	24.10	38.65
109	1	13.90	24.55	34.65	17.45	26.85	35.25	17.45	26.80	35.20
110	2	17.55	24.30	33.10	17.75	25.30	34.00	17.65	25.45	34.20
111	2	14.85	23.30	32.35	14.85	24.00	33.25	15.90	25.70	35.15
112	2	21.40	26.90	31.00	16.80	26.95	36.75	16.90	27.10	36.75
113	1	17.50	28.80	38.90	17.70	28.65	38.15	17.50	28.15	37.85
114	1	23.75	31.00	37.20	21.65	29.60	37.05	20.95	29.05	36.90
115	2	15.50	26.85	35.95	15.20	27.25	36.60	15.00	26.95	36.50
116	4	16.60	24.65	37.70	12.85	23.30	37.75	12.85	23.30	37.75
117	1	20.15	25.10	32.65	20.50	28.05	35.95	19.30	27.25	35.35
118	2	16.10	27.30	39.10	16.30	27.15	38.40	16.10	26.90	38.35

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Summaries of Recommendations by Round for Grade 8 Science

Recommendations on the Raw Score Metric

		Round 1			Round 2			Round 3		
Group	**Statistic**	**Threshold PartProf**	**Threshold Prof.**	**Threshold Adv.**	**Threshold PartProf**	**Threshold Prof.**	**Threshold Adv.**	**Threshold PartProf**	**Threshold Prof.**	**Threshold Adv.**
All Partici-pants	**Median**	**15.5**	**25**	**36.5**	**14.5**	**24**	**36.5**	**14**	**24.5**	**36**
	Minimum	9	19	31	9	22	31	9	22	31
	25th %ile	11.75	23.25	32.25	12.25	23.25	34	12.25	23	34.25
	75th %ile	17.75	27	38	17	27	38	17	27	38
	Maximum	24	31	40	22	30	39	21	29	39
	S.D.	4.12	3.14	3.07	3.64	2.55	2.62	3.47	2.34	2.55
	N	18	18	18	18	18	18	18	18	18

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Summaries of Recommendations by Table for Grade 8 Science

Recommendations on the Raw Score Metric

		Round 1			Round 2			Round 3		
Table	Statistic	Threshold PartProf	Threshold Prof.	Threshold Adv.	Threshold PartProf	Threshold Prof.	Threshold Adv.	Threshold PartProf	Threshold Prof.	Threshold Adv.
	Median	19	27	36	19.5	28.5	36.5	18.5	27.5	36
	Minimum	14	25	33	17	27	35	17	27	35
	25th %ile	17	25	34.5	17.75	27.75	35.75	17.75	27	35
1	75th %ile	21	29.5	37.5	21.25	29.25	37.25	19.5	28.25	37.25
	Maximum	24	31	39	22	30	38	21	29	38
	S.D.	4.16	3	2.58	2.38	1.29	1.29	1.71	0.96	1.5
	N	4	4	4	4	4	4	4	4	4
	Median	16	27	33	16	27	37	16	27	37
	Minimum	15	23	31	15	24	33	15	25	34
	25th %ile	16	24	32	15	25	34	16	26	35
2	75th %ile	18	27	36	17	27	37	17	27	37
	Maximum	21	27	39	18	27	38	18	27	38
	S.D.	2.39	1.95	3.27	1.3	1.41	2.17	1.14	0.89	1.64
	N	5	5	5	5	5	5	5	5	5
	Median	11	24	32	11	24	32	11	23	32
	Minimum	9	20	31	9	22	31	9	22	31
	25th %ile	9	22	32	10	22	32	9	22	32
3	75th %ile	14	25	37	11	24	34	11	24	34
	Maximum	16	27	38	14	24	36	13	24	35
	S.D.	3.11	2.7	3.24	1.87	1.1	2	1.67	1	1.64
	N	5	5	5	5	5	5	5	5	5

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Summaries of Recommendations by Table for Grade 8 Science

Recommendations on the Raw Score Metric

		Round 1			Round 2			Round 3		
Table	Statistic	Threshold PartProf	Threshold Prof.	Threshold Adv.	Threshold PartProf	Threshold Prof.	Threshold Adv.	Threshold PartProf	Threshold Prof.	Threshold Adv.
4	Median	12.5	22.5	38	13	22.5	39	13	22.5	39
	Minimum	11	19	37	12	22	38	12	22	38
	25th %ile	11	19.75	37.75	12.75	22	38.75	12.75	22	38.75
	75th %ile	14.75	25	38.5	13	23.25	39	13	23.25	39
	Maximum	17	25	40	13	24	39	13	24	39
	S.D.	2.87	3.2	1.26	0.5	0.96	0.5	0.5	0.96	0.5
	N	4	4	4	4	4	4	4	4	4

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Raw Recommendations by Round and Participant for Grade 11 Science

Raw Recommendations on the Raw Score Metric

		Round 1			Round 2			Round 3		
Panelist #	Table	Threshold PartProf	Threshold Prof.	Threshold Adv.	Threshold PartProf	Threshold Prof.	Threshold Adv.	Threshold PartProf	Threshold Prof.	Threshold Adv.
109	6	18.45	30.00	40.70	18.75	30.25	40.35	18.25	30.05	39.85
110	8	18.70	29.25	40.70	19.20	29.95	40.90	19.20	29.95	40.90
111	8	19.30	28.90	39.00	19.45	30.60	41.75	19.25	30.60	41.75
112	6	14.15	28.05	38.90	17.50	30.55	41.05	17.50	30.45	41.00
113	7	15.35	28.15	40.55	15.65	28.75	40.80	15.00	28.40	40.50
114	6	20.40	34.95	44.35	18.10	31.95	41.95	18.10	31.95	41.95
115	7	19.90	32.00	40.65	19.30	31.40	39.95	16.25	30.05	38.75
117	7	19.05	30.70	38.60	19.45	30.75	39.10	18.75	30.75	39.75
118	8	19.05	31.10	42.15	19.10	31.40	42.50	18.25	31.40	42.50

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Summaries of Recommendations by Round for Grade 11 Science

Recommendations on the Raw Score Metric

		Round 1			Round 2			Round 3		
Group	**Statistic**	**Threshold PartProf**	**Threshold Prof.**	**Threshold Adv.**	**Threshold PartProf**	**Threshold Prof.**	**Threshold Adv.**	**Threshold PartProf**	**Threshold Prof.**	**Threshold Adv.**
All Partici-pants	**Median**	**19**	**30**	**41**	**19**	**31**	**41**	**18**	**30**	**41**
	Minimum	14	28	39	16	29	39	15	28	39
	25th %ile	18	29	39	18	30	40	18	30	40
	75th %ile	19	31	41	19	31	42	19	31	42
	Maximum	20	35	44	19	32	43	19	32	43
	S.D.	2.15	2.24	1.64	1.01	0.87	1.22	1.39	1.12	1.22
	N	9	9	9	9	9	9	9	9	9

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Summaries of Recommendations by Table for Grade 11 Science

Recommendations on the Raw Score Metric

		Round 1			Round 2			Round 3		
Table	Statistic	Threshold PartProf	Threshold Prof.	Threshold Adv.	Threshold PartProf	Threshold Prof.	Threshold Adv.	Threshold PartProf	Threshold Prof.	Threshold Adv.
6	Median	18	30	41	18	31	41	18	30	41
	Minimum	14	28	39	18	30	40	18	30	40
	25th %ile	16	29	40	18	30.5	40.5	18	30	40.5
	75th %ile	19	32.5	42.5	18.5	31.5	41.5	18	31	41.5
	Maximum	20	35	44	19	32	42	18	32	42
	S.D.	3.06	3.61	2.52	0.58	1	1	0	1.15	1
	N	3	3	3	3	3	3	3	3	3
7	Median	19	31	41	19	31	40	16	30	40
	Minimum	15	28	39	16	29	39	15	28	39
	25th %ile	17	29.5	40	17.5	30	39.5	15.5	29	39.5
	75th %ile	19.5	31.5	41	19	31	40.5	17.5	30.5	40.5
	Maximum	20	32	41	19	31	41	19	31	41
	S.D.	2.65	2.08	1.15	1.73	1.15	1	2.08	1.53	1
	N	3	3	3	3	3	3	3	3	3
8	Median	19	29	41	19	31	42	19	31	42
	Minimum	19	29	39	19	30	41	18	30	41
	25th %ile	19	29	40	19	30.5	41.5	18.5	30.5	41.5
	75th %ile	19	30	41.5	19	31	42.5	19	31	42.5
	Maximum	19	31	42	19	31	43	19	31	43
	S.D.	0	1.15	1.53	0	0.58	1	0.58	0.58	1
	N	3	3	3	3	3	3	3	3	3

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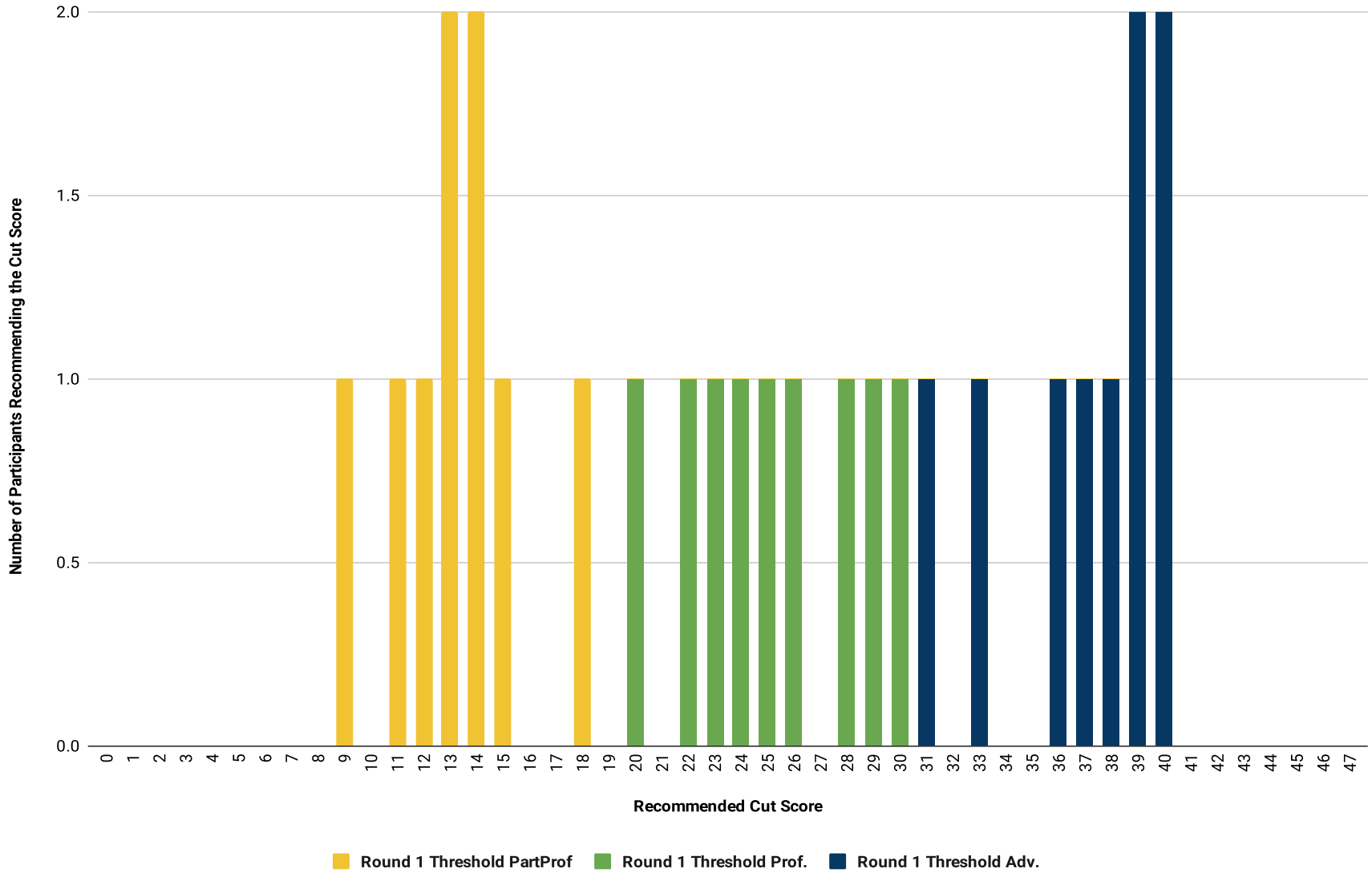
G

Graphical Representation of Participants' Judgments

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Histogram of Recommended Cut Scores for Round 1

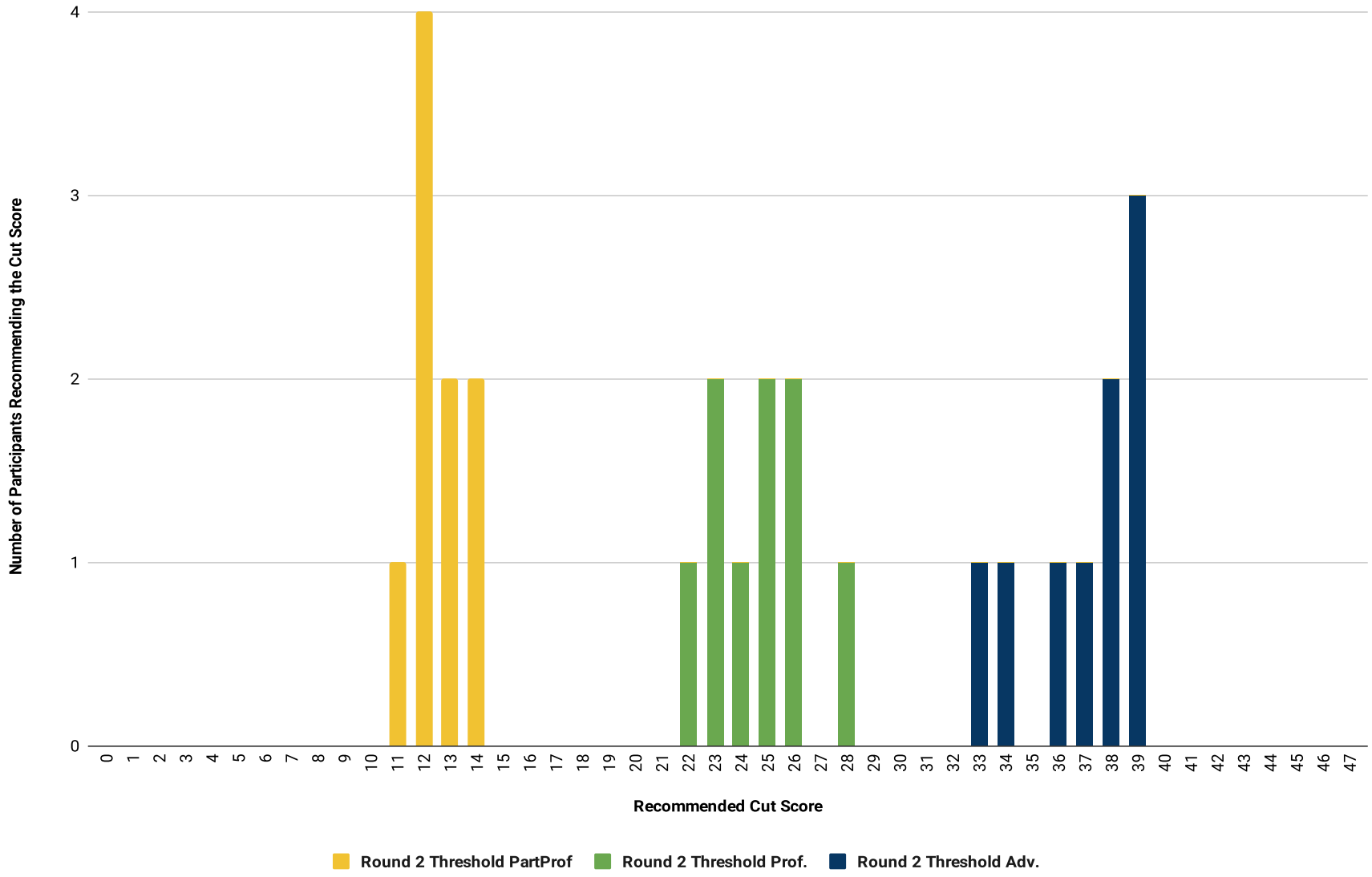
Michigan M-STEP Grade 5 Science



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Histogram of Recommended Cut Scores for Round 2

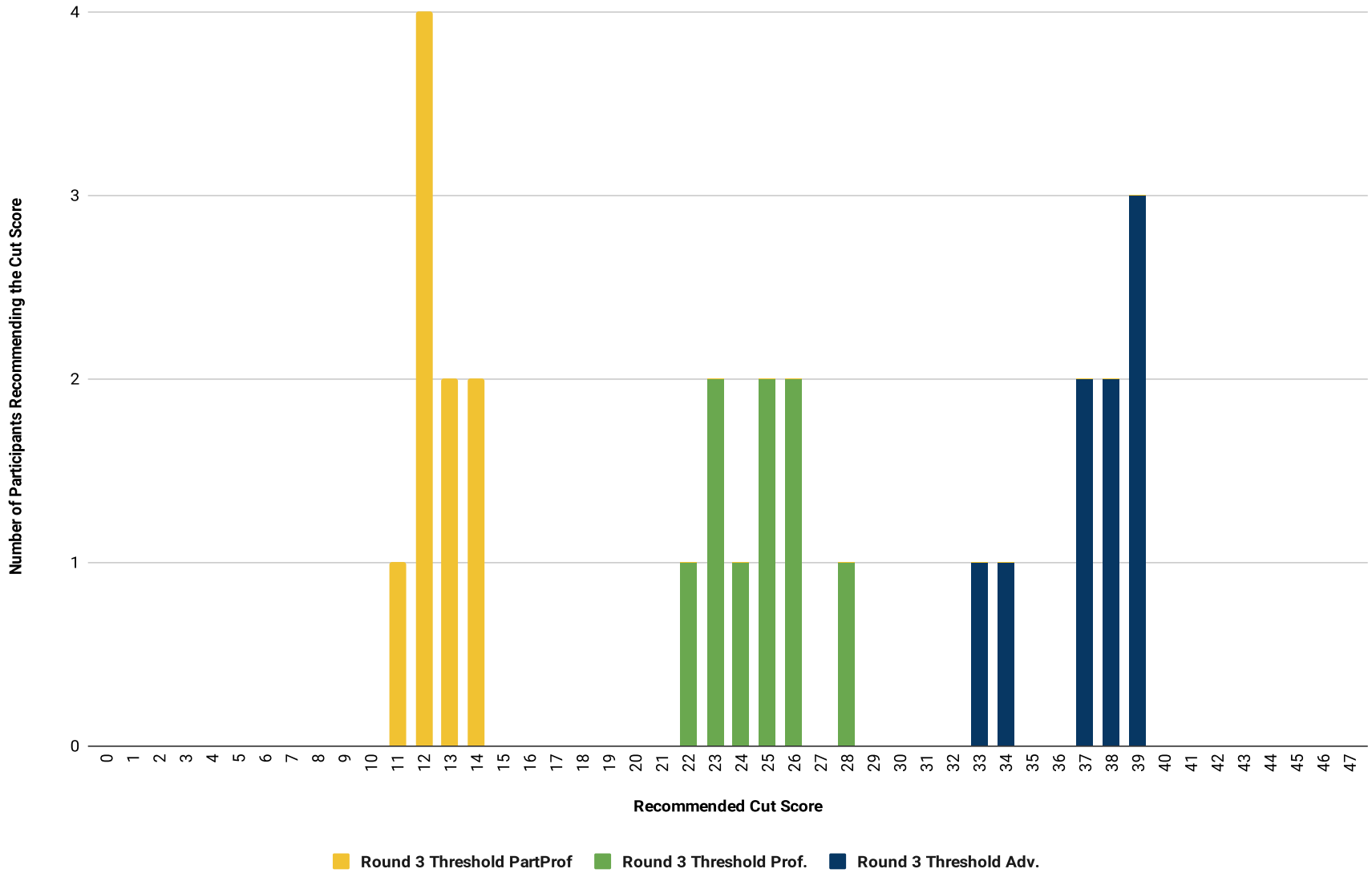
Michigan M-STEP Grade 5 Science



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Histogram of Recommended Cut Scores for Round 3

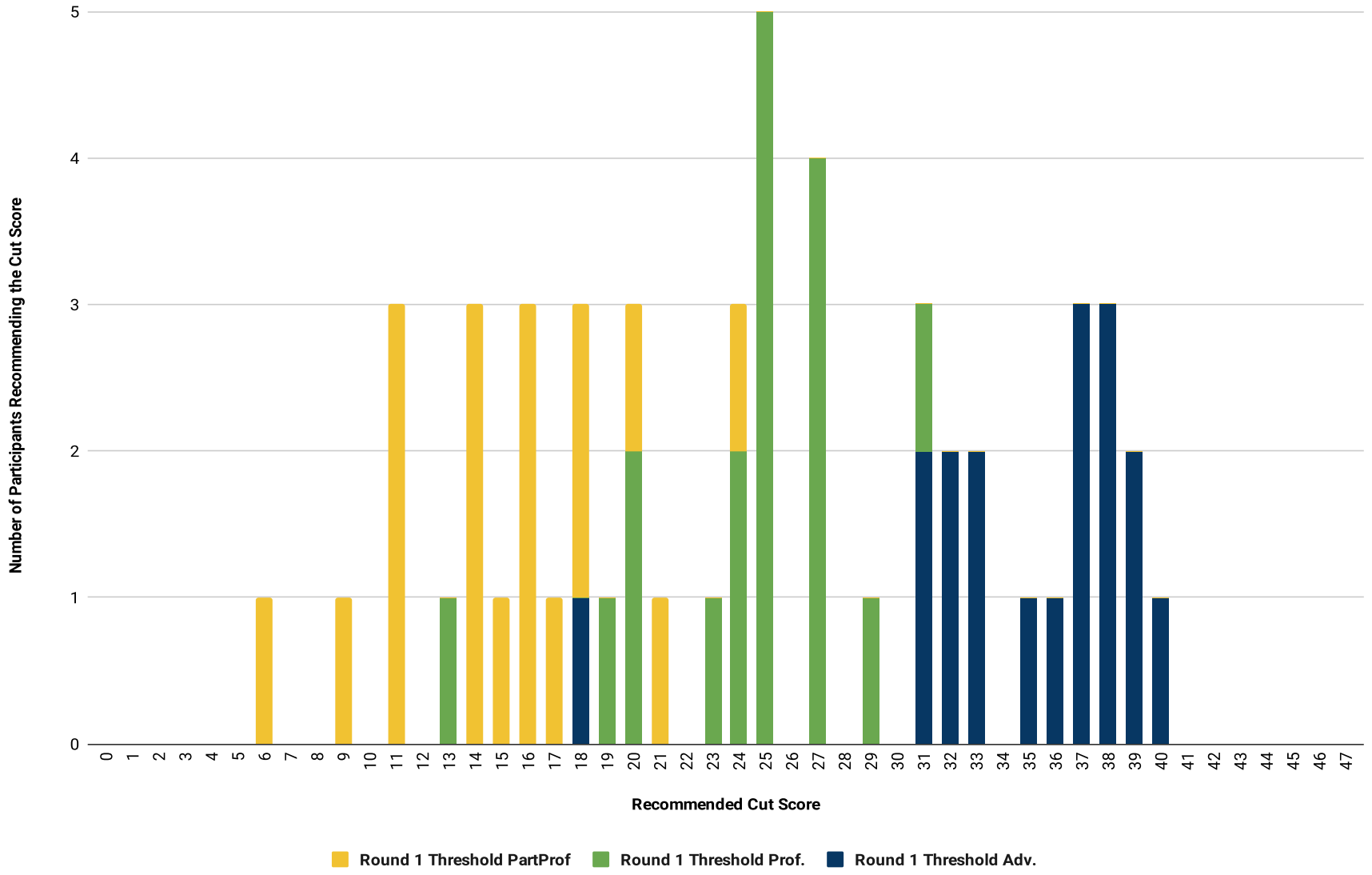
Michigan M-STEP Grade 5 Science



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Histogram of Recommended Cut Scores for Round 1

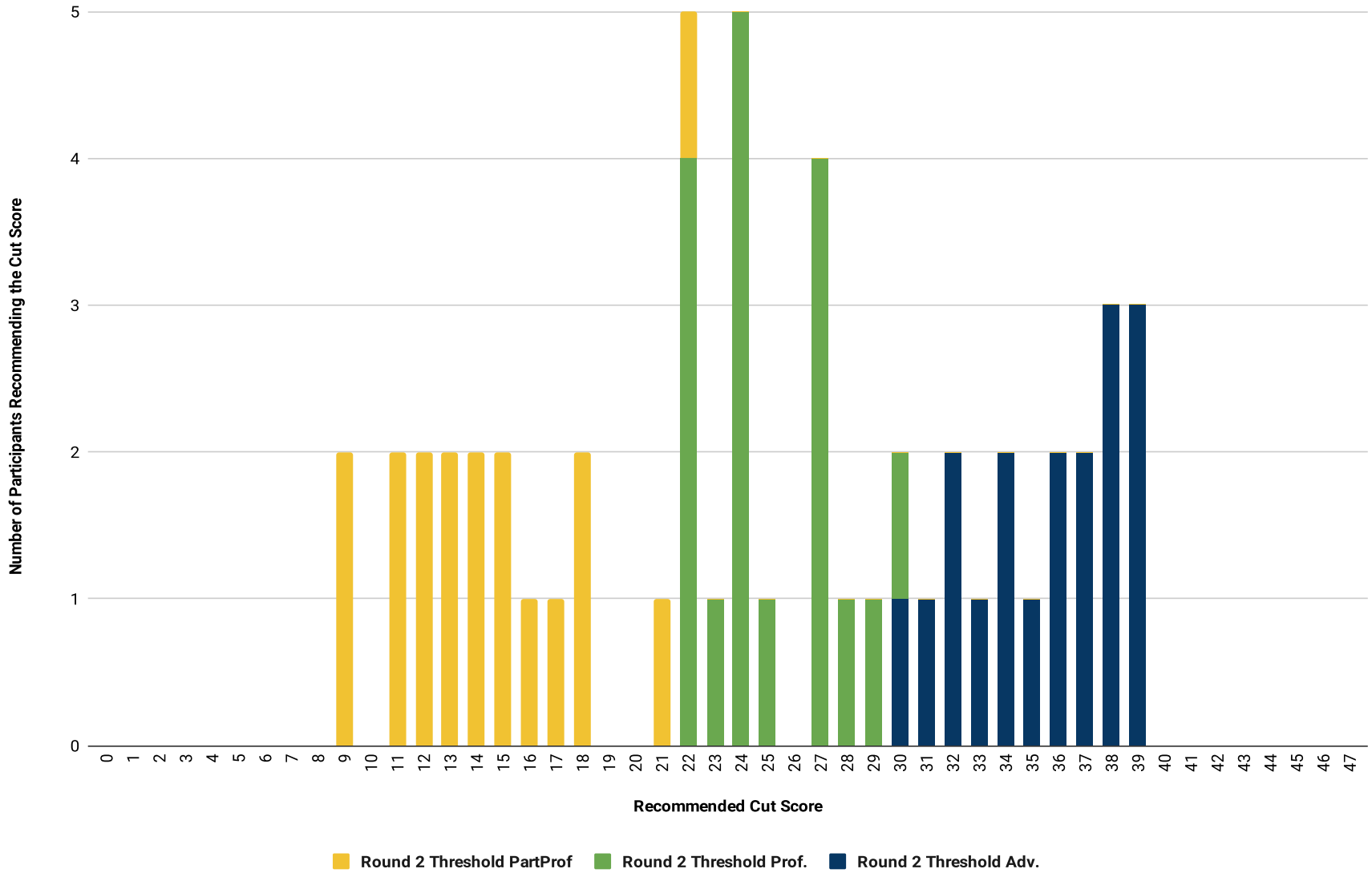
Michigan M-STEP Grade 8 Science



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Histogram of Recommended Cut Scores for Round 2

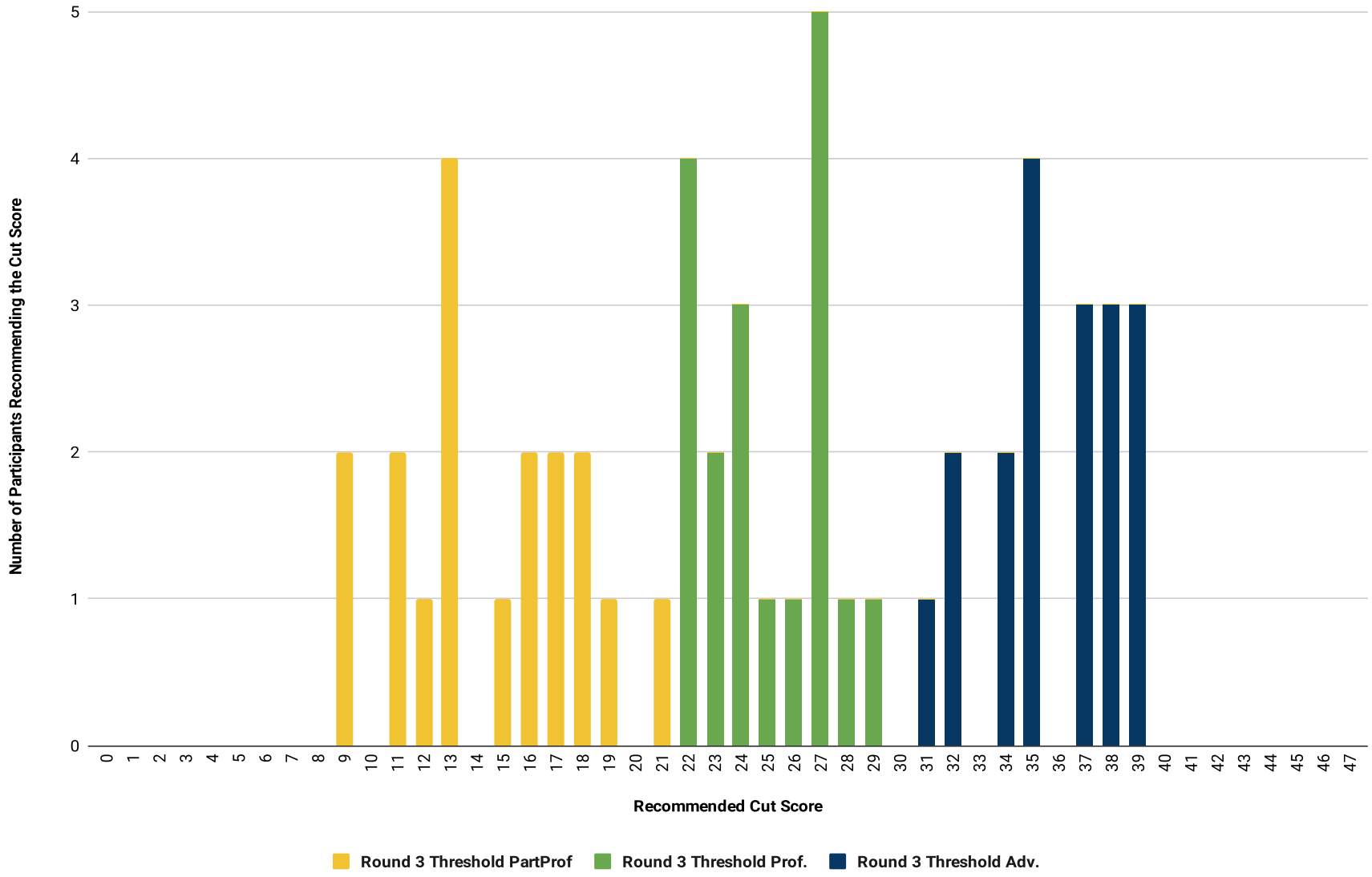
Michigan M-STEP Grade 8 Science



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Histogram of Recommended Cut Scores for Round 3

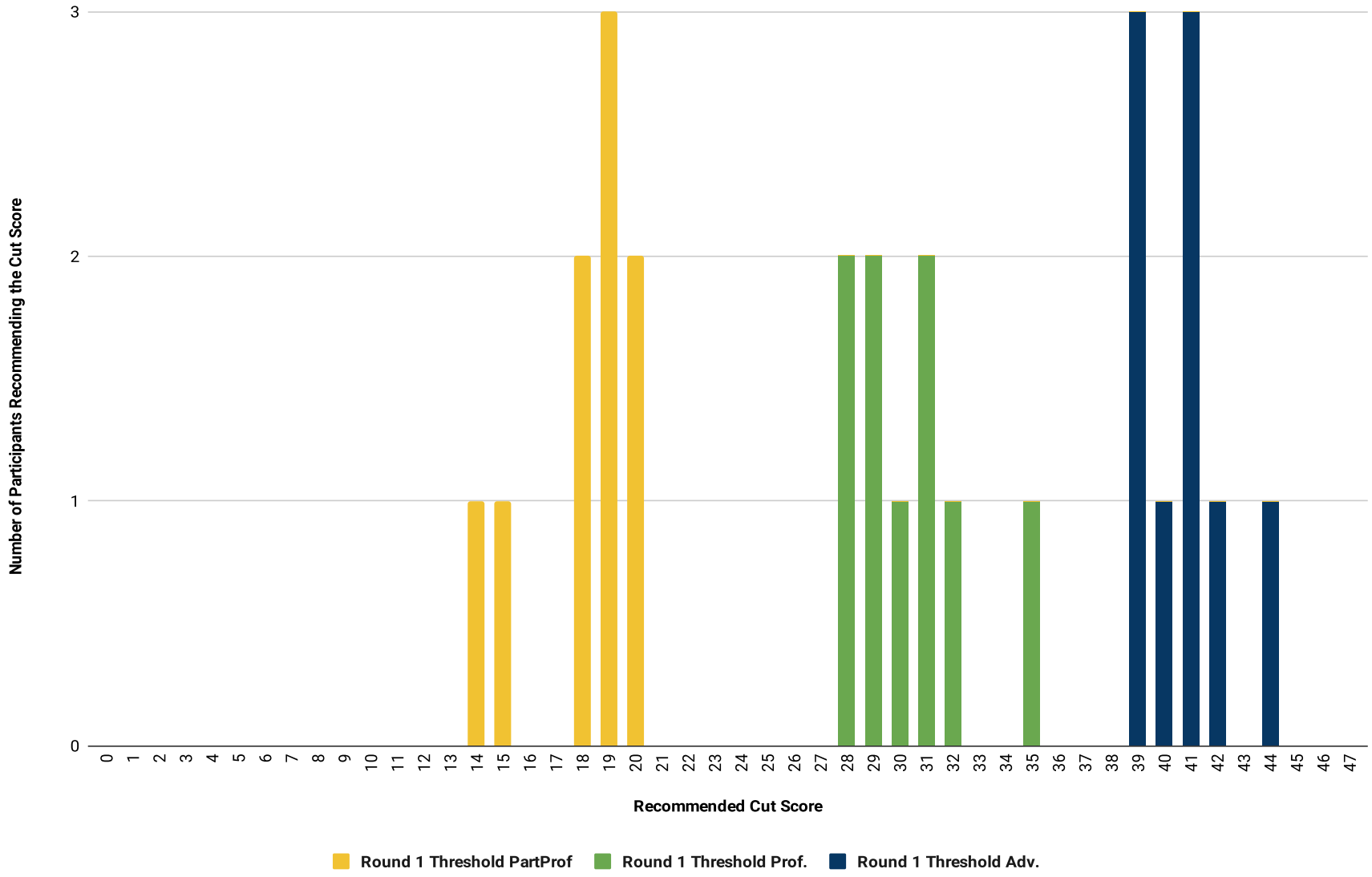
Michigan M-STEP Grade 8 Science



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Histogram of Recommended Cut Scores for Round 1

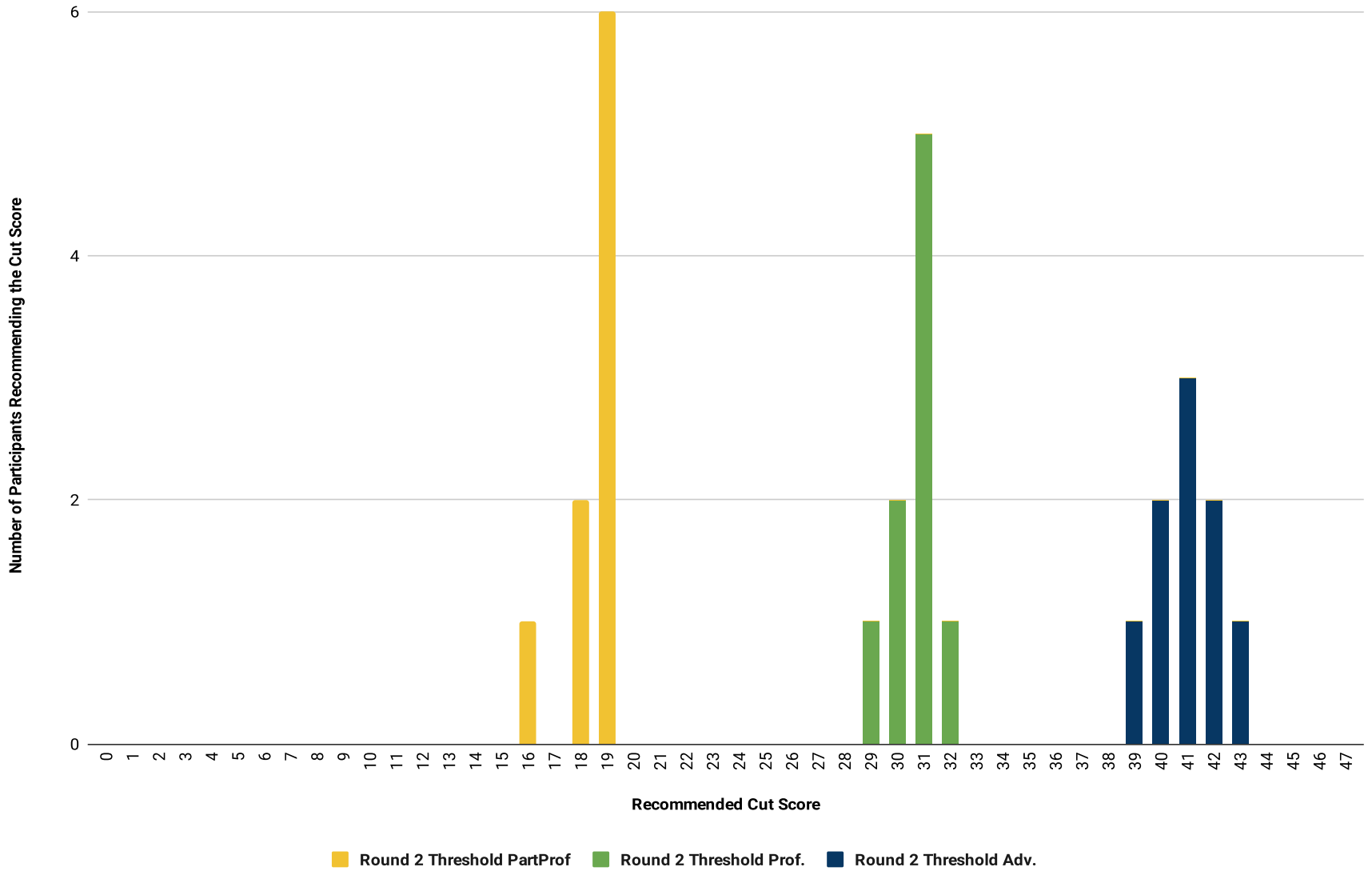
Michigan M-STEP Grade 11 Science



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Histogram of Recommended Cut Scores for Round 2

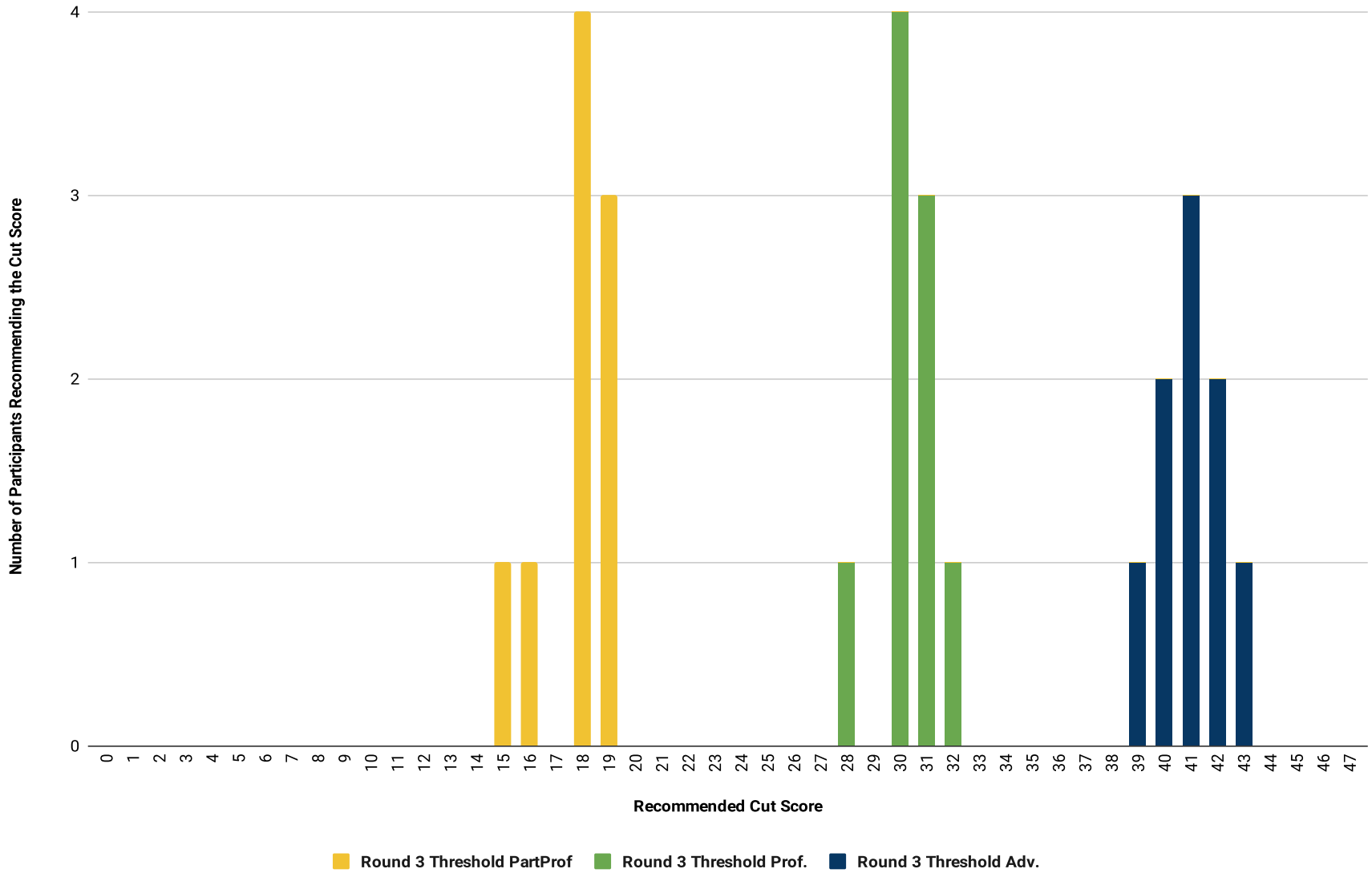
Michigan M-STEP Grade 11 Science



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Histogram of Recommended Cut Scores for Round 3

Michigan M-STEP Grade 11 Science



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H

Participant Evaluations of the Workshop

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DATA RECOGNITION CORPORATION

Pre-Workshop Survey

Thank you for participating in the M-STEP science standard setting! MDE and DRC thank you for your time and expertise during this important step in the assessment process.

This survey is designed to document the experience and diversity of standard setting participants. While we need your information to describe the committee in the aggregate, your individual responses will be kept confidential.

What is your full name? *

Your answer

To which group have you been assigned at the standard setting? *

- ◯ Science Grade 5 & 8
- ◯ Science Grade 8 & 11

Next

Page 1 of 10

Clear form

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Security Agreements

During the registration process, you agreed to the Security Agreement from MDE. In this section, you will be shown the Security Agreement once again, as well as a Security Agreement from DRC. Please review the Security Agreements below and signify your acceptance by checking the button below.

MDE SECURITY AGREEMENT

Test security and student confidentiality are of utmost importance to the Michigan Department of Education. As a participant of the standard setting committee you have access to materials that must be regarded as secure. Please treat all materials as confidential. You are asked not to reproduce any materials, directly or indirectly, and do not disclose the content of these materials.

We are certain that you share our concern that all assessment materials and student responses be handled in a professional, secure, and confidential manner.

DRC SECURITY AGREEMENT

AS A PARTICIPANT AT THIS WORKSHOP, you will have access to materials that must be regarded as confidential. You are required to treat all test materials used in this meeting as confidential. Test security and student confidentiality are of the utmost importance to Data Recognition Corporation (DRC), and DRC must protect information about tests and students in the assessment process. Such information includes performance tasks, multiple-choice items, stimuli, and student responses used in each exam. The nature and quality of an individual student's performance must not be released. In addition, the training materials, standard setting materials (including ordered item booklets and item maps), workshop feedback, and workshop recommendations must not be released.

DO NOT REPRODUCE ANY MATERIALS, directly or indirectly, disclose the contents of these materials, use the tasks as future instructional activities, or reveal any personally identifiable information from student responses to any person for any purpose. We are certain that you share our concern that all items and students' responses be handled in a professional and confidential manner and ask that you acknowledge your adherence to these guidelines by agreeing to these terms and conditions.

DRC technology, processes, records and information related to DRC and its customers are confidential and must be treated accordingly. DRC-related information, including without limitation, documents, notes, files, records, oral information, computer files, or similar materials may not be saved, duplicated or removed from DRC premises or systems (including this website) without permission from DRC.

Additionally, the contents of DRC's records or information otherwise obtained regarding business may not be disclosed to anyone, except where required for a business purpose.

Meeting attendees must not disclose any confidential information, purposefully or inadvertently, through casual conversation, with any unauthorized person inside or outside DRC.

BY SIGNING ON AS A MEMBER OF THIS WORKSHOP COMMITTEE, I AGREE:

a) that all training materials, items (test questions) and student responses are the property of DRC and/or its clients;

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b) that commenting on the content of test questions or responses with non-project related personnel is prohibited;

c) that reproducing, in part or in whole, through means including but not limited to printing, taking pictures, downloading, or capturing screen shots of student responses, test questions, training materials, standard setting materials, workshop feedback, or workshop recommendations is expressly prohibited;

d) that the privacy of the students whose work is presented is to be respected, and all related data is to be protected from disclosure;

e) that I will work in a private environment, separate from others and free from distractions;

f) that I will be the only one to read items and student responses that have been assigned to me;

g) that I will adhere to the criteria defined by the training that I receive;

h) that I will not discuss test questions, student responses, training materials, standard setting materials, workshop feedback, and workshop recommendations with anyone except the workshop facilitators and committee members; and

i) that I will not share test questions, student responses, training materials, standard setting materials, workshop feedback, or workshop recommendations on any media, including social media.

I acknowledge that I have received and am responsible for reading and complying with the aforementioned test security terms, as shown on this site and in linked documents. By virtue of the foregoing, I am on notice that any actions by me that are contrary to the foregoing affirmations and acknowledgements will subject me to possible legal action by Data Recognition Corporation to protect its interest in its intellectual property rights and the integrity and security of the assessments.

By printing my full name here, I acknowledge that I have read and agree to the terms of the Security Agreements presented here. *

Please type your full name here.

Your answer

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Health Check-in

In the past 14 days, have you or someone in your household tested positive for COVID-19; or have you newly experienced any of the symptoms listed below in the past 48 hours? *

Symptoms: fever or chills; cough; shortness of breath or difficulty breathing; fatigue; muscle or body aches; headache; new loss of taste or smell; sore throat; congestion or runny nose; nausea or vomiting; diarrhea.

- ○ No
- ○ Yes
- ○ Decline to State

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About You and Your Experience

This section asks about your background. This information will be used to describe the diversity and experience of the standard setting committee.

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What is your current position? *

Please choose one answer that best describes where a majority of your time is spent.

- ◯ General education teacher
- ◯ Special education teacher
- ◯ ELL teacher
- ◯ Curriculum staff
- ◯ District assessment staff
- ◯ Higher education
- ◯ School-level administrator
- ◯ District-level administrator

What is your educational setting? *

Please choose one answer that best describes where a majority of your time is spent.

- ◯ Elementary school
- ◯ Middle school or junior high school
- ◯ High school
- ◯ Higher education
- ◯ K-8 school
- ◯ 6-12 school
- ◯ Other: _____

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How many years have you worked in education? *

- ◯ Less than 5 years
- ◯ 5-10 years
- ◯ 11-15 years
- ◯ 16-20 years
- ◯ 21-25 years
- ◯ More than 25 years

What percent of students in your district/LEA qualify for free or reduced-price meals? *

Estimates are OK. If you don't know, choose Unknown.

- ◯ 0-25%
- ◯ 26-50%
- ◯ 51-75%
- ◯ 76-100%
- ◯ Unknown or not applicable

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In which community type is your district/LEA? *

- ◯ Rural
- ◯ Urban
- ◯ Suburban

What is the name of your school district/LEA? If not working in a school or district, enter place of employment. *

Your answer

What is your highest level of education? *

- ◯ High school diploma
- ◯ Bachelor's degree
- ◯ Bachelor's degree + additional hours
- ◯ Master's degree
- ◯ Master's degree + additional hours
- ◯ Doctoral degree

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What is your gender? *

- ○ Female
- ○ Male
- ○ Prefer not to answer
- ○ Other: _____

Are you of Hispanic, Latino/a, or Spanish origin? *

- ○ No
- ○ Yes
- ○ Prefer not to answer

What is your race? *

Please choose as many as apply.

- ☐ White
- ☐ Black or African-American
- ☐ American Indian or Alaska Native
- ☐ Native Hawaiian or Other Pacific Islander
- ☐ Asian
- ☐ Prefer not to answer
- ☐ Other: _____

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About Your Experience Before the Workshop

Have you ever attended a standard setting meeting before? *

- ◯ No, I have not.
- ◯ Yes, I have attended one other standard setting.
- ◯ Yes, I have attended more than one standard setting.

How long has it been since your most recent standard setting experience? *

- ◯ I have not attended a standard setting before.
- ◯ Less than 2 years
- ◯ 2 to 5 years
- ◯ Over five years

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Have you worked with the state content standards (the "Michigan K-12 Science Standards") before? *

- ○ Yes
- ○ No

Have you worked with performance level descriptors (PLDs) before? *

- ○ Yes, I have.
- ○ No, I've heard of them but haven't worked with them.
- ○ No, I haven't heard of these before.

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Thank you!

Thank you for completing this pre-workshop evaluation! MDE and DRC thank you for your time and attention to this important step of the standard setting process.

If you have any other questions or comments, please enter them here. Otherwise, press "Submit" to save your responses. Thank you again for your participation!

Your answer

Back Submit Page 10 of 10 Clear form

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M-STEP Pre-Workshop Survey

To which group have you been assigned at the standard setting?

Response	Frequency	Percent	Mean: 1.56
Science Grade 5 & 8	8	44.44	
Science Grade 8 & 11	10	55.56	

In the past 14 days, havee you or someone in your household tested positive for COVID-19; or have you newly experienced any of the symptoms listed below in the past 48 hours?

Response	Frequency	Percent	Mean: 1.00
No	18	100.00	
Yes	0	0.00	
Decline to State	0	0.00	

What is your current position?

Response	Frequency	Percent	Mean: 2.56
General education teacher	11	61.11	
Special education teacher	0	0.00	
ELL teacher	0	0.00	
Curriculum staff	4	22.22	
District assessment staff	0	0.00	
Higher education	2	11.11	
School-level administrator	1	5.56	
District-level administrator	0	0.00	

What is your educational setting?

Response	Frequency	Percent	Mean: 3.17
Elementary school	5	27.78	
Middle school or junior high school	3	16.67	
High school	4	22.22	
Higher education	2	11.11	
K-8 school	1	5.56	
6-12 school	0	0.00	
Other:	3	16.67	

How many years have you worked in education?

Response	Frequency	Percent	Mean: 4.11
Less than 5 years	1	5.56	
5-10 years	1	5.56	
11-15 years	4	22.22	
16-20 years	4	22.22	
21-25 years	5	27.78	
More than 25 years	3	16.67	

What percent of students in your district/LEA qualify for free or reduced-price meals?

Response	Frequency	Percent	Mean: 3.89
0-25%	1	5.56	
26-50%	1	5.56	
51-75%	3	16.67	
76-100%	7	38.89	
Unknown or not applicable	6	33.33	

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In which community type is your district/LEA?

Response	Frequency	Percent	Mean: 1.94
Rural	6	33.33	
Urban	7	38.89	
Suburban	5	27.78	

What is your highest level of education?

Response	Frequency	Percent	Mean: 4.44
High school diploma	0	0.00	
Bachelor's degree	1	5.56	
Bachelor's degree + additional hours	1	5.56	
Master's degree	7	38.89	
Master's degree + additional hours	7	38.89	
Doctoral degree	2	11.11	

What is your gender?

Response	Frequency	Percent	Mean: 1.28
Female	13	72.22	
Male	5	27.78	
Prefer not to answer	0	0.00	
Other:	0	0.00	

Are you of Hispanic, Latino/a, or Spanish origin?

Response	Frequency	Percent	Mean: 1.00
No	18	100.00	
Yes	0	0.00	
Prefer not to answer	0	0.00	

What is your race?

Response	Frequency	Percent	Mean: -
White	13	72.22	
Black or African-American	4	22.22	
American Indian or Alaska Native	1	5.56	
Native Hawaiian or Other Pacific Islander	0	0.00	
Asian	0	0.00	
Prefer not to answer	0	0.00	
Other:	1	5.56	

Have you ever attended a standard setting meeting before?

Response	Frequency	Percent	Mean: 1.22
No I have not.	15	83.33	
Yes I have attended one other standard setting.	2	11.11	
Yes I have attended more than one standard setting.	1	5.56	

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How long has it been since your most recent standard setting experience?

Response	Frequency	Percent	Mean: 1.39
I have not attended a standard setting before.	15	83.33	
Less than 2 years	0	0.00	
2 to 5 years	2	11.11	
Over five years	1	5.56	

Have you worked with the state content standards (the "Michigan K-12 Science Standards") before?

Response	Frequency	Percent	Mean: 1.11
Yes	16	88.89	
No	2	11.11	

Have you worked with performance level descriptors (PLDs) before?

Response	Frequency	Percent	Mean: 2.06
Yes I have.	4	22.22	
No I've heard of them but haven't worked with them.	9	50.00	
No I haven't heard of these before.	5	27.78	

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DATA RECOGNITION CORPORATION

Post-Round Survey

Congratulations on finishing a round of standard setting! Please tell us about your experience during this round.

Grade *

- ○ 5
- ○ 8
- ○ 11

Round *

- ○ 1
- ○ 2
- ○ 3

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Table Number *

- ○ 1
- ○ 2
- ○ 3
- ○ 4
- ○ 5
- ○ 6
- ○ 7
- ○ 8

Participant Number *

Your participant number is a three-digit number shown near the top-right of your item map.

Your answer

Next

Clear form

About Your Round Experience: Round 1

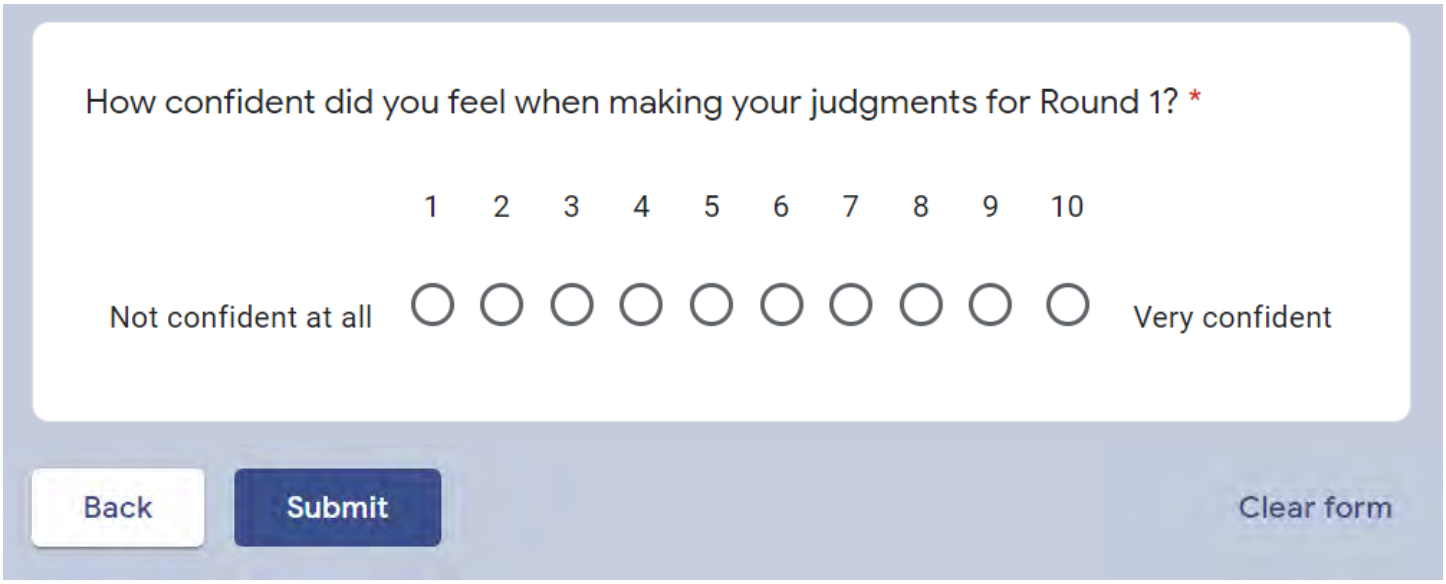
Think about the round that just finished as you complete these questions.

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Please consider the statements below and mark the level of agreement or disagreement you have with each. *

	Strongly Disagree	Disagree	Agree	Strongly Agree
I understood how to make my judgments.	○	○	○	○
I had enough time to make my judgments.	○	○	○	○
I considered the threshold students when making my judgments.	○	○	○	○
Discussing the threshold students helped me make my judgments.	○	○	○	○
I considered the content standards when making my judgments.	○	○	○	○
I considered the test items when making my judgments.	○	○	○	○

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M-STEP Post-Round 1 Survey

Grade

Response	Frequency	Percent	Mean: 2.00
5	8	25.81	
8	15	48.39	
11	8	25.81	

Round

Response	Frequency	Percent	Mean: 1.00
1	31	100.00	
2	0	0.00	
3	0	0.00	

Table Number

Response	Frequency	Percent	Mean: 3.87
1	4	12.90	
2	4	12.90	
3	7	22.58	
4	8	25.81	
5	0	0.00	
6	3	9.68	
7	3	9.68	
8	2	6.45	

I understood how to make my judgments.

Response	Frequency	Percent	Mean: 3.32
Strongly Disagree	0	0.00	
Disagree	1	3.23	
Agree	19	61.29	
Strongly Agree	11	35.48	

I had enough time to make my judgments.

Response	Frequency	Percent	Mean: 3.00
Strongly Disagree	1	3.23	
Disagree	8	25.81	
Agree	12	38.71	
Strongly Agree	10	32.26	

I considered the threshold students when making my judgments.

Response	Frequency	Percent	Mean: 3.68
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	10	32.26	
Strongly Agree	21	67.74	

Discussing the threshold students helped me make my judgments.

Response	Frequency	Percent	Mean: 3.52
Strongly Disagree	0	0.00	
Disagree	2	6.45	
Agree	11	35.48	
Strongly Agree	18	58.06	

I considered the content standards when making my judgments.

Response	Frequency	Percent	Mean: 3.48
Strongly Disagree	0	0.00	
Disagree	1	3.23	
Agree	14	45.16	
Strongly Agree	16	51.61	

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I considered the test items when making my judgments.

Response	Frequency	Percent	Mean: 3.61
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	12	38.71	
Strongly Agree	19	61.29	

How confident did you feel when making your judgments for Round 1?

Response	Frequency	Percent	Mean: 6.58
1	0	0.00	
2	1	3.23	
3	2	6.45	
4	1	3.23	
5	1	3.23	
6	9	29.03	
7	8	25.81	
8	5	16.13	
9	3	9.68	
10	1	3.23	

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DATA RECOGNITION CORPORATION

Post-Round Survey

Congratulations on finishing a round of standard setting! Please tell us about your experience during this round.

Grade *

- ○ 5
- ○ 8
- ○ 11

Round *

- ○ 1
- ○ 2
- ○ 3

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Table Number *

- ○ 1
- ○ 2
- ○ 3
- ○ 4
- ○ 5
- ○ 6
- ○ 7
- ○ 8

Participant Number *

Your participant number is a three-digit number shown near the top-right of your item map.

Your answer

Next

Clear form

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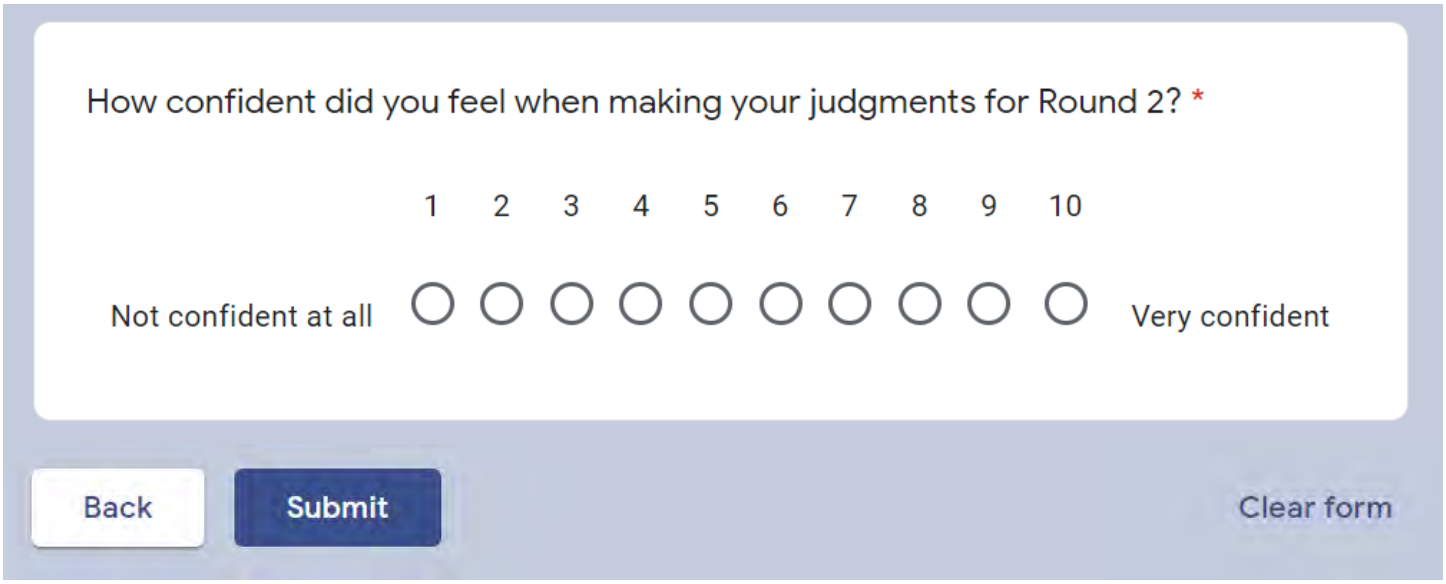
About Your Round Experience: Round 2

Think about the round that just finished as you complete these questions.

Please consider the statements below and mark the level of agreement or disagreement you have with each. *

	Strongly Disagree	Disagree	Agree	Strongly Agree
I understood how to make my judgments.	○	○	○	○
I had enough time to make my judgments.	○	○	○	○
I considered the threshold students when making my judgments.	○	○	○	○
There was adequate time provided for discussion.	○	○	○	○
Discussing my Round 1 judgments with my table was helpful.	○	○	○	○

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M-STEP Post-Round 2 Survey

Grade

Response	Frequency	Percent	Mean: 2.00
5	9	25.71	
8	17	48.57	
11	9	25.71	

Round

Response	Frequency	Percent	Mean: 2.00
1	0	0.00	
2	35	100.00	
3	0	0.00	

Table Number

Response	Frequency	Percent	Mean: 3.94
1	3	8.57	
2	5	14.29	
3	10	28.57	
4	8	22.86	
5	0	0.00	
6	3	8.57	
7	3	8.57	
8	3	8.57	

I understood how to make my judgments.

Response	Frequency	Percent	Mean: 3.51
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	17	48.57	
Strongly Agree	18	51.43	

I had enough time to make my judgments.

Response	Frequency	Percent	Mean: 3.06
Strongly Disagree	1	2.86	
Disagree	8	22.86	
Agree	14	40.00	
Strongly Agree	12	34.29	

I considered the threshold students when making my judgments.

Response	Frequency	Percent	Mean: 3.63
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	13	37.14	
Strongly Agree	22	62.86	

There was adequate time provided for discussion.

Response	Frequency	Percent	Mean: 3.17
Strongly Disagree	1	2.86	
Disagree	5	14.29	
Agree	16	45.71	
Strongly Agree	13	37.14	

Discussing my Round 1 judgments with my table was helpful.

Response	Frequency	Percent	Mean: 3.77
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	8	22.86	
Strongly Agree	27	77.14	

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How confident did you feel when making your judgments for Round 2?

Response	Frequency	Percent	Mean: 8.03
1	0	0.00	
2	0	0.00	
3	1	2.86	
4	1	2.86	
5	1	2.86	
6	0	0.00	
7	6	17.14	
8	10	28.57	
9	13	37.14	
10	3	8.57	

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DATA RECOGNITION CORPORATION

Post-Round Survey

Congratulations on finishing a round of standard setting! Please tell us about your experience during this round.

Grade *

- ○ 5
- ○ 8
- ○ 11

Round *

- ○ 1
- ○ 2
- ○ 3

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Table Number *

- ○ 1
- ○ 2
- ○ 3
- ○ 4
- ○ 5
- ○ 6
- ○ 7
- ○ 8

Participant Number *

Your participant number is a three-digit number shown near the top-right of your item map.

Your answer

Next

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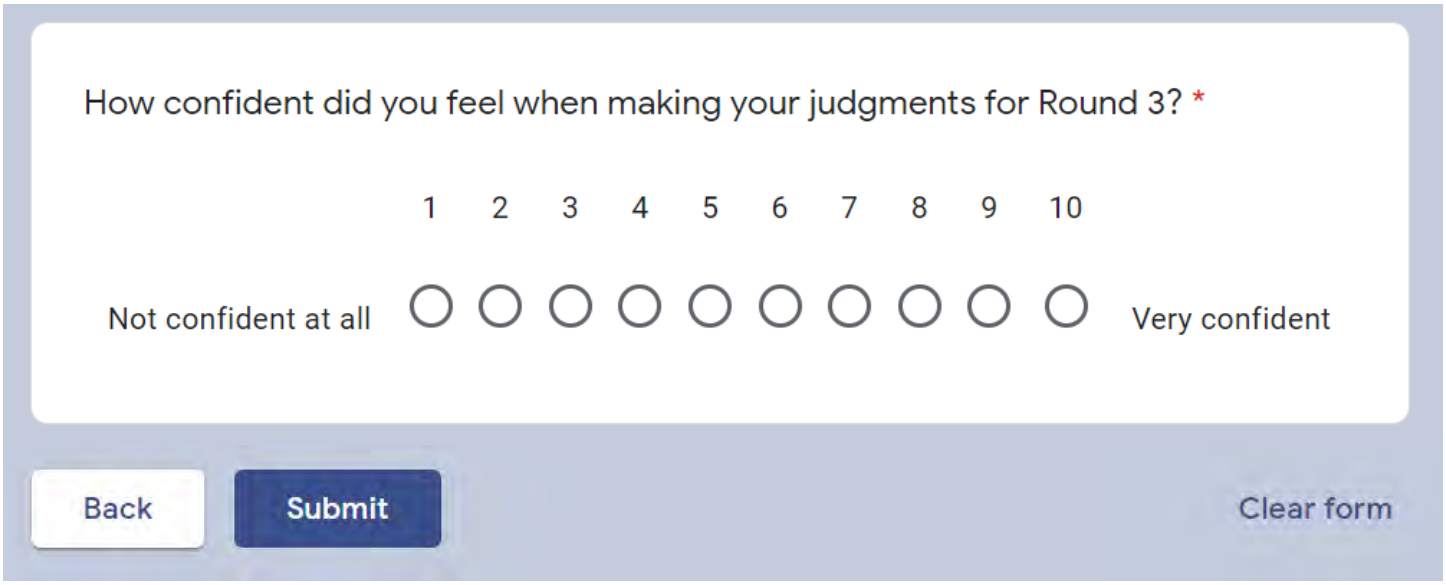
About Your Round Experience: Round 3

Think about the round that just finished as you complete these questions.

Please consider the statements below and mark the level of agreement or disagreement you have with each. *

	Strongly Disagree	Disagree	Agree	Strongly Agree
I understood how to make my judgments.	○	○	○	○
I had enough time to make my judgments.	○	○	○	○
I considered the threshold students when making my judgments.	○	○	○	○
There was adequate time provided for discussion.	○	○	○	○
The committee-wide discussion was helpful.	○	○	○	○

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M-STEP Post-Round 3 Survey

Grade

Response	Frequency	Percent	Mean: 2.03
5	8	22.86	
8	18	51.43	
11	9	25.71	

Round

Response	Frequency	Percent	Mean: 3.00
1	0	0.00	
2	0	0.00	
3	35	100.00	

Table Number

Response	Frequency	Percent	Mean: 3.86
1	4	11.43	
2	5	14.29	
3	10	28.57	
4	7	20.00	
5	0	0.00	
6	3	8.57	
7	3	8.57	
8	3	8.57	

I understood how to make my judgments.

Response	Frequency	Percent	Mean: 3.43
Strongly Disagree	0	0.00	
Disagree	3	8.57	
Agree	14	40.00	
Strongly Agree	18	51.43	

I had enough time to make my judgments.

Response	Frequency	Percent	Mean: 3.43
Strongly Disagree	0	0.00	
Disagree	3	8.57	
Agree	14	40.00	
Strongly Agree	18	51.43	

I considered the threshold students when making my judgments.

Response	Frequency	Percent	Mean: 3.60
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	14	40.00	
Strongly Agree	21	60.00	

There was adequate time provided for discussion.

Response	Frequency	Percent	Mean: 3.34
Strongly Disagree	0	0.00	
Disagree	4	11.43	
Agree	15	42.86	
Strongly Agree	16	45.71	

The committee-wide discussion was helpful.

Response	Frequency	Percent	Mean: 3.71
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	10	28.57	
Strongly Agree	25	71.43	

How confident did you feel when making your judgments for Round 3?

Response	Frequency	Percent	Mean: 8.26
1	0	0.00	
2	0	0.00	
3	0	0.00	
4	2	5.71	
5	0	0.00	
6	1	2.86	
7	2	5.71	
8	12	34.29	
9	15	42.86	
10	3	8.57	

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Post-Workshop Evaluation

Thank you again for participating in the M-STEP science standard setting! The Michigan Department of Education (MDE) and Data Recognition Corporation (DRC) appreciate your hard work.

This evaluation is designed to record your level of satisfaction with the standard setting process and recommendations. Your opinions and comments are important, as they will provide a basis for judging the quality of this process. At the end of the evaluation, there is an opportunity for you to ask questions should you have any.

In which group did you work at the standard setting? *

- ◯ Science 5 & 8
- ◯ Science 8 & 11

What is your participant number? *

Your answer

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Please consider the statements below and mark the level of agreement or disagreement you have with each. *

	Strongly Disagree	Disagree	Agree	Strongly Agree
I had enough time to review the group's recommendations.	○	○	○	○
I had enough time to discuss the group's recommendations with my fellow panelists.	○	○	○	○
The performance standards represent a reasonable profile of performance at each level.	○	○	○	○
The performance level descriptors (PLDs) were useful during the process.	○	○	○	○
The descriptions of the threshold students were useful during the process.	○	○	○	○
Studying the test items was useful during the process.	○	○	○	○
The item maps (where I took notes on each item) were useful during the process.	○	○	○	○

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Please consider the statements below and mark the level of agreement or disagreement you have with each. *

	Strongly Disagree	Disagree	Agree	Strongly Agree
During the workshop, my opinions were considered.	○	○	○	○
My opinions were valued by my group.	○	○	○	○
My group's work was reflected in the presentation of recommendations.	○	○	○	○
The facilitator provided clear instructions.	○	○	○	○
I believe this process will yield defensible cut scores.	○	○	○	○
Overall, I valued the workshop as a professional development experience.	○	○	○	○

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Please consider the statements below and mark the level of agreement or disagreement you have with each. *

	Strongly Disagree	Disagree	Agree	Strongly Agree
I was satisfied with the facilitator who led the main training sessions.	○	○	○	○
I was satisfied with the facilitator who worked with my breakout room.	○	○	○	○
I was satisfied with the DRC content expert who worked with my group.	○	○	○	○

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I was satisfied with other DRC staff members I worked with.	○	○	○	○
The food and service at the facility met my expectations.	○	○	○	○
The breakout rooms had appropriate accommodations to facilitate our work.	○	○	○	○

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About the Recommendations

This section asks about your level of confidence and satisfaction with the recommendations made for each grade. Only respond for grades you worked on: leave the rest blank.

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Grade 5

If you worked on this grade, consider these statements and indicate your level of agreement. If you did NOT work on this grade, move on to the next grade.

	Strongly Disagree	Disagree	Agree	Strongly Agree
I was confident in my recommendations for the Level 2 cut score.	○	○	○	○
I was confident in my recommendations for the Level 3 cut score.	○	○	○	○
I was confident in my recommendations for the Level 4 cut score.	○	○	○	○
The group's recommended cut score for Level 2 is about right.	○	○	○	○
The group's recommended cut score for Level 3 is about right.	○	○	○	○
The group's recommended cut score for Level 4 is about right.	○	○	○	○

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Grade 8

If you worked on this grade, consider these statements and indicate your level of agreement. If you did NOT work on this grade, move on to the next grade.

	Strongly Disagree	Disagree	Agree	Strongly Agree
I was confident in my recommendations for the Level 2 cut score.	○	○	○	○
I was confident in my recommendations for the Level 3 cut score.	○	○	○	○
I was confident in my recommendations for the Level 4 cut score.	○	○	○	○
The group's recommended cut score for Level 2 is about right.	○	○	○	○
The group's recommended cut score for Level 3 is about right.	○	○	○	○
The group's recommended cut score for Level 4 is about right.	○	○	○	○

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Grade 11

If you worked on this grade, consider these statements and indicate your level of agreement. If you did NOT work on this grade, move on to the next grade.

	Strongly Disagree	Disagree	Agree	Strongly Agree
I was confident in my recommendations for the Level 2 cut score.	○	○	○	○
I was confident in my recommendations for the Level 3 cut score.	○	○	○	○
I was confident in my recommendations for the Level 4 cut score.	○	○	○	○
The group's recommended cut score for Level 2 is about right.	○	○	○	○
The group's recommended cut score for Level 3 is about right.	○	○	○	○
The group's recommended cut score for Level 4 is about right.	○	○	○	○

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Hypothetical Results without COVID-19

For a moment, imagine....

Imagine temporarily that the COVID-related disruption to instruction didn't happen in 2020 and 2021. Also imagine that all students received typical instruction in the state content standards in both of these years.

Some people might expect the impact data for the test might have looked somewhat different. Others might expect the impact data wouldn't look particularly different.

What do you think?

Complete the sentence: If it wasn't for the COVID-19 related disruption to instruction, student performance on the tests in 2021 probably would have been _____ than what the committee saw in the impact data at the end of the process. *

- ◯ ... much better ...
- ◯ ... somewhat better ...
- ◯ ... about the same ...
- ◯ ... somewhat worse ...
- ◯ ... much worse ...

How come? Please use this space to describe any thoughts you have about your answer to the question above.

This question is optional, but we appreciate any insight you can share about your answer. Take as much space as you need.

Your answer

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Interacting With Workshop Tools

How comfortable did you feel using the following technologies during the workshop? *

	Very uncomfortable	Somewhat uncomfortable	Somewhat comfortable	Very comfortable
The DRC workshop "Hub"	○	○	○	○
Google Sheets/Forms	○	○	○	○

Did you use the following paper-based materials during the workshop? *

	Frequently	Occasionally	Rarely	Never
Paper agenda	○	○	○	○
Paper content standards	○	○	○	○
Paper PLDs	○	○	○	○
Paper practice items and map	○	○	○	○

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Thank you!

Thank you for completing this post-workshop evaluation! We thank you for your time and attention to this important step of the standard setting process.

If you have any other questions or comments, please enter them here. Otherwise, press "Submit" to save your responses. Thank you again for your participation!

Your answer

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M-STEP Post-Workshop Survey

In which group did you work at the standard setting?

Response	Frequency	Percent	Mean: 1.50
Science 5 & 8	9	50.00	
Science 8 & 11	9	50.00	

I had enough time to review the group's recommendations.

Response	Frequency	Percent	Mean: 3.17
Strongly Disagree	0	0.00	
Disagree	1	5.56	
Agree	13	72.22	
Strongly Agree	4	22.22	

I had enough time to discuss the group's recommendations with my fellow panelists.

Response	Frequency	Percent	Mean: 3.00
Strongly Disagree	0	0.00	
Disagree	3	16.67	
Agree	12	66.67	
Strongly Agree	3	16.67	

The performance standards represent a reasonable profile of performance at each level.

Response	Frequency	Percent	Mean: 3.11
Strongly Disagree	0	0.00	
Disagree	4	22.22	
Agree	8	44.44	
Strongly Agree	6	33.33	

The performance level descriptors (PLDs) were useful during the process.

Response	Frequency	Percent	Mean: 3.33
Strongly Disagree	0	0.00	
Disagree	1	5.56	
Agree	10	55.56	
Strongly Agree	7	38.89	

The descriptions of the threshold students were useful during the process.

Response	Frequency	Percent	Mean: 3.56
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	8	44.44	
Strongly Agree	10	55.56	

Studying the test items was useful during the process.

Response	Frequency	Percent	Mean: 3.67
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	6	33.33	
Strongly Agree	12	66.67	

The item maps (where I took notes on each item) were useful during the process.

Response	Frequency	Percent	Mean: 3.56
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	8	44.44	
Strongly Agree	10	55.56	

During the workshop, my opinions were considered.

Response	Frequency	Percent	Mean: 3.50
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	9	50.00	
Strongly Agree	9	50.00	

My opinions were valued by my group.

Response	Frequency	Percent	Mean: 3.56
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	8	44.44	
Strongly Agree	10	55.56	

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My group's work was reflected in the presentation of recommendations.

Response	Frequency	Percent	Mean: 3.56
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	8	44.44	
Strongly Agree	10	55.56	

The facilitator provided clear instructions.

Response	Frequency	Percent	Mean: 3.39
Strongly Disagree	0	0.00	
Disagree	2	11.11	
Agree	7	38.89	
Strongly Agree	9	50.00	

I believe this process will yield defensible cut scores.

Response	Frequency	Percent	Mean: 3.28
Strongly Disagree	0	0.00	
Disagree	1	5.56	
Agree	11	61.11	
Strongly Agree	6	33.33	

Overall, I valued the workshop as a professional development experience.

Response	Frequency	Percent	Mean: 3.61
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	7	38.89	
Strongly Agree	11	61.11	

I was satisfied with the facilitator who led the main training sessions.

Response	Frequency	Percent	Mean: 3.78
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	4	22.22	
Strongly Agree	14	77.78	

I was satisfied with the facilitator who worked with my breakout room.

Response	Frequency	Percent	Mean: 3.61
Strongly Disagree	0	0.00	
Disagree	1	5.56	
Agree	5	27.78	
Strongly Agree	12	66.67	

I was satisfied with the DRC content expert who worked with my group.

Response	Frequency	Percent	Mean: 3.72
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	5	27.78	
Strongly Agree	13	72.22	

I was satisfied with other DRC staff members I worked with.

Response	Frequency	Percent	Mean: 3.72
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	5	27.78	
Strongly Agree	13	72.22	

The food and service at the facility met my expectations.

Response	Frequency	Percent	Mean: 3.61
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	7	38.89	
Strongly Agree	11	61.11	

The breakout rooms had appropriate accommodations to facilitate our work.

Response	Frequency	Percent	Mean: 3.67
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	6	33.33	
Strongly Agree	12	66.67	

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Grade 5: I was confident in my recommendations for the Level 2 cut score.

Response	Frequency	Percent	Mean: 3.56
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	4	22.22	
Strongly Agree	5	27.78	
No Response	9	50.00	

Grade 5: I was confident in my recommendations for the Level 3 cut score.

Response	Frequency	Percent	Mean: 3.67
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	3	16.67	
Strongly Agree	6	33.33	
No Response	9	50.00	

Grade 5: I was confident in my recommendations for the Level 4 cut score.

Response	Frequency	Percent	Mean: 3.78
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	2	11.11	
Strongly Agree	7	38.89	
No Response	9	50.00	

Grade 5: The group's recommended cut score for Level 2 is about right.

Response	Frequency	Percent	Mean: 3.56
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	4	22.22	
Strongly Agree	5	27.78	
No Response	9	50.00	

Grade 5: The group's recommended cut score for Level 3 is about right.

Response	Frequency	Percent	Mean: 3.67
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	3	16.67	
Strongly Agree	6	33.33	
No Response	9	50.00	

Grade 5: The group's recommended cut score for Level 4 is about right.

Response	Frequency	Percent	Mean: 3.67
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	3	16.67	
Strongly Agree	6	33.33	
No Response	9	50.00	

Grade 8: I was confident in my recommendations for the Level 2 cut score.

Response	Frequency	Percent	Mean: 3.25
Strongly Disagree	0	0.00	
Disagree	1	5.56	
Agree	10	55.56	
Strongly Agree	5	27.78	
No Response	2	11.11	

Grade 8: I was confident in my recommendations for the Level 3 cut score.

Response	Frequency	Percent	Mean: 3.38
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	10	55.56	
Strongly Agree	6	33.33	
No Response	2	11.11	

Grade 8: I was confident in my recommendations for the Level 4 cut score.

Response	Frequency	Percent	Mean: 3.38
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	10	55.56	
Strongly Agree	6	33.33	
No Response	2	11.11	

Grade 8: The group's recommended cut score for Level 2 is about right.

Response	Frequency	Percent	Mean: 3.38
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	10	55.56	
Strongly Agree	6	33.33	
No Response	2	11.11	

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Grade 8: The group's recommended cut score for Level 3 is about right.

Response	Frequency	Percent	Mean: 3.44
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	9	50.00	
Strongly Agree	7	38.89	
No Response	2	11.11	

Grade 8: The group's recommended cut score for Level 4 is about right.

Response	Frequency	Percent	Mean: 3.44
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	9	50.00	
Strongly Agree	7	38.89	
No Response	2	11.11	

Grade 11: I was confident in my recommendations for the Level 2 cut score.

Response	Frequency	Percent	Mean: 3.00
Strongly Disagree	0	0.00	
Disagree	1	5.56	
Agree	6	33.33	
Strongly Agree	1	5.56	
No Response	10	55.56	

Grade 11: I was confident in my recommendations for the Level 3 cut score.

Response	Frequency	Percent	Mean: 3.00
Strongly Disagree	0	0.00	
Disagree	1	5.56	
Agree	6	33.33	
Strongly Agree	1	5.56	
No Response	10	55.56	

Grade 11: I was confident in my recommendations for the Level 4 cut score.

Response	Frequency	Percent	Mean: 3.13
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	7	38.89	
Strongly Agree	1	5.56	
No Response	10	55.56	

Grade 11: The group's recommended cut score for Level 2 is about right.

Response	Frequency	Percent	Mean: 3.00
Strongly Disagree	0	0.00	
Disagree	1	5.56	
Agree	6	33.33	
Strongly Agree	1	5.56	
No Response	10	55.56	

Grade 11: The group's recommended cut score for Level 3 is about right.

Response	Frequency	Percent	Mean: 3.00
Strongly Disagree	0	0.00	
Disagree	1	5.56	
Agree	6	33.33	
Strongly Agree	1	5.56	
No Response	10	55.56	

Grade 11: The group's recommended cut score for Level 4 is about right.

Response	Frequency	Percent	Mean: 3.13
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	7	38.89	
Strongly Agree	1	5.56	
No Response	10	55.56	

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If it wasn't for the COVID-19 related disruption to instruction, student performance on the tests in 2021 probably would have been _____ than what the committee saw in the impact data at the end of the process.

Response	Frequency	Percent	Mean: 1.61
... much better ...	9	50.00	
... somewhat better ...	7	38.89	
... about the same ...	2	11.11	
... somewhat worse ...	0	0.00	
... much worse ...	0	0.00	

The DRC workshop "Hub"

Response	Frequency	Percent	Mean: 3.78
Very uncomfortable	0	0.00	
Somewhat uncomfortable	0	0.00	
Somewhat comfortable	4	22.22	
Very comfortable	14	77.78	

Google Sheets/Forms

Response	Frequency	Percent	Mean: 3.94
Very uncomfortable	0	0.00	
Somewhat uncomfortable	0	0.00	
Somewhat comfortable	1	5.56	
Very comfortable	17	94.44	

Paper agenda

Response	Frequency	Percent	Mean: 2.72
Frequently	2	11.11	
Occasionally	5	27.78	
Rarely	7	38.89	
Never	4	22.22	

Paper content standards

Response	Frequency	Percent	Mean: 1.39
Frequently	12	66.67	
Occasionally	5	27.78	
Rarely	1	5.56	
Never	0	0.00	

Paper PLDs

Response	Frequency	Percent	Mean: 1.11
Frequently	16	88.89	
Occasionally	2	11.11	
Rarely	0	0.00	
Never	0	0.00	

Paper practice items and map

Response	Frequency	Percent	Mean: 2.28
Frequently	3	16.67	
Occasionally	9	50.00	
Rarely	4	22.22	
Never	2	11.11	

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DATA RECOGNITION CORPORATION

Across-Grade Discussion Evaluation

This evaluation is designed to document the process used to review the cut scores across grades during the standard setting. Your opinions and comments are important, as they will provide a basis for judging the quality of this process. At the end of the evaluation, there is an opportunity for you to ask questions should you have any.

In what group did you work during the standard setting? *

- ◯ Science grades 5 & 8
- ◯ Science grades 8 & 11

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Please consider the statements below and mark the level of agreement or disagreement you have with each. *

	Strongly Disagree	Disagree	Agree	Strongly Agree
I understood the purpose of the across-grade discussion.	○	○	○	○
The facilitator made the across-grade discussion process clear to me.	○	○	○	○
I considered the recommendations from my original grade/group during the discussion.	○	○	○	○

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I considered the content-based expectations for students during the discussion.	○	○	○	○
I considered the impact data during the discussion.	○	○	○	○
I understood how the impact data were calculated.	○	○	○	○
I had enough time to hear about the recommendations made by other groups.	○	○	○	○
I had enough time to share the recommendations made by my group.	○	○	○	○

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Please consider the statements below and mark the level of agreement or disagreement you have with each. *

	Strongly Disagree	Disagree	Agree	Strongly Agree
Overall, the impact data form an explainable pattern across grades.	○	○	○	○
Overall, the recommendations reflect appropriately rigorous expectations for students.	○	○	○	○
Overall, I believe my opinions were considered and valued by my group.	○	○	○	○
My group's work was reflected in the presentation of recommendations across grades.	○	○	○	○
This process will lead to defensible performance standards for the test.	○	○	○	○

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About the Recommendations

Please indicate your opinion regarding whether you feel the final, recommended cut scores were too low, about right, or too high for each cut score. *

	Too Low	About Right	Too High
The Partially Proficient cut scores for the grades I worked on	○	○	○
The Proficient cut scores for the grades I worked on	○	○	○
The Advanced cut scores for the grades I worked on	○	○	○

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The Partially Proficient cut scores for the other grades	○	○	○
The Proficient cut scores for the other grades	○	○	○
The Advanced cut scores for the other grades	○	○	○

(Optional.) Use this space to explain any of your responses from above.

Your answer

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Thank you!

Thank you for completing this evaluation! We thank you for your time and attention to this important step of the standard setting process.

If you have any other questions or comments, please enter them here. Otherwise, press "Submit" to save your responses. Thank you again for your participation!

Your answer

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M-STEP Across-Grade Discussion Evaluation

In what group did you work during the standard setting?

Response	Frequency	Percent	Mean: 1.47
Science grades 5 & 8	9	52.94	
Science grades 8 & 11	8	47.06	

I understood the purpose of the across-grade discussion.

Response	Frequency	Percent	Mean: 3.53
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	8	47.06	
Strongly Agree	9	52.94	

The facilitator made the across-grade discussion process clear to me.

Response	Frequency	Percent	Mean: 3.65
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	6	35.29	
Strongly Agree	11	64.71	

I considered the recommendations from my original grade/group during the discussion.

Response	Frequency	Percent	Mean: 3.53
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	8	47.06	
Strongly Agree	9	52.94	

I considered the content-based expectations for students during the discussion.

Response	Frequency	Percent	Mean: 3.53
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	8	47.06	
Strongly Agree	9	52.94	

I considered the impact data during the discussion.

Response	Frequency	Percent	Mean: 3.59
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	7	41.18	
Strongly Agree	10	58.82	

I understood how the impact data were calculated.

Response	Frequency	Percent	Mean: 3.53
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	8	47.06	
Strongly Agree	9	52.94	

I had enough time to hear about the recommendations made by other groups.

Response	Frequency	Percent	Mean: 3.47
Strongly Disagree	0	0.00	
Disagree	1	5.88	
Agree	7	41.18	
Strongly Agree	9	52.94	

I had enough time to share the recommendations made by my group.

Response	Frequency	Percent	Mean: 3.47
Strongly Disagree	0	0.00	
Disagree	1	5.88	
Agree	7	41.18	
Strongly Agree	9	52.94	

Overall, the impact data form an explainable pattern across grades.

Response	Frequency	Percent	Mean: 3.41
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	10	58.82	
Strongly Agree	7	41.18	

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Overall, the recommendations reflect appropriately rigorous expectations for students.

Response	Frequency	Percent	Mean: 3.35
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	11	64.71	
Strongly Agree	6	35.29	

Overall, I believe my opinions were considered and valued by my group.

Response	Frequency	Percent	Mean: 3.53
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	8	47.06	
Strongly Agree	9	52.94	

My group's work was reflected in the presentation of recommendations across grades.

Response	Frequency	Percent	Mean: 3.59
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	7	41.18	
Strongly Agree	10	58.82	

This process will lead to defensible performance standards for the test.

Response	Frequency	Percent	Mean: 3.29
Strongly Disagree	0	0.00	
Disagree	0	0.00	
Agree	12	70.59	
Strongly Agree	5	29.41	

The Partially Proficient cut scores for the grades I worked on

Response	Frequency	Percent	Mean: 2.06
Too Low	0	0.00	
About Right	16	94.12	
Too High	1	5.88	

The Proficient cut scores for the grades I worked on

Response	Frequency	Percent	Mean: 2.00
Too Low	0	0.00	
About Right	17	100.00	
Too High	0	0.00	

The Advanced cut scores for the grades I worked on

Response	Frequency	Percent	Mean: 1.94
Too Low	1	5.88	
About Right	16	94.12	
Too High	0	0.00	

The Partially Proficient cut scores for the other grades

Response	Frequency	Percent	Mean: 2.12
Too Low	0	0.00	
About Right	15	88.24	
Too High	2	11.76	

The Proficient cut scores for the other grades

Response	Frequency	Percent	Mean: 2.00
Too Low	0	0.00	
About Right	17	100.00	
Too High	0	0.00	

The Advanced cut scores for the other grades

Response	Frequency	Percent	Mean: 1.94
Too Low	1	5.88	
About Right	16	94.12	
Too High	0	0.00	

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Appendix I: Recommendations for the Grade 3 Reading Cut Score Executive Report

Michigan Student Test of Educational Progress (M-STEP)
Recommendations for the Grade 3 Reading Cut Score

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Data Recognition Corporation

December 10, 2018

Summary

- In July and December 2018, the Michigan Department of Education (MDE) partnered with Data Recognition Corporation (DRC) to conduct standard settings for grade 3 reading using the Michigan Student Test of Educational Progress (M-STEP).
- The standard setting was needed because of recent state legislation mandating the identification of grade 3 students who were more than one year behind in reading for the purposes of remediation and possible retention.
- The four-phase standard setting comprised an initial standard setting, editing the performance level descriptors (PLDs), a replication of the standard setting, and a review workshop.
- Participants' recommendations at the standard settings were consistent, and the recommended cut score was validated by the review committee.

Background

Students' grade 3 reading performance is measured by the M-STEP grade 3 test of English language arts (ELA), a test aligned to the Michigan Academic Standards. The cut scores associated with the performance levels of *Not Proficient, Partially Proficient, Proficient,* and *Advanced* were validated by Michigan educators as part of a *standards validation* workshop in July 2018.

To comply with recently enacted state law, MDE partnered with DRC to establish a separate cut score for the grade 3 ELA test associated with still-emerging readers who were reading at more than one year behind grade-level. As part of a statewide reading initiative, these students would subject to retention and would be provided additional support to improve their reading level.

Standard Setting Methodology

The standard setting was implemented in four phases:

1) On July 13, 2018, a committee of 11 Michigan educators and stakeholders engaged in the Bookmark Standard Setting Procedure (Lewis, Mitzel, & Green, 1996; Lewis, Mitzel, Mercado, & Schulz, 2012). Using the Michigan Academic Standards and test items from the M-STEP, participants enumerated the knowledge, skills, and abilities expected of students who met the grade 3 reading requirement (in a document called the *performance level descriptors* or *PLDs*), and they recommended a cut score for the grade 3 reading requirement.

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2) On November 30, 2018, a committee of two reading experts convened to review and refine the PLDs. They verified the PLDs aligned with the expectations associated with the grade 3 reading requirement.
3) On December 3, 2018, a committee of nine Michigan educators, including reading coaches and interventionists, convened to replicate the Bookmark Procedure. These educators recommended cut scores similar to those recommended by the July 2018 committee.
4) On December 4, 2018, a committee of seven Michigan educators and stakeholders convened to review the recommendations from the two standard settings. As part of a policy-focused workshop, the participants endorsed the findings of the standard setting committees and made a unified cut score recommendation to MDE.

The Bookmark Procedure is a content-focused process. Participants considered the knowledge and skills needed to meet the grade 3 reading requirement, particularly those of students at the threshold of meeting the grade 3 reading requirement. Participants engaged in multiple rounds of individual judgments and group discussions. Committees' median judgments comprised their final recommendations.

Table 1 shows the recommended cut scores from the standard settings, plus the associated *impact data.* Impact data are the percentages of students who would be classified above and below the cut score if it were applied to student data from the Spring 2018 administration of the test. The table also notes the difference between the two recommendations is 0.4 conditional standard error of measurement (CSEM). The CSEM quantifies the amount of statistical error associated with the test. If a student were tested many times, one would expect her scores to fall within a range of ±1.0 CSEM about 2/3 of the time.

Table 1. Median Cut Score Recommendations from the July and December Standard Settings, and Difference in Terms of Conditional Standard Error of Measurement (CSEM)

Workshop	Median Recommendations	Impact Data from Spring 2018		Difference (CSEM)
	Meeting the Reading Standard	***Not Meeting the Reading Standard***	***Meeting the Reading Standard***	***Meeting the Reading Standard***
July	1262	11.1%	88.9%	0.4 CSEM
December	1266	15.3%	84.7%	

The review committee considered the two standard settings. DRC explained that the July 2018 standard setting was conducted just after the M-STEP standards validation for the main ELA test: these participants had engaged in the Bookmark Procedure for four days prior to the standard setting for grade 3 reading. The review committee noted that the December 2018 standard setting committee recommended a cut score markedly similar to that from July 2018, building validity evidence for the cut score.

After reviewing the recommendations, the review committee found the two recommended cut scores to be comparable. The review committee endorsed the work of the July 2018 committee with their recommended cut score of 1262.

The review committee recorded several concerns regarding the implementation of the grade 3 reading requirement. Notably, the review committee was concerned that: the retention policy will have a differential impact on some districts, especially urban districts; different districts may implement the good-faith exemptions in very different ways; some parents may be confused or concerned by the letter sent home; and that the supports available for students who do not meet the requirement are unclear.

The review committee recommended that MDE study the implementation of the grade 3 reading requirement, especially in the first few years, by sponsoring studies on the differential impact of the requirement on various Michigan districts. That committee also recommended that MDE consider building a confidence interval of ±1 SEM around the cut score recommended by the July 2018 committee, and subjecting to the retention policy only students who earn scores below 1253, -1 SEM from the recommended cut score. The committee further recommended that students who earn scores within ±1 SEM of the cut score (i.e., between 1253 and 1271, inclusive) be provided additional supports and funding. Were this recommendation implemented, approximately 4.3% of students would be subject to the retention policy (scoring 1252 or lower), 17.4% of students would be provided additional support (scoring 1253 – 1271), and 77.1% of students would fully meet the grade 3 reading requirement (scoring 1272 or higher).

References

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