

## MI-Access Functional Independence Science Assessment

### Physical Science - Grade 11 Performance Level Descriptors

Grade 11	EMERGING	ATTAINED	SURPASSED
<b>Physical Science</b>	Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who are emerging toward the performance standard</b> , with or without assistance, are typically able to demonstrate a <b>limited*</b> ability to...	Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who attained the performance standard</b> are typically able to <b>independently*</b> ...	Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who surpassed the performance standard</b> are typically able to <b>consistently**</b> and <b>independently*</b> ...
TB: Structure and Properties of Matter	<ul style="list-style-type: none"> <li>use the periodic table to identify a pattern among familiar elements (such as location in the Periodic Table, or how they are classified and limited to: Hydrogen, Oxygen, Copper, Tin, Nickel, Carbon, Sodium, Iron, Gold, or Silver), or</li> <li>identify that as the temperature increases, so does the spacing and motion of the particles of a common substance, or</li> <li>recognize the relationship between the structure (properties) and function of materials made by humans.</li> </ul>	<ul style="list-style-type: none"> <li>use the periodic table to identify a pattern among familiar elements (such as location in the Periodic Table, the number of electrons, their relative size, and/or how they are classified for Hydrogen, Helium, Oxygen, Copper, Tin, Nickel, Carbon, Sodium, Potassium, Calcium, Lead, Iron, Gold, Silver, Aluminum, and/or Neon), and/or</li> <li>identify the relationship between the melting and/or boiling points of a common substance and/or that as the temperature increases, so does the spacing and motion of the particles of the substance, and/or</li> <li>identify the relationship between the structure (properties) and function of natural materials and/or those made by humans.</li> </ul>	<ul style="list-style-type: none"> <li>use the periodic table to identify patterns among familiar elements (such as location in the Periodic Table, the number of electrons, their relative size, and how they are classified for Hydrogen, Helium, Oxygen, Copper, Tin, Nickel, Carbon, Sodium, Potassium, Calcium, Lead, Iron, Gold, Silver, Aluminum, and Neon), and</li> <li>use an investigation to describe the relationship between the melting and/or boiling points of a common substance and/or that as the temperature increases, so does the spacing and motion of the particles of the substance, and</li> <li>use evidence to describe the relationship between the structure (properties) and function of natural materials or those made by humans.</li> </ul>

Grade 11	EMERGING	ATTAINED	SURPASSED
<b>Physical Science</b>	Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who are emerging toward the performance standard</b> , with or without assistance, are typically able to demonstrate a <b>limited*</b> ability to...	Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who attained the performance standard</b> are typically able to <b>independently*</b> ...	Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who surpassed the performance standard</b> are typically able to <b>consistently**</b> and <b>independently*</b> ...
TB: Chemical Reactions	<ul style="list-style-type: none"> <li>identify a chemical property that occurs in a substance during a common chemical reaction, or</li> <li>identify how a change in temperature or concentration of the reacting particles can affect the rate of reactions.</li> </ul>	<ul style="list-style-type: none"> <li>identify an explanation of chemical properties that occur in a substance during a common chemical reaction (e.g., baking soda and vinegar), and/or</li> <li>identify an explanation that shows how changes in temperature and/or concentration of the reacting particles can affect the rate of reactions.</li> </ul>	<ul style="list-style-type: none"> <li>use models, simulations, or illustrations to explain chemical properties that occur in a substance during a common chemical reaction, and</li> <li>use evidence to explain how changes in temperature and concentration of the reacting particles can affect the rate of reactions.</li> </ul>
TB: Forces & Interactions	<ul style="list-style-type: none"> <li>identify how the net force acting on an object impacts its acceleration or direction, or</li> <li>identify the change in momentum (faster, slower) of one of two objects after two objects collide, or</li> </ul>	<ul style="list-style-type: none"> <li>identify a description that shows how the net force acting on an object, or the mass of the object, impacts its acceleration (as increasing, decreasing, or staying the same) or the direction of the object, and/or</li> <li>use models, illustrations, or simulations to identify the change in momentum of each object after two objects collide or show that total momentum remains the same as before the collision, and/or</li> </ul>	<ul style="list-style-type: none"> <li>use data to describe how the net force acting on an object, or the mass of the object impact its acceleration (as increasing, decreasing, or staying the same) and/or the direction of the object, and</li> <li>use evidence to support a given claim about the change in momentum of each object after two objects collide and show that total momentum remains the same as before the collision, and</li> </ul>

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<b>Physical Science</b>	Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who are emerging toward the performance standard</b> , with or without assistance, are typically able to demonstrate a <b>limited*</b> ability to...	Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who attained the performance standard</b> are typically able to <b>independently*</b> ...	Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who surpassed the performance standard</b> are typically able to <b>consistently**</b> and <b>independently*</b> ...
TB: Forces & Interactions (continued)	<ul style="list-style-type: none"> <li>identify how a factor such as relative size or relative distance between objects affects the gravitational force or the electrostatic force between objects, or</li> <li>recognize evidence that an electric current produces a magnetic field.</li> </ul>	<ul style="list-style-type: none"> <li>identify a description of how a factor such as relative size, charge of particles, relative quantity of charges, and/or relative distance between objects affect the gravitational or electrostatic force between objects, and/or</li> <li>identify evidence that an electric current produces a magnetic field and/or a changing magnetic field produces an electric current.</li> </ul>	<ul style="list-style-type: none"> <li>use models, illustrations, or simulations to identify how factors, such as relative size, charge of particles, relative quantity of charges, and/or relative distance between objects affect the gravitational or electrostatic force between objects, and</li> <li>use an investigation to identify evidence that an electric current produces a magnetic field and/or a changing magnetic field produces an electric current.</li> </ul>
TB: Energy	<ul style="list-style-type: none"> <li>identify a device that converts one form of energy into another form of energy, or</li> <li>identify that heat transfers between substances, or</li> </ul>	<ul style="list-style-type: none"> <li>use evidence to describe devices that convert one form of energy into another form of energy, and/or</li> <li>identify the evidence that explains that heat transfers between substances until energy is uniformly distributed, and/or</li> </ul>	<ul style="list-style-type: none"> <li>participate in building a device that converts one form of energy into another form of energy, and</li> <li>use an investigation to provide evidence that heat transfers between substances until energy is uniformly distributed, and</li> </ul>

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<b>Physical Science</b>	Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who are emerging toward the performance standard</b> , with or without assistance, are typically able to demonstrate a <b>limited*</b> ability to...	Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who attained the performance standard</b> are typically able to <b>independently*</b> ...	Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who surpassed the performance standard</b> are typically able to <b>consistently**</b> and <b>independently*</b> ...
TB: Energy (continued)	<ul style="list-style-type: none"> <li>recognize if a given force is magnetic or electric or recognize the force fields of two interacting objects.</li> </ul>	<ul style="list-style-type: none"> <li>use a demonstration or model, to identify a description for magnetic or electric forces and fields of two interacting objects, and/or the resulting change in the motion of the objects.</li> </ul>	<ul style="list-style-type: none"> <li>use a model to describe the magnetic or electric forces and fields of two interacting objects and the resulting change in the motion of the objects.</li> </ul>
TB: Waves & Electromagnetic Radiation	<ul style="list-style-type: none"> <li>identify one property of waves (vibration, speed, wavelength, or frequency), or</li> <li>identify an advantage of a digital device.</li> </ul>	<ul style="list-style-type: none"> <li>identify the relationship between two wave properties (vibration, speed, wavelength, frequency) or how a device uses waves to transmit information, and/or</li> <li>use evidence to describe advantages of digital devices and digital information storage.</li> </ul>	<ul style="list-style-type: none"> <li>use a wave model to provide evidence to describe or identify a relationship between two wave properties (vibration, speed, wavelength, frequency) and/or how a device uses waves to transmit information, and</li> <li>participate in evaluating and asking questions to identify the advantages of using digital devices and digital information storage.</li> </ul>
<p><b>*May include students using standard accommodations as determined by their Individualized Education Program</b>  <b>**Consistently refers to students who would be able to demonstrate understanding about 80% of the time or better</b></p>			

## MI-Access Functional Independence Science Assessment Life Science - Grade 11 Performance Level Descriptors

Grade 11	EMERGING	ATTAINED	SURPASSED
<b>Life Science</b>	Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who are emerging toward the performance standard</b> , with or without assistance, are typically able to demonstrate a <b>limited*</b> ability to...	Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who attained the performance standard</b> are typically able to <b>independently*</b> ...	Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who surpassed the performance standard</b> are typically able to <b>consistently**</b> and <b>independently*</b> ...
TB: Structure & Function	<ul style="list-style-type: none"> <li>identify that the structure of DNA determines the information for cell function in the body, or</li> <li>identify a body system and its function, or</li> <li>use evidence to identify ways that animals regulate their internal conditions needed to stay alive.</li> </ul>	<ul style="list-style-type: none"> <li>demonstrate that the structure of DNA determines the structure of proteins that are used to carry out cell functions, and/or</li> <li>use a model(s) to identify a description of how the interaction of two body systems provides a specific function, and/or</li> <li>use evidence to show that organisms react to change to regulate their internal conditions needed to stay alive.</li> </ul>	<ul style="list-style-type: none"> <li>explain that the structure of DNA determines the structure of proteins that are used to carry out cell functions, and</li> <li>use models to illustrate the interaction of two body systems that provides specific functions, and</li> <li>use an investigation to provide evidence that organisms react to change to regulate their internal conditions needed to stay alive.</li> </ul>
TB: Matter & Energy in Organisms & Ecosystems	<ul style="list-style-type: none"> <li>identify one reactant that a plant takes in during photosynthesis (light energy, carbon dioxide, or water) or identify the product of photosynthesis that is used by plants (sugar) for energy, or</li> </ul>	<ul style="list-style-type: none"> <li>identify a model that shows the process of how photosynthesis transforms light energy, carbon dioxide, and water into chemical energy (sugar) for organisms to use, and/or</li> </ul>	<ul style="list-style-type: none"> <li>use a model to illustrate how the process of photosynthesis transforms light energy, carbon dioxide, and water into stored chemical energy (sugar) for organisms to use, and</li> </ul>

Grade 11	EMERGING	ATTAINED	SURPASSED
<b>Life Science</b>	Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who are emerging toward the performance standard</b> , with or without assistance, are typically able to demonstrate a <b>limited*</b> ability to...	Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who attained the performance standard</b> are typically able to <b>independently*</b> ...	Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who surpassed the performance standard</b> are typically able to <b>consistently**</b> and <b>independently*</b> ...
TB: Matter & Energy in Organisms & Ecosystems (continued)	<ul style="list-style-type: none"> <li>• recognize that elements from sugar (carbon, hydrogen, oxygen) can form into bigger molecules, or</li> <li>• recognize that cellular respiration results in energy used by organisms to grow and survive, or</li> <li>• recognize the conservation of matter among organisms in an ecosystem, or</li> <li>• use models to identify the cycling of carbon between air and one part of the model (living organisms, water, or soil).</li> </ul>	<ul style="list-style-type: none"> <li>• use a model to identify that common elements (e.g., C, H, O) can form bigger molecules such as carbohydrates, proteins, lipids, and nucleic acids, and/or</li> <li>• identify a description for how the process of cellular respiration transforms food molecules and oxygen molecules into a new substance, which results in the energy used by organisms to grow and survive, and/or</li> <li>• use models to identify the flow of energy and/or the conservation of matter among organisms of an ecosystem, and/or</li> <li>• use models to identify the cycling of carbon between two parts of the model (living organisms, air, water, or soil).</li> </ul>	<ul style="list-style-type: none"> <li>• participate in developing a model to show that common elements (e.g., C, H, O) can form bigger molecules such as carbohydrates, proteins, lipids, and nucleic acids, and</li> <li>• use a model to describe that the process of cellular respiration transforms food molecules and oxygen molecules into a new substance, which results in the energy used by organisms to grow and survive, and</li> <li>• use models to describe the flow of energy and conservation of matter among organisms of an ecosystem, and</li> <li>• use models to identify the cycling of carbon among living organisms, air, water, and soil.</li> </ul>

Grade 11 Life Science	<b>EMERGING</b> Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who are emerging toward the performance standard</b> , with or without assistance, are typically able to demonstrate a <b>limited*</b> ability to...	<b>ATTAINED</b> Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who attained the performance standard</b> are typically able to <b>independently*</b> ...	<b>SURPASSED</b> Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who surpassed the performance standard</b> are typically able to <b>consistently**</b> and <b>independently*</b> ...
TB: Interdependent Relationships in Ecosystems	<ul style="list-style-type: none"> <li>identify the effect of an increase or decrease in an available food/water resource on a population size, or</li> <li>identify if a given solution could have a positive or negative impact on a given environmental condition, or</li> <li>recognize that group behavior can have negative and positive effects on the survival of groups of animals or individuals.</li> </ul>	<ul style="list-style-type: none"> <li>identify an explanation for the cause and effect relationship between population sizes and available resources (food, shelter, water), and/or</li> <li>identify a solution for reducing the impact of human activities on a given environmental condition, and/or</li> <li>identify a description for how group behavior affects the survival of groups of animals and/or individual animals.</li> </ul>	<ul style="list-style-type: none"> <li>use graphs and/or data to explain the cause and effect relationship among population sizes and available resources (food, shelter, water), and</li> <li>use data to select the best solution for reducing the impact of human activities on a given environmental condition, and</li> <li>use evidence to describe how group behavior affects the survival of groups of animals and individual animals.</li> </ul>
TB: Inheritance & Variation of Traits	<ul style="list-style-type: none"> <li>identify the body has specialized cells, or</li> <li>identify that offspring receive half of their genetic information from each parent or identify that offspring look similar but not identical to their parents.</li> </ul>	<ul style="list-style-type: none"> <li>identify the role of cellular division and specialization of cells as the body grows and develops, and/or</li> <li>identify an explanation that offspring receive half of their genetic information from each parent resulting in offspring that look similar but not identical to the parents.</li> </ul>	<ul style="list-style-type: none"> <li>use a model to identify the role of cellular division and specialization of cells as the body grows and develops, and</li> <li>use models and/or illustrations to explain that offspring receive half of their genetic information from each parent resulting in offspring that look similar but not identical to the parents.</li> </ul>

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<b>Life Science</b>	Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who are emerging toward the performance standard</b> , with or without assistance, are typically able to demonstrate a <b>limited*</b> ability to...	Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who attained the performance standard</b> are typically able to <b>independently*</b> ...	Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who surpassed the performance standard</b> are typically able to <b>consistently**</b> and <b>independently*</b> ...
TB: Natural Selection & Evolution	<ul style="list-style-type: none"> <li>• identify a similarity or a difference between the fossil records as two organisms change over time, or</li> <li>• recognize that an organism’s traits can have a positive or negative affect on the ability of an organism to survive.</li> </ul>	<ul style="list-style-type: none"> <li>• use evidence to identify patterns in the fossil record that demonstrate similarities and/or differences as organisms change over time, and/or</li> <li>• identify an explanation that evolution is the result of the number of organisms with beneficial traits increasing due to their ability to survive (e.g., get more food, escape predators) which causes the number of organisms without the beneficial traits to decrease.</li> </ul>	<ul style="list-style-type: none"> <li>• use data to describe patterns in the fossil record that demonstrate similarities and/or differences as organisms change over time and begin to recognize the organisms that have common ancestry, and</li> <li>• use evidence to explain that evolution is the result of the number of organisms with beneficial traits increasing due to their ability to survive (e.g., get more food, escape predators) which causes the number of organisms without the beneficial traits to decrease.</li> </ul>
<p><b>*May include students using standard accommodations as determined by their Individualized Education Program</b>  <b>**Consistently refers to students who would be able to demonstrate understanding about 80% of the time or better</b></p>			



## MI-Access Functional Independence Science Assessment

### Earth & Space Sciences - Grade 11 Performance Level Descriptors

Grade 11	EMERGING	ATTAINED	SURPASSED
<b>Earth &amp; Space Sciences</b>	Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who are emerging toward the performance standard</b> , with or without assistance, are typically able to demonstrate a <b>limited*</b> ability to...	Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who attained the performance standard</b> are typically able to <b>independently*</b> ...	Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who surpassed the performance standard</b> are typically able to <b>consistently**</b> and <b>independently*</b> ...
TB: Space Systems	<ul style="list-style-type: none"> <li>identify that reactions inside the Sun release energy in the form of radiation, or</li> <li>recognize the influence of gravity on the orbit of one planet or Earth's moon.</li> </ul>	<ul style="list-style-type: none"> <li>identify a description of the reactions inside the Sun that release energy as radiation, and some of this radiation reaches Earth, and/or</li> <li>identify that the Sun holds Earth in orbit and Earth holds its moon in orbit due to differences in mass that cause gravitational forces.</li> </ul>	<ul style="list-style-type: none"> <li>use a model to describe that reactions inside the Sun release energy as radiation, and some of this radiation reaches Earth, and/or</li> <li>use a model to show that the Sun holds Earth in orbit and Earth holds the moon in orbit due to differences in mass that cause gravitational forces.</li> </ul>
TB: History of Earth	<ul style="list-style-type: none"> <li>recognize a change that occurred as a result of movement of Earth's tectonic plates, or</li> <li>identify that Earth formed over a long period of time.</li> </ul>	<ul style="list-style-type: none"> <li>use models to identify evidence of past and current tectonic plate movement and/or identify explanations for the relative ages of rocks in Earth's crust, and/or</li> <li>use models of the layers of Earth to show that Earth formed over a long period of time.</li> </ul>	<ul style="list-style-type: none"> <li>use models to describe evidence of past and current tectonic plate movement and explain the relative ages of rocks in Earth's crust, and</li> <li>participate in developing a model of Earth's layers to show that Earth formed over a long period of time.</li> </ul>

Grade 11  Earth & Space Sciences	<b>EMERGING</b>	<b>ATTAINED</b>	<b>SURPASSED</b>
TB: Earth's Systems	<p>Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who are emerging toward the performance standard</b>, with or without assistance, are typically able to demonstrate a <b>limited*</b> ability to...</p> <ul style="list-style-type: none"> <li>identify one effect of water on one earth material (such as soil, sand, rocks, etc.), or</li> <li>recognize a simple carbon cycle between two Earth systems.</li> </ul>	<p>Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who attained the performance standard</b> are typically able to <b>independently*</b>...</p> <ul style="list-style-type: none"> <li>use a model to describe the effects of water on earth materials (such as soil, sand, rocks, etc.), and/or</li> <li>identify a simple carbon cycle between two Earth systems (hydrosphere, atmosphere, geosphere, and biosphere).</li> </ul>	<p>Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who surpassed the performance standard</b> are typically able to <b>consistently**</b> and <b>independently*</b>...</p> <ul style="list-style-type: none"> <li>participate in an investigation to demonstrate the effects of water on earth materials (such as soil, sand, rocks, etc.), and</li> <li>use evidence to describe a simple carbon cycle between two or more Earth systems (hydrosphere, atmosphere, geosphere, and biosphere).</li> </ul>
TB: Weather & Climate	<ul style="list-style-type: none"> <li>use data to recognize patterns in local weather, regional weather, or global climate.</li> </ul>	<ul style="list-style-type: none"> <li>use weather data to describe changes in local, regional, or global climate.</li> </ul>	<ul style="list-style-type: none"> <li>use weather data to predict changes in local, regional, and global climate.</li> </ul>
TB: Human Sustainability	<ul style="list-style-type: none"> <li>identify how natural resources, natural hazards, or climate change affect human populations, or</li> <li>identify if a solution reduces the human impact on a natural resource, or</li> </ul>	<ul style="list-style-type: none"> <li>identify a description for how natural resources, natural hazards, and climate change affect human populations, and/or</li> <li>identify the solution that best results in reducing the human impact on a natural resource, and/or</li> </ul>	<ul style="list-style-type: none"> <li>use evidence to describe how natural resources, natural hazards, and climate change affect human populations, and</li> <li>participate in investigations to determine how one solution for reducing human impact on natural resources may be better than another possible solution, and</li> </ul>

Grade 11	EMERGING	ATTAINED	SURPASSED
<b>Earth &amp; Space Sciences</b>	Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who are emerging toward the performance standard</b> , with or without assistance, are typically able to demonstrate a <b>limited*</b> ability to...	Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who attained the performance standard</b> are typically able to <b>independently*</b> ...	Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who surpassed the performance standard</b> are typically able to <b>consistently**</b> and <b>independently*</b> ...
TB: Human Sustainability (continued)	<ul style="list-style-type: none"> <li>identify the effects of human populations on biodiversity or the sustainable use of natural resources (students are not expected to define biodiversity).</li> </ul>	<ul style="list-style-type: none"> <li>identify the effects of human populations on biodiversity and the sustainable use of natural resources (students are not expected to define biodiversity).</li> </ul>	<ul style="list-style-type: none"> <li>use evidence while exploring and asking questions about biodiversity to describe the effect of human populations on biodiversity and the sustainable use of natural resources (students are not expected to define biodiversity).</li> </ul>
<p><b>*May include students using standard accommodations as determined by their Individualized Education Program</b>  <b>**Consistently refers to students who would be able to demonstrate understanding about 80% of the time or better</b></p>			

## MI-Access Functional Independence Science Assessment ETS - Grade 11 Performance Level Descriptors

Grade 11	EMERGING	ATTAINED	SURPASSED
<b>Engineering, Technology, and Applications of Science</b>	Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who are emerging toward the performance standard</b> , with or without assistance, are typically able to demonstrate a <b>limited*</b> ability to...	Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who attained the performance standard</b> are typically able to <b>independently*</b> ...	Based on the Essential Elements using the High level of the Michigan Range of Complexity, across all content expectations, students <b>who surpassed the performance standard</b> are typically able to <b>consistently**</b> and <b>independently*</b> ...
TB: Engineering Design	<ul style="list-style-type: none"> <li>recognize a major global challenge for which humans need or want solutions, or</li> <li>identify a sub-problem for a real-world problem, or</li> <li>use one factor or criteria (such as cost or safety) to recommend which of two solutions is better given the factors/criteria, when participating in a group investigation of solutions to a real-world problem.</li> </ul>	<ul style="list-style-type: none"> <li>use evidence to identify a major global challenge for which humans need or want solutions, and/or</li> <li>identify a sub-problem of a complex real-world problem and a potential solution that uses engineering, and/or</li> <li>use two factors or criteria (such as cost, safety, reliability, and/or aesthetics) to recommend which of three solutions is best given the factors/criteria, when participating in a group investigation of solutions to a real-world problem.</li> </ul>	<ul style="list-style-type: none"> <li>use evidence to describe major global challenges for which humans need or want solutions, and begin to identify possible constraints for a solution, and</li> <li>identify a sub-problem and a potential solution that uses engineering, during a class investigation of a complex real-world problem, and</li> <li>use two or more factors or criteria (such as cost, safety, reliability, and/or aesthetics) to recommend which of three solutions is best given the factors/criteria, and begin to recognize a possible impact (social, cultural, or environmental), when participating in a group investigation of solutions to a real-world problem.</li> </ul>
<p><b>*May include students using standard accommodations as determined by their Individualized Education Program</b>  <b>**Consistently refers to students who would be able to demonstrate understanding about 80% of the time or better</b></p>			