



Introduction to the Standards for  
the Preparation of Teachers of  
Early Childhood General and  
Special Education  
(Birth-Kindergarten)

**Michigan State Board of Education**

**Approved**

**January 14, 2020**

# Purpose

The purpose of the Standards for the Preparation of Teachers of Early Childhood General and Special Education (Birth-Kindergarten) is to establish a shared vision for the content and skills that entry-level teachers of early childhood education in Michigan should possess and be able to demonstrate in their teaching. The standards reflect a vision of a well-prepared beginning teacher, whose role is to address the needs of the whole child.

These standards are organized into five sections of professional preparation to teach early childhood education and define acceptable levels of performance at teachers' point of entry into the field. These standards establish outcomes for graduates of teacher preparation programs in early childhood general and special education (birth-kindergarten) and are to be used to inform program development and continuous improvement efforts at Michigan's institutions of higher education.

The standards in this document do not define a candidate's entire postsecondary coursework, but rather define the specific program area coursework for becoming a teacher. Additional coursework will be required by colleges and universities as part of their general education coursework (typically in the first two years of a college or university experience).

Teacher preparation programs should carefully consider articulation agreements and stackable credentials (such as earned Child Development Associate and/or associate degrees) in developing their programs. Programs should also consider the overlap of the PK and K content within the PK-3 preparation standards when building programs. The sets of standards do have intentional overlap.

These standards are to be implemented alongside Michigan's Clinical Experiences Requirements and Core Practices to ensure teacher candidates have sufficient opportunity to demonstrate proficiency in these standards and Core Practices in authentic instructional settings.

Additional materials will be available to assist institutions in unpacking the standards and developing program syllabi. Materials will be posted as they are developed through the implementation phase. Preparation standards are intended to provide a framework for educator preparation institutions in developing their programs. Additional information about how preparation relates to placement and permits (district flexibility or compliance plans) are available on the MDE website.

# Development of the Proposal

In alignment with Goal 3 of the Top 10 in 10 Years Strategic Plan, these standards work to develop a high-quality, prepared, and collaborative education workforce that is prepared to use differentiated supports and meet the needs of the whole child.

In May 2018, Superintendent Brian Whiston announced a revised certification structure for teacher certification. More details about the structure are described on the Michigan Department of Education (MDE) website. The first sets of preparation standards to support the structure are Standards for the Preparation of Teachers of Lower Elementary (PK-3) and Upper Elementary (3-6) Education and were approved by the State Board of Education in August 2018. These standards include an increased emphasis on the preparation of teachers to teach children within the specialized age bands and focus instruction on specific pedagogical skills.

Frequent questions arose related to the revised certification structure around the early childhood workforce and the Early Childhood General and Special Education (ZS) endorsement. In response, a stakeholder committee was convened beginning in January 2019 to review the Early Childhood (ZS) endorsement standards alongside the PK-3 preparation standards and make a recommendation on the structure for the ZS endorsement moving forward. The committee recommendation was to include an additional band in the certification structure for General and Special Education Early Childhood teachers from birth through kindergarten.



The committee also recommended that this band should be able to be earned as a standalone grade band or alongside the PK-3 grade band. In practice, this means this would be the first time teachers can be certified for having specialized early childhood instructional preparation without also having to be certified for K-5. This grade band is intended for populations of teachers that are currently required to hold the ZS endorsement. Teachers who are already eligible to teach in these settings will still be able to teach in that setting without this endorsement (i.e., they will be “grandparented”), but the endorsement would be available for them should they want it. Alternative options (i.e., a BA in child development) will continue to be allowable. A person holding this endorsement will be well-prepared to work and

teach in Great Start Readiness Programs (GSRP), Early Childhood Special Education (ECSE), Head Start, and *Early On* ®. At this time, expanding the requirement for certification to new populations is not recommended. These standards do not replace specialized preparation of Occupational Therapists, Physical Therapists, Categorical Special Education Teachers (e.g., Autism Spectrum Disorder, Learning Disabilities), or other specialized personnel.

Key areas of the draft early childhood standards include sections for: Whole Child Development, Special Education (Natural and Inclusive Environments), Family and Community Relationships, and Content Knowledge and Pedagogy. Underlying these areas are a layer of standards focused on the foundational coursework required in order to enact the other sections. Coursework should be applied in a manner that relies on connected clinical experiences.

The draft document was sent to an external review team for feedback. The responses were compiled by the review team and edits were made to the document accordingly. The key edits included reorganization, increased clarity, modified language, additional specificity for skills of infant and toddler teachers, additional standards for special education knowledge and skills, and alignment with the Standards for the Preparation of Teachers of Lower Elementary (PK-3) Education.

The previous Early Childhood Education PK (General and Special Education) Endorsement (ZS) was required to be earned along with an elementary program or certain secondary programs. As a result, all content earned was based on that elementary or secondary program. In most cases, this means the teacher was prepared with K-5 content and pedagogy and then added the ZS (child development, relationships, etc.). The standards presented below do not require the candidate to pair this preparation with K-5 standards. The content is specific to children within the birth-kindergarten continuum.

The standards will be accompanied by a glossary and resources for programs.

These standards were submitted for the SBE review at its August 13, 2019 meeting. This presentation was followed by a period of public comment through September 23, 2019. A total of 126 individuals (teachers and practitioners, administrators, teacher educators, educator organization representatives, parents, and interested citizens) indicated their opinion on the standards and submitted comments. 87.5% of respondents indicated that the proposed standards would improve the preparation of teachers of early childhood. The standards were revised to address the comments, including clarifications around usage of the standards and personnel requirements. Individual standards were modified for clarification or more appropriate language. Additional materials will be made available for implementation according to feedback provided in the comments.

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**Note:** Standards in *italics* are also in the professional section of the PK-3 preparation standards. Significant overlap with the PK-3 standards also exist in the content area coursework but are not italicized in this document.

# 1. Foundational

## **FC. 1 Teaching and Learning**

Well-prepared beginning teachers will:

- A. *Support the whole child through knowledge and understanding of young children's characteristics and needs, including multiple interrelated areas of child development and learning, learning processes, and motivation to learn.*
- B. *Demonstrate knowledge and understanding of the multiple influences on development and learning of the whole child, including but not limited to: cultural and linguistic context, social emotional needs, traumatic experiences, health status and disabilities, peer and adult relationships; children's individual and developmental variations, play, family and community characteristics; the influence and impact of technology and the media.*
- C. *Support children's approaches to learning by using evidence-based practices that engage and empower young learners.*
- D. *Demonstrate the ability to build meaningful and effective learning environments, curriculum and experiences by focusing on children's characteristics, needs, and interests; linking children's language, culture, and community to early learning; using social interactions during routines and play-based experiences; incorporating technology and integrative approaches to learning; and utilizing incidental teaching, embedded learning opportunities and informal experiences to build children's development in all areas.*
- E. Understand that positive responsive relationships serve as the foundation for children's development and learning, family engagement and cross sector-collaborations that are essential to support optimal development and learning.
- F. Plan, implement and assess developmentally appropriate experiences based on state and national learning standards that promote concept and skill development and challenging learning experiences across all development domains and content areas.
- G. Design and provide learning experiences that include active manipulation of a wide variety of materials and equipment in all developmental and content areas, both indoors and outdoors.
- H. Demonstrate the ability to challenge children and to use scaffolding strategies to advance each child's optimal development and learning, supporting many opportunities to practice newly acquired skills, incorporating supportive and assistive technologies when appropriate.
- I. Design and provide a healthy and safe environment for all children and adults including appropriate supervision and guidance, consistent and predictable yet flexible routines, and clear and purposeful transitions between various parts of the daily routine and between groups, settings, and programs.



- J. *Demonstrate knowledge and application of research-based instructional strategies to support the whole child's learning and development through the visual and performing arts.*
- K. *Demonstrate knowledge and application of research-based instructional strategies to support the whole child's learning and development through movement and physical activities.*
- L. *Demonstrate knowledge and application of research-based instructional strategies to create opportunities to develop critical knowledge, skills, and behaviors that contribute to life-long health.*
- M. *Demonstrate knowledge and use of a variety of strategies, instructional accommodations, and adaptations of the learning environment including accommodation of instructional and assessment materials as appropriate to meet children's abilities or disabilities, home language, and culture to promote the full participation of all children, including those with special needs, in general education classrooms.*
- N. Create environments in which children are encouraged to interact and learn with and alongside others in self-selected groupings and use individualized, formal and informal grouping practices to support learning.
- O. Facilitate children's development of a wide range of relationships and among peers and adults.
- P. Promote appreciation for diversity while being respectful of the cultural traditions, values, and beliefs of families being served.

## **FC.2 Observation, Documentation, Assessments**

Well-prepared beginning teachers will:

- A. *Demonstrate understanding of and ability to use systematic observations, documentation, screening tools and play-based assessments and other appropriate forms of formative and summative assessment tools and approaches embedded in assessment-related activities in curriculum and daily routines.*
- B. Use appropriate health appraisal procedures and evaluation procedures and demonstrate the ability to recommend referrals and follow-up to/with appropriate agencies and partners when necessary.
- C. Synthesize evaluation and assessment information and collaborate with families to identify and prioritize developmental outcomes and necessary supports that will enhance the functioning of young children in the natural environment including the use assistive technology.
- D. Use assessment data to make decisions about teaching practices and curriculum development.
- E. *Engage in positive partnerships with families and other professionals and articulate the value, appropriate use (and potential misuse) of assessment, including screening and referral practices.*
- F. Accurately interpret screening and assessment results for individual and group and explain results in practical terms.

### **FC.3 Culturally Responsive Education**

Well-prepared beginning teachers will:

- A. Demonstrate, model and affirm respect for a variety of complex characteristics of individuals, families and communities that influence a child's development and learning.
- B. Design opportunities for learning that are equitable, irrespective of gender, ability, age, ethnicity, language, or family structure and promote active and equitable participation for all children in the program.
- C. Use language and teaching practices in which young children are affirmed as individuals, including person-first language.
- D. Use culturally and linguistically responsive teaching practices, evaluation and assessment methods.
- E. Demonstrate recognition of how implicit bias affects learning.
- F. Reflect on personal cultural biases that may influence interactions, relationships,
- G. Create environments in which all cultures are represented respectfully and celebrated on a continuous basis through experiences and materials available in the classroom.

### **FC.4 Relationships, Interactions and Guidance**

Well-prepared beginning teachers will:

- A. Understand positive relationships and supportive interactions are the foundation of successful teaching of young children.
- B. Value, create and model positive, open and respectful relationships with children.
- C. Use intentional and evidence-based instructional strategies to develop positive relationships and support individual children.
- D. Demonstrate intentional teaching through modeling prosocial behaviors and providing social and emotional skills instruction.
- E. *Implement norms and routines and use classroom management strategies that support individual and group motivation and behavior among children to generate active engagement in play and learning, self-motivation, and positive social interaction, and to create supporting and dynamic indoor and outdoor learning environments.*
- F. *Utilize individual and group guidance and problem-solving techniques to develop positive and supportive relationships with children, encourage and teach positive social skills and interaction among children, promote positive strategies of conflict resolution, and develop personal self-regulation, motivation, and esteem.*
- G. Plan and implement evidence-based supports and interventions for children who exhibit signs of trauma and stress.

### **FC.5 Professionalism**

Well-prepared beginning teachers will:

- A. Articulate the importance of early childhood education and the societal benefits of an accessible, affordable and high-quality experience.

- B. Identify, analyze, and engage in ongoing professional learning that strengthen their instructional practice and use reflective practices to design, monitor, and adapt their instruction as a means for gauging their own professional growth.
- C. *Continually evaluate the effects of professional and personal decisions and actions on the children, parents, and other professionals in their learning community.*
- D. *Demonstrate knowledge of and critically analyze the ethical/professional codes of conduct in education, including the [Michigan Code of Educational Ethics](#) and the [Statement and Guidance on Developing a Policy for Prevention of Suspension and/or Expulsion of Children Birth through Age 8 in Early Education and Care Programs](#).*
- E. *Identify signs of emotional distress, toxic stress, child abuse and/or neglect in young children and follow appropriate procedures for mandated reporting and utilize skills and strategies for clarifying and communicating sensitive issues with appropriate parties (including but not limited to child abuse, neglect, hygiene, and nutrition) to promote young children's physical and psychological health, safety, and sense of security.*
- F. *Demonstrate knowledge of and maintain currency in public policy issues and processes and the impact on the education of all children, including English learners and children with special needs.*
- G. *Demonstrate knowledge and application of legal and ethical guidelines and professional standards related to children and families.*
- H. Understand how policies, procedures, and systems support stable staff and strong personnel, fiscal, and program management/administration so all children, families and staff have high-quality experiences.

## 2. Whole Child Development

### **WCD.1 General Knowledge**

Well-prepared beginning teachers will:

- A. Identify and differentiate between the various contributions of research findings and developmental theories that shape the field of child development.
- B. Explain how the dynamic interaction between biological maturation and experience impact children's development.
- C. Describe how early experiences, including relationships, educational practices, interactions and strategies, can help strengthen or weaken the architecture of children's developing brains and brain wiring.
- D. Identify and explain the characteristics of typical and atypical whole child development from birth through age five, including the developmental milestones of physical, social-emotional, aesthetic, cognitive, and language development; the interconnected nature between different areas of development and the progression toward greater ability and complexity in self-regulation (including executive function skills and effortful control), and symbolic thinking; and variation in rates of development that occur among children.
- E. Identify key elements of prenatal growth and development, and their impact on the typical and atypical development of a child such as prenatal periods, role of maternal and paternal heredity/genes, genetic abnormalities/disorders, screening; maternal diseases, disorders, screening; teratogens (substances, environment); methods and complications of labor/delivery; and neonatal risk factors.

### **WCD.2 Influences on Development**

Well-prepared beginning teachers will:

- A. Recognize how the following characteristics have profound influences on all developmental domains, their respective developmental milestones, and the dynamic interaction across domains: how young children grow, develop and learn; general characteristics of birth through kindergarten; typical and atypical growth and development; and how children develop and learn over time.
- B. *Demonstrate understanding of the implications for development in early learning of common learning challenges and disabilities in young children, including their etiology, characteristics and classification of common disabilities (speech language impairment, cognitive impairment, learning disabilities, autism spectrum disorder, physical disabilities, visual impairment, deaf and hard of hearing, and emotional impairment), how to respond appropriately to these signs, and their implications for development and learning in the early years.*
- C. Demonstrate knowledge of how young children differ in their development and approaches to learning by: identifying differences and similarities in abilities and skills across developmental domains detailing the impact of adult interactions and parenting styles on children's development, abilities and skill sets; and understanding the impact of secure consistent relationships and positive attachment on children's development.

- D. Demonstrate knowledge of the impact of the environment on child growth, development and learning by identifying the effects of risk factors including but not limited to income disparity, trauma, health and nutrition on children’s growth, development and learning; understand that environmental factors can influence the rate of growth, development and learning; and explain how positive interactions can reduce the impact of negative environmental factors and demonstrate the ability to implement appropriate evidence-based practices and interventions.
- E. Articulate how children’s experiences shape their overall motivation and approaches to learning and how dispositions and behaviors like resilience, persistence, initiative and flexibility affect their learning and development.
- F. Maximize opportunities to support children’s development through secure, consistent relationships with responsive adults and positive relationships with peers.
- G. Use guidance techniques to support children’s need for a sense of security and self-esteem.
- H. *Demonstrate knowledge and use of a variety of strategies to promote full participation of English learners in classrooms.*
- I. *Demonstrate an ability to manage and implement standards-based content instruction to support English learners in accessing the core curriculum as they learn language and academic content.*
- J. Demonstrate knowledge of and differentiate between the distinct elements of trauma, toxic stress, and adverse childhood experiences (ACEs) and the impact on brain development and later academic, social and emotional skill development, including explaining the interconnected nature of trauma, toxic stress, and adverse childhood experiences. Identify prevention strategies and protective factors of resilience and implement strategies to build resilience in children, families, and communities using evidence-based and trauma informed interventions.
- K. Demonstrate knowledge of the impact of diversity, inclusion and bias on children, families, and programming, and the ability to implement strategies to promote equity, cultural responsiveness and inclusivity.

### **WCD 3. The Role of Play**

Well-prepared beginning teachers will

- A. Articulate how play is the primary avenue for children’s learning across all domains, content areas, and for developing self-regulation.
- B. Design, sequence, and implement play-based learning experiences supported by knowledge of theory and research in child development for infants, toddlers, preschoolers and kindergarten children.
- C. Demonstrate knowledge of the value of play, skill in play interactions, and an understanding of how children use play to translate experience into understanding.
- D. Promote and provide time for daily open ended, self-selected play.

- E. Explain the multiple forms of play as part of children’s learning (e.g., imitative play and social referencing in infants; solitary, parallel, social, cooperative, onlooker, fantasy, physical and constructive play to develop symbolic and imaginative thinking, peer relationships, language, creative movement, and problem-solving skills).
- F. Considering multiple audiences, including families, describe the characteristics of play as a pedagogical tool which enables children to enjoy learning and do so in a conceptually rich fashion.
- G. Interact with children during play to scaffold children’s thinking, to model appropriate behaviors for those who need assistance, to help children become better play partners, and to use play to translate experience into understanding.
- H. Provide adequate and uninterrupted time for children to engage in play each day, including age-appropriate extended blocks of time designated for child choice, play, and exploration.
- I. Ensure that the contribution and importance of play to children’s development, learning, and overall well-being is reflected in the daily experiences and activities planned and provided for children.
- J. Support the relationship between play and the development in emergent language; executive functioning; emergent mathematics; scientific thinking; social competence; and emotional intelligence.

#### **WCD.4 Social Emotional Development**

Well-prepared beginning teachers will:

- A. Demonstrate knowledge that social emotional development is a critical aspect of learning and recognize the characteristics of typical social emotional development at different stages during the early years.
- B. Understand theories and research that support the importance of positive teacher-child relationships and high-quality interactions in early childhood education.
- C. Recognize implicit bias can be present when labeling and identifying challenging behaviors and use these opportunities to identify developmentally appropriate prosocial behaviors and scaffold skill acquisition specific to the individual skills of the child to build resilience.
- D. Collaborate with families and other professionals to promote positive social/emotional development.
- E. Create opportunities for children to develop prosocial language and non-violent approaches to conflict resolution/transformation and problem solving.
- F. Use knowledge of children’s shared interests and temperaments to facilitate play among peers.
- G. Provide and frame genuine choice for children, support them in making choices and comment positively on the choices they make.
- H. Create environments in which children feel safe and confident to engage in a range of experiences and with various groupings of peers and adults.
- I. Create opportunities for children to express varied emotions, including through play, and learn that expressing all emotions is acceptable; for children to define

emotions, identify their own emotions and situations that bring about these emotions, learn about how to recognize the emotions of others.

- J. Provide opportunities for children to develop moral autonomy and respect for the rights of others.
- K. Utilize multiple approaches to help children to develop effective strategies to regulate behaviors including environmental cues, following a routine, verbally labeling children's behavior objectively.
- L. Create caring communities where children know that they belong and are valued, children increase in ability to take another's perspective, and children have a sense of community in their classroom and confidence that it is a safe place to learn and to interact with classmates.
- M. Provide opportunities for children to develop understanding and mutual respect.
- N. Provide opportunities for infants and toddlers to demonstrate an increasing awareness of emotion.
- O. Provide opportunities for infants and toddlers to demonstrate an increasing awareness of self by showing preferences for objects, people, and activities.
- P. Provide opportunities for infants and toddlers to demonstrate competence while attempting activities and tasks.
- Q. Provide opportunities to develop and sustain caring relationships with peers and teachers.
- R. Create consistent, but flexible, routines, schedules, and activities; communicate expectations clearly and consistently such that children increasingly understand the nature and boundaries of acceptable behavior.
- S. Build warm, positive and nurturing relationships by conveying warmth and affection verbally and nonverbally; sitting in close proximity to and making eye contact with children; using tone of voice, facial expressions and level of enthusiasm in synch with each child; and promoting self-initiated exploration while remaining available to provide needed assistance.
- T. Demonstrate an understanding of the unique needs of each child and tailor responses and plan supports to be in tune with the individual child's preferences for receiving comfort, interaction and supports.
- U. Demonstrate sensitivity to each child's signs of fatigue or overstimulation and adjust the pace of activities, tone of voice and interaction styles in response.
- V. Understand and respond to the individual cues provided by each child.
- W. Support emotional regulation in infants by soothing them with gentle voice and touch or by redirecting their attention to elicit a more positive or calm emotional state.
- X. Promote socialization by placing infants so they can see and reach things and observe and respond to the interactions and activities occurring around them.
- Y. Proactively support children's positive behavior by setting up conditions that minimize the potential for misbehavior, establishing and reminding children of limits, and offering choices to diffuse minor conflicts.
- Z. Understand that experiences in the development of social confidence have long-term effects.

### 3. Relationships

Well-prepared beginning teachers will:

- A. *Promote and provide opportunities to engage parents, families, and communities.*
- B. Recognize, value and support, family members as their child's primary teacher and advocate, both within and beyond the program.
- C. Identify a variety of complex characteristics of families and communities which influence a child's development such as gender, ability, age, home language, family structure, ethnicity, diversity, or background.
- D. Apply valuable information and understandings received from families regarding their children to create effective connections and consistency across homes and the program.
- E. Identify and use strategies to engage families in building strong, meaningful partnerships that are authentic, culturally and linguistically appropriate and provide opportunities for regular, ongoing two-way communication that is sensitive and respectful to individual family needs, preferences and goals for their child.
- F. Use a variety of ongoing communication strategies that will support and empower families and communities through respectful, reciprocal relationships.
- G. Actively assist families in identifying and using available federal, state and local agencies, programs and assets to support children and families.
- H. Share knowledge and resources with parents to mitigate the impact of environmental factors on children's health.
- I. Work cooperatively and collaboratively with a wide variety of public and private birth through kindergarten early care and education programs, as well as community leaders, action groups and agencies within the community to support the needs of young children and families.
- J. *Describe the roles and responsibilities of other professionals in the birth through kindergarten service continuum, including, but not limited to health care providers, early childhood specialists, school psychologists, social workers, occupational therapists, speech and language pathologists, physical therapists, school counselors, reading specialists, and bilingual or English as a second language educators.*
- K. *Identify specialized personnel in the birth through kindergarten service continuum and collaborate with them in a system of supports to advance children's learning and well-being.*
- L. Collaborate with families to support their skills in promoting the development of their children using routines-based strategies in the home or other natural environments.



## 4. Special Education

Early childhood environments are safe, responsive and nurturing environments that support learning and development of infants, toddlers, and preschoolers.

Environmental practices refer to aspects of the space, materials, equipment, routines, and activities and practitioners, teachers, and families can intentionally alter to support each child's learning across developmental domains. Educators have a responsibility to support all learners and understand the interdisciplinary nature of this work, including collaboration with service providers, coaching family members to implement interventions, and incorporate intervention supports and services available through the Individuals with Disabilities Education Act into home and classroom settings.

### **NIE.1 Learning Environments**

Well-prepared beginning teachers will:

- A. Provide appropriate learning environments that are responsive to children, birth through Kindergarten, with typical and atypical developing characteristics and children who are English language learners.
- B. Apply and construct learning environments that provide achievable and challenging experiences for all children, including children with differing abilities and children with disabilities or developmental delays.
- C. Evaluate environments to ensure the physical and emotional safety of all children.
- D. Meet children's physical needs through small and large group muscle play, feeding, diapering and toileting, and rest and take into consideration all necessary health and safety procedures to limit the spread of infectious diseases, symptoms of common illness and environmental hazards, how to use environmental factors and conditions to promote the health, safety, and physical development of infants and toddlers and meeting healthy nutritional needs.
- E. Use educational materials that balance needs for growing independence and active exploration with the need for safety and health.
- F. Coach and work with the family and other adults to modify and adapt the physical, social, and temporal environments to promote each child's access to and participation in daily routines and learning experiences.
- G. Provide services and coach family members to support child development in natural and inclusive environments during daily routines and activities to promote the child's access to and participation in learning experiences.
- H. Demonstrate a knowledge of and ability to create transition plans between programs for children with and without disabilities.
- I. Consider Universal Design for Learning principles to create accessible environments.
- J. Select, develop, and evaluate developmentally and functionally appropriate materials, equipment, and environments.
- K. Organize space, time, materials, peers, and adults to maximize progress in natural and structured environments.
- L. Provide a stimulus-rich indoor and outdoor environment that employs materials, media, and adaptive and assistive technology, as well as opportunities for

movement and regular physical activity to maintain or improve fitness, wellness, and development across domains and that is responsive to individual.

- M. Identify and implement Department of Licensing and Regulatory Affairs regulations relating to early childhood childcare ratios, requirements for physical space, equipment recalls, and the administration of Supplemental Nutrition Assistance Program benefits.
- N. Identify and implement practices that promote success for young children in the Least Restrictive Environment, utilizing strategies and supports to ensure full access to the curriculum and participation in learning.
- O. Protect the privacy of children and families in compliance with FERPA.

### **NIE.2 Individualized Family Service Program (IFSP) and Individualized Education Program (IEP)**

Well-prepared beginning teachers will:

- A. *Demonstrate understanding of the teacher's role in the referral and eligibility determination process, as well as in development, enactment, and assessment of an Individualized Family Service Plan (IFSP), Individualized Education Program (IEP) and 504 Plan.*
- B. Support the development of an Individualized Family Service Program (IFSP) or Individualized Education Program (IEP) as a member of the IFSP/IEP team to identify and support goals, including embedding strategies, so that children may access early intervention and supports, and the general curriculum and benefit educationally.
- C. Support the unique roles of the IFSP/IEP required team members particularly related to the parent/family role.
- D. Understand timelines and requirements related to the implementation of the IFSP/IEP.
- E. Successfully include and support optimal outcomes for young children with IFSPs and IEPs in settings with typically developing peers, such as home visiting model programs, state-funded preschool, early childhood special education programs, and other related early childhood programs.
- F. Demonstrate the ability to formulate and use action plans based on IFSPs and IEPs in collaboration with the team.
- G. Demonstrate the ability to participate and serve as an advocate during the development, implementation and annual meetings of the IFSP and IEP.
- H. Support the individual needs of children within their programs through the natural and least restrictive environment.
- I. Collaborate with families and other early childhood and interdisciplinary providers about developmentally and functionally appropriate individual and group strategies and activities within natural routines and across settings for infants, toddlers, and young children.
- J. Support families with children who exhibit a broad range of developmental delays or disabilities in infant or toddler, preschool and primary settings across a range of service delivery models.

K. Understand the legal requirements and best practices related to transition planning and implementation.

# Content Knowledge and Pedagogy

This section covers the content knowledge and pedagogy that teachers need to know and demonstrate in order to teach children across the grade band and coach families/caregivers to facilitate learning within the home/community environments. There are skills these teachers need that are only appropriate for portions of the age space (i.e., teachers of infants and toddlers will use different content and pedagogical knowledge than teachers of kindergartners). Teachers of young children should be aware that there are significant developmental differences between infants and kindergartners, so content is differentiated accordingly across all of the content areas. For all children, however, content and pedagogy are derived through an educator's strong understanding of child development, establishing quality relationships with children and families, and approaches that value and leverage family culture and home language(s). It is imperative that early childhood teachers are able to utilize knowledge of adult learning and coaching in order to support family members in implementing related strategies to support the development and learning of all children, especially for those in home visiting or early interventionist roles.

## Infant and Toddler

### 5. Infant and Toddler Content and Pedagogy

#### **IT.1 General Considerations in Infant Toddler Content and Pedagogy**

The first three years of life is the period of the most rapid growth and development which shapes every year thereafter. An infant who depends completely on others to determine and satisfy their every need typically transforms into a much more competent three-year-old who can begin to communicate thoughts, play with peers and understand his/her world. During the earliest years of children's development, however, they are simply too immature to participate in the formalized, content-area based teaching and learning that is typically associated with school. In addition, the strands of development in infants and toddlers, rather than being linear, twist together into braids that later unravel and form in new ways. Since developmental achievements are difficult to separate out into one single domain or content area they are best considered more holistically. Because of the unique characteristics of the earliest period of development and learning, infant and toddler pedagogy is separated from that of children from preschool through kindergarten.

Well prepared beginning teachers will:

- A. Understand educating and caring for infants and toddlers requires a holistic approach and demonstrate classroom practices that support this approach.
- B. Create environments that protect, engage, challenge and nurture all aspects of infant and toddler learning and development.
- C. Understand that activities and experiences can be beneficial as long as they remain within infants' and toddlers' capacities for interest and attention.
- D. Understand and implement practices to support the five strands of infant and toddler development and learning (Well-being, Belonging, Exploration,

Communication and Contribution), that are described in the [Early Childhood Standards of Quality for Infant and Toddler Programs](#).

- E. Understand that all learning and development in infancy and toddlerhood is intimately connected to responsive caregiving practices and the role of the educator is to promote quality relationships with primary caregivers.

## **IT2. Supporting Cognitive Development**

Specific skills to support infants' and toddlers' cognitive development have been separated out to provide clear and focused guidance in this area. It should be remembered, however, that they are in reality holistically combined with other areas of development and learning during this age period. Supporting infant and toddler cognitive development requires educators to have a solid understanding of the infant-toddler developmental continuum, individual children's interests and temperament, and the way in which cognitive development is scaffolded through responsive facilitation of play and exploration. Infant and toddler cognition includes understanding basic scientific and mathematical concepts that lay the foundation for more discrete numeracy and science concepts learned in the preschool and kindergarten years. As young infants mature, they can rely on their developing memory to help them make sense of their world. Infant-toddler teachers encourage, facilitate, and comment on these early experiences to help young children begin to understand basic mathematical, spatial, and causal relationships.

Well prepared beginning teachers will:

- A. Facilitate infants' and toddler's exploration and concept development by promoting sensory exploration of a wide variety of materials, demonstrating functional and unique ways to use objects, and providing appropriate labels for attributes and concepts children encounter.
- B. Facilitate infants' and toddlers' exploration of concepts such as means-end and cause and effect by prompting and offering specific verbal or non-verbal information or guidance.
- C. Organize and provide experiences that increase infants' and toddlers' understanding of the world around them,
- D. Provide experiences with the specific intent to build new ideas and build knowledge of concepts such as fill/dump, up/down.
- E. Plan experience for children 18 months and older that introduce a wide variety of areas such as counting, sorting and matching and exploring different states of matter (liquid/solid), textures and colors.
- F. Promote imitation and symbolic representation by imitating sounds, facial expressions and gestures of infants, talking about things that are not present, and using props to represent real life items.
- G. Support infants' and toddlers' reasoning and problem solving by modeling and encouraging children to persist with tasks and to predict, explain and reason about the people and world around them.
- H. Utilize strategies to support problem solving such as simplifying problems, giving clues and modeling solutions.

### **IT3. Supporting Language and Literacy Development**

Specific skills to support infants' and toddlers' language and literacy development have been separated out to provide clear and focused guidance in this area. It should be remembered, however, that they are in reality holistically combined with other areas of development and learning during this age period. Developing language and literacy skills begins at birth through everyday positive interactions in home, community, and school settings—sharing books, telling stories, singing songs and talking with one another. Infants' and toddlers' language development is supported by teachers who are attentive to and responsive to infants' earliest attempts at communication. Language rich play, using talk for learning and reading and rereading a variety of appropriate books also build a rich foundation for later literacy learning. Review of the [Essential Instructional Practices in Language and Emergent Literacy: Birth to Age 3](#) is recommended.

Well prepared beginning teachers will:

- A. Promote language and communication exchange by responding to young children's earliest attempts to communicate their emotional, physical and social needs.
- B. Watch for and respond appropriately to infants and toddlers verbal and nonverbal responses to promote back and forth conversational interaction.
- C. Use comments and questions to initiate or extend conversations that build on children's interests or activities.
- D. Purposely use language to narrate their own actions and those of the children in their group.
- E. Repeat and extend children's language by imitating young children's babbling, expanding toddlers' utterances, adding words and modeling complete sentences in context.
- F. Use language throughout the day for many purposes including to communicate, to calm, to prepare for transitions, to play, to socialize, and to help children solve problems.
- G. Use language to add richness to children's everyday experiences and to expand their understanding processes, terms and concepts.
- H. Frequently engage children in book exploration, storytelling and reading activities with a wide variety of books.
- I. Point to pictures while labeling them, using facial expression, varied vocal tone and gestures to communicate the meaning of words.
- J. Ask toddlers 18 months and up questions about the pictures of plot of a book and provide them opportunities to complete predictable sentences or rhyming phrases while reading aloud.
- K. Share many forms of children's literature including poems, songs, finger plays and word play.
- L. Use songs that model rhyming, contain alliteration, and enhance predictive sequencing.
- M. Demonstrate knowledge of the importance of the children's use of their first or home language(s) and dialect(s) and development of additional languages and literacies, and build upon children's use of their first or home language(s).

# Preschool and Kindergarten (ages 3-6)

## 6. Language and Emergent Literacy

Literacy includes listening, speaking, viewing, reading, writing, and visually representing. Reading includes looking at books independently and with an adult or peer, shared book reading in which adults read with children. In all instances, teachers should be cognizant of each child's experiences, strengths, needs, and interests.

This section covers the content knowledge and pedagogy that teachers need to know and demonstrate in order to teach language and emergent literacy to children across the grade band. There are skills these teachers need that are only appropriate for portions of the age space (i.e., teachers of infants and toddlers will use different content and pedagogical knowledge than teachers of kindergartners). Teachers of young children are fully aware that there are significant developmental differences between infants and kindergartners, so content is differentiated accordingly across all of the content areas.

The standards were carefully designed to align well between B-K and PK-3, and to align well with the key knowledge and skills detailed in Michigan's Early Childhood Standards of Quality for [Infant and Toddler Programs \(ECSQ-IT\)](#) and [Prekindergarten \(ECSQ-PK\)](#) and the [Michigan Kindergarten Standards for English Language Arts](#) and the appropriate [Essential Instructional Practices in Literacy](#). Those using the standards are encouraged to read both sets of preparation standards, as well as the ECSQ and Kindergarten academic standards, even if their preparation program only focuses on one of these grade bands.

It is essential that those enacting these standards emphasize the importance of developmentally appropriate practice across the B-K band. There are skills described that are unattainable for infants and toddlers and children should not be pressured to learn them.

In order to achieve a high degree of specificity in the standards, they are organized into many relatively narrow constructs. However, it should be understood that these constructs are highly interrelated in development and education. In reality, for example, vocabulary development affects word reading development and vice versa and a given instructional practice may affect many aspects of literacy development.

### **L.1. Literacy Learning Environments**

Well-prepared beginning teachers will:

- A. Facilitate children's access to and exploration of a range of developmentally appropriate and accessible print materials from a variety of genres (e.g., informative/explanatory texts, narrative texts, signage including environmental print, social stories, poetry) and media (e.g., books, magazines, digital texts, and audio texts) for home and early childhood settings.
- B. Within natural and inclusive environments, promote and create a variety of opportunities for learning that foster collaborative and meaningful literacy

experiences in the learning and care setting (e.g., with use of cloth picture books, picture dictionaries, alphabet books, word walls for content areas, themes, high-frequency words).

- C. Collaborate with families to identify ways to create their child's literacy environment and routines to be calm, consistent, and stimulating.
- D. Use materials and space to foster literacy inquiry (e.g., books children can access, class question wall, inquiry notebooks, inquiry table).
- E. Provide access to materials for active literacy-enriched play (e.g., 3D objects such as puppets and cars/figures, plays, stationary, clipboards with paper/forms, theme related print materials).
- F. Provide access to and intentional interactions with socially, culturally and linguistically diverse texts and to high-interest, self-selected reading and writing materials with a variety of text length and density (i.e., wordless, word, phrase, sentence, paragraph).
- G. For children older than 2 years of age, support and guide integration of digital technologies to aid children's literacy and learning across disciplines (e.g., playing music, opportunities to use and create digital artifacts of learning, interactive simulations, digital/audio stories, or informational texts, digital presentations)
- H. Use a variety of flexible grouping strategies that are based on the literacy task and children's specific literacy strengths, needs, prior knowledge, interests, and other factors.
- I. Teach, model, facilitate, and provide independent practice with opportunities to use literacy for positive social interactions (e.g., solving conflicts, negotiating in collaborative projects).
- J. Use a range of digital and non-digital tools to support dramatic play for socialization, oral language, writing development, word study, vocabulary, fluency, and comprehension.
- K. Use socially, culturally and linguistically diverse texts and to high-interest, self-selected reading and writing materials with a variety of text length and density (i.e., wordless, word, phrase, sentence, paragraph).

## **L.2. Culturally Responsive Practices in Literacy**

Well-prepared beginning teachers will:

- A. Demonstrate knowledge of the importance of the children's use of their first or home language(s) and dialect(s), both inside and outside of the school setting, and development of additional languages and literacies and design instruction that build upon children's use of their first or home language(s).
- B. Select instructional materials that value and reflect the multidimensionality of diversity represented in society and children.
- C. Critically analyze text with children for social and cultural biases by analyzing language and visual representations in print and digital texts and media that perpetuate gender, age, ability, family structure, social class, and racial/ethnic stereotypes.



- D. Engage children in the creation and use of visual representations of thinking and learning (e.g., anchor charts; graphic organizers; personal artifacts, such as personal labels/materials labels).
- E. Articulate that children bring with them varied experiences and skills for language and literacy that reflect family background, beliefs, and environments.

### **L.3. Literacy Curriculum Design and Assessment**

Well-prepared beginning teachers will:

- A. Design or adapt and implement literacy curricula that support literacy learning for whole class, individual and small groups of children in all forms of communication, reading, and writing, including all constructs of literacy.
- B. Observe and describe the impact of language on children’s social and academic development and emerging identities as communicators, readers, and writing, and plan and implement learning opportunities, including intentional play, accordingly.
- C. Identify, promote, and value children’s multiple ways of communicating, in- and out-of-school discourses, and variations in language expression, and leveraging these to provide appropriate language, literacy, and social learning opportunities, instructional practices, and social development for individual children.
- D. Demonstrate knowledge and understanding of state standards and competencies applicable to literacy learning birth through kindergarten; use this knowledge in the development of learning goals and opportunities/instruction.
- E. Provide specific, constructive feedback to children targeted to children’s most critical needs during the process of speaking, listening, viewing, reading, writing, and visually representing.
- F. Identify reasonable goals and expectations for children that align with their literacy development, interests, and cultural background.
- G. Select texts that provide useful material for rich instruction and discussion around a variety of concepts as well as literacy skills and strategies, and analyze texts to identify specific learning goals, challenges (e.g., the complexity of the ideas in the text) and affordances.
- H. Select texts of varying length and density (i.e., wordless, word, phrase, sentence, paragraph), genres (i.e. fiction and nonfiction), and topics (i.e. narrative and informational) that align with learning goals and instructional purposes (e.g., development of language, print, phonemic awareness, content knowledge).

### **Components of Literacy**

#### **L.4. Overall Literacy**

Well prepared beginning teachers will:

- A. **What it is:** Teaching candidates will learn that literacy processes—reading, writing, speaking, listening, viewing, and visually representing—are inherently connected, and the constructs of literacy are related in complex ways.

- B. **How it develops:** Teacher candidates will learn that all of the constructs of literacy are integrated in the service of meaningful communication and literacy learning that all constructs can and should be developed throughout early childhood educational experiences.
- C. **How to assess it:** Teacher candidates will learn that assessment of individual constructs of literacy identified in these standards can be valuable, but also valuable, and essential, is the understanding and ability to administer and interpret the results of multiple informal and formal assessments that examine the processes of language and literacy in their entirety; that it is important to understand that a child's assessed literacy skills, will vary depending upon a number of factors, including background knowledge related to the topic of a particular text, motivation and engagement at that point in time, and features of the literacy task—thus should be seen as an approximation to inform instructional decision-making, not a definitive judgment or a label; that children may exhibit difficulties within and/or across the many constructs of literacy, and, if warranted, that the teacher should seek assessment and/or instructional support from a specialist, which will vary depending on the type of difficulty.
- D. **How to teach it:** Cognizant of each child's experiences, strengths, needs, and interests, well prepared beginning teachers will learn and be able to select and use research-supported instructional techniques that address multiple constructs of literacy development simultaneously (e.g., a single practice could address phonological awareness, concepts of print, and composition), such as, but not limited to, supporting families with strategies to encourage language development and early literacy in the home; literacy-enriched dramatic play, storytelling/story acting, interactive read aloud, shared reading, interactive writing, and discussion of ideas with print and digital texts across disciplines.

### **L.5. Motivation and Engagement**

Well prepared beginning teachers will:

- A. **What it is:** Teacher candidates will learn that literacy engagement and motivation begins at birth and refers to the beliefs, values, goals, and dispositions that provide energy and direction for behaviors and thoughts of the individual related to literacy
- B. **How it develops:** Teacher candidates will learn that literacy engagement and motivation develops through interactions of the child with family, friends, teachers, and community members, combined with experiences in various activities in which the child observes and internalizes the literacy engagements, motivations and knowledge of significant others and learns from important experiences and understand that pressuring young children to read or participate in rote practice of isolated components of reading can lead to bad reading habits and undermine their motivation to read.
- C. **How to assess it:** Well-prepared beginning teachers will learn and be able to assess literacy motivation and engagement through interviews or questionnaires

with the child, which may be supplemented by teacher observation of child affect and actions, that reveals effort, persistence, care, commitment, and accomplishment.

- D. **How to teach it:** Cognizant of each child's experiences, strengths, needs, and interests, well-prepared beginning teachers will learn and be able to select and use research-supported instructional practices to foster intrinsic literacy motivation and engagement, including: setting expectations for classroom participation; providing comfortable spaces for literacy (i.e., sitting together with children, letting them sit on your lap and next to you while sharing books); building interpersonal relationships with children that encourage mutual trust and commitment; assuring opportunities for developing self-efficacy through scaffolding, text and task selection, differentiation, goal-setting and self-monitoring; offering children substantive options, choices and input into book selection, including repetition of favorite books, and learning activities; arranging collaborative activities that foster literacy learning through social interactions; providing a variety of meaningful purposes for academic units and tasks; providing continual encouragement for academic and personal attainment and interests; emphasizing the utility, value, and enjoyment of literacy and literacy tasks.

## **L.6. Print Concepts**

- A. **What it is:** Teacher candidates will learn that print concepts, or concepts of print, are foundational knowledge about how print, in general, and how books "work," such as understanding that print carries meaning, that print is authored, and that print is permanent; that graphics and print relate; that print is made up of graphemes which are associated with phonemes (alphabetic principle) and includes, but is not limited to, directionality of print, knowledge of parts of texts (e.g., title, author, table of contents, diagrams).
- B. **How it develops:** Teacher candidates will learn that concepts of print develop through observation, through interactions with others around print, and through explicit instruction. Note that some of these concepts are language-specific, not universal (e.g., English and Arabic have different directionality).
- C. **How to assess it:** Well-prepared beginning teachers will learn and be able to use screening tools/assessments and to use diagnostic assessment tools to engage children in demonstrating the concepts of print as they engage with texts independently, with peers, and with teachers, to inform instruction in print concepts.
- D. **How to teach it:** Cognizant of each child's experiences, strengths, needs, and interests, well-prepared beginning teachers will learn and be able to select and use research-supported instructional techniques to develop concepts of print, such as encouraging children to touch and hold books and turn pages, print-referencing read-alouds, interactive writing, finger-pointing for print to speech match, literacy-enriched dramatic play and other forums for modelling and explicit instruction.

## **L.7. Phonological Awareness**

- A. **What it is:** Teacher candidates will learn that phonological awareness is a set of foundational oral and aural language skills that involve conscious awareness of sounds within the speech stream, and the segmentation and blending of sounds; the difference between phonological awareness and the related terms *phonology*, *phonics*, and *phonemic awareness*; why phonological awareness, particularly phonemic awareness, is important for development of concepts of print, decoding, and encoding; and its foundational and reciprocal relationships with word reading, spelling, and vocabulary.
- B. **How it develops:** Teacher candidates will learn the common developmental progression of phonological awareness skills, including multiple levels of sounds within words (e.g., syllables, rhymes, onset, rime, initial sounds, and other phonemes), expectations by age level, and the differences among various phonological manipulations, including producing, identifying, matching, blending, segmenting, deleting, and substituting sounds.
- C. **How to assess it:** Well-prepared beginning teachers will learn and be able to use screening and diagnostic tools and to inform instruction in phonological awareness, and if needed to seek assessment and/or instructional support from a specialist.
- D. **How to teach it:** Cognizant of each child's experiences, strengths, needs, and interests, well-prepared beginning teachers will learn and be able to select and implement research-supported instructional techniques that foster children's phonological awareness development, including babbling and sound production/mimicking, encouraging and responding to all sounds, from first coos; use infant-directed speech, listening and distinguishing between sounds, particularly phonemic segmenting, blending, and manipulation, by providing explicit instruction, modeling, and scaffolding, fostering awareness of articulatory features, stretching words, playing with sounds and words (e.g., alliteration), singing, sorting words by sounds, encouraging invented or estimated spelling (which also involves phonics), multimodal and/or multisensory activities with letters (which also involves phonics). Phonological awareness terms (e.g., rhyming, alliteration, syllables) should be used in instruction with children.

## **L.8. Phonics**

- A. **What it is:** Teacher candidates will learn that phonics is a connection between individual and groups of graphemes (letter symbols) and phonemes (letter sounds) that, among other things, allows readers to translate written symbols into meaningful words (decoding); the related terms *consonant*, *vowel*, *hard c/g*, *soft c/g*, *r-controlled vowel*, *blend*, *digraph*, *diphthong*, *types of syllables*, and *schwa*; to accurately analyze any English word for each of its letter-sound relationships; the problems with phonics generalizations that are too broad to be accurate (e.g., "when two vowels go walking the first one does the talking," which actually applies less than half the time).

- B. **How it develops:** Teacher candidates will learn that children generally begin by learning the name, sound(s), and uppercase and lowercase forms of individual letters, followed by learning more complex letter-sound relationships (see Michigan K standards), relying in part on a base of phonological awareness skills and developing reciprocally with those skills.
- C. **How to assess it:** Well-prepared beginning teachers will learn and be able to use observation to inform instruction, cognizant of the language(s) and dialect(s) spoken by the child, including assessments of alphabet knowledge and knowledge of more complex letter-sound relationships, and if warranted seek assessment and/or instructional support from a literacy specialist.
- D. **How to teach it:** Cognizant of each child’s experiences, strengths, needs, and interests, well-prepared beginning teachers will learn and be able to select and use engaging and multimodal research-supported instructional techniques to explicitly teach, model, provide guided practice with, and provide independent practice with letter-sound relationships using texts that are consistent with the child's knowledge of phonics, with synthesis, analysis, and manipulations of graphemes and morphemes within and across words, with emphasis on application in meaningful reading and writing (see Word Recognition for additional expectations), keeping in mind adaptations of instruction for children with needs in working memory and executive functioning skills, such as attention and processing speed.

### **L.9. Letter Knowledge and Spelling**

- A. **What it is:** Teacher candidates will learn that the purpose of early writing is communication and includes skills for composing, spelling, and handwriting and that letter knowledge includes the letter name, sound(s), and form of each letter including uppercase and lowercase letters. Spelling is a connection between individual and groups of phonemes (letters sounds) and graphemes (letter symbols) and morphemes (meaning units) that, among other things, allows readers to translate thoughts into written words (encoding); spelling using the sounds children hear in words rather than conventional rules, is developmentally appropriate and demonstrates children’s understanding of letter-sound relationships; the related terms *consonant*, *vowel*, *hard c/g*, *soft c/g*, *r-controlled vowel*, *blend*, *digraph*, *diphthong*, *types of syllables*, and *schwa*; that spelling instruction enables writing and also improves the specific reading skills of decoding and word reading and whose influences include phonological awareness, orthographic knowledge, and morphological awareness.
- B. **How it develops:** Teacher candidates will learn that spelling develops through a series of common, yet not rigid, stages, with phases within each stage; stages are variously named, for example drawing as writing, scribbling, letter-like forms, random letters, estimated/phonemic spelling, and conventional spelling (not expected until later); spelling development relies particularly on developing phonological awareness, phonics knowledge, and vocabulary knowledge.
- C. **How to assess it:** Well-prepared beginning teachers will learn and be able to use

observation, work samples, screening tools and diagnostic assessments to inform instruction, cognizant of the language(s) and dialect(s) spoken by the child, including assessments of alphabet knowledge; stage of spelling/writing development; and spelling performance within meaningful writing, recognizing that spelling performance may reveal information about children’s grapheme awareness, phonemic awareness, phonics, and vocabulary knowledge, and, if warranted by difficulties, to seek assessment and/or instructional support from a specialist, whose knowledge base includes, but is not limited to, knowledge of dyslexia.

- D. **How to teach it:** Cognizant of each child’s experiences, strengths, needs, and interests, well-prepared beginning teachers of literacy will learn and be able to select and use engaging and multimodal research-supported instructional techniques including practices that simultaneously address both phonics and spelling, explicitly teaching, modeling, providing guided, and independent practice with, and providing feedback regarding, letter-sound relationships and spelling strategies; encouraging writing using any form (e.g., drawing, scribbling); encouraging estimated spelling when appropriate; and providing opportunities for fluent application in meaningful writing, in all cases, keeping in mind adaptations of instruction for children with needs in working memory and executive functioning skills, such as attention and processing speed.

### **L.10. Letters & Words Recognition**

- A. **What it is:** Teacher candidates will learn that letter knowledge includes the letter name, sound(s), and form of each letter including uppercase and lowercase letters and that word recognition is the ability to translate written words into known words within the lexicon; words may be recognized based on decoding, prediction (for example, through initial letters, syntactic context, and semantic context), analogy, and sight; the ultimate goal is to read each word at sight, meaning automatically, but in order to attain this goal with large numbers of words, each word must be fully analyzed graphophonemically and morphophonemically; this applies to all words, including high- as well as low-frequency words and words that are not spelled as might be expected; the related terms include *high frequency word*, *sight word*, and *decodable*.
- B. **How it develops:** Teacher candidates will learn that alphabet knowledge that word recognition develops through experience with letters and words and instruction through a series of common, yet not rigid, stages in overlapping waves, for example in Ehri’s (2014) terms, from understanding that print has meaning, that letters are separate forms that represent sound and can be combined to create meaning, pre-alphabetic to partial alphabetic, to full alphabetic, to consolidated alphabetic, relying particularly on developing an understanding that print has meaning, that letters are separate, unchanging forms that represent sounds, phonological and orthographic awareness, phonics knowledge, vocabulary knowledge, and constructing and monitoring for meaning while engaging in reading experiences with adults.

- C. **How to assess it:** Well-prepared beginning teachers will learn and be able to use screening tools and diagnostic assessments to inform instruction, including letter-name and letter-sound knowledge, high-frequency words, and word reading in context, and seek assessment and/or instructional support from a literacy specialist.
- D. **How to teach it:** Cognizant of each child’s experiences, strengths, needs, and interests, well-prepared beginning teachers will learn and be able to select and use engaging and multimodal research-supported instructional techniques to explicitly teach, model, provide guided practice with, and provide independent practice with letter knowledge, phonology, and word recognition strategies.

### **L.11 Morphology\***

\*These skills are described in detail in the PK-3 standards, and most appropriately addressed in instruction within the PK-3 grade band.

### **L.12 Syntax\***

\*These skills are described in detail in the PK-3 standards, and most appropriately addressed in instruction within the PK-3 grade band.

### **L.13. Reading Fluency\***

\*These skills are described in detail in the PK-3 standards, and most appropriately addressed in instruction within the PK-3 grade band.

### **L.14. Vocabulary**

- A. **What it is:** Teacher candidates will learn that vocabulary is an oral and written language construct that is central to everyday and academic language and involves general and discipline-specific vocabulary; knowledge of word meanings and the conceptual knowledge that underlies them; it includes understanding multiple meanings across contexts, figurative language, and morphological structure of words; it is central to oral language, academic language, reading comprehension, and written composition.
- B. **How it develops:** Teacher candidates will learn that vocabulary develops through oral and written language exposure, inquiry, experiences, and explicit and implicit instruction (including explicit instruction in word meanings, vocabulary strategies [e.g., looking for a possible synonym in the sentence], and deliberate analysis of the morphemic composition of words), with particular complexity for children whose home language is not the language of instruction.
- C. **How to assess it:** Well-prepared beginning teachers will learn and be able to examine children's breadth and depth of vocabulary knowledge, recognizing that children may have knowledge of vocabulary not in the language of instruction, and learning through use of observational checklists and rubrics for oral and written language samples, assessments of vocabulary that have been taught, and, if warranted by difficulties, to seek assessment and/or instructional support from a specialist.
- D. **How to teach it:** Cognizant of each child’s experiences, strengths, needs, and interests, well-prepared beginning teachers will learn and be able to select and

use research-supported instructional techniques to develop vocabulary, including for children whose home language is not the language of instruction, through a large volume of oral and written language exposure (e.g., through behavioral reflections, paraphrase reflections, conversation, read aloud, audio books, and inquiry); selecting appropriate words for instruction; providing accessible, explicit explanation of the meaning of words, including, as appropriate, examples and non-examples, visual supports such as video, photo, or props, movement, analogies, and other comparisons; producing the word for children orally; having children repeat the word; providing opportunities for children to use the word in multiple contexts; providing a visual representation of the word; and other techniques.

### **L.15. Handwriting**

- A. **What it is:** Teacher candidates will learn that the purpose of early writing is communication and thus, writing includes skills for composing, spelling, and handwriting and that handwriting is formation of letters in written text by hand, the fluency of which affects written composition quality for older children. Handwriting is dependent on strong fine motor development of the hands and fingers and letter knowledge. Handwriting is just one part of writing.
- B. **How it develops:** Teacher candidates will learn that handwriting develops in the context of graphomotor development more broadly and through a series of common, yet not rigid, stages including drawing, scribbling, linear scribbles, letter-like formations, and conventional letters. Testing of letter formations (e.g., letter reversals, letter-like forms), pencil grips, handedness is common throughout this grade band.
- C. **How to assess it:** Well prepared beginning teachers will learn and be able to assess handwriting through observation, the use of rubrics, and, if warranted, seek formal assessments administered by a specialist (e.g., occupational therapist).
- D. **How to teach it:** Well prepared beginning teachers will learn and be able to select and use research-supported instructional materials and techniques to develop handwriting (e.g., providing a range of writing/drawing tools for use), including gross and fine motor muscle development, pencil grip and letter formation, through opportunities to exercise and build hand and finger strength (e.g., manipulating play dough, using tweezers), modeling, teaching explicitly, in a multisensory manner, and providing meaningful opportunities to apply letter-formation learning to authentic, communicative contexts and play.

### **L.16. Comprehension**

- A. **What it is:** Teacher candidates will learn that comprehension is the ability to extract and construct meaning through interaction and involvement with oral, written, and visual language separately or in combination and the ultimate purpose of reading instruction.
- B. **How it develops:** Teacher candidates will learn that comprehension of oral, print, and digital texts develops through the integration of many areas including



language development, world knowledge development, and, in the case of written language, written textual knowledge, comprehension strategies, metacognition, and attitudes specific to written and visual language, and working memory and executive functioning skills.

- C. **How to assess it:** Well prepared beginning teachers will learn and be able to assess reading comprehension through tasks including questioning, retelling, dialogic conversations, summarizing, and application tasks (e.g., carrying out a procedure while reading/listening to a procedural text) that, collectively, involve the three categories of comprehension: locate and recall, integrate and interpret, and critique and evaluate; if warranted by difficulties, to seek assessment and/or instructional support from an appropriate specialist.
- D. **How to teach it:** Cognizant of each child's experiences, strengths, needs, and interests, well-prepared beginning teachers will learn and be able to select and use research-supported instructional techniques to develop comprehension, including: making book-sharing interactive through various interpersonal strategies; to select and analyze texts for their affordances and challenges, including for specific disciplinary contexts; provide daily time for children to use language, hear stories and look at books in motivating and engaging contexts for the purposes of building disciplinary knowledge and/or advancing personal interests; provide multiple opportunities to demonstrate their receptive language in meaningful ways (e.g., following verbal guidance for one-step then multi-step directions, games that exercise receptive language such as lotto/simon-says); comprehension strategy instruction; modeling and guiding children to be metacognitive while reading; focused, high- quality discussion of the meanings of text; text structure and feature instruction; and application tasks (e.g., building an argument from textual evidence) that, collectively, involve the three categories of comprehension: locate and recall, integrate and interpret, and critique and evaluate.

### **L.17. Early Writing Composition**

- A. **What it is:** Teacher candidates will learn that composition is the process of conveying meaning through oral, written (print or digital), visual language separately or in combination in many types of text and that the purpose of early writing is communication and includes skills for composing, spelling, and handwriting (e.g., label, list, map, opinion, informative/explanatory, narrative) and is important to active citizenship, many professions, and daily life; and requires applications of writing conventions to construct clear and coherent writing in which the development, organization, and style are appropriate for specific tasks, purposes, and audiences across disciplines.
- B. **How it develops:** Teacher candidates will learn that written composition develops through a series of common, yet not rigid, stages. Development includes fine motor development through opportunities that build small muscle groups in hands and fingers such as working with playdough, finger painting, with hands and then tools, writing through drawing, writing through scribbling, writing

through letter-like forms, writing through letter strings, writing through estimated/phonemic spelling, and eventually writing through conventional spelling, in a manner that may vary across disciplines, genres, and modes of communication, and may be influenced by a child's home language(s) or dialect(s), and integrates many areas including language development (e.g., morphological knowledge and awareness, vocabulary depth and breadth), world knowledge, textual knowledge, and knowledge of composition strategies, self-regulation, working memory and attitudes specific to written and visual language; not all composition difficulties have the same cause nor require the same instructional responses.

- C. How to assess it:** Assess early composition (the effectiveness of a specific piece of writing for a specific purpose and audience), through observation, checklists, rubrics, and other tools and to use intermediary outcomes toward overall quality of a composition, including writing output, mechanics, vocabulary, sentence structure, organization, ideation, voice, and genre (or text) elements and, if warranted seek assessment and/or instructional support from an appropriate specialist.
- D. How to teach it:** Cognizant of each child's experiences, strengths, needs, and interests, well-prepared beginning teachers will learn and be able to select and use research-supported instructional techniques to develop written composition abilities including providing a variety of writing materials across learning spaces; integrating meaningful writing opportunities into play experiences (e.g., sign in at clinic, fill in an order form at the flower shop) and routines (e.g., sign in for attendance, check mark toileting); teachers' modeling writing and instruction in the writing process (i.e., why we write, how authors select ideas/words); take dictation of children's compositions/idea generation and articulate that you are writing their words; engage in interactive writing with children (PK and kindergarten); daily time for children to write across domains in motivating and engaging contexts; instruction in writing processes and strategies, particularly those involving researching, planning, revising, and editing writing in print and digital contexts; opportunities to study models and non-models of writing and write a variety of texts for a variety of purposes and audiences, with scaffolding. Opportunities for early keyboarding is included.

### **L.18. Speaking and Listening**

- A. What it is:** Teacher candidates will learn that speaking and listening are oral language constructs that are central to everyday and academic language general and discipline-specific conversations including semantics (how meaning is portrayed through words and signs), form including phonology (sounds), morphology (meaning), and syntax (grammar; formulation of sentences); features such as intonation, stress, and pause; and use of language including the function (interpersonal and intrapersonal) and context. In addition, components such as gesture, turn-taking, production, comprehension/reception, are all part of language development.

- B. **How it develops:** Teacher candidates will learn that speaking and listening develop through oral language exposure, accompanying gestures with words, modeling gestures to support basic needs (eat, sleep, more, etc.); culturally responsive experiences, inquiry, scaffolded guidance, and explicit and implicit instruction (vocabulary, social interactions).
- C. **How to assess it:** Well-prepared beginning teachers will learn and be able to examine children's speaking and listening knowledge and skills, ensure that infants' and toddlers' hearing is screened regularly, use observational checklists and rubrics for oral language samples, narrative assessments, assessments through play experiences, and, if warranted to seek assessment and/or instructional support from a specialist.
- D. **How to teach it:** Cognizant of each child's experiences, strengths, needs, and interests, well-prepared beginning teachers of literacy will learn and be able to select and use research-supported instructional techniques to develop speaking and listening, including for children whose home language is not the language of instruction, through a large volume of oral language exposure (e.g., through conversation, recasting, singing, finger plays, listening games, read aloud, audio books, play, and inquiry); establishing joint attention; parallel talk; anticipatory talk; imitating and expanding; use of a calm, warm tone of voice; modeling positive anti-bias language; providing specific praise and verbally labeling children's behavior (behavioral reflection/paraphrase reflection); including toys/materials/props in play spaces to encourage children's use of language; providing opportunities during routines for children to use language (e.g., encourage social conversations during meal times, talking with children during diapering/toileting); providing opportunities for children to use language in multiple contexts and with multiple communication partners; selecting appropriate words for vocabulary instruction and providing multiple exposures to target words across contexts; providing accessible, explicit explanation for the use of language for multiple purposes (e.g., social, academic, negotiation) and across multiple contexts; encourage children to use language for requests, needs, and wants; encourage children to use language to negotiate socially; and other techniques; encouraging children to use communication through gestures, signs, oral language, Augmentative and Alternative Communication devices including technologically mediated supports.

## 7. Mathematics

In addition to knowing the mathematics their children learn, well-prepared beginning teachers need specialized mathematical knowledge for teaching — mathematics that is not taught in birth through kindergarten but essential for *teaching* in this age range. They need an understanding of the concepts behind the mathematics and how mathematical ideas and skills develop in children, as well as the mathematical work they will do as a teacher. For example, teachers need to recognize mathematical patterns in children’s strategies and model the standard algorithm for subtraction in a way that makes each step clear. These are demanding activities that require knowledge different from simply knowing the mathematics children are learning.

These standards are organized into two broad topics, Standards for Mathematics-Specific Teaching Practices and Standards for Knowledge for Teaching birth through kindergarten. The first section details teaching practices in mathematics that all beginning teachers should be able to perform regardless of topic, while the second section details specific mathematics topics for children birth through kindergarten and corresponding pedagogical concerns. To achieve greater depth and better prepare teachers for their work, these standards for mathematics do the following five things:

- 1) Identify mathematics topics that are high-leverage for birth through kindergarten teaching, as detailed in Michigan’s Early Childhood Standards of Quality for [Infants and Toddler Programs](#) and [Prekindergarten](#) and the Michigan [Kindergarten Standards for Mathematics](#) for this grade band.
- 2) Identify pedagogical tasks that come up frequently in mathematics teaching, matter for children’s learning, and are mathematically demanding to perform.
- 3) Identify mathematical competencies that teachers need for the pedagogical tasks identified in #2 when teaching the mathematics topics that are high-leverage.
- 4) Provides foundational understanding for teaching, assures greater focus, relevance, and usefulness of the mathematics taught to and learned by teacher candidates, and positions teachers to continue to learn mathematics teaching beyond the scope of their pre-service preparation.
- 5) Apply knowledge of trajectories for learning mathematics to planning and teaching concepts and skills.
- 6) Provide opportunities for children to learn mathematics using concrete materials in purposeful and relevant activities and during play.

### **Standards for Mathematics-Specific Teaching Practices**

In addition to knowing mathematical knowledge for teaching, well-prepared teachers extend general teaching practices to address the unique requirements and opportunities presented by the teaching of mathematics by:

- Building and drawing on *relationships* with children, caregivers, and communities in ways that support children’s mathematics learning.
- *Planning* mathematics lessons and sequences of lessons. Use

learning experiences instead of lessons.

- Using formative and summative mathematics *assessment* to gauge children's learning and to make instructional decisions.
- *Enacting* instruction that allows all children to engage with significant mathematics and develop productive dispositions through well planned, concrete early learning experiences.

The following standards for these four mathematics-specific teaching practices attend to children, mathematics, and issues of equity.

### **M.1 Build and draw on relationships with children, caregivers, and communities in ways that support children's mathematics learning**

Well-prepared beginning teachers will:

- A. Hear children's mathematical thinking and engage with curiosity, interest, and understanding in ways that build rapport, provide information about children's interests, strengths, and needs, and inform instruction.
- B. Communicate with caregivers about mathematics and their child in relation to current standards and the school's curriculum, supporting caregivers in fostering their child's success with mathematics in and out of school.
- C. Use knowledge of children, their caregivers, and their communities to create mathematical learning environments that provide children, in particular children historically marginalized in mathematics classrooms, with access to significant mathematics and engagement in mathematical activities that are both culturally and instructionally appropriate.
- D. Attend to and build children's positive mathematical identities, disrupting patterns of marginalization that reinforce inequities and exclusion.

### **M.2 Plan mathematics learning**

Well-prepared beginning teachers will:

- A. Consider who children are as learners of mathematics and design ways to interest children and to use their resources and affinities to build access and participation, including taking stock of the mathematical capacities children bring to lessons, anticipating common patterns of mathematical thinking, looking for opportunities to include play in mathematics and mathematics in play, and planning for the mathematical participation of particular children.
- B. Analyze the mathematics content in instructional resources, referencing standards and progression documents to clarify learning goals and to identify connections among mathematical concepts and across developmental levels.
- C. Solicit broad participation in mathematical work (for instance, by choosing activities and planning learning experiences that provide children with multiple entry points and ways of being successful), make children's thinking central to the lesson, provide opportunities for play, and give children opportunities to show their thinking and see value in the contributions they make.

### **M.3 Use formative and summative mathematics assessments to gauge children's learning and to make instructional decisions**

Well-prepared beginning teachers will:

- A. Elicit children's thinking and solution strategies in multiple forms in writing, through speaking, in drawings, etc. Identify evidence of understanding in children's thinking and strategies and use this information to make in-the-moment instructional decisions.
- B. Understand the meanings and purposes of summative assessment and the process of formative assessment in mathematics. Interpret the results of assessments and use the interpretations in ways that respond to children's needs, promote learning, and improve instruction.
- C. Consider the language, format, and context of mathematics assessments (and assessment questions) for demonstrating children's thinking and consider how formative and summative mathematics assessments are used and the consequences for children, both intended and unintended.
- D. Distinguish between superficial and deeper evidence about children and attend to key aspects of children's understanding, skill, and engagement, as well as ignore irrelevant aspects (e.g., recognizing the source of the child's confusion vs. right/wrong). Use assessment data to plan next steps for instruction, understanding that evidence of children's learning (vs. topic coverage) is necessary for moving on from a topic.

### **M.4 Enact instruction that allows all children to engage with significant mathematics and to develop productive dispositions toward mathematics**

Well-prepared beginning teachers will:

- A. Support children, in particular children historically marginalized in mathematics classrooms, in identifying themselves as mathematical thinkers and design instruction that helps children to recognize their own and other children's mathematical strengths.
- B. Use a variety of participation structures and instructional routines, including whole class, small group, and independent lesson formats, both play and formal instruction, and a variety of materials.
- C. Foster children's talk about mathematics, with particular attention to disrupting patterns of over and under participation that reinforce inequities and exclusion.
- D. Develop classroom organizational routines and strategies that allow children access to mathematical tools and ensure the effective use of manipulatives and resources.
- E. Develop strategies for creating a classroom culture that values productive struggle, challenging mathematical ideas, constructing mathematical meanings together, and enjoyment of mathematics.

Standards for Mathematical Knowledge for Teaching Birth through Kindergarten:

Four criteria guide the identification of a *high-leverage mathematics topics*:

- 1) It underlies and is foundational to the early childhood curriculum.
- 2) It occupies significant space in the curriculum and is taught in some form across several developmental levels.

- 3) It is fundamental for children’s learning and often leads to persistent difficulty when not taught well.
- 4) It is often known only superficially by beginning teachers or requires significant unpacking of beginning teachers’ established mathematical knowledge.

For instance, for teachers of Birth through Kindergarten, five mathematics topics meet all four criteria.

*Topics of Mathematics High-Leverage for the Mathematical Preparation of Birth through Kindergarten Teachers (defined below)*

- Spatial relationships and Shapes (Geometry)
- Patterns, Relationships, and Change (Algebra)
- Numbers and operations
- Measurement
- Collecting and organizing information (Data analysis)

This section covers the content knowledge and pedagogy that teachers need to know and demonstrate in order to teach mathematics to children across the grade band. There are skills these teachers need that are only appropriate for portions of the age space (i.e., teachers of infants and toddlers will use different content and pedagogical knowledge than teachers of kindergartners). Teachers of young children are fully aware that there are significant developmental differences between infants and kindergartners, so content is differentiated accordingly across all of the content areas.

### **Strategic tasks of mathematics teaching**

To identify mathematical knowledge for teaching these topics, it is necessary to look at the work teachers do and identify strategic tasks of teaching — tasks that, when carried out skillfully, significantly advance the likelihood children learn mathematics, and when badly executed, put children’s mathematics learning at risk. Five criteria guide the identification of a strategic task of teaching.

- It centrally shapes instructional interactions among children and teacher.
- It centrally affects equitable access to mathematics instruction.
- It is learnable by beginning teachers.
- It is broad enough to use to organize mathematical knowledge for teaching and specific enough to direct the mathematical preparation of teachers.
- It has significant mathematical demands.

In addition, a set of teaching tasks needs to work together to meet these criteria. Together, they need to span much of teaching and include its most mathematically intensive aspects. Four tasks of mathematics teaching meet these criteria and provide a useful organization of the mathematical knowledge crucial to beginning teachers.

### **Tasks of Mathematics Teaching Strategic for the Mathematical Preparation of Teachers**

- Unpack mathematical **content** and identify mathematical **competence**
- Talk (perform) mathematical explanations and support children’s mathematical **explanations**
- Choose, interpret, and talk (perform) with **representations** using concrete materials in purposeful, relevant activities
- Elicit, interpret, support, and extend **children’s mathematical thinking**

**M.5 Unpack mathematical content and identify mathematical competence for Spatial Relationships and Shapes (Geometry)**

Well-prepared beginning teachers will:

- A. Identify mathematical affordances in tasks and play situations for noticing, naming, and describing attributes of two- and three-dimensional shapes and spatial relationships (e.g. over, under), paying attention to the precision of examples.
- B. Identify opportunities to introduce mathematical language and precision into other’s talk and play that draw attention to, features, and compositions of shapes and objects, for instance, suggesting words such as tall, short, or wide when someone says, “my building is big” or asking questions about how many blocks or what shapes were used or about which blocks are on the bottom.
- C. Recognize and rewrite mathematical tasks involving spatial reasoning, composing and decomposing shapes, equal partitioning, or comparing or analyzing shapes, including for children of varying abilities.
- D. Generate examples and non-examples of shapes (such as triangles, rectangles, and others) that draw attention to defining features and help to build mathematical definitions, namely examples that fit common expectations and ones that do not.

**M.6 Perform mathematical explanations and support children’s mathematical explanations for spatial relationships and shapes (Geometry)**

Well-prepared beginning teachers will:

- A. Develop and implement appropriate experiences for young children that facilitate the developing concepts recognizing and naming shapes, understanding the physical relationship between yourself and other objects and the relationships between objects.
- B. Unpack, understand, and develop mathematical justifications using definitions when comparing and analyzing two- and three-dimensional shapes, positions, and attributes of objects and phenomena.
- C. Use clear and precise language to name and describe two- and three- dimensional shapes, (e.g., distinguishing between cones and triangles, sides and faces, and sides and edges; recognizing changes in orientation; and identifying transformations).



**M.7 Choose, interpret, and talk with representations using concrete materials in purposeful, relevant activities for spatial relationships and shapes (Geometry)**

Well-prepared beginning teachers will:

- A. Develop and implement appropriate experiences using concrete materials for young children that facilitate the developing concepts of recognizing the relationships that make up events, colors, lines, textures, and sounds; Use and encourage others' use of math language related to Spatial Relationships and Shapes (Geometry); Choose and display accurate representations of regular and irregular two- and three-dimensional shapes in a variety of orientations that highlight defining and non-defining attributes; positions, and attributes of objects and phenomena.
- B. Coordinate images, talk, and gestures (e.g., pointing) when comparing and analyzing components of composite two- and three-dimensional shapes, positions, and attributes of objects and phenomena.
- C. Generate multiple representations and make connections among different representations for composite shapes, positions, and attributes of objects in drawings and other models (e.g., blocks, building materials, and other manipulatives).
- D. Interpret idiosyncratic representations of two- and three- dimensional shapes, positions, and attributes of objects and phenomena and recognize children's developing geometric/algebraic conceptualizations /mathematical strengths and weaknesses (e.g., noticing the potential for confusion in using a piece of pie to represent a triangle).
- E. Utilize a variety of approaches to assessment for all children including those with a range of abilities.

**M.8 Elicit, interpret, support, and extend others' mathematical thinking for spatial relationships and shapes (Geometry)**

Well-prepared beginning teachers will:

- A. Develop and implement appropriate (i.e., concrete) experiences for young children that facilitate the developing concepts of gathering, sorting, classifying, and analyzing information (data) to help make sense of what is happening in the environment.
- B. Encourage creative ideas of problem solving in mathematics using a range of materials (e.g., blocks, tiles)
- C. Pose mathematically appropriate questions to probe and elicit others' thinking about two- and three-dimensional shapes, (e.g., including differences among shapes, equally partitioning shapes, and iterating a part to create a whole), positions, and attributes of objects and phenomena.
- D. Interpret, critique, and develop claims about others' thinking, language, and gestures about quantity, positions, shapes, and relationships between two-dimensional and three-dimensional shapes.
- E. Design and implement experiences that include and encourage the learning of children with a range of abilities.

- F. Clarify and accurately record others' mathematical thinking as they compare and analyze two- and three-dimensional shapes, positions, and attributes of objects and phenomena.

**M.9 Unpack mathematical content and identify mathematical competence for patterns, relationships, and change (Algebra)**

Well-prepared beginning teachers will:

- A. Identify mathematical affordances in tasks and play situations for noticing, naming, and describing attributes of relationships that make up a pattern and understanding that things change over time, paying attention to the precision of examples.
- B. Identify opportunities to introduce mathematical language and precision into other's talk and play that draw attention to patterns, repetitions of objects, events, colors, lines, texture, sounds, and descriptions of observed changes over time.
- C. Recognize and rewrite mathematical tasks involving identifying and creating patterns, identifying changes in attributes across time.
- D. Generate examples and non-examples of patterns and attributes or events that change over time, namely examples that fit common expectations and ones that do not.

**M.10 Perform mathematical explanations and support children's mathematical explanations for patterns, relationships, and change (Algebra)**

Well-prepared beginning teachers will:

- A. Develop and implement appropriate experiences for young children that facilitate the developing concepts recognizing and naming patterns, relationships between yourself and other objects, and change over time.
- B. Formulate questions that distinguish whether a number or element of a series fits a pattern and whether it changes across time.
- C. Unpack, understand, and develop mathematical justifications using definitions when comparing and analyzing patterns, relations among attributes of objects and phenomena and how/whether they change over time.
- D. Use clear and precise language to name and describe patterns, relationships between ourselves and other objects, and change over time.
- E. Compare and contrast different explanations of the methods for generating numerical or geometrical patterns and recognizing relations that make up a pattern.

**M.11 Choose, interpret, and talk with representations using concrete materials in purposeful, relevant activities for patterns, relationships, and change (Algebra)**

Well-prepared beginning teachers will:

- A. Develop and implement appropriate experiences using concrete materials for young children that facilitate the developing concepts of recognizing the relationships that make up a pattern and/or creating repetitions of objects, events, colors, lines, textures, and sounds; understanding that things change

over time and that change can be described with math words.

- B. Use and encourage others' use of math language related to patterns and change (Algebra).
- C. Choose and display accurate representations of patterns, relations between ourselves and other objects, and change over time.
- D. Coordinate images, talk, and gestures such as pointing when comparing and analyzing components of various patterns, attributes of objects and phenomena, and changes over time.
- E. Generate multiple representations and make connections among different representations for composite patterns and attributes of objects in drawings and other models (e.g., blocks, building materials, and other manipulatives) and for examining change over time (e.g., images of the same scene across seasons).
- F. Interpret idiosyncratic representations of, patterns, and attributes of objects and phenomena and recognize children's developing algebraic conceptualizations including strengths and weaknesses (e.g., noticing the potential for confusion in using a mix of real and cartoon images to all represent the same object within a pattern).
- G. Utilize a variety of approaches to assessment for all children including those with a range of abilities.

### **M.12 Elicit, interpret, support, and extend others' mathematical thinking for patterns, relationships, and change (Algebra)**

Well-prepared beginning teachers will:

- A. Develop and implement appropriate experiences for young children that facilitate the developing concepts of patterning, relations between themselves and objects, and change over time.
- B. Pose mathematically appropriate questions to probe and elicit others' thinking about patterns, and relations among objects and phenomena, and change over time.
- C. Interpret, critique, and develop claims about others' thinking, language, and gestures about patterns, relations between objects and phenomena, and change over time.
- D. Design and implement experiences that include and encourage the learning of children with a range of abilities.
- E. Clarify and accurately record others' mathematical thinking as they compare and analyze patterns, attributes of objects and phenomena, and how they change over time.

### **M.13 Unpack mathematical content and identify mathematical competence for numbers and operations**

Well-prepared beginning teachers will:

- A. Identify mathematical opportunities in tasks and play situations for counting objects, sorting objects and exploring early number concepts (i.e., cardinality, one-to-one correspondence, subitizing, hierarchical inclusion, and conservation, as well as counting on and counting back).

- B. Formulate questions about quantity based on correct or incorrect responses in order to develop or assess thinking around early number concepts when engaging with a set of objects (e.g., more/less, equality).
- C. Analyze addition and subtraction tasks for opportunities to address ideas about number, including composing and decomposing, anchor numbers of 5 and 10, and counting all and counting on, and adapt tasks, if necessary, for specific instructional goals.
- D. Identify the mathematical goals, conditions and challenges of tasks and play situations designed to address beginning place value relationships.
- E. Recognize multiple strategies for composing and decomposing numbers.

**M.14 Perform mathematical explanations and support children’s mathematical explanations for numbers and operations**

Well-prepared beginning teachers will:

- A. Develop and implement appropriate experiences for young children that facilitate the concept of number operations such as quantity, order, ways of representing numbers, one-to-one correspondence and counting (including additions and subtraction).
- B. Use and encourage others’ use of math language related to numbers, counting, and operations (e.g., more/less, equality, first/last).
- C. Formulate questions to uncover others’ strategies for determining if a count is correct, such as counting on, counting all, or counting back, as objects are added, removed, or combined; or using understandings of the base-ten structure.
- D. Perform clear mathematical explanations connecting new terminology to objects and coordinating different strategies of composing and decomposing, (e.g., part or part/whole) Generate multiple explanations for counts, quantities (e.g., more/less) and for addition and subtraction based on base-ten number representation, 5s and 10s, convenient decompositions, and counting on or back.

**M.15 Choose, interpret, and talk with representations for Numbers and Operations**

Well-prepared beginning teachers will:

- A. Identify affordances and limitations of representations for iterating units and composing and decomposing numbers.
- B. Identify affordances and limitations of different representations (e.g., materials, manipulatives, drawings, and symbols) for base-ten numbers, quantities, addition and subtraction (e.g., groupable, ungroupable, non-proportional, etc.) in relation to tasks or play situations and pedagogical goals.
- C. Accurately interpret and represent connections and mathematical progressions among representations of numbers, quantities, addition and subtraction (e.g., open number lines, arrays, etc.).
- D. Utilize a variety of approaches to assessment of numbers and operations for all children including those with a range of abilities.

### **M.16 Elicit, interpret, support, and extend others' mathematical thinking for numbers and operations**

Well-prepared beginning teachers will:

- A. Pose questions to elicit particular ways of thinking about composing and decomposing numbers both less than 10 and greater than 10 when thinking is not transparent.
- B. Formulate claims about others' mathematical understanding of counting based on evidence from their performance on counting activities, in particular understandings of quantity, one-to-one correspondence, the ability to count on and back.
- C. Observe, assess and record developing understandings of early number concepts (i.e., cardinality, one-to-one correspondence, subitizing, hierarchical inclusion, and conservation, as well as counting on and counting back, addition, subtraction) and formulate appropriate follow-up questions.
- D. Design and implement experiences that include and encourage the learning of children with a range of abilities.

### **M.17 Unpack mathematical content and identify mathematical competence for measurement**

Well-prepared beginning teachers will:

- A. Recognize and articulate potential goals, environments, learning experiences and play situations which promote children to measure attributes of multiple objects and phenomena using a variety of language and objects. Measurement includes size, weight, quantity, length, volume, and time.
- B. Identify questions that can be asked regarding measurement and comparison of measures of a variety of objects and phenomena and how measurements can change over time.
- C. Provide a narrative of the mathematical work to be done to measure a variety of attributes of various objects and phenomena, including why we measure. Quantifying a measure helps us describe or compare more precisely.
- D. Recognize, analyze, and generate differences in the approaches to measurement.

### **M.18 Perform mathematical explanations and support children's mathematical explanations for measurement**

Well-prepared beginning teachers will:

- A. Explain and encourage others to explain purposes, approaches, and tools/materials for measurement.
- B. Use and encourage others to use math language reflective of measurement of multiple attributes of object and phenomena including size, quantity, weight, length, time (e.g., you took a long nap today).
- C. Explain and encourage others' explanations of what is similar and different for attributes of objects and phenomena using measures of size, weight, volume, quantity, length, and/or time; explaining that quantifying a measurement helps us describe and compare more precisely.
- D. Perform explicit and elaborated explanations that unpack the structure of and

approaches to measurement.

- E. Interpret and contrast alternative or novel approaches measurement.

### **M.19 Choose, interpret, and talk with representations for measurement**

Well-prepared beginning teachers will:

- A. Recognize whether or not measurement approaches are consistent with specific meanings of measurement.
- B. Describe affordances and limitations of different approaches to measurement of objects and phenomena (e.g., we can use yarn to measure something round, but cars to measure something flat).
- C. Choose and use multiple materials/tools and meaningful approaches, including within children's play, to measure a variety of attributes of objects and phenomena within and outside of the classroom.
- D. Use and encourage others to use multiple approaches and materials to record measurements.
- E. Clarify and accurately record others' mathematical thinking as they measure a variety of objects and phenomena.
- F. Utilize a variety of approaches to assessment for all children including those with a range of abilities.

### **M.20 Elicit, Interpret, support, and extend others' mathematical thinking for measurement**

Well-prepared beginning teachers will:

- A. Formulate claims and encourage others to formulate claims about measurement, comparisons of measures, and how measurements might change over time.
- B. Recognize which among a set of partially expressed ideas about measurement is most germane to a given task, such as best tools/materials, approaches, ways of recording, and comparisons.
- C. Clarify and record others' approaches to measurement.
- D. Examine the meaning of measurements and methods for solving measurement tasks as exemplified in others' talk or work, and then apply the approach on different tasks.
- E. Design and implement experiences that include and encourage the learning of children with a range of abilities.

### **M.21 Unpack mathematical content and identify mathematical competence for Collecting, Representing, Using and Organizing Information (Data Analysis)**

Well-prepared beginning teachers will:

- A. Identify mathematical affordances in tasks and play situations for noticing, naming, and describing attributes of gathering data and understanding the purpose of collecting data is to answer questions when the answers are not immediately obvious.
- B. Identify opportunities to introduce mathematical language and precision into other's talk and play that describes, compares and draws conclusions about

data as a whole or in part.

- C. Recognize and introduce mathematical language that describes the organization of data, how data must be presented to allow for interpretation and how data are gathered and organized depends on the question. For example: Sort real objects; organize pictures, counters, or name cards; tally charts can help to see clusters of data while a bar graph is a way to compare quantities across categories.
- D. Recognizing and using mathematical language to collect and organize information by helping make sense of the environment by gathering, sorting, classifying and analyzing information.

**M.22 Perform mathematical explanations and support children’s mathematical explanations for collecting, representing, using and organizing information (Data Analysis)**

Well-prepared beginning teachers will:

- A. Develop and implement appropriate experiences for young children that facilitate the developing concepts of gathering data and understanding the purpose of collecting data.
- B. Formulate questions that determine what data should be gathered, how the data is organized and/or how the data is described. Unpack, understand, and develop mathematical justifications for the purpose of data collection and the useful comparison of the parts of data.
- C. Use clear and precise language to understand the purpose of collecting and analyzing data understanding that the need or purpose of gathering data often comes naturally in the course of discussion or from other content areas such as social studies.
- D. Compare and contrast different explanations of the methods for data collection, analysis, and interpretations.

**M.23 Choose, interpret, and talk with representations using concrete materials in purposeful, relevant activities for collecting, representing, using and organizing information (Data Analysis)**

Well-prepared beginning teachers will:

- A. Develop and implement appropriate experiences using concrete materials for young children that facilitate the developing concepts of gathering data and understanding the purpose of collecting data.
- B. Use and encourage others’ use of math language related to what data should be gathered, how the data is organized and/or how the data is described/interpreted. Choose and display accurate representations related to what data should be gathered, how the data is organized and displayed and/or how the data is described/interpreted. Coordinate images, talk, and gestures to describe the organization of data how data are gathered, and how data must be presented to allow for interpretation.
- C. Utilize a variety of approaches to assessment for all children including those with a range of abilities.

**M.24 Elicit, interpret, support, and extend others' mathematical thinking for collecting, representing, using and organizing information (Data Analysis)**

Well-prepared beginning teachers of mathematics will:

- A. Develop and implement appropriate experiences (throughout the day and during play) for young children that facilitate the developing concepts of gathering data and understanding the purpose of gathering data is to answer questions when the answer is not immediately obvious. Pose mathematically appropriate questions to probe and elicit others' thinking about comparing or drawing conclusions about the data in whole or in part. Interpret, critique, and develop claims about others' thinking, language, and gestures about the need or purpose for gathering data, how to unpack and understand the purpose of data collection and the useful comparison to the parts of data. Clarify and accurately record others' mathematical thinking as they compare and analyze attributes of the methods for data collection, analysis and interpretations.
- B. Design and implement experiences that include and encourage the learning of children with a range of abilities.



## 8.Science

The science standards for birth through kindergarten teachers reflect a vision for learning environments where children make sense of the world by engaging in 3-Dimensional science and engineering learning, as defined in the Michigan’s Early Childhood Standards of Quality for [Infant and Toddler Programs \(ECSQ-IT\)](#) and [Prekindergarten \(ECSQ-PK\)](#), and the [Michigan Standards for Science](#) (i.e., science and engineering practices, disciplinary core ideas, and crosscutting concepts). The K-12 Science Education framework provides detailed research-based knowledge of how people learn science and what Michigan classrooms can look like. The Early Childhood Standards of Quality provides information about environments, relationships, and developmentally appropriate practices to support exploration, inquiry, and growing understanding of the world. Science learning at this level should be focused on preparing environments for using the five senses to explore a wide range of objects/phenomena and their properties to identify patterns, testing children’s own ideas in a systematic way using a variety of materials, reasoning and arguing from evidence, making thinking public and critiquing the thinking of others, creating and interpreting increasingly complex text and participating in and supporting a culture of talk. By leveraging literacy and mathematics connections, well prepared beginning teachers can engage all children from birth through Kindergarten in complex age-appropriate problems and the investigation of natural and designed phenomena. The environment in which this type of science learning takes place is led by a knowledgeable and prepared teacher. To meet this expectation, preservice teachers must engage in multiple science learning experiences that mirror these expectations and reflect on those experiences as beginning teachers.

This section covers the content knowledge and pedagogy that teachers need to know and demonstrate in order to teach science to children across the grade band. There are skills these teachers need that are only appropriate for portions of the age space (i.e., teachers of infants and toddlers will use different content and pedagogical knowledge than teachers of kindergarteners). Teachers of young children are fully aware that there are significant developmental differences between infants and kindergartners, so content is differentiated accordingly across all of the content areas.

### **Engaging Children in 3-Dimensional (3D) Science Learning**

#### **S.1 Scientific Phenomena**

Well-prepared beginning teachers will:

- A. Articulate the role of scientific phenomena in three-dimensional science teaching and learning.
- B. Identify, evaluate, and use productive scientific phenomena for children’s science learning including everyday noticings of the world (for example, a puddle disappearing over time).

## **S.2 Engaging children in Science and Engineering Practices (SEPs)**

Well-prepared beginning teachers will:

- A. Articulate the nature and importance of scientific and engineering practices, including observing, exploring, asking questions and defining problems, planning and carrying out investigations, collecting data, analyzing and interpreting data, and constructing explanations and designing solutions.
- B. Provide multiple sensory and exploratory opportunities so that children discover properties and phenomena and later, that they can make things happen and solve simple problems.
- C. Identify age appropriate elements of scientific and engineering practices, including identifying patterns, exploring cause and effect relations, examining the structure and function of objects (both natural and human made), using materials to solve problems, developing and using models and engaging in argument from evidence.

## **S.3 Engaging Children in Developing and Using Disciplinary Core Ideas (DCIs)**

Well-prepared beginning teachers will:

- A. Demonstrate an understanding of and articulate the importance of life, earth and physical science disciplinary core ideas of the Early Childhood Standards of Quality for Prekindergarten, and Kindergarten Michigan Science Standards.
- B. Identify age appropriate elements of the disciplinary core ideas within instructional materials.
- C. Create experiences for children to use disciplinary core ideas within life, earth, and physical science and engineering.

## **S.4 Engaging Children in Developing and Using Crosscutting Concepts**

Well-prepared beginning teachers will:

- A. Articulate the nature of the crosscutting concepts and relate them to 3D and sensory learning (giving priority to patterns, cause and effect, and structure and function of systems and systems models) and identify them within the environment and instructional materials.
- B. Identify age appropriate elements of the crosscutting concepts within instructional materials.
- C. Create experiences for children to use and integrate crosscutting concepts.

## **Children's Sense-making and Science Teaching Pedagogy**

### **S.5 Selecting and modifying instructional materials for 3D learning**

Well-prepared beginning teachers will:

- A. Select and modify instructional and sensory materials to create learning environments that engage children in using the disciplinary core ideas and science and engineering practices to explore, describe, test, experience and explain phenomena.

- B. Articulate and incorporate connections between science and other discipline areas (e.g., engagement in measurement, analysis and the cross-cutting concept of patterns within science learning; writing to explain science understanding).

### **S.6 Children’s scientific sense-making**

Well-prepared beginning teachers will:

- A. Articulate how children make sense of scientific phenomena, ideas, experiences and data and what scientific sense-making looks like in individuals (e.g., speaking, writing, visually representing, enacting, responding nonverbally) and group interactions (e.g., speaking and listening, responding nonverbally).
- B. Identify instances of sense-making and elicit children’s ideas and responses, in individual, small group, and/or whole group interactions that embrace the complexity and iterative nature of responding to sensory experiences, sense-making.
- C. Respond to children’s experiences and inquiry in ways that promote concept development and further inquiry. This means moving beyond indicating whether the ideas are correct vs. incorrect, accurate vs. misconceptions (e.g., providing words to describe children’s responses to science and sensory experiences and materials, asking questions that guide children toward deeper understanding vs. a correct answer).

### **S.7 Pedagogical strategies that support culturally relevant sense-making in 3D learning**

Well-prepared beginning teachers will:

- A. Articulate research-based pedagogical strategies that support children’s sense-making in age and culturally appropriate ways including leveraging children’s prior experiences and knowledge, varying activity structures, nonverbal interactions and talk and group work for science. For example, teachers should be expected to describe children’s responses, elicit children’s thinking, cultural and community connections, and curiosity when making sense of phenomena.
- B. Choose, modify and/or design learning experiences and/or assessments to create environments that provide opportunities for iterative children’s responses, sense-making and explanation building through adult-child interactions, classroom talk, written words, diagrams and/or movement.
- C. Create an inclusive linguistic culture that leverages non-verbal communication, individual interactions, small group work and whole group talk strategies for eliciting children’s ideas and engaging children in sense-making through 3D learning (e.g., supplying words for children’s nonverbal responses, partner talk, asking for clarification, asking for evidence and reasoning, asking for others to agree/disagree and asking for contributions to build on one another).
- D. Demonstrate initial strategies for navigating tensions between alternative ideas and ways of knowing (which may be derived from various cultures) and canonical science ideas including: referring to evidence, continuing to consider/debate to work through the ideas, focusing on the most important disciplinary/explanatory

ideas and understanding when it is appropriate and necessary to create space for children to grapple with alternative ideas.

- E. Select or modify formative and summative science assessments (diagrammatic, linguistic) that address 3D learning and reveal children's current sense-making.
- F. Recognize and assess children's ideas, life experiences and learning beyond the technical scientific language by evaluating samples of children's work and classroom interactions to determine the nature and depth of children's responses, sense-making and leverage ongoing changes in children's learning to adjust instruction and interaction strategies.

### **S.8 Equity and Access**

Well-prepared beginning teachers are able to:

- A. Identify children's and communities' interests, experiences and resources as assets to their science learning and use these assets to select materials, sensory experiences, phenomenon, and modify or design learning experiences and interaction strategies.
- B. Develop strategies for creating a classroom culture that values extended exploration, discoveries, sensory experiences, productive struggle, challenging science ideas, constructing science meaning together, inclusiveness, and enjoying science.

## 9. Social Development & Studies

This section covers the content knowledge and pedagogy that teachers need to know and demonstrate in order to teach social development and studies to children across the grade band. There are skills these teachers need that are only appropriate for portions of the age space (i.e., teachers of infants and toddlers will use different content and pedagogical knowledge than teachers of kindergartners). Teachers of young children are fully aware that there are significant developmental differences between infants and kindergartners, so content is differentiated accordingly across all of the content areas.

The standards were carefully designed to align well between B-K and PK-3, and to align well with the key knowledge and skills detailed in Michigan's Early Childhood Standards of Quality for [Infant and Toddler Programs \(ECSQ-IT\)](#) and [Prekindergarten \(ECSQ-PK\)](#) and the [Michigan Kindergarten Standards for English Language Arts](#). Those using the standards are encouraged to read both sets of preparation standards, as well as the ECSQ and Kindergarten academic standards, even if their preparation program only focuses on one of these grade bands.

### **SS.1 Civic Engagement**

Children study their social world from the moment of birth. A strong identity is developed through multiple positive images and experiences with adults who are able to meet each child where they are in development and scaffold growth. From birth establishing close and stable relationships with caregivers lays a foundation for how children explore, perceive, and interpret the world. By the time they are three, four and five years-old, children are becoming increasingly sophisticated in observing and understanding their social world. The early childhood classroom is a perfect laboratory for children to further learn the knowledge, skills, and attitudes required to live in a diverse democratic society and to be able to understand our growing global interdependence as adults. The foundations of these skills include developing a strong identity, positive relationships with caregivers and peers, sense of belonging, emotional development, sense of contribution and community, skills for establishing strong relationships through culturally responsive learning opportunities, and non-violent approaches to problem-solving.

Well prepared teachers demonstrate knowledge that infants, toddlers, and children are individuals with their own thoughts, ideas, goals, needs, and feelings. The development of a strong individual, family, and community identity is critical to children's social well-being and influences children's cognitive development across content domains necessary for success in school and life.

Well-prepared beginning teachers will:

- A. Create environments that support children to explore their individual interests, goals, needs, and preferences.
- B. Use a developmental approach to support children in demonstrating an increased understanding of socially acceptable behavior.
- C. Use a developmental approach to support children in increasing awareness of themselves as members of a group.

- D. Create environments for children to develop mutual understanding and respect for diverse others.
- E. Provide a variety of materials/tools for children to observe themselves (e.g., mirrors, photographs) and a create images/representations of themselves, their families, and their world.
- F. Use language that helps children to describe themselves using factual information including what changes and what does not (e.g., recognize and label body parts, emotions, preferences).
- G. Use behavioral reflections to describe children’s behaviors objectively (e.g., you are working together to fill the bucket).
- H. Create learning experiences, including through play, for children to develop personal self-control, self-motivation, and self-esteem.

## **SS.2 Relationships**

Well prepared teachers will demonstrate knowledge that children develop relationships through respectful, nurturing interaction with others, infants develop a sense of security and trust enabling them to explore their world and develop a sense of identity. In the earliest months of the child’s life, this happens through a strong and trusting relationship with the primary caregiver. As these relationships continue and development progresses, toddlers will learn to take another’s point of view, to empathize with others, to ask for help, to see themselves as a help for others, and to discuss or explain their ideas to adults or to other children. As a result of their contributions in the home environment, with peers, the program, and the community, children develop understanding and awareness of others, positive and accepting attitudes, and the ability to exhibit caring, cooperation, honesty, pride, and independence.

Well-prepared beginning teachers will:

- A. Articulate that teachers play a significant role in helping children to initiate and maintain relationships with peers and adults and establish positive relationships with all children and families they serve.
- B. Support children in demonstrating an increased ability to communicate about and seek help for interpersonal conflict.
- C. Support children in demonstrating an increased ability to make intentional choices.
- D. Encourage children to communicate with peers (e.g., recognize peers exist, pay attention/listen to others, facilitate opportunities for peer to peer interactions and communication, peer to peer negotiations).
- E. Provide and facilitate opportunities to develop skills for understanding multiple perspectives.
- F. Engage children in learning about and using helping and friendly behaviors, positive social skills and facilitate these interactions among children.
- G. Demonstrate use of individual and group guidance and problem-solving techniques to develop positive and supportive relationships with children.
- H. Guide and facilitate positive, non-violent strategies of conflict resolution that result in win-win solutions.

- I. Provide multiple opportunities to develop communication skills to first communicate goals/needs, identify a problem, create a plan, negotiate with adults and peers using evidence/observation, then to generate a reasoned position on a public (i.e., classroom) issue in order to act constructively to further the public (i.e., classroom/family) good.
- J. Facilitate peer to peer social conversations during routine (i.e., mealtime) and play experiences.
- K. Foster emerging caring and cooperation skills among children and encourage developmentally appropriate reciprocal interactions where children take the perspective of others and discuss and explain their ideas to peers and adults.
- L. Create environments that expect respectful behaviors from peers and other adults; provide guidance for children to be respectful and tolerant themselves.

### **SS.3 History**

Well-prepared beginning teachers will:

- A. Provide intentional experiences for children to develop a sense of time and chronology using events from personal experiences and expanding into the events of the program, the family and larger communities as appropriate for the developmental level (e.g., past, present, future/yesterday, today, tomorrow, before/after, now/later; when/where/with whom, order and sequence of events, seasons).
- B. Provide intentional experiences involving change and continuity over time, and make appropriate use of historical evidence (e.g., events from their own past experience) in helping children develop a beginning awareness of temporal concepts and answering questions and developing arguments about past, present and future events (e.g. recalling past events to problem solve a given situation, classroom projects that incorporate individual family stories or photographs of elders or family traditions, opportunities to track the passage of time through the construction of timelines of events of significance to them (e.g., daily schedule), their communities, and earlier times communicate regularly with families and invite multigenerational participation).
- C. Design environments that promote the development of sense of time and chronology with predictable but flexible routines, schedules, and activities. Infants develop this through environments that provide individualized care routines and toddlers, preschoolers and kindergarteners through opportunities for children to use visual schedules/graphic organizers (e.g., steps for handwashing).
- D. Design experiences for children to recognize and respect historical concepts that vary across cultures (i.e. personal space, touch, time concepts, mealtime); take such into consideration when working with families; for example, visibly connect the curriculum to the families and cultures represented in the classroom; provide opportunities to hear from community members as storytellers or historians for the various cultures (including family members) and development of the area or region.

- E. Critically analyze language and visual representations in print and digital texts and media to avoid those which perpetuate gender, age, ability, family structure, social class, and racial/ethnic stereotypes.
- F. Use the Early Childhood Standards of Quality for Infant and Toddler Programs, Michigan Kindergarten content standards for social studies and Early Childhood Standards of Quality for Prekindergarten to plan appropriate experience.

#### **SS.4 Geography**

Well-prepared beginning teachers will:

- A. Demonstrate the ability to support children to develop an awareness of landmarks and familiar places.
- B. Demonstrate the ability to support children to describe the characteristics of home to gain understanding of physical features (e.g. exterior type, door color, type of home, etc.)
- C. Use geographic concepts to develop learning experiences that enable children to identify and interpret environments using representational tools, spatial perspective, and concepts. Encourage children to apply skills in asking and answering questions, and creating geographic representations that explain human needs and wants and their relationship to their environment (e.g., developing an awareness of body in space, teachers that respond in predictable ways to needs/wants, helping children describe their needs and wants, provide opportunities for children to be involved in drawing a picture of a house as shelter).
- D. Provide access to high quality literature, both fiction and non-fiction, that helps children learn more about their place in their neighborhood and their expanding 'community,' both the structures as well as the outdoor play spaces and the plants and surrounding lands, forests, streams and bodies of water.
- E. Arrange the environments — indoors and outside — to support and encourage self-motivated exploration and curiosity about people and places around the world; encourage children to see themselves as explorers.

#### **SS.5 Civics and Government**

Well-prepared beginning teachers will:

- A. Demonstrate knowledge that governments apply civic virtues and principles of American constitutional democracy, explaining important rights and how, when, and where American citizens demonstrate their responsibilities by participating in government; Demonstrate knowledge of Michigan K-3 content standards for social studies and Early Childhood Standards of Quality for Prekindergarten.
- B. Demonstrate the ability to support children in increasing their understanding of who work in the community and what they do.
- C. Assist children in developing rules and creating a democratic group setting (i.e., articulating/discovering with children why we have rules within family, school, and community) and how the rules apply to themselves and others.



Create learning experiences to help children learn basic safety and health rules that they use daily.

- D. Provide democratic experiences such as voting, discussing the rights and responsibilities of being a member of a community.
- E. Promote children's developing sense of what it means to be a democratic community of learners and create such an environment within the classroom in which children have a chance to be heard, to respectfully express their own voices, to participate.
- F. Provide diverse experiences for children to acknowledge and respond to others' thinking and behavior.
- F. Provide experiences for children to demonstrate care of the environment is our collective responsibility (e.g., caring for learning materials).
- G. Plan and implement opportunities to participate in community projects that are collaborative and help to establish a sense of place.

### **SS.6 Economics**

Well-prepared beginning teachers will:

- A. Provide experiences for children to demonstrate an increased ability to make intentional choices.
- B. Provide experiences involving the interaction of individual needs, wants, goods, services, and how these basic economic concepts relate to children's lives. (e.g., how to share resources, fair trading, play experiences that allow for 'buying, selling, trading' goods or services; or saving by various means as a classroom project to reach a goal).
- C. Provide experiences involving concepts of fairness and equity (i.e., problem-solving solutions regarding shared spaces and shared materials).
- D. Plan and implement opportunities for children to exchange goods and services and develop an awareness that goods and services have value, and that value is influenced by many characteristics including availability, quality, personal need/goal, and the same good/service may have different value to different people (e.g., trading, identifying preferences, negotiation for toys, playing store)
- E. Plan and implement experiences for children to pay for things with the representation of money and provide opportunities for children to engage in play that includes the buying, selling, trading of goods or services using representations of money.