

# Pennsylvania Learning Standards for Early Childhood

# KINDERGARTEN

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Office of Child Development  
and Early Learning



Pennsylvania  
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Department of Education

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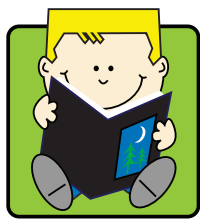
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## Learning Standards Development

Pennsylvania Learning Standards for Early Childhood were originally constructed as a joint project of the Departments of Education and Human Services. The Office of Child Development and Early Learning in collaboration with the Office of Elementary and Secondary Education have overseen revisions to the standards.

Each set of standards has been formulated with help and guidance from practitioners and program specialists who represented early childhood programs, school districts, higher education, family leaders, policy analysts, and researchers. A group of Pennsylvania educators, in conjunction with the Office of Child Development and Early Learning, created a set of Pennsylvania Core Standards beginning with Pre-Kindergarten. The Pennsylvania Core Standards start in Pre-Kindergarten and continue through 12th grade. The Pennsylvania State Board of Education adopted the Pennsylvania Core Standards in March 2014. The 2014 revisions include updates related to the Pennsylvania Core Standards; Science, Technology, Engineering, and Math (STEM) supportive practices; and current research trends.

### Learning Standards for Early Childhood are used to:

- Inform professionals about curriculum and assessment
- Guide the selection of instructional materials and the design of interactions/goal setting
- Inform families of appropriate expectations for children
- Provide a common framework for community-based birth–grade 3 alignment work

### Learning Standards for Early Childhood are NOT used as:

- A specific curriculum
- A means to prohibit children from moving from one grade or age level to another
- A specific assessment of the competence of children or teachers

## INTRODUCTION

Children are born with an incredible capacity and desire to learn. More than 40 years of research confirms the foundational importance of early education and care for children’s school and life success. It is essential that children’s first experiences are robust ones, steeped in activities that develop critical thinking and problem-solving skills, a deep understanding about themselves in a social society, and age-appropriate content.

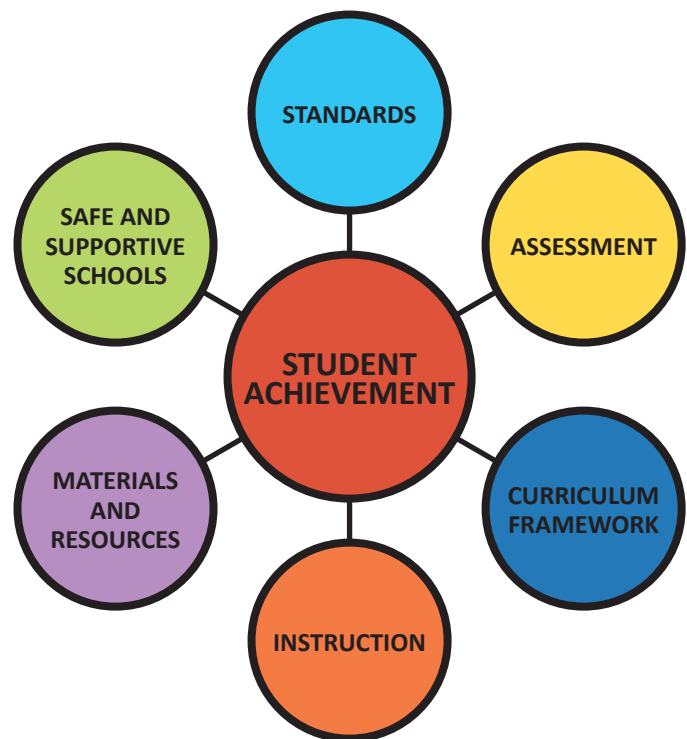
Instructional practices must embed the domains of development—cognitive, social-emotional, language, and physical—with approaches to learning that enable children to explore, understand, and reach beyond the “here and now” to challenge themselves, experiment, and transform information into meaningful content and skills.

Professionals interacting with young children have the critical task of providing rich information and experiences. Such experiences build skills and understanding in the context of everyday routines and within intentionally-designed play opportunities that capture children’s interests and curiosity. Pennsylvania Learning Standards for Early Childhood are designed to support and enhance the learning environment; responsive relationships; age, cultural, and linguistically-appropriate curriculum; and practices being used to assess children, classrooms, and programs.

The Department of Education and the Office of Child Development and Early Learning use a Standards Aligned System. The Standards Aligned System is a collective body of research that identifies six elements which, when used together, provide a framework for program improvement and child success. The elements identified are standards, assessments, curriculum framework, instruction (including interventions), safe and supportive schools, and materials and resources. A

web-based portal including more information and resources related to these elements is accessible at [www.pdesas.org](http://www.pdesas.org).

### STANDARDS ALIGNED SYSTEM (SAS)



## 1. Standards

Learning standards provide the framework for learning. They provide the foundational information for what children should be able to know and do. Pennsylvania Learning Standards for Early Childhood build on information learned previously, creating a continuum of learning that assures consistent and linked learning that begins in infancy, increasing in complexity as it extends through graduation.

Pennsylvania also uses program standards that assure children's experiences are being offered in high-quality settings. Pennsylvania's state-funded programs all offer similar sets of standards that provide guidance on program operation that exhibit best practices.

## 2. Assessments

Professionals must use both informal and formal assessments to understand children's progress. In early childhood, formative assessments that provide information about how children are progressing allow professionals to make adaptations or adjustments in the individualized learning plans for every child. Early childhood professionals observe and assess children using the materials that are found in the learning environment. Professionals must use the information they have documented during observation, along with information from the family, to identify goals and next steps for children's learning.

## 3. Curriculum framework

A curriculum framework reminds us what information should be taught to young children within each of the Key Learning Areas. It assures the continuum of learning that begins at birth and continues through graduation. Pennsylvania's curriculum framework includes big ideas, essential questions, concepts, and competencies that further define the learning standards.

## 4. Instruction including interventions


Instruction in the early years often looks different than instruction in the older grades. Learning occurs within the context of play and active learning strategies where children are engaged in concrete and hands-on discovery; experimentation; and interaction with materials, their peers, and nurturing adults.

Professionals help construct knowledge during these active learning times by designing activities that build on children's prior knowledge to create new understandings and information. Direct instruction should be combined with child-initiated play to produce optimal conditions for young children's learning. Adults become facilitators who interact with children throughout the day. Adults ask open-ended questions that encourage children to think about what comes next. With this approach, adults support children's creativity, problem-solving, intuition, and inventiveness (approaches to learning) by challenging and encouraging them. Professionals design focused instruction that is based on the identified individual needs of every child and assure these experiences encompass their interests, abilities, and culture.

### STEM (Science, Technology, Engineering, Math)

STEM (Science, Technology, Engineering, Math) education is an intentional, integrative approach to teaching and learning, in which students uncover and acquire a comprehensive set of concepts, competencies, and thinking skills of science, technology, engineering, and mathematics that they transfer and apply in both academic and real-world contexts.

Education in Science, Technology, Engineering, and Math beginning at birth is supported by research in neuroscience and other developmen-

tal sciences. This research shows that the basic architecture of a child's brain is constructed through an ongoing process that begins before birth and continues through adulthood. Research also confirms that the brain is predominantly receptive to learning math and logic between the ages of 1 and 4, and that early math skills are the most powerful predictors of later learning. Providing children with opportunities to have early experiences in STEM supports children in their academic growth, develops early critical thinking and reasoning skills, and enhances later interest in STEM careers. The foundations of STEM learning lie in the natural inquiry and exploration of young children, as well as intentionally designed activities which build scientific and mathematical concepts, and the effective use of available technologies. Positive interactions early in life, in an environment intentionally designed to provide STEM experiences where children explore; ask questions; brainstorm, plan, and test solutions; and receive support from educators will help to lay this foundation. Early learning STEM experiences are based on the Pennsylvania Learning Standards for Early Childhood for infants and toddlers and prekindergarten. The STEELS (Science, Technology & Engineering, and Environmental Literacy & Sustainability) Standards are used for kindergarten through grade 2. STEM subjects are supported within these standards and are noted by the symbol,  throughout the supportive practices. Science, Technology, Engineering, and Math are not separate subjects broken down into their own time slots. These topics of study are incorporated and encouraged within all activities throughout the day. In addition, laying this early foundation will help to bridge the educational gap between birth to age 5 and K-12 educational programs.

### Interventions

#### • *Early Childhood Special Education*

Early childhood classrooms should be inclusive ones where children with disabilities and developmental delays are enjoying learning experience alongside their typically developing peers. Professionals may need to adapt or modify the classroom environment, interactions, and/or materials and equipment to help children with disabilities fully participate.

Pennsylvania Learning Standards for Early Childhood are designed to be used for all children. The content within these standards provides the breadth of information from which to create goals and experiences for all children that will help them reach their highest potential while capturing their interests and building on what they already know. Professionals must emphasize and celebrate all children's accomplishments and focus on what all children can do.

#### • *English Language Learners/Dual Language Learners*

Children develop language much the same way they acquire other skills. Children learn native and second languages using an individual style and rate. Differences among English Language Learners/Dual Language Learners such as mixing languages or a silent period are natural. Each child's progress in learning English needs to be respected and viewed as acceptable and part of the ongoing process of learning any new skill. Children can demonstrate proficiency in most of the standards using their dominant language. Use of home language in the classroom environment, and in simple phrases, validates a child's place in the classroom, encouraging the child to see him/herself as a learner. Working alongside English-speaking adults and peers in authentic learning experiences which respect home language is an effective means of learning English. Similar to all young children, English Language Learners/Dual Language Learners benefit from use

of visuals, props, and realia (objects from real life used in classroom instruction to improve children’s understanding of other cultures and real life situations). The skills needed for young English Language Learners/Dual Language Learners to become proficient in English are fully embedded in the Pennsylvania Learning Standards for Early Childhood.

## 5. Materials and resources

Every early-learning setting, whether it is in a home atmosphere or center-based classroom, must be a comfortable, safe, and nurturing environment where children can learn through their play. Children discover and understand science, social studies, and math information when they actively explore materials and ideas that are guided by professionals who intentionally design activities that engage children in critical thinking and processing. Children also learn about their own abilities and learning styles, how to get along with others, and how to appreciate others’ contributions in classrooms that include a diverse set of materials and experiences.

School environments should be linked to a child’s home environment, incorporating cultural and ethnic materials and children’s home language, and provide experiences that are inclusive for all children, regardless of ability, socio-economic status, or family background. Well-designed environments demonstrate a commitment to the whole child by offering materials and activities that promote social, physical, cognitive, and language learning. Resources provided within the Standards Aligned System (SAS) portal include Pennsylvania educator-created lesson plans, instructional strategies, digital media resources, and other valuable information.

## 6. Safe and supportive schools

The safe and supportive schools element found on the Standards Aligned System portal showcases resources and exemplars that promote active child engagement in a safe and positive learning environment. The three areas of focus within safe and supportive schools are:

**Engagement**—Program engagement is essential for child success and building a positive program climate. Engagement within a program is a process of events and opportunities that lead to children gaining the skills and confidence needed to cope and feel safe within their environment. These events and opportunities include relationships, respect for cultural diversity, and family participation. Relationships are the connection between two or more people or groups and their involvement with and behavior toward one another. Respect for diversity shows an understanding, appreciation, and response to differences in individuals or groups. Family participation includes the active involvement within classroom and school events.

**Safety**—Program safety refers to the security of the setting and program-related activities as perceived and experienced by all stakeholders, including families, caregivers, children, school staff, and the community. Program safety encompasses both emotional and physical safety, and is influenced by positive and negative behaviors of children and staff. Emotional safety focuses on the feeling of connection, comfort, and acceptance within a secure setting. Physical safety ensures children are free from danger or threatening circumstances.

**Environment**—Program environment refers to the extent to which program settings promote child safety and health. Environment is inclusive of all aspects of a program—academic components, its physical and mental health supports and services, and its physical building and location within a community. The physical environment looks at the external surrounding and physical conditions within a

program. Classroom assessment instruments that help providers assess the arrangement of indoor space, the provision of materials and activities, and their development of class schedules are useful in a sharing best practice implementation and alignment to Pennsylvania Learning Standards for Early Childhood. The academic environment is the climate set within a program that values and promotes learning and self-fulfillment. Wellness within a program supports good physical and mental health, including the promotion of a proper diet, exercise, and healthy habits.

## EARLY CHILDHOOD CONNECTIONS

High-quality early care and education programs also promote connections that assure children’s school success. Programs that build relationships with children and families and coordinate their work with other early-learning programs and school districts create strong partnerships for success.

### 1. Connections to children

Relationships are the key to successful connections between the adult and the child. Professionals must take time to know every child, to understand the way in which each child learns best, and to identify the special talents and skills each child possesses. Adults who work with young children must be students themselves. They must learn about children’s home experiences and culture so they can design learning environments that support the home-school connection and expand prior learning into new knowledge.

### 2. Connections to families

Families of young children have much to offer in the learning process. When a partnership is formed between professional and family, the connection has been strengthened, assuring that children receive consistent messages about learning and skill development. Families should be given opportunities to learn about their children’s day at school, to provide input into the information they want their children to learn and master, and to understand what they can do at home to enhance the learning experience. To assure effective family engagement strategies, professionals can reference the Partnerships for Learning Standards.

At-home resources for families such as *Kindergarten, Here I Come; Kindergarten, Here I Am; Learning Is Everywhere; Building Blocks for Babies; Every Day I Learn through Play; and Recipes for Readiness* provide professionals and families tools to share age-appropriate expectations and to connect learning experiences.

Family ethnicity and culture must be interwoven into the life of an early childhood program and classroom. Professionals must embrace all children’s heritages and provide activities, materials, and experiences that help children become aware of and appreciate their own culture while learning about and appreciating the similarities and differences of others. Families can provide authentic cultural experiences and resources that support cultural awareness and appreciation. Such opportunities foster family and school relations and partnerships. Communications with families should be made in the home language. Professionals in high-quality, early education programs know and understand their own attitudes and biases and are culturally sensitive and supportive of diversity.

### 3. Connections with other early-learning programs

Children and families often have other needs and priorities in addition to participation in high-quality early care and education programs.

Families may need to coordinate their early care and education program services with health services or early intervention services, as well as with their other children's school experiences. Programs within a community that support families' single point of contact or help to coordinate services for children demonstrate a strong understanding and respect for families. Providers that reach out to neighborhood schools to facilitate transition into the public school or who have developed a working relationship with their intervention provider assure linkages that support children's school readiness and ongoing success. To assure effective family engagement strategies, professionals can reference the Partnerships for Learning Standards.

## THE LEARNING STANDARDS CONTINUUM

**W**ithin all Pennsylvania Learning Standards for Early Childhood, the Key Learning Areas define the domains or areas of children's learning that assure a holistic approach to instruction. All children, regardless of age and ability, should be exposed to experiences that build their skill development in approaches to learning, social and emotional development, language and literacy development, health wellness and physical development, creative expression, and the cognitive areas of mathematics, science, and social studies. The Standards within each Key Learning Area provide the information that children should know and the skills children should be able to do when they leave the age level or grade.

Pennsylvania Learning Standards for Early Childhood are connected through a continuum of learning and link to the 3rd grade academic standards. Some skills will not emerge in a noticeable way until a child is older. These standards will be intentionally blank or identified as emerging.

Professionals who view children's skill development across ages and grades will be able to understand the sequential way children learn and become familiar with the way in which teachers at higher grade levels support learning.

### AGE GROUPING IN PENNSYLVANIA LEARNING STANDARDS FOR EARLY CHILDHOOD

#### Learning Standards for Infant-Toddler

The Infant-Toddler Standards are divided into three age levels: infant (birth through 12 months), young toddler (9 months–27 months), and older toddler (24 months through 36 months). These age divisions are arbitrary as a means for organizing the content; very young children's development is uneven and may span two or all three of the age levels in different Key Areas of Learning. This is reflected by the overlap of the age 9 months–27 months in younger toddlers.

The Standards in each Key Area of Learning are displayed on an Infant-Toddler continuum with the content within one strand presented together. Practitioners can look down each level to determine the skills that best match their children's current development, identifying additional concepts and competencies, and supportive practices to scaffold children's learning.

When strands include "emerging," these concepts are beginning to emerge but are not expected to be mastered. For example, infants and

#### 4. Connections for learning

Young children make learning connections through authentic hands-on experiences. Professionals that allow children time to explore and discover both inside and outside, optimize children's capacity to internalize and generalize content by making their own connections to prior knowledge. All children, regardless of age and ability, need opportunities to engage in practice activities and experiences that are steeped in play. Adults should design learning experiences with connections among multiple domains. Integrated learning experiences support both content and social and cultural learning.

young toddlers may be exploring mathematical estimation as they interact with materials, but intentional instruction would not be appropriate for that age. Adults should continue to introduce these concepts whenever appropriate for the individual child without expectation of mastery.

#### Learning Standards for Pre-Kindergarten

Professionals will find the skills that pre-kindergarteners (ages three to five) are practicing and mastering within the pre-kindergarten standards. Younger preschoolers will be learning the content, while older children will be mastering the skills and showing proficiency. Classroom environments, materials, and activities that are developed for this age will be appropriate for both three- and four-year-olds; expectations for mastery will be different.

#### Learning Standards for Kindergarten

Students who complete kindergarten should demonstrate mastery of the skills within the kindergarten standards. This document is designed for full-day kindergarten classrooms. Half-day kindergarten teachers will need to modify the amount of content that is introduced to children during the kindergarten year, but the cognitive processing that children must develop and the holistic instruction will remain constant regardless of the length of the kindergarten day.

It is critical that kindergarten instruction occurs through an active learning approach where teachers use differentiated instructional strategies and focus on learning centers and play as key elements of the daily schedule. Child-initiated investigation should be predominant with supportive direct instruction in content areas infused throughout the day. Kindergarten children should be given opportunities to develop social and emotional skills, physical skills, and their creative expression within the course of a kindergarten day.

#### Learning Standards for Grades 1 and 2

Students who complete grades 1 and 2 should demonstrate mastery of the skills within the grades 1 and 2 standards. It is critical that grades 1 and 2 instruction occurs through an active learning approach where teachers use differentiated instructional strategies and focus on hands-on experiential learning that is meaningful to young learners. Child-initiated investigation should be coupled with supportive direct instruction in content areas infused throughout the day. Students should be given opportunities to develop social and emotional skills, physical skills and their creative expression within the course of a typical day.

# GUIDING PRINCIPLES

**H**igh-quality early care and education programs offer learning opportunities that have a significant impact on the success of all children. A warm, responsive relationship with a highly-trained teaching staff is foundational. It is expected that teachers will intentionally integrate developmental knowledge with the attitudes,

skills, and concepts children need to make progress socially and academically. High-quality early care and education programs maintain high developmentally achievable expectations for all children using clear performance standards with a continuous cycle of assessment understood and used by staff, children, and families.



High-quality early care and education programs have a significant impact on children's future successes.



Children's learning development and opportunities are supported when their teachers are trained in early childhood development and education, including professional training and ongoing professional development, and are intentional in their relationships and work with children and families.



All children can learn and deserve high expectations that are age-, individually-, and culturally-appropriate.



Early care and education programs must address the individual needs of a diverse population of children, e.g., children with special needs, children from diverse cultural backgrounds, children from all socio-economic groups.



Young children learn best when they are able to construct knowledge through meaningful play, active exploration of the environment, and thoughtfully planned activities.



Early care and education programs are defined by a set of comprehensive standards that maximize a child's growth and development across cognitive and non-cognitive domains.



The learning environment for young children should stimulate and engage their curiosity of the world around them and meet their physical and emotional needs so that they feel safe and secure.



There must be a system of research-based assessments that documents children's growth and development in relationship to a defined set of standards and is used to inform instruction.



Language and early literacy development must be supported and integrated throughout all aspects of early care and education programs.



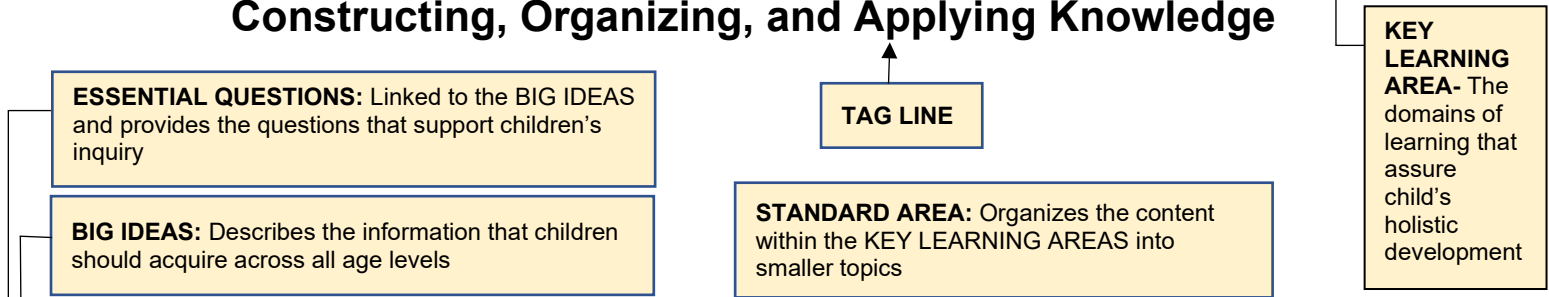
Children's learning is enhanced when families, schools, and communities work together.



# THE LEARNING STANDARDS FOR EARLY CHILDHOOD FORMAT

(Approaches to Learning Through Play, Social and Emotional Development, Language and Literacy Development, Social Studies Thinking, Creative Thinking and Expression, Health, Wellness, and Physical Development)

## Approaches to Learning Through Play Constructing, Organizing, and Applying Knowledge



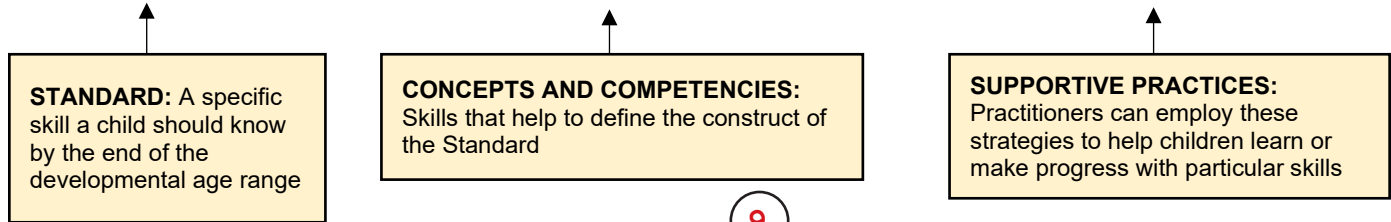
### AL.1 Constructing and Gathering Knowledge

**Big Ideas:** Children actively construct knowledge through routines, play, practices, and language. Children use a variety of strategies to gather information based upon their own individualized approach to learning.

**Essential Questions:** What strategies can be used to gather information? What can I learn from my every day experiences, including play?

#### A. CURIOSITY AND INITIATIVE **STRAND**

Standard	Concepts and Competencies	Supporting Practices
<b>AL.1.K.A</b> <b>Explore and ask questions to seek meaningful information about a growing range of topics, ideas, and tasks.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>Utilize senses to explore and learn from the environment.</li> <li>Show interest and inquire about other's work.</li> <li>Ask questions to understand something (e.g., "How does that work?")</li> <li>Demonstrate interest in new materials and experiences that are introduced into the classroom (e.g., use play to practice new skills and knowledge, use vocabulary words or concepts learned in class during play).</li> <li>Watch others engaged in a task and ask to join in.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>Stimulate student curiosity using "provocation" strategies when introducing new topics or ideas (e.g., ask students to guess what an unfamiliar object might be used for, place new materials in the sensory table and encourage exploration, ask "I wonder" questions).</li> <li>Provide real objects that can be manipulated or explored to understand a concept.</li> <li>Respond to student's questions (inquiry) with explanations.</li> <li>Model and encourage use of vocabulary within context of play/learning experience.</li> <li>Encourage students to discuss, inquire, engage in learning experiences, and research answers to questions on topics.</li> <li>Provide a classroom with clearly defined interest areas and materials that invite students to explore, discover, and create.</li> <li>Provide ample time to practice new skills and knowledge through playful experiences.</li> <li>Regularly rotate classroom materials and formally introduce new objects and activities into the classroom by showing excitement (e.g., "Look what I brought for us to do today!")</li> </ul>



# FOUNDATIONAL SKILLS FOR LEARNING: APPROACHES TO LEARNING THROUGH PLAY, SOCIAL EMOTIONAL DEVELOPMENT

The Approaches to Learning Through Play and Social Emotional Development standards are included first in our standards because these are foundational skills. These standards provide children with skills needed for school, life, and career success. These skills should be taught to children throughout the day.



# Approaches to Learning through Play

## Constructing, Organizing, and Applying Knowledge

### AL.1 Constructing and Gathering Knowledge

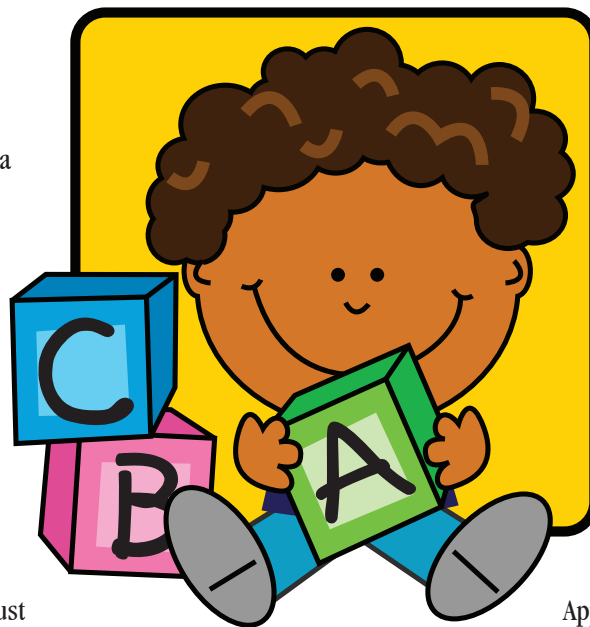
### AL.2 Organizing and Understanding Information

### AL.3 Applying Knowledge

### AL.4 Learning through Experience

**A**pproaches to Learning through Play Standards describe the essential life skills that enable a child to grow, learn, develop, and become a successful member of the community. The use and development of these skills begin at birth and continue across the human life span. Approaches to Learning through Play Standards addresses how a child gathers and constructs knowledge, organizes and understands information, applies that knowledge, and transfers the self-constructed learning beyond the immediate moment. The child must develop these imperative capacities to understand and use the content of literacy, mathematics, science, and social studies, as well as necessary emotional well-being and lifelong success. It is essential to provide children with optimal learning opportunities that feature the development of these skills as the key component of 21st century classrooms across our state.

**F**rom the moment of birth, healthy children are in a continuous state of exploring, discovering, and constructing meaningful relationships with the world around them. These innate qualities support children as they venture out to connect with and understand the world in which they live. When children are encouraged to follow their innate inquisitiveness, they develop processes that enable them to succeed in answering important self-constructed “how” or “I wonder” questions. While children follow their own self-directed leads, they may be unsure of the outcome but are willing to take that risk to find out what will happen next. This outlook provides children with great pleasure as they interact successfully to understand their world; therefore, they desire to return to this preferred state of mind again and again. Children enjoy learning that includes active self-direction, positive anticipation, risk-



taking, pleasure, knowledge construction, absorption in the moment, and the desire to return to this state of mind, which is what we call play. Therefore, play is a powerful learning tool that enables the child to grow and develop a lifelong love of learning. Play is the child’s natural state of mind and therefore influences all of the child’s domains of development including physical, cognitive, language, social, aesthetic, and emotional. And equally as important, play as a focused state of mind provides the child with a context and positive attitude in which to develop their

Approaches to Learning skills, which are shown to lead to lifelong success.

## Play, Play, and Play Some More!

**T**he best way to support children’s learning in the early years is to provide hands-on, active learning experiences that include play activities. Play enables children to weave together past knowledge and new information to acquire new understanding and skill development. A child who discovers the characteristics of apples through manipulating, investigating, and exploring them understands the depth of apples better than a child who colors a worksheet picture of an apple. Children can cooperate in the block area to determine how many blocks can be added to a structure before it falls. This type of play enhances children’s social and creative thinking sequences. Play sequences and activities expand across all Key Areas of Learning and can build social, cognitive, and physical skill development when they are intentionally planned and facilitated by teachers who interact with children, asking open-ended questions to scaffold children’s thinking and problem-solving.

## AL.1 Constructing and Gathering Knowledge

**BIG IDEAS:** Children actively construct knowledge through routines, play, practices, and language. Children use a variety of strategies to gather information based upon their own individualized approach to learning.

**ESSENTIAL QUESTIONS:** What strategies can be used to gather information? What can I learn from my everyday experiences, including play?

### A. CURIOSITY AND INITIATIVE

Standard	Concepts and Competencies	Supportive Practices
<p><b>AL.1 K.A</b>  <b>Explore and ask questions to seek meaningful information about a growing range of topics, ideas, and tasks.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Use senses to explore and learn from the environment.</li> <li>• Show interest and inquire about others' work.</li> <li>• Ask questions to understand something. (e.g., "How does that work?")</li> <li>• Use play to practice new skills and knowledge.</li> <li>• Demonstrate interest in new materials and experiences that are introduced into the classroom. (e.g., use play to practice new skills and knowledge, use vocabulary words or concepts learned in class during play)</li> <li>• Watch others engaged in a task and ask to join in.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Stimulate students' curiosity using "provocation" strategies when introducing new topics or ideas (e.g., ask students to guess what an unfamiliar object might be used for, place new materials in sensory table and encourage exploration, ask "I wonder" questions).</li> <li>• Provide real objects that can be manipulated or explored to understand a concept.</li> <li>• Respond to students' questions (inquiry) with explanations.</li> <li>• Model and encourage use of vocabulary within context of play/learning experience.</li> <li>• Encourage students to discuss, inquire, engage in learning experiences, and research answers to questions on topics.</li> <li>• Provide a classroom with clearly defined interest areas and materials that invite students to explore, discover, and create.</li> <li>• Provide ample time to practice new skills and knowledge through playful experiences.</li> <li>• Regularly rotate classroom materials and formally introduce new objects and activities into the classroom by showing excitement (e.g., "Look what I brought for us to do today!").</li> </ul>

### B. RISK-TAKING

Standard	Concepts and Competencies	Supportive Practices
<p><b>AL.1 K.B</b>  <b>Demonstrate a willingness to participate in new and challenging experiences.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Actively explore new materials that are introduced into the classroom.</li> <li>• State discomfort at trying something new, but make attempts to try with encouragement.</li> <li>• Listen attentively to learn proper techniques for a new skill, and follow through using the learned technique.</li> <li>• Deal with success in a positive way and view challenges as growing experiences.</li> <li>• Differentiate between appropriate and inappropriate methods for learning information (e.g., understand that jumping from a high wall is a dangerous way to discover its height).</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Introduce materials and activities by explaining what they are and providing instructions on use.</li> <li>• Support students when activity becomes challenging (e.g., active listening, encouragement, offer specific feedback).</li> <li>• Engage students in "what if" scenarios to discuss potentially dangerous or inappropriate responses to situations.</li> <li>• Rotate materials in the classroom often to provide a variety of diverse experiences.</li> <li>• Demonstrate enthusiasm when introducing new materials and challenges.</li> </ul>

C. STAGES OF PLAY

Standard	Concepts and Competencies	Supportive Practices
<p><b>AL.1 K.C</b> Engage in elaborate, interactive play sequences that include acting out roles and negotiating play themes.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Use materials and props to support an ongoing play experience.</li> <li>• Initiate and sustain play scenarios related to prior learning (e.g., rainforest theme, space theme).</li> <li>• Extend play scenarios over more than one day.</li> <li>• Engage in simple games containing rules demonstrating the ability to plan ahead and to develop strategies.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Observe and explicitly point out when students are referencing prior learning in their play scenarios.</li> <li>• Observe play scenarios for use of new vocabulary, knowledge, and/or for misconceptions/interests that can be addressed through instruction.</li> <li>• Provide props and materials to support play experiences.</li> <li>• Join in pretend play scenarios with students.</li> <li>• Understand the stages of play (solitary, parallel, associative, and cooperative) and recognize that students will engage in all stages at various times.</li> <li>• When appropriate, allow structures or scenario props to stay in location for several days without clean-up.</li> <li>• Engage students in game play with peers.</li> </ul>

AL.2 Organizing and Understanding Information

**BIG IDEA:** Strategies for filtering and organizing information are important to the learning process.

**ESSENTIAL QUESTIONS:** How do I decide what information/task to attend to? What strategies do I use to organize information?

A. ENGAGEMENT AND ATTENTION

Standard	Concepts and Competencies	Supportive Practices
<p><b>AL.2 K.A</b> Complete a task, despite interruptions or classroom disruptions.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Complete simple activities or tasks from beginning to end with independence.</li> <li>• Follow multi-step directions.</li> <li>• State when frustrated by a challenge.</li> <li>• Ignore distractions to complete a task.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Save students' work for later completion if transition to a new activity is necessary.</li> <li>• Encourage students to complete tasks that are challenging.</li> <li>• Allow ample time for students to complete tasks and activities in which they are engaged.</li> <li>• Give clear and simple directions or explanations.</li> <li>• Minimize interruptions and disruptions for students who are concentrating on a specific task or activity.</li> <li>• Offer help to students who are demonstrating difficulty completing a task or activity.</li> <li>• Differentiate based on student needs.</li> <li>• Model self-monitoring behaviors.</li> </ul>



**B. TASK ANALYSIS**

Standard	Concepts and Competencies	Supportive Practices
<p><b>AL.2 K.B</b>  <b>Complete multi-step tasks with independence.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Attend and follow through with three-step directions.</li> <li>• Explain the steps necessary to complete a task.</li> <li>• Share the desired outcome or end goal of a task or activity.</li> <li>• Break task into smaller components and complete one at a time.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Ask students to describe the steps required to complete a certain task.</li> <li>• Model goal-setting and breaking tasks into steps using explicit vocabulary (e.g., first, next, last).</li> <li>• Encourage students to explain the sequence, steps, and desired outcomes of self-initiated tasks and activities.</li> <li>• Use clear and concise directions (visual and/or verbal) for the completion of tasks.</li> <li>• Review steps of a task with students prior to asking them to complete the task and give them time to complete the task without reminders.</li> <li>• Differentiate based on student needs.</li> </ul>

**C. PERSISTENCE**

Standard	Concepts and Competencies	Supportive Practices
<p><b>AL.2 K.C</b>  <b>Accomplish challenging tasks by employing familiar and new strategies as needed.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Determine alternative ways to complete a task when the first attempt is unsuccessful (e.g., using materials in new ways, trial and error, breaking tasks into steps, asking for help).</li> <li>• Implement familiar and new strategies independently.</li> <li>• Stick to a task after experiencing frustration.</li> <li>• Show pride in completion of a challenging task.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Model and discuss a variety of strategies that can be used to follow through on a challenging task (e.g., using materials in new ways, trial and error, breaking tasks into steps, asking for help from a competent peer or adult).</li> <li>• Encourage students to develop alternative solutions to accomplish a task.</li> <li>• Ask students open-ended questions to help develop alternative solutions without giving them the answer.</li> <li>• Offer constructive feedback on students' efforts to work through challenging tasks.</li> <li>• Acknowledge students' completion of a challenging task.</li> </ul>

**D. PATTERNING**

Standard	Concepts and Competencies	Supportive Practices
<p><b>AL.2 K.D</b>  <b>Recognize and create simple patterns.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Identify patterns in the environment (e.g., decode or read common signs or logos).</li> <li>• Identify patterns in literacy (e.g., word families).</li> <li>• Recognize, describe, extend, and transfer a two- and three-element pattern (e.g., AB, ABC).</li> <li>• Reproduce an existing pattern and verbalize the pattern.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Engage students in finding patterns (e.g., in the environment, literacy, mathematical, scientific, arts).</li> <li>• Model creating patterns.</li> <li>• Provide opportunities to create and extend patterns.</li> <li>• Discuss patterns (e.g., "Why do you think that is a pattern?" "What is missing from this pattern?").</li> </ul>

**E. MEMORY**

Standard	Concepts and Competencies	Supportive Practices
<p><b>AL.2 K.E</b>  <b>Retain and recall information presented over a short period of time.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Recall information and/or experiences from the past.</li> <li>Engage in use of mnemonic devices (e.g., sing songs to remember the days of the week).</li> <li>Recall details from stories, events, and experiences.</li> <li>Share family experiences using stories, pictures, photos, and/or videos.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>Encourage students to talk about past experiences and events.</li> <li>Ask questions which challenge students to recall the details of experiences they are relating.</li> <li>Maintain documentation of past events through pictures, photos, videos, and/or quotes from students. Post and explore this documentation with the students over time.</li> <li>Make connections between previous learning and new information.</li> <li>Introduce mnemonic devices as a strategy to promote recall.</li> <li>Encourage families to make and share memory books highlighting student’s past experiences.</li> </ul>

**AL.3 Applying Knowledge**

**BIG IDEA:** Prior knowledge and experiences can be used to express and create new understandings.

**ESSENTIAL QUESTIONS:** How do I use what I already know to understand new things? How do I represent new understandings?




**A. CREATIVITY**

Standard	Concepts and Competencies	Supportive Practices
<p><b>AL.3 K.A</b>  <b>Use music, art, and/or stories to express ideas, thoughts, and feelings.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Use a variety of materials to explore and express ideas and emotions.</li> <li>Recognize imagination and creativity in others.</li> <li>Communicate own ideas.</li> </ul> <p><i>See also 9.1.M K.E; 9.1.D K.E; 9.1.V K.E; 1.4 K.M; 1.5 K.E</i></p>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>Provide opportunities to use materials in uncommon ways.</li> <li>Provide a variety of materials to use in creating.</li> <li>Use “I wonder” statements to encourage creativity with use of objects.</li> <li>Model how to elaborate, refine, evaluate, and communicate ideas, thoughts, and feelings.</li> </ul> <p><i>Reference 9.1.M K.E; 9.1.D K.E; 9.1.V K.E; 1.4 K.M; 1.5 K.E</i></p>

**B. INVENTION**

Standard	Concepts and Competencies	Supportive Practices
<p><b>AL.3 K.B</b>  <b>Create an object to serve a functional purpose.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Explore different ways to use everyday objects.</li> <li>Describe plan to create a functional object (e.g., develop a blueprint prior to building a block structure).</li> <li>Answer questions to explain the purpose of a creation.</li> <li>Show pride in a creation.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>Provide opportunities to engage in creative activities.</li> <li>Encourage children to pre-plan their creative efforts.</li> <li>Provide opportunities to present and describe creations.</li> <li>Ask questions about students’ creations (e.g., “How did you make that?” “What is that used for?”).</li> <li>Offer specific feedback on students’ creative efforts.</li> </ul>

**C. REPRESENTATION**

Standard	Concepts and Competencies	Supportive Practices
<b>AL.3 K.C</b> Use materials and objects to represent new concepts.	<b>The learner will:</b> <ul style="list-style-type: none"> <li>Combine different types of materials to represent a scenario or situation (e.g., represent a community using a variety of objects).</li> <li>Use real life objects to represent make-believe or fantasy objects (e.g., paper for money, magazine for a menu).</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li> Provide a variety of loose parts that can be combined to create an end-product.</li> <li> Provide opportunities for children to use materials in non-conforming ways.</li> <li> Use “I wonder” statements to encourage children’s creativity with use of objects.</li> </ul>

**AL.4 Learning through Experience**

**BIG IDEA:** Experiences provide the context in which learning is constructed.

**ESSENTIAL QUESTIONS:** In what ways does an experience in one setting influence my learning and experiences in another setting? How do I learn from my mistakes and/or from challenging situations?

**A. MAKING CONNECTIONS**

Standard	Concepts and Competencies	Supportive Practices
<b>AL.4 K.A</b> Relate knowledge learned from one experience to a similar experience in a new setting.	<b>The learner will:</b> <ul style="list-style-type: none"> <li>Relate personal (e.g., home, cultural, community) experiences during school activities.</li> <li>Connect information and/or experiences from the past.</li> <li>Understand differences in activities and events from home to school.</li> <li>Share new skills or tasks learned or practiced outside of school setting in the classroom.</li> <li>Practice skills learned in whole group demonstration or role-play during center exploration.</li> <li>Apply a skill to multiple tasks (e.g., use measuring cups in science activity, math exploration, and cooking).</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>Encourage families to continue school activities at home.</li> <li>Provide families regular updates about activities that are occurring in school (e.g., message boards, newsletters, classroom websites, journals).</li> <li>Talk with families about what students are working on at home and incorporate those goals in the school day.</li> <li>Ask students to describe out-of-school activities they participate in and show what they are learning.</li> <li>Provide “take home” activities that connect material learned that day to home environment (e.g., after practicing patterns in the classroom, identify patterns at home).</li> <li>Acknowledge, value, and use diversity that students bring to the classroom (e.g., culture, family structure, community).</li> <li>Provide materials, including text, in centers that encourage practice of skills demonstrated during instruction.</li> </ul>

**B. RESILIENCY**

Standard	Concepts and Competencies	Supportive Practices
<b>AL.4 K.B</b> Recognize that everyone makes mistakes and that using positive coping skills can result in learning from the experience.	<i>Reference 16.1 K.C</i>	<i>Reference 16.1 K.C</i>



C. PROBLEM-SOLVING

Standard	Concepts and Competencies	Supportive Practices
<p><b>AL.4 K.C</b>  <b>Use problem-solving strategies to achieve a positive outcome.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Try new ways to complete an unfamiliar task.</li> <li>• Attempt to complete a task in more than one way (e.g., using materials in new ways, trial and error, breaking tasks into steps) before asking for help or stopping due to frustration.</li> <li>• Ask questions to clarify problems.</li> <li>• Discuss the different ways used to accomplish a task or to solve a problem.</li> <li>• Recall and use a previously successful strategy.</li> <li>• Change plan if a better strategy presents itself.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Explicitly discuss and present/model a variety of strategies that can be used to solve problems (e.g., using materials in new ways, trial and error, breaking tasks into steps, asking for help from a competent peer or adult).</li> <li>• Create and provide opportunities for students to engage in problem-solving activities (e.g., role-play).</li> <li>• Encourage students to use a variety of materials to solve problems or complete a task (e.g., “I wonder if we could use this box to catch the worm?”).</li> <li>• Engage students in interactions that use known strategies in new situations.</li> <li>• Display a variety of materials and ask students to complete a task, allowing them to choose the materials that best suit the activity.</li> <li>• Ask open-ended questions that require thought and creative thinking (e.g., “What is another way you could solve this problem?”) to facilitate problem-solving.</li> <li>• Observe how students solve problems in the classroom and offer assistance when needed.</li> </ul>



# Approaches to Learning through Play

## Glossary

**Associative Play**—A form of play in which a group of children participate in similar and/or identical activities without formal organization, group direction, group interaction, or a definite goal; children may imitate others in a group but each child acts independently.

**Attention**—An ability to focus; take all stimuli in environment and focus on one thing.

**Competence**—The ability to perform a task, action, or function successfully.

**Cooperative Play**—Any organized recreation among a group of children in which activities are planned for the purpose of achieving some goal.

**Culture**—The way of life of a particular social, ethnic, or age group of people which includes beliefs, arts, customs, and behaviors.

**Curiosity**—A desire to learn or know about something; inquisitiveness.

**Engagement**—Ability to express oneself physically, cognitively, and emotionally during an activity; to feel a connection or a strong bond to work.

**Extrinsic Motivation**—Motivation that comes from factors outside an individual.

**Initiative**—A readiness and ability to be eager to lead an action.

**Intrinsic Motivation**—Motivation that comes from inside an individual rather than from any external or outside rewards.

**Invention**—An act of devising, creating, or producing using imagination (art, music).

**Memory**—The mental capacity or faculty of retaining and retrieving facts, events, impressions, etc., or of recalling or recognizing previous experiences.

**Mnemonic Device**—a mind memory and/or learning aid. Commonly, mnemonics are verbal—such as a very short poem or a special word.

**Parallel Play**—A form of social play where children play with toys like those the children around them are using, but the child is absorbed in his/her own activity; usually play beside rather than with one another.

**Pattern**—The regular and repeated way in which something happens or is done.

**Persistence**—The steady continuance of an action in spite of obstacles or difficulties.

**Play**—A self-selected activity that may or may not have a specific purpose.

**Pretend Play**—Using an object to represent something else while giving it action and motion; actively experimenting with the social and emotional roles of life; can build skills in many developmental areas.

**Provocation Strategies**—strategies which promote thoughtful practices that enhance the teaching and learning of young children within and across diverse communities.

**Resilience**—The ability to cope with and bounce back from all types of challenges. A person thrives, matures, and increases competence by drawing on biological, psychological, and environmental resources.

**Solitary Play**—A form of play among a group of children within the same room or area in which each child engages in an independent activity using toys that are different from the toys of others; shows no interest in joining in or interfering with the play of others

**Task Analysis**—A process of breaking down complex behaviors into smaller, discrete, specific sub-behaviors to be performed in a certain order for maximum success.

**Temperament**—The combination of mental, physical, and emotional traits of a person; natural predisposition.

# Social and Emotional Development

## Student Interpersonal Skills

### 16.1 Self-Awareness and Self-Management

### 16.2 Establishing and Maintaining Relationships

### 16.3 Decision-Making and Responsible Behavior

#### Positive Behavior Techniques

All children benefit from safe, nurturing environments, clear and consistent routines, and effective caregivers who understand children's behavior as attempts to communicate needs. When children are taught skills to assist them in positive communication, coping, and interpersonal relationships, challenging behaviors can be prevented. For a smaller group of children more focused efforts can be applied to address specific behavioral needs. An even smaller population of children will need more intensive interventions in collaboration with trained professionals. This tiered-approach to addressing behavior contributes to a safe



and supportive environment in which all children are respected and valued.

All children need early childhood experiences that nurture emotional security, positive self-concept, and respect for

others. Children's social and emotional development are strengthened when they have experiences that promote a sense of identity and belonging within an accepting and responsive environment. Adults support children's self-identity and social competence by modeling respect for the children, using positive guidance techniques that support the development of self-control and interpersonal problem-solving, and by encouraging positive approaches to learning and interacting with others.

## 16.1 Self-Awareness and Self-Management

**BIG IDEA:** Understanding of self and ability to regulate behaviors and emotions are inextricably linked to learning and success.

**ESSENTIAL QUESTIONS:** How do I develop positive feelings about myself? How do I express and manage my emotions?

### A. MANAGES EMOTIONS AND BEHAVIORS

Standard	Concepts and Competencies	Supportive Practices
<p><b>16.1 K.A</b> Distinguish between emotions and identify socially accepted ways to express them.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Express feelings that are appropriate to the situation.</li> <li>Express feelings verbally, through play, and artistic representation.</li> <li>Name a range of feelings (e.g., happy, sad, angry, surprised).</li> <li>Control negative responses (e.g., express response in appropriate way: talk with a peer or tell a teacher).</li> <li>Know when to withhold expressions of feelings in certain situations.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>Use Positive Behavior Support to encourage students' social and emotional success.</li> <li>Establish and state clear behavior expectations.</li> <li>Offer materials to creatively express emotions.</li> <li>Read books about feelings and talk about the outcomes.</li> <li>Engage students in discussions about how they feel when they experience certain situations (e.g., positive and negative).</li> <li>Model appropriate emotional responses (e.g., "I feel ..." "That made me feel ...").</li> <li>Explain appropriate "cool-down" strategies.</li> <li>Respond to students verbal and nonverbal cues.</li> </ul>

### B. INFLUENCES OF PERSONAL TRAITS ON LIFE ACHIEVEMENTS

Standard	Concepts and Competencies	Supportive Practices
<p><b>16.1 K.B</b> Recognize that everyone has personal traits which guide behavior and choices.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Demonstrate awareness of self and one's own preferences.</li> <li>Know and state independent thoughts and feelings.</li> <li>Demonstrate pride in own accomplishments.</li> <li>Demonstrate confidence in own abilities (e.g., "I can kick that ball really far.").</li> <li>Choose materials and activities based on preferences and personal interests.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>Encourage an environment where cultural and personal diversity are valued.</li> <li>Provide opportunities to make decisions and choices.</li> <li>Support students in sharing opinions about classroom activities, choices, and other experiences.</li> <li>Graph students' likes and dislikes.</li> <li>Share enthusiasm and describe students' abilities and preferences (e.g., "I see you enjoy building with the blocks.").</li> <li>Display students' work at their eye level.</li> </ul>

### C. RESILIENCY

Standard	Concepts and Competencies	Supportive Practices
<p><b>16.1 K.C</b> Recognize that everyone makes mistakes and that using positive coping skills can result in learning from the experience.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Use positive coping strategies (e.g., stay calm when something does not go as intended, stop and take a deep breath, short break).</li> <li>Recognize when a mistake happens and strive to learn from the experience.</li> <li>Move forward with a second attempt at something after the first attempt was unsuccessful.</li> </ul> <p><i>* See also AL.4 K.B</i></p>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>Foster a positive environment where mistakes can happen without embarrassment or ridicule.</li> <li>Model positive coping strategies.</li> <li>Understand that students struggling to identify basic feelings may not demonstrate resiliency until those basic emotion related skills develop.</li> <li>Offer a space where students can regain composure.</li> <li>Talk through a challenging experience with students.</li> <li>Help students understand that mistakes will happen.</li> <li>Encourage students to talk about mistakes and understand it as a learning opportunity.</li> <li>Acknowledge students' demonstration of efforts to persevere during difficult or frustrating times.</li> </ul>

D. GOAL-SETTING

Standard	Concepts and Competencies	Supportive Practices
<p><b>16.1 K.D</b>  <b>Establish goals independently and recognize their influence on choices.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Set, discuss, and reflect on goals (e.g., behavioral, learning, play).</li> <li>• Recognize and adopt strategies to meet short- and long-term goals.</li> <li>• Analyze and evaluate alternative strategies in meeting goals.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Explicitly use words such as “goal,” “plan,” “achieve,” “met,” “change.”</li> <li>• Use “Plan-Do-Review” strategy to encourage planning and discussion about goals and follow-through.</li> <li>• Establish and maintain a safe climate in which reasonable risks are accepted and encouraged.</li> <li>• Discuss students’ choices in terms of “goals” to be met and alternative strategies in meeting them.</li> </ul>

16.2 Establishing and Maintaining Relationships

**BIG IDEAS:** Early adult-child relationships, based on attachment and trust, set the stage for life-long expectations that impact children’s ability to learn, respect adult authority, and express themselves. Positive peer interactions create collaborative learning opportunities. Relationships with others provide a means of support.

**ESSENTIAL QUESTION:** How do my relationships with adults and peers help me feel secure, supported, and successful?

A. RELATIONSHIPS – TRUST AND ATTACHMENT

Standard	Concepts and Competencies	Supportive Practices
<p><b>16.2 K.A</b>  <b>Interact with peers and adults in a socially acceptable manner.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Engage in reciprocal conversation with peers and adults.</li> <li>• Respond to adult’s questions and directions.</li> <li>• Demonstrate appropriate affection for familiar adults and peers.</li> <li>• Seek out companionship from another student.</li> <li>• Use words denoting friendship.</li> <li>• Ask a peer to play.</li> <li>• Play cooperatively with a few peers for a sustained period of time.</li> <li>• Respond with empathy to others who are upset.</li> <li>• Share and take turns.</li> <li>• Respect feelings and belongings of others.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Use Positive Behavior Support to support students’ social and emotional success.</li> <li>• Model appropriate methods and strategies of interaction based on school and community culture.</li> <li>• Talk about ideas related to school work, play, and home life.</li> <li>• Arrange the environment to encourage collaboration.</li> <li>• Use literature as a teaching strategy for appropriate and inappropriate interaction.</li> <li>• Provide duplicate materials so students can play together.</li> <li>• Set timers to encourage material or equipment sharing.</li> <li>• Incorporate daily blocks of time for uninterrupted student-directed play.</li> <li>• Provide daily opportunities for individual conversations between students and adults.</li> <li>• Describe others’ feelings during difficult situations.</li> </ul>



**B. DIVERSITY**

Standard	Concepts and Competencies	Supportive Practices
<p><b>16.2 K.B</b>  <b>Identify similarities and differences between self and others.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Understand each person has a set of unique characteristics.</li> <li>• Create drawings of people (including self-portraits) depicting body parts, clothing, and other physical characteristics.</li> <li>• Label personal characteristics.</li> <li>• Discuss similarities and differences between self and others.</li> <li>• Understand family structures differ from one family to another.</li> <li>• Understand thoughts and feelings of others may differ from own.</li> <li>• Demonstrate respect for children’s difference (e.g., including differences in thoughts and feelings).</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Model and promote strategies that embrace individual and family diversity.</li> <li>• Provide opportunities to discuss and compare personal traits among members of the class.</li> <li>• Encourage family members to volunteer or share information, materials, and activities that reflect home cultures.</li> <li>• Include multicultural materials, especially those relevant to the cultures within the class.</li> <li>• Display pictures/posters depicting students/families of different races, cultures, ages, and abilities.</li> <li>• Explicitly discuss points of difference in thoughts and feelings.</li> </ul>


**C. COMMUNICATION**

Standard	Concepts and Competencies	Supportive Practices
<p><b>16.2 K.C</b>  <b>Engage in reciprocal communication with adults and peers.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Communicate using details related to topic being discussed (including topics of personal interest, and special events).</li> <li>• Pose questions related to topic being discussed.</li> <li>• Respond to questions posed by adults and peers.</li> <li>• Recognize conversational cues (e.g., wait time, turn-taking).</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Explicitly restate comments made by students and encourage those responding to add further detail, or contribute further to the topic being discussed.</li> <li>• Explicitly teach students what a question is.</li> <li>• Help students create and pose questions to initiate or continue a conversation.</li> <li>• Model acceptable conversational cues (e.g., wait time, turn-taking).</li> <li>• Talk about events that are currently relevant to students.</li> </ul>

**D. MANAGING INTERPERSONAL CONFLICTS**

Standard	Concepts and Competencies	Supportive Practices
<p><b>16.2 K.D</b>  <b>Recognize that conflict occurs and distinguish between appropriate and inappropriate ways to resolve conflict.</b>  <i>*See also 5.2 K.B</i></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Use appropriate words and actions to express own needs.</li> <li>• Identify a problem and discuss possible solutions.</li> <li>• Practice independently solving simple conflicts with peers.</li> <li>• Practice negotiating conflicts using words before seeking help or reacting physically.</li> <li>• Accept and attempt teacher’s or others’ ideas on strategies to solve a conflict.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Model, teach, and discuss possible strategies for resolving conflict (e.g., use of puppets, role-playing, stories demonstrating conflict resolution).</li> <li>• Be open and available to help students resolve conflicts (e.g., “I” messages).</li> <li>• Design an area in the room that encourages students to solve conflicts.</li> </ul>

**E. SUPPORT – ASKING FOR HELP**

Standard	Concepts and Competencies	Supportive Practices
<p><b>16.2 K.E</b>  <b>Ask for and accept offers of help when needed or appropriate.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Attempt tasks independently before asking for help.</li> <li>• Recognize when help is needed.</li> <li>• Recognize appropriate sources of help (e.g., familiar adult, community helpers, peers).</li> <li>• Ask for adult help to solve a problem or to complete a task.</li> <li>• Respond appropriately to offers of help (e.g., “That’s okay, I can do it.” or “Yes, thank you.”).</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>•  Encourage students to turn to peers for assistance.</li> <li>• Create an environment of trust by providing consistency and predictability (e.g., in daily routines, activities, staff).</li> <li>• Offer assistance in helping a student complete a task.</li> <li>• Discuss where students can go for help when needed (e.g., familiar adult, community helpers, peers).</li> </ul>

**16.3 Decision-Making and Responsible Behavior**

**BIG IDEA:** Actions and behaviors either positively or negatively affect how I learn, and how I get along with others.  
**ESSENTIAL QUESTION:** How do I use healthy strategies to manage my behavior?

**A. DECISION-MAKING SKILLS**

Standard	Concepts and Competencies	Supportive Practices
<p><b>16.3 K.A</b>  <b>Interpret the consequences of choices.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Recognize unsafe situations.</li> <li>• Tell an adult of unsafe situation.</li> <li>• Warn a peer about a safety risk (e.g., chair not pushed in).</li> <li>• Encourage peers having a dispute to use positive decision-making strategies (e.g., use their words and work it out).</li> <li>• Discuss the reasons for having rules.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Provide opportunities for children to contribute to rule making.</li> <li>• Offer opportunities to discuss reasons for having rules.</li> <li>• Display rules created by students in the classroom.</li> <li>• Model and teach a variety of decision-making strategies (e.g., vocabulary associated with decision-making strategies and consequences).</li> <li>• Provide reminders of rules and consequences when students test the rules.</li> <li>• Use natural consequences (e.g., falling due to running in the classroom) as opportunities to discuss consequences of behaviors.</li> </ul>

**B. UNDERSTANDING SOCIAL NORMS (Social Identity)**

Standard	Concepts and Competencies	Supportive Practices
<p><b>16.3 K.B</b>  <b>Recognize there are socially acceptable ways to behave in different places.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Transition between places and people with minimal distress.</li> <li>• Use inside voices while indoors and outside voices when outdoors.</li> <li>• Cooperate in both large and small group activities facilitated by adult.</li> <li>• Apply classroom rules to new situations.</li> <li>• Adjust to changes in routines and activities.</li> <li>• Follow rules and routines in classroom and other settings with reminders.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Discuss expectations of differing environments (e.g., library, restroom, cafeteria, classroom, outside).</li> <li>• Discuss expectations of a new or unfamiliar environment or situation (e.g., field trip, classroom visitor).</li> <li>• Provide literacy experiences related to socially acceptable ways to behave in different places.</li> <li>• Model appropriate behavior.</li> <li>• Provide consistent rules and expectations in classroom environment.</li> <li>• Encourage families to provide consistent rules and expectations in home environment.</li> </ul>

C. RESPONSIBLE ACTIVE ENGAGEMENT – EMPATHY

Standard	Concepts and Competencies	Supportive Practices
<p><b>16.3 K.C</b>  <b>Actively engage in assisting others when appropriate.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Respond with empathy to others who are upset.</li> <li>• Recognize when someone needs help and offer assistance.</li> <li>• Respect another’s attempts to complete tasks independently.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Encourage peers to help one another rather than offering adult assistance.</li> <li>• Identify and describe other people’s feelings, including use of nonverbal cues.</li> <li>• Read and discuss books about empathy.</li> <li>• Provide specific feedback and acknowledgement on students’ efforts to help others.</li> </ul>

## Social and Emotional Development Glossary

**Active Engagement**—The process of acting, participating, assisting, or actively connecting with others.

**Communication**—Processes by which information is exchanged between individuals.

**Communication Skills**—Verbal and nonverbal means of effectively conveying meaningful information.

**Conflict**—Inherent incompatibility between two or more people or two or more choices.

**Conflict Resolution**—Process by which issues arising from a disagreement or clash between ideas, principles, or people are settled.

**Consequence**—A positive or negative outcome resulting from a choice or decision.

**Coping Skills**—Behavioral tools that enable one to express negative feelings in ways that are not self-destructive or threatening to others and to overcome personal adversity or stress.

**Culture**—Shared attitudes, values, goals, behaviors, interactions and practices that are learned through social interactions which identify or distinguish groups.

**Decision-Making**—Process of coming to a conclusion or determination.

**Diversity**—Variety of characteristics that make individuals unique.

**Emotions**—The outward and inward expression of a person’s state of mind based upon personality, mood, and temperament that influence relationships and must be appropriately managed.

**Resilience**—An ability to recover from or adjust easily to misfortune or change.

**Pyramid Model**—Is used to support social and emotional competence in infants and young children.



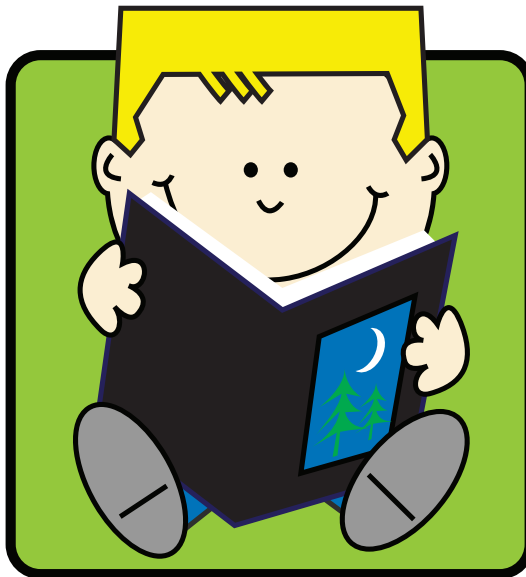


# Language and Literacy Development

## English Language Arts

- 1.1 Foundational Skills
- 1.2 Reading Informational Text
- 1.3 Reading Literature
- 1.4 Writing
- 1.5 Speaking and Listening

**C**ommunication occurs in different ways. It is a way to share one's ideas and understand the ideas of others. Reading involves the use of pictures, symbols, and text to gain information and derive meaning, and writing is used for a variety of purposes. Children should be exposed to a variety of books to acquire new information and for personal fulfillment. Children apply a wide range of strategies to comprehend, interpret, evaluate, and appreciate text. Children draw meaning from their prior knowledge and experience, their interactions with others, their knowledge of word meaning, and their word identification strategies. Children vary their use of the spoken and written language to communicate effectively with others. One of the first building blocks of reading is phonemic awareness; this is one of the best predictors of early reading achievement. Children should be developing this awareness in the early years by listening to rhyming



stories and songs and engaging in word play activities.

### Diversity and Culture

**T**oday's early childhood programs include increasingly diverse groups of children, families, and teachers who represent many cultures, values, and lifestyles. Providers have a unique opportunity to create

welcoming environments that emphasize respect for diversity and support families' cultural and linguistic differences. Teachers must help assure the preservation of home language while supporting the acquisition of Standard English. Programs should create experiences and opportunities that honor all children's cultures and values by developing creative strategies for including and expanding home-to-school connections and by providing students with varied ways to demonstrate their learning. Such experiences and opportunities assure all students' success in school.

## 1.1 Foundational Skills

**BIG IDEA:** Emerging reading involves the use of pictures, symbols, and text to gain information and derive meaning.

**ESSENTIAL QUESTION:** How do I acquire and practice pre-reading skills?

### A. BOOK HANDLING

Standard	Concepts and Competencies	Supportive Practices
<b>1.1 K.A</b> <b>Use book-handling skills.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>• Orient a book properly.</li> <li>• Turn pages from left to right, one page at a time.</li> <li>• Track print from top to bottom and left to right.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>• Model appropriate book handling practices.</li> <li>• Read to students daily.</li> <li>• Provide daily opportunities to look at and read books and magazines.</li> <li>• Provide hands-on experience (e.g., small groups, independent, learning stations) with texts.</li> </ul>

### B. PRINT CONCEPTS

Standard	Concepts and Competencies	Supportive Practices
<b>1.1 K.B</b> <b>Demonstrate understanding of the organization and basic features of print.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>• Follow words left to right, top to bottom, and page by page.</li> <li>• Recognize that spoken words are represented in written language by specific sequences of letters.</li> <li>• Understand that words are separated by spaces in print.</li> <li>• Recognize and name all upper and lower case letters of the alphabet.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>• Model print concepts while using different forms of text and genre (e.g., big books, names, poems).</li> <li>• Read to students daily.</li> <li>• Provide opportunities to sort words and letters.</li> <li>• Provide hands-on experience (e.g., small groups, independent, learning stations) with text.</li> <li>• Use print and digital-text materials for functional purposes.</li> </ul>

### C. PHONOLOGICAL AWARENESS

Standard	Concepts and Competencies	Supportive Practices
<b>1.1 K.C</b> <b>Demonstrate understanding of spoken words, syllables, and sounds (phonemes).</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>• Recognize and produce rhyming words.</li> <li>• Count, pronounce, blend, and segment syllables in spoken words.</li> <li>• Blend and segment onsets and rimes of single-syllable spoken words.</li> <li>• Isolate and pronounce initial, medial vowel, and final sound (phonemes) in the three phoneme (CVC).</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>• Provide oral practice with counting words, syllables, and phonemes.</li> <li>• Provide oral practice with identifying beginning and ending sounds.</li> <li>• Use pictures to identify rhyming words.</li> <li>• Provide opportunities to identify and produce rhyming words.</li> </ul>

### D. PHONICS AND WORD RECOGNITION

Standard	Concepts and Competencies	Supportive Practices
<b>1.1 K.D</b> <b>Know and apply grade-level phonics and word analysis skills in decoding words.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>• Demonstrate basic knowledge of one-to-one letter-sound correspondence.</li> <li>• Associate the long and short sounds with common spellings for the five major vowels.</li> <li>• Read grade-level high-frequency sight words with automaticity.</li> <li>• Distinguish between similarly spelled words by identifying the sounds of the letters that differ.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>• Ask students to verbally identify the letters out of sequence.</li> <li>• Ask students to identify the sound for each letter out of sequence.</li> <li>• Model and practice segmenting and blending.</li> <li>• Provide learning centers that focus on letters, sounds, words, and creating simple sentences.</li> <li>• Use print and digital-text materials for functional purposes.</li> </ul>


**E. FLUENCY**

Standard	Concepts and Competencies	Supportive Practices
<b>1.1 K.E</b> <b>Read emergent-reader text with purpose and understanding.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>Identify and use high-frequency words to read emergent-reader text.</li> <li>Decode and encode unknown words in a text.</li> <li>Choose text based on identified need and purpose.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>Include self-selected reading opportunities.</li> <li>Provide a variety of emergent-reader text.</li> <li>Provide daily opportunities to practice reading emergent-reader text and high-frequency words.</li> <li>Post high-frequency words in the classroom (e.g., word wall).</li> <li>Incorporate high-frequency words into meaningful context.</li> </ul>

**1.2 Reading Informational Text**

**BIG IDEAS:** Effective readers use appropriate strategies to construct meaning. Critical thinkers actively and skillfully interpret, analyze, evaluate, and synthesize information. An expanded vocabulary enhances one’s ability to express ideas and information.  
**ESSENTIAL QUESTIONS:** What is the text really about? How does interaction with the text promote thinking and response? Why learn new words? What strategies and resources does the learner use to figure out unknown vocabulary?

**A. KEY IDEAS AND DETAILS – MAIN IDEA**

Standard	Concepts and Competencies	Supportive Practices
<b>1.2 K.A</b> <b>With prompting and support, identify the main idea and retell key details of text.</b>	<b>The learner, with prompting and support, will:</b> <ul style="list-style-type: none"> <li>Identify the main idea.</li> <li>Know the details of a text can be used to support a topic or main idea.</li> <li>Provide relevant details from a text which support the main idea.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li> Provide and read a variety of informational text.</li> <li>Model identifying main idea and supporting details.</li> <li>Provide multiple opportunities to identify main idea and supporting details.</li> <li>Model retelling of key details.</li> </ul>

**B. KEY IDEAS AND DETAILS – TEXT ANALYSIS**

Standard	Concepts and Competencies	Supportive Practices
<b>1.2 K.B</b> <b>With prompting and support, answer questions about key details in a text.</b>	<b>The learner, with prompting and support, will:</b> <ul style="list-style-type: none"> <li>Use specific details from the text to answer questions.</li> <li>Answer “who” or “what” the text is about.</li> <li>Answer “how” and/or “why” questions using specifics from the text.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>Provide purposeful and playful exposure to a variety of informational text (e.g., nonfiction text, recipes, web pages, menus, phone books, maps, etc.).</li> <li>Provide peer-to-peer opportunities to discuss informational text.</li> <li>Ask students to identify facts from text.</li> <li>Ask “who,” “what,” “how,” and “why” questions.</li> <li>Provide verbal prompts and picture cues to assist in recall.</li> </ul>


**C. KEY IDEAS AND DETAILS**

Standard	Concepts and Competencies	Supportive Practices
<b>1.2 K.C</b> <b>With prompting and support, make a connection between two individuals, events, ideas, or pieces of information in a text.</b>	<b>The learner, with prompting and support, will:</b> <ul style="list-style-type: none"> <li>Find similarities and differences between two individuals, events, ideas, or pieces of information in a text.</li> <li>Answer cause-and-effect questions about events, ideas, and information in a text.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>Model making connections.</li> <li>Provide learning centers and a classroom library where students can interact independently with text.</li> <li>Ask prompting questions.</li> </ul>


**E. CRAFT AND STRUCTURE – TEXT STRUCTURE**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.2 K.E</b>  <b>Identify parts of a book (title, author) and parts of a text (beginning, details, and end).</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Relate that text is organized in a predictable format.</li> <li>• Identify title and author.</li> <li>• Identify the beginning, details, and end of a text.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Identify and discuss parts of a book.</li> <li>• Ask students to identify parts of a book.</li> <li>• Model identifying parts of an informational text.</li> </ul>

**F. CRAFT AND STRUCTURE – VOCABULARY**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.2 K.F</b>  <b>With prompting and support, ask and answer questions about unknown words in a text.</b></p>	<p><b>The learner, with prompting and support, will:</b></p> <ul style="list-style-type: none"> <li>• Recognize that a word is unknown.</li> <li>• Ask “What does this word mean?”</li> <li>• Connect prior knowledge to unknown words.</li> <li>• Participate in discussions about unknown words.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>•  Introduce vocabulary in the context of topics when using a variety of informational text (e.g., nonfiction text, recipes, web pages, menus, phone books, maps, etc.).</li> <li>• Model own connections to new vocabulary.</li> <li>• Model how use of picture cues can help determine the meaning of new words.</li> <li>• Respond with interest and support when students demonstrate interest in an unknown word.</li> </ul>

**G. INTEGRATION OF KNOWLEDGE AND IDEAS – DIVERSE MEDIA**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.2 K.G</b>  <b>Answer questions to describe the relationship between illustrations and the text in which they appear.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Retell a simple sequence in a text using picture support.</li> <li>• Describe pictures in a text in detail to answer specific questions in a text.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>•  Provide various experiences to engage with picture/text connections. (e.g., cooking, dramatic play, construction, gardening, posting picture schedule)</li> <li>• Ask questions to prompt students to relate illustrations to the text in which they appear.</li> <li>• Model and provide practice connecting illustrations with a text.</li> </ul>



**H. INTEGRATION OF KNOWLEDGE AND IDEAS – EVALUATING ARGUMENTS**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.2 K.H</b>  <b>With prompting and support, identify the reasons an author gives to support points in a text.</b></p>	<p><b>The learner, with prompting and support, will:</b></p> <ul style="list-style-type: none"> <li>• Identify the evidence an author uses.</li> <li>• Answer prompts using specific text details.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Model and provide practice identifying text supports (e.g., illustrations).</li> <li>• Prompt students to refer back to text.</li> </ul>


**I. INTEGRATION OF KNOWLEDGE AND IDEAS – ANALYSIS ACROSS TEXTS**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.2 K.I</b>                      With prompting and support, identify basic similarities and differences between two texts (read or read aloud) on the same topic.</p>	<p><b>The learner, with prompting and support, will:</b></p> <ul style="list-style-type: none"> <li>Recognize that texts have similar components that can be compared and contrasted (e.g., main ideas, details).</li> <li>Participate in strategies that provide opportunities to compare and contrast texts and/or components of texts (e.g., Venn diagrams, T-charts).</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>Provide opportunities to engage with a variety of text on the same topic.</li> <li>Ask questions regarding similarities and differences after reading two or more texts on the same topic.</li> <li>Use structural supports (e.g., graphic organizers) to compare and contrast texts.</li> <li>Model and provide practice with a variety of texts on similar topics.</li> </ul>

**J. VOCABULARY ACQUISITION AND USE**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.2 K.J</b>                      Use words and phrases acquired through conversations, reading, and being read to, and respond to texts.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Talk about pictures and text using new vocabulary words or phrases.</li> <li>Use new vocabulary in the context of dramatic play, daily routines, and classroom conversations.</li> <li>Use new vocabulary when asking questions or describing situations or objects.</li> <li>Use new vocabulary when answering questions or describing situations or objects.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li> Use Tier III vocabulary daily and throughout different contexts.</li> <li> Provide concrete materials in learning centers to assist students in connecting prior knowledge to new words or phrases.</li> <li>Read appropriate informational text.</li> <li>Provide opportunities for oral language practice.</li> <li>Respond with interest and support when children seek clarification of a word or phrase.</li> </ul>

**K. VOCABULARY ACQUISITION AND USE**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.2 K.K</b>                      With prompting and support, determine or clarify the meaning of unknown or multiple-meaning words and phrases based upon grade-level reading and content.</p>	<p><b>The learner, with prompting and support, will:</b></p> <ul style="list-style-type: none"> <li>Recognize words or phrases that are unfamiliar to them.</li> <li>Connect prior knowledge to unfamiliar words.</li> <li>Make predictions about word meanings.</li> <li>Use strategies to look up unfamiliar words.</li> <li>Talk about connections between familiar and unfamiliar words or phrases that mean similar things (e.g., grass, lawn).</li> <li>Participate in discussions about unfamiliar words.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li> Model researching unfamiliar words in a text.</li> <li>Introduce vocabulary in the context of topics when using a variety of informational text (e.g., nonfiction text, recipes, web pages, menus, phone books, maps, etc.).</li> <li>Model how use of picture cues can help determine the meaning of new words.</li> </ul>

**L. RANGE OF READING**

Standard	Concepts and Competencies	Supportive Practices
<b>1.2 K.L</b> <b>Actively engage in group reading activities with purpose and understanding.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>• Ask and answer questions about text being read aloud.</li> <li>• Share relevant prior knowledge about text being read aloud.</li> <li>• Respond to and build on comments from other children.</li> <li>• Use ideas gained in group reading activities in other daily routines, learning centers, and activities.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>• Provide opportunities for group reading activities.</li> <li>• Teach and model appropriate active listening skills.</li> <li>• Use strategies prior to reading to involve children in the text being read (e.g., predict the topic of the text using front cover and/or illustrations, picture walk).</li> <li>• Attend to students’ questions and comments during reading.</li> <li>• Provide learning center materials and activities that extend the ideas explore in group reading.</li> </ul>

**1.3 Reading Literature**

**BIG IDEAS:** Effective readers use appropriate strategies to construct meaning. Critical thinkers actively and skillfully interpret, analyze, evaluate, and synthesize information. An expanded vocabulary enhances one’s ability to express ideas and information.

**ESSENTIAL QUESTIONS:** What is the text really about? How does interaction with the text promote thinking and response? Why learn new words? What strategies and resources does the learner use to figure out unknown vocabulary?

**A. KEY IDEAS AND DETAILS – THEME**

Standard	Concepts and Competencies	Supportive Practices
<b>1.3 K.A</b> <b>With prompting and support, retell familiar stories including key details.</b>	<b>The learner, with prompting and support, will:</b> <ul style="list-style-type: none"> <li>• Retell story in sequential order.</li> <li>• Recall key details of a story.</li> <li>• Use a variety of strategies to retell a story (e.g., picture cards, dramatic play, illustration).</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>• Select appropriate literary text.</li> <li>• Model retelling with key details.</li> <li>• Provide multiple opportunities to practice retelling.</li> <li>• Provide students digital media opportunities to reinforce sequencing skills.</li> <li>• Ask questions that support the use of sequencing (e.g., “What was the first thing that happened?” “What happened after?”).</li> </ul>

**B. KEY IDEAS AND DETAILS – TEXT ANALYSIS**

Standard	Concepts and Competencies	Supportive Practices
<b>1.3 K.B</b> <b>Answer questions about key details in a text.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>• Respond to questions and discuss key details from literary text.</li> <li>• Use specific details from story to answer questions.</li> <li>• Answer “who” or “what” the story is about.</li> <li>• Answer “how” and/or “why” questions using specifics from the story.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>• Select appropriate literary text.</li> <li>• Ask probing questions about literary text.</li> <li>• Provide verbal prompts and picture cues to assist in recall.</li> </ul>

**C. KEY IDEAS AND DETAILS – LITERARY ELEMENTS**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.3 K.C</b>                      With prompting and support, identify characters, settings, and major events in a story.</p>	<p><b>The learner, with prompting and support, will:</b></p> <ul style="list-style-type: none"> <li>Identify narrative elements (e.g., characters, setting, major events).</li> <li>Demonstrate understanding that the “setting” is where the story takes place.</li> <li>Demonstrate understanding that “characters” are people or animals who have a role in the story.</li> <li>Respond to questions and prompts about characters, settings, and events.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>Select appropriate literary text.</li> <li>Provide opportunities to identify narrative elements of a text.</li> </ul>

**D. CRAFT AND STRUCTURE – POINT OF VIEW**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.3 K.D</b>                      Name the author and illustrator of a story and define the role of each in telling the story.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Understand that an author writes the story.</li> <li>Understand that the illustrator draws the pictures.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>Explicitly use the terms “author” and “illustrator” along with their definitions.</li> <li>Credit students as “author” and “illustrator” of their own works (drawings and dictations).</li> <li>Provide opportunities to discuss the roles of the author and illustrator in telling the story.</li> </ul>

**E. CRAFT AND STRUCTURE – TEXT STRUCTURE**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.3 K.E</b>                      Recognize common types of text.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Engage with a variety of text (e.g., fables, folklore, fairy tales, nursery rhymes, tall tales, dramas, poetry, picture books, storybooks, nonfiction text, recipes, web pages, menus, phone books, maps).</li> <li>Understand that different types of text are used for different purposes.</li> <li>Understand that a storybook has characters, setting, and actions associated with words and, most often, illustrations.</li> <li>Understand that a poem consists of words arranged in patterns of sound (e.g., rhyming words, alliteration).</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>Provide purposeful and playful exposure to a variety of texts. (e.g., fables, folklore, fairy tales, nursery rhymes, tall tales, dramas, poetry, picture books, storybooks, nonfiction text, recipes, web pages, menus, phone books, maps)</li> <li>Explicitly use the labels for different genres (e.g., “storybook,” “poem,” “fiction,” “nonfiction”).</li> <li>Model how to determine a fiction or nonfiction text by comparing books on the same topic.</li> </ul>

**F. CRAFT AND STRUCTURE – VOCABULARY**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.3 K.F</b>                      Ask and answer questions about unknown words in a text.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Ask “What does this word mean?”</li> <li>Connect prior knowledge to unknown words.</li> <li>Participate in discussions about unknown words.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>Introduce vocabulary in the context of topics when using storybooks, finger plays, songs, or poems.</li> <li>Model own connections to new vocabulary.</li> <li>Provide multiple opportunities for practice with unknown words.</li> <li>Model how use of picture cues can help one determine the meaning of new words.</li> </ul>

**G. INTEGRATION OF KNOWLEDGE AND IDEAS – SOURCES OF INFORMATION**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.3 K.G</b>  <b>Make connections between the illustrations and the text in a story (read or read aloud).</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Retell a simple sequence in a text using picture support.</li> <li>• Describe pictures in a text in detail to answer specific questions in a text.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Provide a variety of literary texts.</li> <li>• Provide opportunities to interact with literary text.</li> <li>• Model how to make text to illustration connections.</li> </ul>

**H. INTEGRATION OF KNOWLEDGE AND IDEAS – TEXT ANALYSIS**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.3 K.H</b>  <b>Compare and contrast the adventures and experiences of characters in familiar stories.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Understand that characters within the same story or characters from different stories can be compared and contrasted.</li> <li>• Participate in strategies that provide opportunities to compare and contrast the experiences of characters (e.g., Venn diagrams, T-charts, dramatic role-play).</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Provide purposeful and playful exposure to a variety of fictional texts (e.g., fables, folklore, fairy tales, nursery rhymes, tall tales, dramas, poetry, picture books, storybooks).</li> <li>• Model finding similarities and differences between familiar stories.</li> <li>• Introduce strategies (e.g., Venn diagrams, T-charts) using concrete materials (e.g., hula hoops, strings) to compare and contrast texts and components of texts in teacher-led, small group, and individual activities.</li> </ul>

**I. VOCABULARY ACQUISITION AND USE – STRATEGIES**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.3 K.C</b>  <b>With prompting and support, identify characters, settings, and major events in a story.</b></p>	<p><b>The learner, with prompting and support, will:</b></p> <ul style="list-style-type: none"> <li>• Identify narrative elements (e.g., characters, setting, major events).</li> <li>• Demonstrate understanding that the “setting” is where the story takes place.</li> <li>• Demonstrate understanding that “characters” are people or animals who have a role in the story.</li> <li>• Respond to questions and prompts about characters, settings, and events.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Select appropriate literary text.</li> <li>• Provide opportunities to identify narrative elements of a text.</li> </ul>





**J. VOCABULARY ACQUISITION AND USE**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.3 K.J</b> Use words and phrases acquired through conversations, reading, and being read to, and respond to texts.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Recognize words or phrases that are unfamiliar to them.</li> <li>• Connect prior knowledge to unfamiliar words.</li> <li>• Make predictions about word meanings.</li> <li>• Use strategies to look up unfamiliar words.</li> <li>• Talk about connections between familiar and unfamiliar words or phrases that mean similar things (e.g., grass, lawn).</li> <li>• Participate in discussions about unfamiliar words.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Use vocabulary daily and throughout different contexts.</li> <li>• Model use of newly learned words or phrases.</li> <li>• Support and acknowledge children’s use of new words or phrases.</li> <li>• Provide opportunities for oral language practice.</li> <li>• Scaffold the definition of words when introducing them before a story, being certain to provide several examples that help to demonstrate the meaning.</li> <li>• Encourage students to listen for new vocabulary words within the context of the story.</li> </ul>

**K. RANGE OF READING**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.3 K.K</b> Actively engage in group reading activities with purpose and understanding.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Ask and answer questions about text being read aloud.</li> <li>• Share relevant prior knowledge about text being read aloud.</li> <li>• Respond to and build on comments from other students.</li> <li>• Use ideas gained in group reading activities in other daily routines, learning centers, and activities.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Provide opportunities for group reading.</li> <li>• Teach and model appropriate active listening skills.</li> <li>• Attend to students’ questions and comments during reading.</li> <li>• Ask questions about a story during reading.</li> <li>• Provide learning center materials and activities that extend the ideas explored in group reading.</li> </ul>

**1.4 Writing**

**BIG IDEAS:** Audience and purpose influence a writer’s choice of organizational pattern, language, and literary techniques. Effective research requires the use of varied resources to gain or expand knowledge.

**ESSENTIAL QUESTIONS:** What makes clear and effective writing? Why do writers write? Who is the audience? What will work best for the audience? Where can one find information to answer questions?

**A. INFORMATIVE/EXPLANATORY**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.4 K.A</b> Use a combination of drawing, dictating, and writing to compose informative/explanatory texts.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Create a picture about a nonfiction topic and talk about it.</li> <li>• Use illustration/dictation to convey meaning about a particular topic.</li> <li>• Use phonetic spelling when writing.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Model writing using a combination of drawing and writing.</li> <li>• Provide frequent opportunities to dictate and/or write.</li> <li>• Provide opportunities to engage in shared, interactive, and independent writing.</li> <li>• Use journals where students can write about specific topics of interest.</li> <li>• Encourage students to draw and talk about topics of interest.</li> </ul>

**B. INFORMATIVE/EXPLANATORY – FOCUS**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.4 K.B</b> Use a combination of drawing, dictating, and writing to focus on one specific topic.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Respond to writing prompts on a specific topic.</li> <li>• Choose a specific topic to write about.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Provide opportunities for whole group or small group discussion on a topic before writing.</li> <li>• Provide opportunities to engage in shared, interactive, and independent writing.</li> <li>• Create charts of students ideas about topics of interest to facilitate students choice of a particular topic.</li> <li>• Model writing on a single topic.</li> </ul>

**C. INFORMATIVE/EXPLANATORY – CONTENT**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.4 K.C</b> With prompting and support, generate ideas and details to convey information that relates to the chosen topic.</p>	<p><b>The learner, with prompting and support, will:</b></p> <ul style="list-style-type: none"> <li>• Brainstorm main ideas on a chosen topic (e.g., topic—bats, ideas—helpful, mammal, scary).</li> <li>• Choose a main idea to focus writing on topic.</li> <li>• Generate relevant details that support the chosen topic.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Create a list of topics brainstormed by the students.</li> <li>• Facilitate discussion between small groups of students interested in a similar topic to organize thoughts and ideas.</li> <li>• Model how to differentiate between relevant and irrelevant ideas.</li> </ul>

**D. INFORMATIVE/EXPLANATORY – ORGANIZATION**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.4 K.D</b> Make logical connections between drawing and dictation/writing.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Understand that words are connected to print.</li> <li>• Work with adult to create words or sentences that relate to drawings.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Write the students’ words on the picture and read it out loud.</li> <li>• Encourage students to read their dictations.</li> <li>• Model making connections between drawings and dictation/writing.</li> <li>• Provide frequent opportunities for writing and dictating stories.</li> <li>• Provide opportunities to engage in shared, interactive, and independent writing.</li> </ul>

**E. INFORMATIVE/EXPLANATORY – STYLE**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.4 K.E</b> With prompting and support, illustrate using details and dictate/write using descriptive words.</p>	<p><b>The learner, with prompting and support, will:</b></p> <ul style="list-style-type: none"> <li>• Add details to illustrations.</li> <li>• Use descriptive words in dictation and writing.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Model adding details to illustrations and writing.</li> <li>• Provide frequent opportunities for writing and dictating stories.</li> <li>• Provide opportunities to engage in shared, interactive, and independent writing.</li> </ul>

**F. INFORMATIVE/EXPLANATORY – CONVENTIONS OF LANGUAGE**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.4 K.F</b>  <b>Demonstrate a grade-appropriate command of the conventions of standard English grammar, usage, capitalization, punctuation, and spelling.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Capitalize the first word in a sentence and pronoun I.</li> <li>• Recognize and use ending punctuation.</li> <li>• Spell simple words phonetically.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Model using grade-appropriate conventions.</li> <li>• Model using grade-appropriate proofreading skills.</li> <li>• Provide frequent opportunities for writing and dictating stories.</li> <li>• Provide opportunities to engage in shared, interactive, and independent writing.</li> </ul>

**G. OPINION/ARGUMENTATIVE**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.4 K.G</b>  <b>Use a combination of drawing, dictating, and writing to compose opinion pieces on familiar topics.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Participate in discussions about fact and opinion.</li> <li>• State an opinion.</li> <li>• Create a picture about an opinion and talk about it.</li> <li>• Use illustration/dictation to convey meaning about an opinion.</li> <li>• Use phonetic spelling when writing.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Facilitate discussions about fact and opinion.</li> <li>• Model writing an opinion piece using a combination of drawing and writing.</li> <li>• Provide frequent opportunities for students to dictate and/or write.</li> <li>• Provide opportunities to engage in shared, interactive, and independent writing.</li> </ul>

**H. OPINION/ARGUMENTATIVE – FOCUS**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.4 K.H</b>  <b>Form an opinion by choosing between two given topics.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Choose between two topics.</li> <li>• State an opinion.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Model choosing between two topics.</li> <li>• Model forming an opinion about a given topic.</li> <li>• Provide frequent opportunities for writing and dictating stories.</li> <li>• Provide opportunities for learners to engage in shared, interactive, and independent writing.</li> </ul>

**I. OPINION/ARGUMENTATIVE – CONTENT**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.4 K.I</b>  <b>Support the opinion with reasons.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Participate in discussions supporting opinions.</li> <li>• Generate relevant reasons that support the opinion.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Model how to support an opinion.</li> <li>• Provide frequent opportunities for writing and dictating stories.</li> <li>• Provide opportunities to engage in shared, interactive, and independent writing.</li> </ul>

**J. OPINION/ARGUMENTATIVE – ORIENTATION**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.4 K.J</b>  <b>Make logical connections between drawing and writing.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Understand that words are connected to print.</li> <li>• Work with adult to create words or sentences that relate to drawing.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Model making connections between drawings and dictation/writing.</li> <li>• Provide frequent opportunities for writing and dictating stories.</li> <li>• Provide opportunities to engage in shared, interactive, and independent writing.</li> </ul>

**L. OPINION/ARGUMENTATIVE – CONVENTIONS OF LANGUAGE**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.4 K.L</b>  <b>Demonstrate a grade-appropriate command of the conventions of standard English grammar, usage, capitalization, punctuation, and spelling.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Capitalize the first word in a sentence and pronoun I.</li> <li>• Recognize and use ending punctuation.</li> <li>• Spell simple words phonetically.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Model using grade-appropriate conventions.</li> <li>• Model using grade-appropriate proofreading skills.</li> <li>• Provide frequent opportunities for writing and dictating stories.</li> <li>• Provide opportunities to engage in shared, interactive, and independent writing.</li> </ul>

**M. NARRATIVE**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.4 K.M</b>  <b>Use a combination of drawing, dictating, and writing to compose narratives that describe real or imagined experiences or events.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Create a picture about a real or imagined experience or event and talk about it.</li> <li>• Use illustration/dictation to convey meaning about an experience or event.</li> <li>• Use phonetic spelling when writing.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Model narrative writing using a combination of drawing and writing.</li> <li>• Facilitate discussions about real and imagined experiences.</li> <li>• Provide opportunities to read and be read to using books about real and imagined experiences.</li> <li>• Provide frequent opportunities to dictate and/or write.</li> <li>• Provide opportunities to engage in shared, interactive, and independent writing.</li> </ul>

**N. NARRATIVE – FOCUS**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.4 K.N</b>  <b>Establish who and what the narrative will be about.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Generate ideas for writing.</li> <li>• Understand that “who” a story will be about refers to the person, animal, or animated object that the story will be about.</li> <li>• Understand that “what” a story will be about refers to the sequenced events that happen to the references “who.”</li> <li>• Respond when asked “who” or “what” a story is about, and follow through when drawing about or dictating the story.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Model how to determine the characters and events of a story.</li> <li>• Facilitate discussions about characters and events.</li> <li>• Provide frequent opportunities for writing and dictating stories.</li> <li>• Explicitly use terms like “details” and “sequence” along with verbal or visual prompts.</li> <li>• Encourage students to follow through with their generated “who” and “what.”</li> <li>• Provide opportunities to engage in shared, interactive, and independent writing.</li> </ul>

**O. NARRATIVE – CONTENT**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.4 K.O</b>  <b>Describe experiences and events.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Provide details (e.g., descriptive words, feelings, and thoughts of the character) to further develop a story.</li> <li>• Tell adult what she/he has illustrated/ written about.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Ask students for details about their illustrations or writing.</li> <li>• Model rich descriptions about an event or experience.</li> <li>• Facilitate discussions about familiar and unfamiliar events.</li> <li>• Provide frequent opportunities for writing and dictating stories.</li> <li>• Provide opportunities to engage in shared, interactive, and independent writing.</li> </ul>

**P. NARRATIVE – ORGANIZATION**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.4 K.P</b>  <b>Recount a single event or several loosely linked events, tell about the events in the order in which they occurred, and provide a reaction to what happened.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Understand stories can be told about a single event or several loosely linked events.</li> <li>• Understand that a single event is made up of a series of smaller events that are in a sequence (e.g., before, next, end).</li> <li>• Respond with a logical sequence of events when asked “what” the story is about.</li> <li>• Write using a logical sequence of events.</li> <li>• Include a reaction to what happened.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Model sequential retelling of events.</li> <li>• Provide opportunities to practice sequencing (e.g., graphic organizers, illustrations).</li> <li>• Engage with students using digital media to reinforce sequencing skills.</li> <li>• Ask questions relating to sequencing. (e.g., before, next, end)</li> <li>• Model sharing a reaction to an event(s).</li> <li>• Provide frequent opportunities for writing and dictating stories.</li> <li>• Provide opportunities to engage in shared, interactive, and independent writing.</li> </ul>

**R. NARRATIVE – CONVENTIONS OF LANGUAGE**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.4 K.R</b>  <b>Demonstrate a grade-appropriate command of the conventions of standard English grammar, usage, capitalization, punctuation, and spelling.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Capitalize the first word in a sentence and pronoun I.</li> <li>• Recognize and use ending punctuation.</li> <li>• Spell simple words phonetically.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Model using grade-appropriate conventions.</li> <li>• Model using grade-appropriate proofreading skills.</li> <li>• Provide frequent opportunities for writing and dictating stories.</li> <li>• Provide opportunities to engage in shared, interactive, and independent writing.</li> </ul>

**T. PRODUCTION AND DISTRIBUTION OF WRITING – WRITING PROCESS**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.4 K.T</b>  <b>With guidance and support from adults and peers, respond to questions and suggestions from peers, and add details to strengthen writing as needed.</b></p>	<p><b>The learner, with guidance and support, will:</b></p> <ul style="list-style-type: none"> <li>• Understand that drawings and dictation convey meaning to an audience.</li> <li>• Understand writing may have to be changed to make meaning more clear.</li> <li>• Share work with others.</li> <li>• Participate in discussions about their work.</li> <li>• When prompted make changes to work based on feedback.</li> <li>• Respond to questions and suggestions from peers.</li> <li>• Add details to strengthen writing as needed.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Model asking and answering questions about a peer’s writing (focused on details of the writing).</li> <li>• Assure a supportive environment where students feel confident enough to share their work.</li> <li>• Use explicit prompts to encourage the use of both positive and constructive feedback (e.g., “I liked when ...” “I wonder ...”).</li> <li>• Model how to provide feedback.</li> <li>• Model how details strengthen writing.</li> <li>• Provide frequent opportunities for writing and dictating stories.</li> <li>• Provide opportunities to engage in shared, interactive, and independent writing.</li> </ul>

**U. TECHNOLOGY AND PUBLICATION**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.4 K.U</b>                      With guidance and support, explore a variety of digital tools to produce and publish writing in collaboration with peers.</p>	<p><b>The learner, with guidance and support, will:</b></p> <ul style="list-style-type: none"> <li>• Use a variety of digital tools to produce and publish writing.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Provide opportunities to use available technology.</li> <li>• Model use of available technology.</li> </ul>

**V. CONDUCTING RESEARCH**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.4 K.V</b>                      Participate in individual or shared research projects on a topic of interest.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Ask adults or peers for explanations or information using why, how, where, and when (e.g., “Why do leaves turn color?” “Why does Jamal like pizza?”).</li> <li>• Use a variety of resources with teacher support (e.g., adults and peers, books, digital media, maps, recipes, experts) to find new information.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Provide materials (e.g., videos, books, magazines, technology), structure, and opportunities to create an individual or shared research project.</li> <li>• Model/guide procedures for how to research a project.</li> <li>• Engage individual students or groups of students interested in a similar topic in project-based learning.</li> </ul>

**W. CREDIBILITY, RELIABILITY, AND VALIDITY OF SOURCES**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.4 K.W</b>                      With guidance and support, recall information from experiences or gather information from provided sources to answer a question.</p>	<p><b>The learner, with guidance and support, will:</b></p> <ul style="list-style-type: none"> <li>• Respond to prompts which require reference to prior experiences.</li> <li>• Relate prior experiences in learning to a current topic.</li> <li>• Recall information from experiences.</li> <li>• Use a variety of resources with teacher support (e.g., adults and peers, books, digital media, maps, recipes, experts) to find new information.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Model connecting prior experiences to a current topic.</li> <li>• Model recalling information from experiences to respond to a question.</li> <li>• Model how to gather information from sources to respond to a question.</li> </ul>

**X. RANGE OF WRITING**

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.4 K.X</b>                      Write routinely over short time frames.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Engage in writing opportunities including journaling.</li> <li>• Revisit previous work.</li> <li>• Respond to writing prompts.</li> <li>• Choose to write independently during play.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Provide frequent opportunities for writing and dictating stories.</li> <li>• Provide opportunities to engage in shared, interactive, and independent writing.</li> <li>• Provide a variety of materials and opportunities to write daily and over time (e.g., journals, “authors” chair, projects).</li> <li>• Provide opportunities and encourage revisiting prior work.</li> <li>• Encourage persistence in drawing/dictation/writing.</li> </ul>

## 1.5 Speaking and Listening

**BIG IDEAS:** Active listeners make meaning from what they hear by questioning, reflecting, responding, and evaluating. Effective speakers prepare and communicate messages to address the audience and purpose.

**ESSENTIAL QUESTIONS:** What do good listeners do? How do active listeners make meaning? How do speakers effectively communicate a message?

### A. COMPREHENSION AND COLLABORATION – COLLABORATIVE DISCUSSION

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.5 K.A</b> Participate in collaborative conversations with peers and adults in small and larger groups.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Communicate using detail related to topic being discussed.</li> <li>Pose questions related to topic being discussed.</li> <li>Allow wait time before responding.</li> <li>Engage in turn-taking.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>Encourage asking questions to find out more information.</li> <li>Provide and monitor multiple opportunities for conversations throughout the day.</li> <li>Explicitly restate comments made by students and encourage those responding to add further detail, or contribute further to the topic being discussed.</li> <li>Encourage students to restate comments made by peers.</li> <li>Model appropriate participation in discussions including polite interactions, one person speaking at a time, or asking questions.</li> <li>Embed opportunities to “turn and talk” to share ideas on a topic.</li> <li>Model appropriate conversation skills (e.g., tone, volume, turn-taking, active listening, eye contact).</li> </ul>

### B. COMPREHENSION AND COLLABORATION – CRITICAL LISTENING

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.5 K.B</b> Ask and answer questions about key details in a text read aloud or information presented orally or through other media.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Respond to a question with an answer or details related to the topic being discussed.</li> <li>Generate “who,” “what,” “when,” and “where” questions.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>Engage students in conversation about topics of interest daily.</li> <li>Ask students to identify facts from text.</li> <li>Model asking and answering questions about details.</li> <li>Ask “who,” “what,” “when,” and “where” questions.</li> <li>Invite students to discuss how they would react to a situation if they were the character in the story.</li> <li>Provide opportunities to respond orally in daily activities.</li> </ul>

### C. COMPREHENSION AND COLLABORATION – EVALUATING INFORMATION

Standard	Concepts and Competencies	Supportive Practices
<p><b>1.5 K.C</b> Ask and answer questions to seek help, get information, or clarify something that is not understood.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Act upon or respond to simple statements and questions showing understanding of intent.</li> <li>Ask “What does that mean?”</li> <li>Ask “Can you help me?”</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>Model asking for help or clarifying information.</li> <li>Model oral discussion techniques.</li> <li>Provide opportunities for oral language use.</li> <li>Promote active listening and attention to key ideas and details.</li> </ul>

**D. PRESENTATION OF KNOWLEDGE AND IDEAS – PURPOSE, AUDIENCE, AND TASK**

Standard	Concepts and Competencies	Supportive Practices
<b>1.5 K.D</b> Share stories, familiar experiences, and interests, speaking clearly enough to be understood by all audiences using appropriate volume.	<b>The learner will:</b> <ul style="list-style-type: none"> <li>• Talk about stories, experiences, and interests using detail.</li> <li>• Use appropriate volume to be heard by a group (paying attention to inside and outside voice).</li> <li>• Use appropriate pacing.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>• Provide opportunities to share stories, experiences, and interests.</li> <li>• Model appropriate volume and rate of speech when talking to a group.</li> <li>• Encourage use of appropriate volume and pacing.</li> <li>• Speak to and engage students in group and individual conversations daily.</li> <li>• Re-phrase student’s sentence structure or grammar by repeating the sentence properly.</li> </ul>

**E. PRESENTATION OF KNOWLEDGE AND IDEAS – CONTEXT**

Standard	Concepts and Competencies	Supportive Practices
<b>1.5 K.E</b> Speak audibly and express thoughts, feelings, and ideas clearly.	<b>The learner will:</b> <ul style="list-style-type: none"> <li>• Speak clearly.</li> <li>• Use appropriate volume to be heard by a group (paying attention to inside and outside voices).</li> <li>• Use appropriate pacing.</li> <li>• Express thoughts, feelings and ideas clearly.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>• Model appropriate volume and rate of speech.</li> <li>• Provide opportunities to speak in small and large group settings.</li> <li>• Encourage use of appropriate volume and pacing.</li> <li>• Speak to and engage students in group and individual conversations daily.</li> <li>• Re-phrase student’s sentence structure or grammar by repeating the sentence properly.</li> </ul>

**G. CONVENTIONS OF STANDARD ENGLISH**

Standard	Concepts and Competencies	Supportive Practices
<b>1.5 K.G</b> Demonstrate command of the conventions of standard English when speaking, based on Kindergarten level and content.	<b>The learner will:</b> <ul style="list-style-type: none"> <li>• Speak using increasingly complex sentences.</li> <li>• Use common verbs and nouns.</li> <li>• Use past and future tense.</li> <li>• Use plurals including those which do not end in “s.”</li> <li>• Use pronouns.</li> <li>• Use a variety of prepositions.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>• Model the proper use of standard English when speaking.</li> <li>• Provide multiple opportunities for oral language practice and use.</li> </ul>





# Languages and Literacy Development Glossary

**Alliteration**—The repetition of initial consonant sounds.

**Antonym**—A word that is the opposite of another word.

**Basic Features of Print**—Letters, words, and sentences

**Characterization**—The method an author uses to reveal characters and their various personalities.

**Choral Reading**—Reading of a text where an adult or an experienced reader reads a line of text and student repeats the line.

**Collaboration**—The action of working with someone to produce or create something.

**Collaborative Conversations**—Also called reciprocal conversation; knowing and following the back and forth rules of conversation.

**Compare**—Place together characters, situations, or ideas to show common or differing features in literary selections.

**Context Clues**—Information from the reading that identifies a word or group of words.

**Conventions of Language**—Mechanics, usage, and sentence completeness.

**Credibility**—The quality of being believable or worthy of trust.

**Decoding**—Analyzing text to identify and understand individual reading.

**Dialogic Reading**—An effective strategy to enhance vocabulary, oral language skills, and comprehension.

**Dictation**—The act of saying words aloud to be written down.

**Emergent Literacy**—One stage of literacy development; reading and writing behaviors that precede and develop into convention and literacy.

**Environmental Print**—The print of everyday life; symbols, signs, numbers, colors, and logos found within the environment.

**Expressive Language**—Being able to convey messages using words.

**Evaluate**—Examine and judge carefully.

**Explanatory**—Something that makes things more clear; intended to make people understand something by describing it or giving the reasons for it.

**Fine Motor**—Demonstrate increased control of hand and eye coordination; using hands and fingers such as in writing, painting, drawing, modeling clay, or pinching clothespins.

**Fluency**—The clear, easy, written or spoken expression of ideas. Freedom from word-identification problems which might hinder comprehension in silent reading or the expression of ideas in oral reading.

**Genre**—A category used to classify literary works, usually by form, technique, or content (prose, poetry).

**Guided Reading**—Teachers work with students at their instructional level to guide them in using context, visual, and structural cues.

**Homophone**—One of two or more words pronounced alike, but different in spelling or meaning (hair/hare; road/rode).

**Informative**—Something that contains useful, helpful, or relevant information or details.

**Literary/Story Elements**—The essential techniques used in literature (characterization, setting, plot, theme, problem, solution).

**Literary Devices**—Tools used by the author to enliven and provide voice to the writing (dialogue, alliteration).

**Main Idea**—The most important or central thought of a paragraph or larger section of text, which tells the reader what the text is about.

**Narrative**—A story, actual or fictional, expressed orally or in writing.

**Onset**—A sound in word that comes before the vowel.

**Phonemic Awareness**—Ability to hear and identify parts of spoken language and auditory divide into phonemes.

**Phoneme**—A sound unit of speech.

**Phonics**—A way of teaching reading that stresses sound symbol relationships; refers to the relationship between the letters and letter sounds of language.

**Phonological Awareness**—A broad term that includes phonemic awareness. In addition to phonemes, phonological awareness refers to larger spoken units such as rhymes, words, syllables, and onsets and rimes.

**Picture Walk**—A pre-reading strategy that is an examination of the text looking at pictures to gain an understanding of the story and to illicit story related language in advance of reading the story.

**Point of View**—The way in which an author reveals characters, events, and ideas in telling a story; the vantage point from which the story is told.

**Print Awareness**—Ability to understand how print works.

**Project-Based Learning**—An instructional approach built upon authentic learning activities that engage student interest and motivation.

**Reading Critically**—Reading in which a questioning attitude, logical analysis, and inference are used to judge the worth of text; evaluating relevancy and adequacy of what is read; the judgment of validity or worth of what is read, based on sound criteria.

**Reciprocal Conversations**—Also called collaborative conversations; knowing and following the back and forth rules of conversation.

**Receptive Language**—Being able to receive and give meaning to message/words heard.

**Research**—A systematic inquiry into a subject or problem to discover, verify, or revise relevant facts or principles having to do with that subject or problem.

**Rhyme**—Correspondence of sound between words or the endings of words.

**Rime**—The part of a syllable that contains at least one vowel and all that follows.

**Shared Reading**—Teachers guide the entire class through stories with a high level of support; sharing and reading a story together (echo reading, choral reading, or fill the gap reading).

**Shared Writing**—Teacher and learner work together to compose a message or story.

**TIER I Words**—Words that rarely require direct instruction and typically do not have multiple meanings.

**TIER II Words**—High-frequency words that occur across a variety of domains; occur often in mature language situations such as adult conversations and literature; TIER II words also contain multiple meanings (e.g., here/hear).

**TIER III Words**—Low-frequency words that occur in specific domains (including subjects in school, hobbies, occupations, geographic regions, technology, weather).

**Tone**—The attitude of the author toward the audience and characters (serious or humorous).

**Voice**—The fluency, rhythm, and liveliness in writing that make it unique to the writer.



# Mathematical Thinking and Expression

## Exploring, Processing, and Problem-Solving

2.1 Numbers and Operations

2.2 Algebraic Concepts

2.3 Geometry

2.4 Measurement, Data, and Probability

**M**athematical learning is a key element of Science, Technology, Engineering, and Math (STEM) education. To fully understand math, children must be able to connect mathematical concepts to real-world situations and across disciplines. Math skills are developed and based on children's experiences with their environment, their interactions with adults and other children, and their daily observations. Throughout the early years of life, children notice and discover mathematical dimensions of their world. They compare quantities, find patterns, problem-solve, communicate, and confront real problems such as balancing a tall block building or angling a ramp to roll a ball down. Mathematics helps children make sense of their



world and helps them construct a solid foundation for future success. By asking intentional questions, adults can help encourage STEM concepts where children are identifying objects, making comparisons, making predictions, testing ideas, and sharing discoveries, all while investigating their environment. Mathematical thinking is foundational and impor-

tant to academic success in all subjects. All children are capable of developing a strong knowledge of mathematics in their earliest years. Math and science subjects are connected to other subject matters and the real world. Adults should tap into children's natural curiosity and give them ample opportunities to be active participants in their own learning.

### Standards for Mathematical Practice

#### Habits of Mind of a Productive Mathematical Thinker

- Make sense of problems and persevere in solving them.
- Attend to precision.

#### Reasoning and Explaining

- Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning of others.

#### Modeling and Using Tools

- Model with mathematics.
- Use appropriate tools strategically.

#### Seeing Structure and Generalizing

- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.

## 2.1 Numbers and Operations

**BIG IDEAS:** Mathematical relationships among numbers can be represented, compared, and communicated. Numeral quantities, calculations, and measurements can be estimated or analyzed by using appropriate strategies and tools. Mathematical relationships can be represented as expressions, equations, and inequalities in mathematical situations. Patterns exhibit relationships that can be extended, described, and generalized.

**ESSENTIAL QUESTIONS:** How is mathematics used to quantify, compare, represent, and model numbers? How can mathematics support effective communication? How are relationships represented mathematically? How can expressions, equations, and inequalities be used to quantify, solve, model, and/or analyze mathematical situations? What does it mean to estimate or analyze numerical quantities? When is it appropriate to estimate versus calculate? What makes a tool and/or strategy appropriate for a given task? How can patterns be used to describe relationships in mathematical situations? How can recognizing repetition or regularity assist in solving problems more efficiently?

### A.1 COUNTING AND CARDINALITY – CARDINALITY

Standard	Concepts and Competencies	Supportive Practices
<b>2.1 K.A.1</b> <b>Know number names and write and recite the count sequence.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>Count to 100.</li> <li>Count forward beginning from a given number within a known sequence (instead of having to begin at 1).</li> <li>Name numerals 0–20.</li> <li>Represent a number of objects with a written numeral 0–20.</li> <li>Recognize that a number represents a specific quantity.</li> <li>Connect the quantity to a written symbol.</li> <li>Continually check work by asking questions (e.g., “Does this make sense?”).</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>Identify opportunities for students to write 0 and say zero to represent the number of items left when all items have been taken away (Avoid using the word none to represent this situation. Find instances for which the response would be zero in real-world settings to provide experiences with the concept of zero.).</li> <li>Provide number lines, number grids, five frame, tens frame to represent numbers to 100.</li> <li>Provide opportunities and support students’ rote counting (not always starting with 1) through everyday activities and small group activities.</li> <li>Provide and display a number chart for reference and daily use.</li> <li>Provide activities and practice in ordering numbers.</li> <li>Provide activities and practice in writing numerals to represent or match a number or number set.</li> <li>Encourage appropriate handwriting formation of the numbers 0–9.</li> </ul>

### A.2 COUNTING AND CARDINALITY – COUNTING

Standard	Concepts and Competencies	Supportive Practices
<b>2.1 K.A.2</b> <b>Apply one-to-one correspondence to count the number of objects.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>Use one-to-one correspondence when counting to 20.</li> <li>State the total number of objects counted, demonstrating understanding that last number named tells the number of objects counted.</li> <li>Understand each successive number name refers to a quantity that is one larger when added to the given number.</li> <li>Solve addition and subtraction word problems, and add and subtract within 10, by using objects or drawings to represent the problem.</li> <li>Recognize that a number represents a specific quantity.</li> <li>Continually check work by asking questions (e.g., “Does this make sense?”).</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>Extend, describe, and generalize number patterns.</li> <li>Describe relationships in mathematical situations.</li> <li>Model the process of and counting with one-to-one correspondence.</li> <li>Provide opportunities and support students’ counting with one-to-one correspondence (e.g., passing napkins out during snack).</li> <li>Provide different types of manipulatives (e.g., chips, cubes, macaroni, ten frame, five frame).</li> </ul>

**A.3 COUNTING AND CARDINALITY – COMPARING**

Standard	Concepts and Competencies	Supportive Practices
<p><b>2.1 K.A.3</b>  <b>Apply the concept of magnitude to compare numbers and quantities.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group (e.g., using matching and counting strategies).</li> <li>Compare two numbers between 1 and 10 presented as written numerals.</li> <li>Develop mathematical communication skills.</li> <li>Use clear and precise language and discussions to justify own reasoning.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>Provide a variety of and varying amounts of materials for comparison (e.g., shells, buttons, pebbles, cereal).</li> <li>Help students describe similarities and differences of concrete objects.</li> <li>Provide opportunities for counting, reading, and writing numbers through various daily classroom activities.</li> <li>Provide opportunities to match sets to find which set is greater than, less than, or equal to other sets.</li> <li>Provide opportunities to compare two numbers between 1 and 10 presented as written numerals.</li> <li>Provide daily opportunities to use mathematical vocabulary to compare numbers and quantities.</li> </ul>

**B.1 NUMBERS AND OPERATIONS IN BASE TEN**

Standard	Concepts and Competencies	Supportive Practices
<p><b>2.1 K.B.1</b>  <b>Use place-value to compose and decompose numbers within 19.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Compose and decompose numbers up to 19 into ten and ones by using objects or drawings.                             <ul style="list-style-type: none"> <li>Record each composition or decomposition by a drawing or equation.</li> </ul> </li> <li>Continually check work by asking questions (e.g., “Does this make sense?”).</li> <li>Begin to discern a pattern or structure that exists in teen numbers.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>Use five and ten frames to provide visual representations of numbers.</li> <li>Provide opportunities to practice counting sequences to identify the pattern in the teen numbers.</li> <li>Describe, extend, and generalize number relationships while using a number line or number chart.</li> <li>Provide opportunities for regrouping ones to tens.</li> <li>Provide opportunities to support counting, reading, and writing numbers through various classroom activities.</li> <li>Provide opportunities to use mathematical vocabulary to show understanding of repetitive actions for counting and computation (e.g., “one more” or “one less”).</li> </ul>



## 2.2 Algebraic Concepts

**BIG IDEAS:** Mathematical relationships among numbers can be represented, compared, and communicated. Mathematical relationships can be represented as expressions, equations, and inequalities in mathematical situations. Patterns exhibit relationships that can be extended, described, and generalized.

**ESSENTIAL QUESTIONS:** How is mathematics used to quantify, compare, represent, and model numbers? How can mathematics support effective communication? How are relationships represented mathematically? How can expressions, equations, and inequalities be used to quantify, solve, model, and/or analyze mathematical situations? How can patterns be used to describe relationships in mathematical situations? How can recognizing repetition or regularity assist in solving problems more efficiently?

### A. OPERATIONS AND ALGEBRAIC THINKING

Standard	Concepts and Competencies	Supportive Practices
<p><b>2.2 K.A.1</b>  <b>Extend the concepts of putting together and taking apart to add and subtract within 10.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Represent addition and subtraction. (e.g., with objects, fingers, mental images, drawings, sounds, acting out situations, verbal explanations, expressions, or equations)</li> <li>• Decompose numbers less than or equal to 10 into pairs in more than one way, by using objects or drawings.                             <ul style="list-style-type: none"> <li>▫ Record each decomposition through a drawing or equation.</li> </ul> </li> <li>• Find the number that makes 10, for any number from 1 to 9, when added to the given number.</li> <li>• Solve addition and subtraction word problems, and add and subtract within 10, by using objects, drawings, or equations.</li> <li>• Begin to discern a pattern or structure in equations of addition and subtraction.</li> <li>• Experiment with representing problem situations in multiple ways including numbers, words (e.g. mathematical language), drawing pictures, using objects, acting out, making a chart or list, creating equations, etc.</li> <li>• Connect the different representations and explain the connections.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Provide opportunities to practice addition by combining sets of concrete objects.</li> <li>• Provide opportunities to practice subtraction by separating sets of concrete objects.</li> <li>• Implement the strategy of “counting on” when counting two sets of objects joined together (e.g., 2 apples in one set and 3 apples in another set—say 2, 3, 4, 5, five apples in all).</li> <li>• Provide daily opportunities to create number sentences up to the sum of 5 using manipulatives.</li> <li>• Provide opportunities to create and read number sentences in group settings and in learning centers.</li> <li>• Refer to subtraction and its symbol using the words minus or subtract.</li> <li>• Provide instructional experiences so students’ progress from the concrete level, to the pictorial level, then to the abstract level when learning mathematical concepts.</li> <li>• Provide strategies to build understanding with joining and separating quantities.</li> <li>• Provide concrete objects to solve problems.</li> <li>• Provide concrete examples to recognize that <math>3 + 2 = 5</math> and <math>2 + 3 = 5</math> while using math vocabulary.</li> </ul>



## 2.3 Geometry

**BIG IDEAS:** Patterns exhibit relationships that can be extended, described, and generalized. Geometric relationships can be described, analyzed, and classified based on spatial reasoning and/or visualization.

**ESSENTIAL QUESTIONS:** How can patterns be used to describe relationships in mathematical situations? How can recognizing repetition or regularity assist in solving problems more efficiently? How are spatial relationships, including shape and dimension, used to draw, construct, model, and represent real situations or solve problems? How can the application of the attributes of geometric shapes support mathematical reasoning and problem solving? How can geometric properties and theorems be used to describe, model, and analyze situations?

### A.1 GEOMETRY – IDENTIFICATION

Standard	Concepts and Competencies	Supportive Practices
<b>2.3 K.A.1</b> <b>Identify and describe two- and three-dimensional shapes.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>Identify shapes as two-dimensional or three-dimensional.</li> <li>Name shapes regardless of their orientations or overall size.</li> <li>Use simple shapes to compose larger shapes.</li> <li>Compare two representations side-by-side and explain their connections.</li> <li>Use clear and precise language in discussions with others and in own reasoning.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>Model the process of recognizing and describing the properties of naming geometric shapes (e.g., line segment, diagonal, angle, length, width, height).</li> <li>Provide opportunities and support in locating geometric shapes within the environment.</li> <li>Provide opportunities and support in describing the attributes of shapes.</li> <li>Provide two- and three-dimensional shapes.</li> </ul>

### A.2 GEOMETRY – APPLICATION

Standard	Concepts and Competencies	Supportive Practices
<b>2.3 K.A.2</b> <b>Analyze, compare, create, and compose two- and three-dimensional shapes.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>Describe objects in the environment using names of shapes.</li> <li>Describe the relative positions of objects using appropriate terms (e.g., above, below, beside, in front, behind, next to).</li> <li>Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts, and other attributes.</li> <li>Model shapes in the world by building shapes.</li> <li>Construct arguments using concrete referents (e.g., objects, pictures, drawing, and actions).</li> <li>Develop mathematical communication skills as they participate in mathematical discussions.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>Provide materials and support in creating shapes (e.g., toothpicks, Popsicle sticks, foam shapes, playdough, straws).</li> <li>Model how a shape can be turned in different ways and remain the same shape.</li> <li>Use appropriate vocabulary related to geometry to describe two- and three-dimensional shapes.</li> <li>Provide daily opportunities to explore and apply understanding of geometry.</li> <li>Provide opportunities to develop a logical argument to support understanding of two- and three-dimensional shapes.</li> <li>Provide opportunities to explore the classroom to find and identify two- and three-dimensional shapes.</li> </ul>

## 2.4 Measurement, Data, and Probability

**BIG IDEAS:** Numerical quantities, calculations, and measurements can be estimated or analyzed by using appropriate strategies and tools. Measurement attributes can be quantified, and estimated using customary and non-customary units of measure. Data can be modeled and used to make inferences. Mathematical relations and functions can be molded through multiple representations and analyzed to raise and answer questions.

**ESSENTIAL QUESTIONS:** What does it mean to estimate or analyze numerical quantities? When is it appropriate to estimate versus calculate? What makes a tool and/or strategy appropriate for a given task? Why does “what” we measure influence “how” we measure? In what ways are the mathematical attributes of objects or processes measured, calculated, and/or interpreted? How precise do measurements and calculations need to be? How does the type of data influence the choice of display? How can probability and data analysis be used to make predictions? How can data be organized and represented to provide insight into the relationship between qualities?

### A.1 MEASUREMENT AND DATA – MEASUREMENT

Standard	Concepts and Competencies	Supportive Practices
<b>2.4 K.A.1</b> <b>Describe and compare attributes of length, area, weight, and capacity of everyday objects.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>Describe measurable attributes of objects (e.g., length, weight, area, or capacity).</li> <li>Describe several measurable attributes of a single object.</li> <li>Compare two objects with a measureable attribute in common.</li> <li>Consider the available tools (including estimation) when solving a mathematical problem.</li> <li>Decide when certain tools might be helpful.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>Demonstrate how to measure objects starting at an end point and adding on cubes until the cubes are equal in length to the object they are measuring.</li> <li>Provide daily opportunities to use appropriate measurement vocabulary (e.g., incorporate comparative and spatial vocabulary to compare, locate, and identify positions in space).</li> <li>Provide interesting items for comparison in learning activities (large group, small group, center time).</li> <li>Design and provide activities to help students recognize the attributes of length, weight, time, and volume.</li> <li>Create measurement math stories that require students to determine which measuring tool to use (e.g., What would I need to do to find out how long I brush my teeth in the morning?).</li> <li>Provide sequence activities.</li> </ul>

### A.4 MEASUREMENT AND DATA – DATA

Standard	Concepts and Competencies	Supportive Practices
<b>2.4 K.A.4</b> <b>Classify objects and count the number of objects in each category.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>Classify up to 20 objects into categories using one attribute.                             <ul style="list-style-type: none"> <li>Display the number of objects in each category.</li> <li>Count and compare the quantities of each category.</li> <li>Describe the difference.</li> </ul> </li> <li>Construct arguments using concrete objects to classify items (e.g., ask “Why is this true?” “Does this make sense?”).</li> <li>Connect the different representations and explain the connections.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>Introduce and use measurement and comparative vocabulary</li> <li>Practice one-to-one matching to reinforce number conservation concept (e.g., size versus number of objects).</li> <li>Pose questions about number conservation.</li> <li>Provide opportunities to develop a logical argument to describe the differences and relationships with classified objects.</li> <li>Provide opportunities to use concrete objects to sort and classify independently and in small groups.</li> </ul>



# Mathematical Thinking and Expression Glossary

**Algebraic Expression**—A group of numbers, symbols, and variables that express a single series of operations.

**Ascending Order**—A listing in which numbers or terms are organized in increasing value.

**Attribute**—A quality or feature regarded as a characteristic or inherent part of someone or something.

**Bar Graph**—A graph in which horizontal or vertical bars represent data.

**Cardinality**—The number of elements in a set or other grouping.

**Concrete Objects**—Physical objects used to represent mathematical situations.

**Counting On**—Given two sets of objects in which to find the sum; learner counts one set and then counts on from the first set to the second set (3 apples in one set, 1 apple in other set – learner says 1 – 2 – 3 and then 4; there are 4 in all).

**Data**—Information gathered by observation, questioning, or measurement, usually expressed with numbers.

**Descending Order**—A listing in which numbers or terms are organized in decreasing value.

**Graph**—A pictorial device that shows a relationship between variables or sets of data.

**Manipulatives**—A wide variety of physical materials, objects, and supplies that students use to foster mathematical learning.

**Non-Standard Measurement**—A measure that is not determined by the use of standard units (paper clips, blocks).

**Numerical Operations**—Place value, number sense, counting, correspondence, comparison, ordering numbers, addition, subtraction (joining/separating sets).

**Number Sense**—Understanding of numbers and their quantities.

**Ordinal Number**—A whole number that names the position of an object in a sequence.

**Pictograph**—A graph that uses pictures or symbols to represent data.

**Place Value**—The value of the position of a digit in a numeral.

**Probability**—The measure of the likelihood of an event occurring.

**Reflection**—A transformation creating a mirror image of a figure on the opposite side of a line.

**Seriation**—Arranging objects in order by size or position in space (arrange in a series of pattern).

**Spatial Sense**—Building and manipulating mental representations of two- and three-dimensional objects.

**Standard Measurement**—A measure determined by the use of standard units (e.g., inches, feet, pounds, cups, pints, gallons, centimeters, meters, kilos, milliliters, liters).

**Subitize**—To perceive the number of (a group of items) at a glance and without counting.

**Symbol**—A sign used to represent something.

**Symmetry**—An attribute of a shape or relation; an exact reflection of a form on opposite sides of a dividing line or place.

**Three-dimensional**—Involving or relating to three dimensions or aspects; giving the illusion of depth.

**Two-dimensional**—Having only two dimensions, especially length and width.

**Whole Numbers**—The set of numbers consisting of the counting numbers and zero.



# Scientific Thinking and Technology

## Exploring, Scientific Inquiry, and Discovery

### 3.1 Life Science

### 3.2 Physical Science

### 3.3 Earth and Space Science

### 3.4 Environment Literacy and Sustainability

### 3.5 Technology and Engineering

**C**hildren are born with natural curiosity and the innate science and math skills to interpret and respond to the world. Children learn about Science, Technology, Engineering, and Math (STEM) concepts through play. They explore, experiment, invent, design and test solutions, and form ideas about how the world works. Technology, engineering, and math are the application of science to the design, creation, and construction of things. Children, who are given opportunities to conduct experiments, gather data and make conclusions, are developing skills that support discovery about the natural world and scientific inquiry. Adults support science in play by providing an engaging environment and facilitating appropriately. Scientific play is enhanced with natural objects. High quality early learning environments provide children with the structure in which to build upon their natural desire to explore, to build, and to question. Adults must acknowledge and support children in extending their curiosity through the scientific process of inquiry, observing, asking questions, forming hypothesis, investigating, gathering data, drawing conclusions, and building ideas that lead to new questions. Facilitating Scientific Inquiry: Adults facilitate scientific inquiry when class-rooms or learning environments are structured to promote curiosity. Scientific inquiry



is the active search for knowledge and occurs most successfully when adults intentionally create activities and experiences that allow children to use previously learned knowledge to understand new information. One role of the adult during this active exploration is to scaffold children's thinking by asking open-ended questions. Open-ended questions encourage problem-solving and support children's learning of the world around them. Open-ended questions are a more effective strategy

to encourage learning and critical thinking when compared to closed questions, which typically result in short answers that don't provide insight into children's thinking. When learning environments are structured to promote curiosity, children use strategies that are based on scientific inquiry.

## The Scientific Method

**T**he scientific method is a way for scientists to study and learn things. It involves making an observation and identifying a problem, gathering data, making a hypothesis, and testing the hypothesis. Sometimes the problem or the hypothesis changes as you do experiments. The scientific method can be used by children on topics and questions that interest them.

## Step of the Scientific Method

- Make an observation and identify a problem
- Gather data
- Make a hypothesis
- Test the hypothesis
- Make changes

## The Engineering Design Process

**A**ccording to NAEYC, adding engineering practices to the preschool classroom formally introduces young children to the design process. Design is the “study of aesthetics and the utility of items in our daily lives” (Bequette & Bequette 2012, 40). While professional designers typically have an elaborate multistep process for creating and improving their plans to solve problems, we needed a streamlined approach for novice designers.

**E**ngineering is Elementary has developed a five-step engineering design process for elementary students (Museum of Science, Boston 2018), which we’ve paraphrased here:

- Ask—to identify the problem and others’ solutions
- Imagine—to brainstorm and select a solution to test
- Plan—to specify the design and materials
- Create—to make and test a model
- Improve—to ask how the design can be even better and start the cycle again

**N**AEYC developed the following slightly modified four-step design process for preschoolers:

- Finding a problem: Identify a problem or need. Ask, why is it important? How have others approached the problem?
- Imagining and planning: Brainstorm solutions. Sketch possible plans. Choose one to build. List and gather needed materials.
- Creating: Refer to the plan and build a model or prototype. Share the model for feedback or test the prototype.
- Improving: Analyze the model or prototype with others. How could it be improved? Redesign based on feedback.

**Please note, the formatting of the Science domain for Kindergarten, Grade 1, and Grade 2 reflects the newly adopted Pennsylvania Integrated Standards for Science, Technology & Engineering, and Environmental Literacy and Sustainability (STEEL), and Pennsylvania Technology and Engineering Standards.**

**The PDFs from these approved standards are included to fully align with grades K, 1 and 2.**

## 3.1 Life Science

**BIG IDEAS:** Living things have unique characteristics which differ from non-living things. The characteristics of living things can be observed and studied.

**ESSENTIAL QUESTIONS:** In what ways do living and non-living things differ? What are similarities, differences, and patterns of living things?

**3.1.K.A Life Science:** From Molecules to Organisms: Structures and Processes

**Students who demonstrate understanding can** use observations to describe patterns of what plants and animals (including humans) need to survive.

**Clarifying Statement:** Examples of patterns could include that animals need to take in food but plants do not; the different kinds of food needed by different types of animals; the requirement of plants to have light; and, that all living things need water.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
<p><b>Analyzing and Interpreting Data</b> Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.</p> <ul style="list-style-type: none"> <li>Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions.</li> </ul> <hr/> <p style="text-align: center;"><b>Connections to Nature of Science</b></p> <p><b>Scientific Knowledge Is Based on Empirical Evidence</b></p> <ul style="list-style-type: none"> <li>Scientists look for patterns and order when making observations about the world.</li> </ul>	<p><b>LS1.C: Organization for Matter and Energy Flow in Organisms</b></p> <ul style="list-style-type: none"> <li>All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow.</li> </ul>	<p><b>Patterns</b></p> <ul style="list-style-type: none"> <li>Patterns in the natural and human designed world can be observed and used as evidence.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania’s state-recognized plants and animals include hemlock, mountain laurel, white-tailed deer, and local songbirds.

**PA Career Ready Skills:** Interact in pro-social ways (e.g., reciprocal conversation, turn taking, sharing) with peers and adults.

### Connections to Other Standards Content and Practices

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
Agriculture (AFNR)	CS.02.02.01.a: Identify and summarize the components within AFNR systems (e.g., Animal Systems: health, nutrition, genetics, etc.; Natural Resources Systems: soil, water, etc.).
Science, Environmental Literacy and Sustainability (NAEE)	K-4 Strand 1.G. Drawing conclusions and developing explanations: Learners develop explanations that address their questions about the environment.
PA Core Standards: ELA	CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest.
PA Core Standards and Practices: Math	MP.7: Look for and make use of structure. CC.2.4.K.A.1: Describe and compare attributes of length, area, weight, and capacity of everyday objects.
PA Standards: Social Studies	6.4.K.D: Identify individual wants and needs.
Educational Technology (ISTE)	1.6. Creative Communicator: Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals.
Technology and Engineering (ITEEA)	STEL-3A: Apply concepts and skills from technology and engineering activities that reinforce concepts and skills across multiple content areas.

## 3.2 Physical Science

**BIG IDEA:** Physical properties help us to understand the world.

**ESSENTIAL QUESTIONS:** What are physical properties of objects? How are physical properties of objects discovered? What effect does energy have on the physical properties of objects?

**3.2.K.A Physical Science:** Motion and Stability: Forces and Interactions

**Students who demonstrate understanding can** analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.

**Clarifying Statement:** Examples of problems requiring a solution could include having a marble or other object move a certain distance, follow a particular path, and knock down other objects. Examples of solutions could include tools such as a ramp to increase the speed of the object and a structure that would cause an object such as a marble or ball to turn.

**Assessment Boundary:** Assessment does not include friction as a mechanism for change in speed.

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
<p><b>Analyzing and Interpreting Data</b></p> <p>Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.</p> <ul style="list-style-type: none"> <li>Analyze data from tests of an object or tool to determine if it works as intended.</li> </ul>	<p><b>PS2.A: Forces and Motion</b></p> <ul style="list-style-type: none"> <li>Pushes and pulls can have different strengths and directions.</li> <li>Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it.</li> </ul> <p><b>ETS1.A: Defining Engineering Problems</b></p> <ul style="list-style-type: none"> <li>A situation that people want to change or create can be approached as a problem to be solved through engineering. Such problems may have many acceptable solutions.</li> </ul>	<p><b>Cause and Effect</b></p> <ul style="list-style-type: none"> <li>Simple tests can be designed to gather evidence to support or refute student ideas about causes.</li> </ul>

**Pennsylvania Context:** N/A

**PA Career Ready Skills:** Engage in reciprocal communication with peers and adults.

### Connections to Other Standards Content and Practices

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
Agriculture (AFNR)	CS.01.02.02.b: Analyze how technology is used in AFNR systems to maximize productivity.
Science, Environmental Literacy and Sustainability (NAAEE)	K-4 Strand 1.E. Organizing and analyzing information: Learners describe data and organize information to search for relationships and patterns concerning the environment and environmental topics.
PA Core Standards: ELA	CC.1.5.K.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. CC.2.1.K.A.3: Apply the concept of magnitude to compare numbers and quantities.
PA Standards: Social Studies	8.1.K.B: With guidance and support, differentiate facts from opinions as related to an event. 8.1.K.C: Explain how to locate information in a source.
Educational Technology (ISTE)	1.5. Computational Thinker: Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.
Technology and Engineering (ITEEA)	STEL-7E: Illustrate that there are different solutions to a design and that none are perfect.

**3.2.K.B Physical Science: Motion and Stability: Forces and Interactions**

**Students who demonstrate understanding can plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.**

**Clarifying Statement:** Examples of pushes or pulls could include a string attached to an object being pulled, a person pushing an object, a person stopping a rolling ball, and two objects colliding and pushing on each other.

**Assessment Boundary:** Assessment is limited to different relative strengths or different directions, but not both at the same time. Assessment does not include non-contact pushes or pulls such as those produced by magnets.

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
<p><b>Planning and Carrying Out Investigations</b></p> <p>Planning and carrying out investigations to answer questions or test solutions to problems in K–2 builds on prior experiences and progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions.</p> <ul style="list-style-type: none"> <li>With guidance, plan and conduct an investigation in collaboration with peers.</li> </ul> <p style="text-align: center;"><b>Connections to Nature of Science</b></p> <p><b>Scientific Investigations Use a Variety of Methods</b></p> <ul style="list-style-type: none"> <li>Scientists use different ways to study the world.</li> </ul>	<p><b>PS2.A: Forces and Motion</b></p> <ul style="list-style-type: none"> <li>Pushes and pulls can have different strengths and directions.</li> <li>Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it.</li> </ul> <p><b>PS2.B: Types of Interactions</b></p> <ul style="list-style-type: none"> <li>When objects touch or collide, they push on one another and can change motion.</li> </ul> <p><b>PS3.C: Relationship Between Energy and Forces</b></p> <ul style="list-style-type: none"> <li>A bigger push or pull makes things speed up or slow down more quickly.</li> </ul>	<p><b>Cause and Effect</b></p> <ul style="list-style-type: none"> <li>Simple tests can be designed to gather evidence to support or refute student ideas about causes.</li> </ul>

**Pennsylvania Context:** N/A

**PA Career Ready Skills:** Interact in pro-social ways (e.g., reciprocal conversation, turn taking, sharing) with peers and adults.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
Agriculture (AFNR)	CS.01.02.01.a: Research technologies used in AFNR systems.
Science, Environmental Literacy and Sustainability (NAAEE)	K-4 Strand 1.B. Designing investigations: Learners design simple environmental investigations.
PA Core Standards: ELA	CC.1.5.K.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. CC.2.4.K.A.1: Describe and compare attributes of length, area, weight, and capacity of everyday objects.
PA Standards: Social Studies	5.4.K.B: Identify how students can work together.
Educational Technology (ISTE)	1.4. Innovative Designer: Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions.
Technology and Engineering (ITEEA)	STEL-2D: Develop a plan in order to complete a task.

**3.2.K.C Physical Science: Energy**

**Students who demonstrate understanding can make observations to determine the effect of sunlight on Earth's surface.**

**Clarifying Statement:** Examples of Earth's surface could include sand, soil, rocks, and water

**Assessment Boundary:** Assessment of temperature is limited to relative measures such as warmer/cooler.

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
<p><b>Planning and Carrying Out Investigations</b>                      Planning and carrying out investigations to answer questions or test solutions to problems in K–2 builds on prior experiences and progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions.</p> <ul style="list-style-type: none"> <li>Make observations (firsthand or from media) to collect data that can be used to make comparisons.</li> </ul> <hr/> <p style="text-align: center;"><i>Connections to Nature of Science</i></p> <p><b>Scientific Investigations Use a Variety of Methods</b></p> <ul style="list-style-type: none"> <li>Scientists use different ways to study the world.</li> </ul>	<p><b>PS3.B: Conservation of Energy and Energy Transfer</b></p> <ul style="list-style-type: none"> <li>Sunlight warms Earth's surface.</li> </ul>	<p><b>Cause and Effect</b></p> <ul style="list-style-type: none"> <li>Events have causes that generate observable patterns.</li> </ul>

**Pennsylvania Context:** N/A

**PA Career Ready Skills:** Interact in pro-social ways (e.g., reciprocal conversation, turn taking, sharing) with peers and adults.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
Agriculture (AFNR)	CS.06.01.01.a: Research and explain the foundational cycles in AFNR (e.g., water cycle, nutrient cycle, carbon cycle, etc.).
Science, Environmental Literacy and Sustainability (NAAEE)	K-4 Strand 1.C. Collecting information: Learners locate and collect information about the environment and environmental topics.
PA Core Standards: ELA	CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest. CC.1.5.K.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	MP.1: Make sense of problems and persevere in solving them. CC.2.1.K.A.3: Apply the concept of magnitude to compare numbers and quantities.
PA Standards: Social Studies	7.3.K.A: Describe how weather affects daily life.
Educational Technology (ISTE)	1.3. Knowledge Constructor: Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts and make meaningful learning experiences for themselves and others.
Technology and Engineering (ITEEA)	STEL-8A: Analyze how things work.

3.2.K.D Physical Science: Energy

Students who demonstrate understanding can use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.

**Clarifying Statement:** Examples of structures could include umbrellas, canopies, and tents that minimize the warming effect of the sun.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
<p><b>Constructing Explanations and Designing Solutions</b></p> <p>Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions.</p> <ul style="list-style-type: none"> <li>Use tools and materials provided to design and build a device that solves a specific problem or a solution to a specific problem.</li> </ul>	<p><b>PS3.B: Conservation of Energy and Energy Transfer</b></p> <ul style="list-style-type: none"> <li>Sunlight warms Earth’s surface.</li> </ul>	<p><b>Cause and Effect</b></p> <ul style="list-style-type: none"> <li>Events have causes that generate observable patterns.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include materials found naturally in Pennsylvania, such as wood from the state’s forests.

**PA Career Ready Skills:** Interact in pro-social ways (e.g., reciprocal conversation, turn taking, sharing) with peers and adults.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
Agriculture (AFNR)	CS.01.02.01.c: Solve problems in AFNR work-places or scenarios using technology.
Science, Environmental Literacy and Sustainability (NAEE)	K-4 Strand 3.1.C. Identifying and critiquing alternative solutions and courses of action: Learners develop plans, including possible design solutions, for addressing selected local environmental issues.
PA Core Standards: ELA	CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest. CC.1.5.K.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	MP.5: Use appropriate tools strategically. CC.2.3.K.A.1: Identify and describe two- and three-dimensional shapes. CC.2.3.K.A.2: Analyze, compare, create, and compose two- and three-dimensional shapes.
PA Standards: Social Studies	5.1.K.E: Demonstrate responsibilities in the classroom.
Educational Technology (ISTE)	1.4. Innovative Designer: Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions.
Technology and Engineering (ITEEA)	STEL-1C: Demonstrate that creating can be done by anyone.





### 3.3 Earth and Space Science

**BIG IDEA:** The earth, which is part of a larger solar system, consists of structures, processes, and cycles which affect its inhabitants.  
**ESSENTIAL QUESTIONS:** What structures, processes, and cycles make up the earth? How do the various structures, processes, and cycles affect the earth’s inhabitants? How do we know the earth is part of a larger solar system?

**3.3.K.A Earth and Space Sciences: Earth’s Systems**

Students who demonstrate understanding can use and share observations of local weather conditions to describe patterns over time.

**Clarifying Statement:** Examples of qualitative observations could include descriptions of the weather (such as sunny, cloudy, rainy, and warm); examples of quantitative observations could include numbers of sunny, windy, and rainy days in a month. Examples of patterns could include that it is usually cooler in the morning than in the afternoon and the number of sunny days versus cloudy days in different months.

**Assessment Boundary:** Assessment of quantitative observations limited to whole numbers and relative measures such as warmer/cooler.

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
<p><b>Analyzing and Interpreting Data</b></p> <p>Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.</p> <ul style="list-style-type: none"> <li>Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions.</li> </ul> <hr/> <p style="text-align: center;"><i>Connections to Nature of Science</i></p> <p><b>Science Knowledge Is Based on Empirical Evidence</b></p> <ul style="list-style-type: none"> <li>Scientists look for patterns and order when making observations about the world.</li> </ul>	<p><b>ESS2.D: Weather and Climate</b></p> <ul style="list-style-type: none"> <li>Weather is the combination of sunlight, wind, snow or rain, and temperature in a particular region at a particular time. People measure these conditions to describe and record the weather and to notice patterns over time.</li> </ul>	<p><b>Patterns</b></p> <ul style="list-style-type: none"> <li>Patterns in the natural world can be observed, used to describe phenomena, and used as evidence.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include that Pennsylvania has four distinct seasons.

**PA Career Ready Skills:** Interact in pro-social ways (e.g., reciprocal conversation, turn taking, sharing) with peers and adults.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
Agriculture (AFNR)	CS.06.01.01.a: Research and explain the foundational cycles in AFNR (e.g., water cycle, nutrient cycle, carbon cycle, etc.).
Science, Environmental Literacy and Sustainability (NAAEE)	K-4 Strand 1.E. Organizing and analyzing information: Learners describe data and organize information to search for relationships and patterns concerning the environment and environmental topics.
PA Core Standards: ELA	CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. CC.2.4.K.A.1: Describe and compare attributes of length, area, weight, and capacity of everyday objects. CC.2.4.K.A.4: Classify objects and count the number of objects in each category.
PA Standards: Social Studies	7.3.K.A: Describe how weather affects daily life.
Educational Technology (ISTE)	1.6. Creative Communicator: Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals.
Technology and Engineering (ITEEA)	STEL-3A: Apply concepts and skills from technology and engineering activities that reinforce concepts and skills across multiple content areas.

**3.3.K.B Earth and Space Sciences: Earth's Systems**

**Students who demonstrate understanding can construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.**

**Clarifying Statement:** Examples of plants and animals changing their environment could include a squirrel digs in the ground to hide its food and tree roots can break concrete.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
<p><b>Engaging in Argument From Evidence</b></p> <p>Engaging in argument from evidence in K–2 builds on prior experiences and progresses to comparing ideas and representations about the natural and designed world(s).</p> <ul style="list-style-type: none"> <li>Construct an argument with evidence to support a claim.</li> </ul>	<p><b>ESS2.E: Biogeology</b></p> <ul style="list-style-type: none"> <li>Plants and animals can change their environment.</li> </ul> <p><b>ESS3.C: Human Impacts on Earth Systems</b></p> <ul style="list-style-type: none"> <li>Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things.</li> </ul>	<p><b>Systems and System Models</b></p> <ul style="list-style-type: none"> <li>Systems in the natural and designed world have parts that work together.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include that Pennsylvania has many examples of how animals, plants, and humans alter and impact the environment to meet their survival needs.

**PA Career Ready Skills:** Identify similarities and differences between self and others.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
<b>Agriculture (AFNR)</b>	CS.02.02.01.a: Identify and summarize the components within AFNR systems (e.g., Animal Systems: health, nutrition, genetics, etc.; Natural Resources Systems: soil, water, etc.).
<b>Science, Environmental Literacy and Sustainability (NAEE)</b>	K-4 Strand 2.1.B. Earth's living systems: Learners identify basic similarities and differences among a wide variety of living organisms. They explain ways that living organisms, including humans, affect the environment in which they live, and how their environment affects them.
<b>PA Core Standards: ELA</b>	CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest.
<b>PA Core Standards and Practices: Math</b>	MP.3: Construct viable arguments and critique the reasoning of others. CC.2.4.K.A.1: Describe and compare attributes of length, area, weight, and capacity of everyday objects. CC.2.4.K.A.4: Classify objects and count the number of objects in each category.
<b>PA Standards: Social Studies</b>	6.1.K.C: Identify choices to meet needs.
<b>Educational Technology (ISTE)</b>	1.1. Empowered Learner: Students leverage technology to take an active role in choosing, achieving, and demonstrating competency in their learning goals, informed by the learning sciences.
<b>Technology and Engineering (ITEEA)</b>	STEL-1A: Compare the natural world and human-made world.



**3.3.K.C Earth and Space Sciences: Earth and Human Activity**

**Students who demonstrate understanding can use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.**

**Clarifying Statement:** Examples of relationships could include that deer eat buds and leaves, therefore, they usually live in forested areas; and, grasses need sunlight so they often grow in meadows. Plants, animals, and their surroundings make up a system.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
<b>Developing and Using Models</b> Modeling in K–2 builds on prior experiences and progresses to include using and developing models (i.e., diagram, drawing, physical replica, diorama, dramatization, storyboard) that represent concrete events or design solutions. <ul style="list-style-type: none"> <li>Use a model to represent relationships in the natural world.</li> </ul>	<b>ESS3.A: Natural Resources</b> <ul style="list-style-type: none"> <li>Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do.</li> </ul>	<b>Systems and System Models</b> <ul style="list-style-type: none"> <li>Systems in the natural and designed world have parts that work together.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include a wide variety of habitats from mountains to urban areas, each of which provides the specific food, shelter, water, and space required by the variety of plants and animals found in each habitat. Local nature centers can provide information on the types of native Pennsylvania wildlife and native wild plants that can be found in each region of the state.

**PA Career Ready Skills:** Identify similarities and differences between self and others.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
Agriculture (AFNR)	CS.02.01.01.a: Research and describe different types of geographic data used in AFNR systems.
Science, Environmental Literacy and Sustainability (NAAEE)	K-4 Strand 1.F. Working with models and simulations: Learners use models to represent environmental relationships, patterns, and processes.
PA Core Standards: ELA	CC.1.5.K.A: Participate in collaborative conversations with peers and adults in small and larger groups. CC.1.5.K.C: Ask and answer questions in order to seek help, get information, or clarify something that is not understood.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. CC.2.1.K.A.1: Know number names and write and recite the count sequence.
PA Standards: Social Studies	6.4.K.D: Identify individual wants and needs. 7.3.K.A: Describe how weather affects daily life.
Educational Technology (ISTE)	1.1. Empowered Learner: Students leverage technology to take an active role in choosing, achieving, and demonstrating competency in their learning goals, informed by the learning sciences.
Technology and Engineering (ITEEA)	STEL-3B: Draw connections between technology and human experiences.

**3.3.K.D Earth and Space Sciences: Earth and Human Activity**

**Students who demonstrate understanding can ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.**

**Clarifying Statement:** Emphasis is on local forms of severe weather.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
<b>Asking Questions and Defining Problems</b> Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested. <ul style="list-style-type: none"> <li>Ask questions based on observations to find more information about the designed world.</li> </ul> <b>Obtaining, Evaluating, and Communicating Information</b> Obtaining, evaluating, and communicating information in K–2 builds on prior experiences and uses observations and texts to communicate new information. <ul style="list-style-type: none"> <li>Read grade-appropriate texts and/or use media to obtain scientific information to describe patterns in the natural world.</li> </ul>	<b>ESS3.B: Natural Hazards</b> <ul style="list-style-type: none"> <li>Some kinds of severe weather are more likely than others in a given region. Weather scientists forecast severe weather so that the communities can prepare for and respond to these events.</li> </ul> <b>ETS1.A: Defining and Delimiting an Engineering Problem</b> <ul style="list-style-type: none"> <li>Asking questions, making observations, and gathering information are helpful in thinking about problems.</li> </ul>	<b>Cause and Effect</b> <ul style="list-style-type: none"> <li>Events have causes that generate observable patterns.</li> </ul> <p style="text-align: center;"><b>Connections to Engineering, Technology, and Applications of Science</b></p> <b>Interdependence of Science, Engineering, and Technology</b> <ul style="list-style-type: none"> <li>People encounter questions about the natural world every day.</li> </ul> <b>Influence of Engineering, Technology, and Science on Society and the Natural World</b> <ul style="list-style-type: none"> <li>People depend on various technologies in their lives; human life would be very different without technology.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include identifying severe weather in your area (e.g., tornadoes, forest fires, flooding, blizzards) and how forecasting helps one prepare to ensure safety.

**PA Career Ready Skills:** Engage in reciprocal communication with peers and adults.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
Agriculture (AFNR)	CS.01.02.02.c: Evaluate the importance of technology use and how it impacts AFNR systems.
Science, Environmental Literacy and Sustainability (NAEE)	K-4 Strand 1.A. Questioning: Learners develop questions that help them conduct simple investigations and learn about the environment.
PA Core Standards: ELA	CC.1.5.K.A: Participate in collaborative conversations with peers and adults in small and larger groups. CC.1.5.K.C: Ask and answer questions in order to seek help, get information, or clarify something that is not understood.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. CC.2.1.K.A.1: Know number names and write and recite the count sequence.
PA Standards: Social Studies	7.3.K.A: Describe how weather affects daily life.
Educational Technology (ISTE)	1.1. Empowered Learner: Students leverage technology to take an active role in choosing, achieving, and demonstrating competency in their learning goals, informed by the learning sciences.
Technology and Engineering (ITEEA)	STEL-1B: Explain the tools and techniques that people use to help them do things.

**3.3.K.E Earth and Space Sciences: Earth and Human Activity**

**Students who demonstrate understanding can** *communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.*

**Clarifying Statement:** Examples of human impact on the land could include cutting trees to produce paper and using resources to produce bottles. Examples of solutions could include reusing paper and recycling cans and bottles.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
<p><b>Obtaining, Evaluating, and Communicating Information</b></p> <p>Obtaining, evaluating, and communicating information in K–2 builds on prior experiences and uses observations and texts to communicate new information.</p> <ul style="list-style-type: none"> <li>Communicate solutions with others in oral and/or written forms using models and/or drawings that provide detail about scientific ideas.</li> </ul>	<p><b>ESS3.C: Human Impacts on Earth Systems</b></p> <ul style="list-style-type: none"> <li>Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things.</li> </ul> <p><b>ETS1.B: Developing Possible Solutions</b></p> <ul style="list-style-type: none"> <li>Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem’s solutions to other people.</li> </ul>	<p><b>Cause and Effect</b></p> <ul style="list-style-type: none"> <li>Events have causes that generate observable patterns.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include habitat destruction, and industrial operations, or examples of how humans affect the environment by their actions. Wastewater treatment, landfills, and recycling centers provide additional context.

**PA Career Ready Skills:** Engage in reciprocal communication with peers and adults.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
Agriculture (AFNR)	CS.06.01.01.a: Research and explain the foundational cycles in AFNR (e.g., water cycle, nutrient cycle, carbon cycle, etc.).
Science, Environmental Literacy and Sustainability (NAEE)	K-4 Strand 3.1.C. Identifying and critiquing alternative solutions and courses of action: Learners develop plans, including possible design solutions, for addressing selected local environmental issues.
PA Core Standards: ELA	CC.1.5.K.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. CC.2.1.K.A.1: Know number names and write and recite the count sequence.
PA Standards: Social Studies	5.2.K.B: Identify a problem and discuss possible solutions.
Educational Technology (ISTE)	1.6. Creative Communicator: Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals.
Technology and Engineering (ITEEA)	STEL-4B: Illustrate helpful and harmful effects of technology.

### 3.4 Environmental Literacy and Sustainability

**BIG IDEA:** People live in an environment. People share the environment with other living things. People are impacted and have impact on the environment.

**ESSENTIAL QUESTIONS:** How can I describe my immediate environment? In what ways can I use the environment? How does what I do (positive or negative) affect my environment?

**3.4.K-2.A Environmental Literacy and Sustainability:** Agriculture and Environmental Systems and Resources

**Students who demonstrate understanding can** *categorize ways people harvest, re-distribute, and use natural resources.*

**Clarifying Statement:** Examples could include that trees provide food, fiber, and building materials. Trees are logged, transported, and processed into different products, such as fiber, furniture, and buildings. Fruits and nuts from trees are picked, transported, and processed.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
<p><b>Obtaining, Evaluating, and Communicating Information</b></p> <p>Obtaining, evaluating, and communicating information in K–2 builds on prior experiences and uses observations and texts to communicate new information.</p> <ul style="list-style-type: none"> <li>Communicate information with others in oral and/or written forms using models, drawings, writing, or numbers that provide detail about scientific ideas, practices, and/or design ideas.</li> </ul> <p><b>Analyzing and Interpreting Data</b></p> <p>Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.</p> <ul style="list-style-type: none"> <li>Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions.</li> </ul>	<p><b>ESS3.A: Natural Resources</b></p> <ul style="list-style-type: none"> <li>Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do.</li> </ul>	<p><b>Cause and Effect</b></p> <ul style="list-style-type: none"> <li>Events have causes that generate observable patterns.</li> </ul> <p><b>Systems and System Models</b></p> <ul style="list-style-type: none"> <li>Systems in the natural and designed world have parts that work together.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include Pennsylvania farms (agriculture, urban agriculture, and aquaculture), businesses (manufacturing, recreation), and industries (electricity and power, mining, biotechnology, forest products, transportation).

**PA Career Ready Skills:** Identify consequences of a decision to oneself and others prior to action.

#### Connections to Other Standards Content and Practices

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
Agriculture (AFNR)	CS.04.01.01.a: Define stewardship of natural resources and distinguish how it connects to AFNR systems.
Science, Environmental Literacy and Sustainability (NAAEE)	K-4 Strand 2.3.B. Resource distribution and consumption: Learners describe ways people harvest, re-distribute, and use natural resources.
PA Core Standards: ELA	CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.K.B: Ask and answer questions about key details in a text read aloud or information presented orally or through other media. CC.1.5.1.B: Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood. CC.1.5.2.B: Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. CC.2.4.1.A.4: Represent and interpret data using tables/charts. CC.2.4.2.A.4: Represent and interpret data using line plots, picture graphs, and bar graphs.
PA Standards: Social Studies	5.2.2.D: Explain responsible community behavior. 6.2.2.G: Identify examples of an economic system.
Educational Technology (ISTE)	1.1. Empowered Learner: Students leverage technology to take an active role in choosing, achieving, and demonstrating competency in their learning goals, informed by the learning sciences.
Technology and Engineering (ITEEA)	STEL-4D: Select ways to reduce, reuse, and recycle resources in daily life. Children should give examples of the ways they handle waste at school or at home.

**3.4.K-2.B Environmental Literacy and Sustainability:** Agriculture and Environmental Systems and Resources

**Students who demonstrate understanding can** examine how people from different cultures and communities, including one's own, interact and express their beliefs about nature.

**Clarifying Statement:** Emphasis is on how students' interactions and beliefs about nature compare to someone living in a different community. Emphasis is not on judging anyone's interactions or beliefs about nature.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
<p><b>Obtaining, Evaluating, and Communicating Information</b></p> <p>Obtaining, evaluating, and communicating information in K–2 builds on prior experiences and uses observations and texts to communicate new information.</p> <ul style="list-style-type: none"> <li>Read grade-appropriate texts and/or use media to obtain scientific information to describe patterns in the natural world.</li> </ul>	<p><b>ESS3.A: Natural Resources</b></p> <ul style="list-style-type: none"> <li>Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do.</li> </ul> <p><b>ESS3.C: Human Impacts on Earth Systems</b></p> <ul style="list-style-type: none"> <li>Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things.</li> </ul>	<p><b>Patterns</b></p> <ul style="list-style-type: none"> <li>Patterns in the natural world can be observed, used to describe phenomena, and used as evidence.</li> </ul> <p><b>Cause and Effect</b></p> <ul style="list-style-type: none"> <li>Events have causes that generate observable patterns.</li> </ul>

**Pennsylvania Context:** N/A

**PA Career Ready Skills:** Demonstrate respect for the uniqueness of others.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
Agriculture (AFNR)	CS.01.01.01.b: Analyze and summarize AFNR issues and their impact on local, state, national and global levels.
Science, Environmental Literacy and Sustainability (NAEE)	K-4 Strand 2.2.B. Culture: Learners identify ways that people express different cultural backgrounds and how these can influence environmental perceptions and activities.
PA Core Standards: ELA	CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.K.B: Ask and answer questions about key details in a text read aloud or information presented orally or through other media. CC.1.5.1.B: Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood. CC.1.5.2.B: Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.5: Use appropriate tools strategically. CC.2.4.1.A.4: Represent and interpret data using tables/charts.
PA Standards: Social Studies	6.1.K.A: Identify how scarcity influences choice. 8.2.1.C: Identify holiday and cultural celebrations in a community and why they are celebrated. 8.4.1.A: Explain why cultures celebrate.
Educational Technology (ISTE)	1.7. Global Collaborator: Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally.
Technology and Engineering (ITEEA)	STEL-1A: Compare the natural world and human-made world.



**3.4.K-2.C Environmental Literacy and Sustainability:** Environmental Literacy Skills

Students who demonstrate understanding can explain ways that places differ in their physical characteristics, their meaning, and their value and/or importance.

**Clarifying Statement:** Emphasis is on making observations of local environments such as schoolyards, streams, mountains, and fields and sharing their value or meaning. Examples of value or meaning could be their recreational, esthetic (aesthetic), economic, and ecological importance, such as providing a home for animals.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
<p><b>Analyzing and Interpreting Data</b> Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.</p> <ul style="list-style-type: none"> <li>Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions.</li> </ul> <p><b>Obtaining, Evaluating, and Communicating Information</b> Obtaining, evaluating, and communicating information in K–2 builds on prior experiences and uses observations and texts to communicate new information.</p> <ul style="list-style-type: none"> <li>Communicate information with others in oral and/or written forms using models, drawings, writing, or numbers that provide detail about scientific ideas, practices, and/or design ideas.</li> </ul>	<p><b>LS4.D: Biodiversity and Humans</b></p> <ul style="list-style-type: none"> <li>There are many different kinds of living things in any area, and they exist in different places on land and in water.</li> </ul> <p><b>ESS3.C: Human Impacts on Earth Systems</b></p> <ul style="list-style-type: none"> <li>Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things.</li> </ul>	<p><b>Patterns</b></p> <ul style="list-style-type: none"> <li>Patterns in the natural world can be observed, used to describe phenomena, and used as evidence.</li> </ul> <p><b>Stability and Change</b></p> <ul style="list-style-type: none"> <li>Things may change slowly or rapidly.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include the state’s geographic features, which include but are not limited to mountain ranges, forested areas, waterways, watersheds, marshes, farms, cities, and developed areas.

**PA Career Ready Skills:** Demonstrate respect for the uniqueness of others.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
Agriculture (AFNR)	CS.02.01.01.c: Evaluate geographic data and select necessary data sets to solve problems within AFNR systems.
Science, Environmental Literacy and Sustainability (NAEE)	K-4 Strand 2.3.C. Places: Learners identify ways that places differ in their physical and human characteristics.
PA Core Standards: ELA	CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups. CC.1.5.K.D: Share stories, familiar experiences, and interests, speaking clearly enough to be understood by all audiences using appropriate volume. CC.1.5.1.D: Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly. CC.1.5.2.D: Tell a story or recount an experience with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences.
PA Core Standards and Practices: Math	MP.5: Use appropriate tools strategically. CC.2.4.2.A.4: Represent and interpret data using line plots, picture graphs, and bar graphs.
PA Standards: Social Studies	7.1.1.B: Describe places in geographic reference in physical features.
Educational Technology (ISTE)	1.7. Global Collaborator: Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally.
Technology and Engineering (ITEEA)	STEL-1A: Compare the natural world and human-made world.



**3.4.K-2.D Environmental Literacy and Sustainability:** Environmental Literacy Skills

Students who demonstrate understanding can plan and carry out an investigation to address an issue in their local environment and community.

**Clarifying Statement:** Examples of planning could include developing questions (“wonder statements”) about a local environment issue (such as litter, discolored streams, erosion) and then letting students decide how to answer them.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
<p><b>Planning and Carrying Out Investigations</b></p> <p>Planning and carrying out investigations to answer questions or test solutions to problems in K–2 builds on prior experiences and progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions.</p> <ul style="list-style-type: none"> <li>With guidance, plan and conduct an investigation in collaboration with peers.</li> </ul>	<p><b>ESS3.C: Human Impacts on Earth Systems</b></p> <ul style="list-style-type: none"> <li>Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things.</li> </ul>	<p><b>Stability and Change</b></p> <ul style="list-style-type: none"> <li>Things may change slowly or rapidly.</li> </ul> <p><b>Patterns</b></p> <ul style="list-style-type: none"> <li>Patterns in the natural world can be observed, used to describe phenomena, and used as evidence.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include but are not limited to local nature centers, Pennsylvania’s Conservation Districts, and science museums and centers.

**PA Career Ready Skills:** Identify multiple ways to solve conflicts and practice solving problems.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
Agriculture (AFNR)	CS.01.02.01.c: Solve problems in AFNR workplaces or scenarios using technology.
Science, Environmental Literacy and Sustainability (NAEE)	K-4 Strand 3.2.C. Planning and taking action: Learners develop an action strategy or design solution for a specific local environmental issue of their choosing.
PA Core Standards: ELA	CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers. CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers. CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.1.F: Add drawings or other visual displays when sharing aloud to clarify ideas, thoughts, and feelings. CC.1.5.2.F: Add drawings or other visual displays to presentations when appropriate to clarify ideas, thoughts, and feelings.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. CC.2.4.1.A.4: Represent and interpret data using tables/charts. CC.2.4.2.A.4: Represent and interpret data using line plots, picture graphs, and bar graphs.
PA Standards: Social Studies	5.1.1.E: Describe students’ responsibilities in the school and community. 5.1.2.C: Define fairness in working with others. 5.2.2.C: Identify community projects/activities that support leadership and public service.
Educational Technology (ISTE)	1.4. Innovative Designer: Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions.
Technology and Engineering (ITEEA)	STEL-2D: Develop a plan in order to complete a task.





### 3.5 Technology and Engineering

**BIG IDEA:** Technology impacts daily living and can be used as a tool for exploring and understanding the world, as well as communicating with one another. The media (e.g., , music, books, maps, TV programming, newspapers, magazines, movies, Internet, applications, advertising) constructed with available technology conveys a message that can be read, interpreted, and evaluated.

**ESSENTIAL QUESTIONS:** How do I choose the correct technology for a task? Can I use various technologies appropriately? How do I read, interpret, and evaluate media?

**3.5.K-2.A Technology and Engineering:** Applying, Maintaining, and Assessing Technological Products and Systems

**Students who demonstrate understanding can identify and use everyday symbols.**

**Clarifying Statement:** Symbols are used as a means of communication in the technological world. Examples include road signs, symbols for persons with disabilities, and icons on a screen.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<b>Analyzing and Interpreting Data</b> Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations. <ul style="list-style-type: none"> <li>Analyze data from tests of an object or tool to determine if it works as intended.</li> </ul>	<b>ETS1.B: Developing Possible Solutions</b> <ul style="list-style-type: none"> <li>Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem’s solutions to other people.</li> </ul>	<b>Communication</b> <ul style="list-style-type: none"> <li>Learns that humans have many ways to communicate.</li> </ul>

**Pennsylvania Context:** N/A

**Pennsylvania Career Ready Skills:** Identify one’s own strengths, needs, and preferences.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
<b>PA Core Standards: Reading and Writing in Science and Technical Areas</b>	CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers. CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers. CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest. CC.1.4.1-2.V: Participate in individual or shared research and writing projects. CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
<b>PA Core Standards and Practices: Math</b>	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. MP.5: Use appropriate tools strategically.
<b>Integrated Standards for Science, Environmental Literacy &amp; Sustainability, and Technology &amp; Engineering Standards Grades K–12</b>	N/A

**3.5.K-2.AA Technology and Engineering:** Nature and Characteristics of Technology and Engineering

**Students who demonstrate understanding can demonstrate that creating can be done by anyone.**

**Clarifying Statement:** Using technology and engineering tools and techniques, anyone can design or improve things to enhance their lives. Creation of new knowledge, approaches, and inventions can occur through either individual or collaborative efforts. Even young children can view themselves as creators.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<b>Asking Questions and Defining Problems</b> Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested. <ul style="list-style-type: none"> <li>Define a simple problem that can be solved through the development of a new or improved object or tool.</li> </ul>	<b>ETS1.A: Defining and Delimiting Engineering Problems</b> <ul style="list-style-type: none"> <li>A situation that people want to change or create can be approached as a problem to be solved through engineering.</li> <li>Asking questions, making observations, and gathering information are helpful in thinking about problems.</li> <li>Before beginning to design a solution, it is important to clearly understand the problem.</li> </ul>	<b>Creativity</b> <ul style="list-style-type: none"> <li>Learns that humans create products and ways of doing things.</li> </ul> <b>Making and Doing</b> <ul style="list-style-type: none"> <li>Learns to use tools and materials to accomplish a task.</li> </ul>

**Pennsylvania Context:** N/A

**Pennsylvania Career Ready Skills:** Demonstrate respect for the uniqueness of others.

Connections to Other Standards Content and Practices

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers. CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers. CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest. CC.1.4.1-2.V: Participate in individual or shared research and writing projects. CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. MP.5: Use appropriate tools strategically.
Science, Technology & Engineering, and Environmental Literacy & Sustainability Academic Standards	N/A

3.5.K-2.B Technology and Engineering: Applying, Maintaining, and Assessing Technological Products and Systems

Students who demonstrate understanding can describe qualities of everyday products.

**Clarifying Statement:** Technology assessment, or the ability to critically analyze a technology’s effectiveness, is a skill that should be introduced early and consistently. Is a lunchbox hard or soft, metal or plastic, insulated or not? Is there enough space inside for the items brought for lunch?

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<p><b>Asking Questions and Defining Problems</b></p> <p>Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested.</p> <ul style="list-style-type: none"> <li>Ask questions based on observations to find more information about the natural and/or designed world(s).</li> </ul>	<p><b>PS1.A: Structure and Properties of Matter</b></p> <ul style="list-style-type: none"> <li>Different properties are suited for different purposes.</li> </ul>	<p><b>Communication</b></p> <ul style="list-style-type: none"> <li>Learns that humans have many ways to communicate.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include but are not limited to manufacturing businesses.

**Pennsylvania Career Ready Skills:** Demonstrate respect for the uniqueness of others.

Connections to Other Standards Content and Practices

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers. CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers. CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest. CC.1.4.1-2.V: Participate in individual or shared research and writing projects. CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. MP.5: Use appropriate tools strategically.
Science, Technology & Engineering, and Environmental Literacy & Sustainability Academic Standards	N/A

**3.5.K-2.BB Technology and Engineering:** Nature and Characteristics of Technology and Engineering

Students who demonstrate understanding can compare the natural world and human-made world.

**Clarifying Statement:** The natural world includes trees, plants, animals, rivers, oceans, mountains, and other items that make up the earth’s landscape, biomes, and climate. The human-made world includes pencils, rulers, computers, buildings, airplanes, roads, refrigerators, communication devices, and other items developed for the betterment of humans.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<p><b>Asking Questions and Defining Problems</b></p> <p>Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested.</p> <ul style="list-style-type: none"> <li>Define a simple problem that can be solved through the development of a new or improved object or tool.</li> </ul>	<p><b>ESS3.A: Natural Resources</b></p> <ul style="list-style-type: none"> <li>Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do.</li> </ul>	<p><b>Systems Thinking</b></p> <ul style="list-style-type: none"> <li>Learns that human-designed things are connected.</li> </ul> <p><b>Critical Thinking</b></p> <p>Engages in listening, questioning, and discussing.</p>

**Pennsylvania Context:** Examples of Pennsylvania context include but are not limited to robotic industries and agriculture industries.

**Pennsylvania Career Ready Skills:** Identify consequences of a decision to oneself and others prior to action.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers. CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers. CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest. CC.1.4.1-2.V: Participate in individual or shared research and writing projects. CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. MP.5: Use appropriate tools strategically.
Science, Technology & Engineering, and Environmental Literacy & Sustainability Academic Standards	3.2.1.C: Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.

**3.5.K-2.C Technology and Engineering:** Impacts of Technology

Students who demonstrate understanding can explain ways that technology helps with everyday tasks.

**Clarifying Statement:** Children should be able to identify activities they engage in regularly and describe how different technologies help them do these tasks more easily. Contrasting the lifestyles of earlier societies with their own will provide ample examples.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<p><b>Asking Questions and Defining Problems</b> Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested.</p> <ul style="list-style-type: none"> <li>Define a simple problem that can be solved through the development of a new or improved object or tool.</li> </ul>	<p><b>ETS1.A: Defining and Delimiting Engineering Problems</b> Asking questions, making observations, and gathering information are helpful in thinking about problems.</p>	<p><b>Communication</b></p> <ul style="list-style-type: none"> <li>Learns that humans have many ways to communicate.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include but are not limited to robotic industries and agriculture industries.

**Pennsylvania Career Ready Skills:** Identify multiple ways to solve conflicts and practice solving problems.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers. CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers. CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest. CC.1.4.1-2.V: Participate in individual or shared research and writing projects. CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. MP.5: Use appropriate tools strategically.
Science, Technology & Engineering, and Environmental Literacy & Sustainability Academic Standards	N/A

**3.5.K-2.CC Technology and Engineering:** Nature and Characteristics of Technology and Engineering

Students who demonstrate understanding can discuss the roles of scientists, engineers, technologists and others who work with technology.

**Clarifying Statement:** Technological advancement does not occur without the teamwork of many people who have knowledge and skills in distinct areas. Being able to recognize the unique contributions of these individuals is a necessary part of the technological and engineering design process. Young children can develop an appreciation of how people with different specialties can collaborate to design, create, build, and test a product or system. Analogies often work well with students in this grade band. For example, they can understand how a vehicle is purchased from a dealer, maintained by a mechanic at a service center, and driven by a family member. All of these people have something to do with the vehicle, but each in their own way.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<p><b>Obtaining, Evaluating, and Communicating Information</b></p> <p>Obtaining, evaluating, and communicating information in 3–5 builds on K–2 experiences and progresses to evaluating the merit and accuracy of ideas and methods.</p> <ul style="list-style-type: none"> <li>Compare and/or combine across complex texts and/or other reliable media to support the engagement in other scientific and/or engineering practices.</li> </ul>	N/A	<p><b>Communication</b></p> <ul style="list-style-type: none"> <li>Learns that humans have many ways to communicate.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include but are not limited to robotic industries and agriculture industries.

**Pennsylvania Career Ready Skills:** Identify multiple ways to solve conflicts and practice solving problems.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	<p>CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers.</p> <p>CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers.</p> <p>CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest.</p> <p>CC.1.4.1-2.V: Participate in individual or shared research and writing projects.</p> <p>CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question.</p> <p>CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question.</p> <p>CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.</p>
PA Core Standards and Practices: Math	<p>MP.2: Reason abstractly and quantitatively.</p> <p>MP.4: Model with mathematics.</p> <p>MP.5: Use appropriate tools strategically.</p>
Science, Technology & Engineering, and Environmental Literacy & Sustainability Academic Standards	N/A

**3.5.K-2.D Technology and Engineering:** Impacts of Technology

Students who demonstrate understanding can select ways to reduce, reuse, and recycle resources in daily life.

**Clarifying Statement:** Children should give examples of the ways they handle waste at school or at home.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<p><b>Asking Questions and Defining Problems</b></p> <p>Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested.</p> <ul style="list-style-type: none"> <li>Define a simple problem that can be solved through the development of a new or improved object or tool.</li> </ul>	<p><b>ESS3.C: Human Impacts on Earth Systems</b></p> <ul style="list-style-type: none"> <li>Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things.</li> </ul> <p><b>ETS1.B: Developing Possible Solutions</b></p> <ul style="list-style-type: none"> <li>Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem’s solutions to other people.</li> </ul>	<p><b>Attention to Ethics</b></p> <ul style="list-style-type: none"> <li>Learns that use of technology affects humans and the environment.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include but are not limited to waste removal and recycling facilities.

**Pennsylvania Career Ready Skills:** Select coping skill strategies response to adverse situations (e.g., positive self-talk, talking to others, taking a break, taking care of oneself, avoiding negative self-talk).

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers. CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers. CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest. CC.1.4.1-2.V: Participate in individual or shared research and writing projects. CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. MP.5: Use appropriate tools strategically.
Standard Source	Possible Connections to Other Standard(s) or Practice(s)
Science, Technology & Engineering, and Environmental Literacy & Sustainability Academic Standards	N/A

**3.5.K-2.DD Technology and Engineering: Core Concepts of Technology and Engineering**

Students who demonstrate understanding can *collaborate effectively as a member of a team*.

**Clarifying Statement:** To operate at the most effective level, team members must learn to communicate and work together as a unit. Strategies to work together in a team must be modeled by the teacher and laid out as an expectation within the laboratory-classroom setting.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<b>Asking Questions and Defining Problems</b> Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested. <ul style="list-style-type: none"> <li>Define a simple problem that can be solved through the development of a new or improved object or tool.</li> </ul>	N/A	<b>Collaboration</b> <ul style="list-style-type: none"> <li>Learns to share technological products and ideas.</li> </ul>

**Pennsylvania Context:** N/A

**Pennsylvania Career Ready Skills:** Select and utilize expressive communication strategies (e.g., tone, body language, facial expressions) with an understanding of its effect on others.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers. CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers. CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest. CC.1.4.1-2.V: Participate in individual or shared research and writing projects. CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. MP.5: Use appropriate tools strategically.
Science, Technology & Engineering, and Environmental Literacy & Sustainability Academic Standards	N/A

**3.5.K-2.E Technology and Engineering:** Impacts of Technology

**Students who demonstrate understanding can** *illustrate helpful and harmful effects of technology.*

**Clarifying Statement:** Children can examine a familiar technology and explain how it can be both helpful and harmful. For example, a crayon can be used to draw creatively but can also be used to write on bedroom walls.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<b>Asking Questions and Defining Problems</b> Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested. <ul style="list-style-type: none"> <li>Define a simple problem that can be solved through the development of a new or improved object or tool.</li> </ul>	N/A	<b>Communication</b> <ul style="list-style-type: none"> <li>Learns that humans have many ways to communicate.</li> </ul> <b>Attention to Ethics</b> <ul style="list-style-type: none"> <li>Learns that use of technology affects humans and the environment.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include but are not limited to robotic industries and agriculture industries.

**Pennsylvania Career Ready Skills:** Identify consequences of a decision to oneself and others prior to action.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers. CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers. CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest. CC.1.4.1-2.V: Participate in individual or shared research and writing projects. CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. MP.5: Use appropriate tools strategically.
Science, Technology & Engineering, and Environmental Literacy & Sustainability Academic Standards	3.3.2.B: Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.

**3.5.K-2.F Technology and Engineering:** Influence of Society on Technological Development

**Students who demonstrate understanding can** *investigate the use of technologies in the home and community.*

**Clarifying Statement:** Children learn to use their senses to gather data and make observations about technologies in their everyday environment. Toasters, microwaves, stoves, and refrigerators may be used to create breakfasts before going to school in western cultures. In other societies, different food storage and preparation technologies are used for this same purpose.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<b>Asking Questions and Defining Problems</b> Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested. <ul style="list-style-type: none"> <li>Define a simple problem that can be solved through the development of a new or improved object or tool.</li> </ul>	<b>ETS1.A: Defining and Delimiting Engineering Problems</b> <ul style="list-style-type: none"> <li>Asking questions, making observations, and gathering information are helpful in thinking about problems.</li> </ul>	<b>Critical Thinking</b> <ul style="list-style-type: none"> <li>Engages in listening, questioning, and discussing.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include but are not limited to Pennsylvania’s food production industries.

**Pennsylvania Career Ready Skills:** Demonstrate respect for the uniqueness of others.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers. CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers. CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest. CC.1.4.1-2.V: Participate in individual or shared research and writing projects. CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. MP.5: Use appropriate tools strategically.
Science, Technology & Engineering, and Environmental Literacy & Sustainability Academic Standards	3.2.1.C: Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.

**3.5.K-2.G Technology and Engineering: Nature and Characteristics of Technology and Engineering**

Students who demonstrate understanding can explain the tools and techniques that people use to help them do things.

**Clarifying Statement:** By using technology and engineering, people adapt the natural world to meet their needs and wants and to solve problems. All people use tools and processes created through technology and engineering in every aspect of their daily tasks.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<p><b>Asking Questions and Defining Problems</b></p> <p>Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested.</p> <ul style="list-style-type: none"> <li>Define a simple problem that can be solved through the development of a new or improved object or tool.</li> </ul>	<p><b>ETS1.A: Defining and Delimiting Engineering Problems</b></p> <ul style="list-style-type: none"> <li>A situation that people want to change or create can be approached as a problem to be solved through engineering.</li> <li>Asking questions, making observations, and gathering information are helpful in thinking about problems.</li> <li>Before beginning to design a solution, it is important to clearly understand the problem.</li> </ul>	<p><b>Critical Thinking</b></p> <ul style="list-style-type: none"> <li>Engages in listening, questioning, and discussing.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include but are not limited to robotic industries and agriculture industries.

**Pennsylvania Career Ready Skills:** Identify multiple ways to solve conflicts and practice solving problems.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers. CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers. CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest. CC.1.4.1-2.V: Participate in individual or shared research and writing projects. CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. MP.5: Use appropriate tools strategically.
Science, Technology & Engineering, and Environmental Literacy & Sustainability Academic Standards	N/A



**3.5.K-2.H Technology and Engineering:** Influence of Society on Technological Development

Students who demonstrate understanding can explain the needs and wants of individuals and societies.

**Clarifying Statement:** Basic human needs include food, water, and shelter. Beyond these, children can discuss other needs and wants that have resulted in new technologies. This helps them to begin to see that other people’s thoughts, feelings, needs, and wants may differ from their own.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<b>Asking Questions and Defining Problems</b> Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested. <ul style="list-style-type: none"> <li>Define a simple problem that can be solved through the development of a new or improved object or tool.</li> </ul>	<b>ETS1.A: Defining and Delimiting Engineering Problems</b> <ul style="list-style-type: none"> <li>A situation that people want to change or create can be approached as a problem to be solved through engineering.</li> </ul>	<b>Communication</b> <ul style="list-style-type: none"> <li>Learns that humans have many ways to communicate.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include but are not limited to manufacturing businesses.

**Pennsylvania Career Ready Skills:** Identify possible behaviors and anticipate reactions in response to a specific social context.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers. CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers. CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest. CC.1.4.1-2.V: Participate in individual or shared research and writing projects. CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. MP.5: Use appropriate tools strategically.
Science, Technology & Engineering, and Environmental Literacy & Sustainability Academic Standards	N/A

**3.5.K-2.I Technology and Engineering:** Impacts of Technology

Students who demonstrate understanding can compare simple technologies to evaluate their impacts.

**Clarifying Statement:** Children can look at simple tools in their home or school to compare how they impact life. For example, how does a hand-operated pencil sharpener versus an electric one impact people?

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<b>Asking Questions and Defining Problems</b> Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested. <ul style="list-style-type: none"> <li>Define a simple problem that can be solved through the development of a new or improved object or tool.</li> </ul>	<b>ETS1.C: Optimizing the Design Solution</b> <ul style="list-style-type: none"> <li>Because there is always more than one possible solution to a problem, it is useful to compare and test designs.</li> </ul>	<b>Critical Thinking</b> <ul style="list-style-type: none"> <li>Engages in listening, questioning, and discussing.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include but are not limited to robotic industries and agriculture industries.

**Pennsylvania Career Ready Skills:** Identify consequences of a decision to oneself and others prior to action.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers. CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers. CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest. CC.1.4.1-2.V: Participate in individual or shared research and writing projects. CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. MP.5: Use appropriate tools strategically.
Science, Technology & Engineering, and Environmental Literacy & Sustainability Academic Standards	N/A

**3.5.K-2.I Technology and Engineering:** Impacts of Technology

Students who demonstrate understanding can compare simple technologies to evaluate their impacts.

**Clarifying Statement:** Children can look at simple tools in their home or school to compare how they impact life. For example, how does a hand-operated pencil sharpener versus an electric one impact people?

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<p><b>Asking Questions and Defining Problems</b></p> <p>Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested.</p> <ul style="list-style-type: none"> <li>Define a simple problem that can be solved through the development of a new or improved object or tool.</li> </ul>	<p><b>ETS1.C: Optimizing the Design Solution</b></p> <ul style="list-style-type: none"> <li>Because there is always more than one possible solution to a problem, it is useful to compare and test designs.</li> </ul>	<p><b>Critical Thinking</b></p> <ul style="list-style-type: none"> <li>Engages in listening, questioning, and discussing.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include but are not limited to robotic industries and agriculture industries.

**Pennsylvania Career Ready Skills:** Identify consequences of a decision to oneself and others prior to action.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers. CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers. CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest. CC.1.4.1-2.V: Participate in individual or shared research and writing projects. CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. MP.5: Use appropriate tools strategically.
Science, Technology & Engineering, and Environmental Literacy & Sustainability Academic Standards	N/A

**3.5.K-2.J Technology and Engineering:** Impacts of Technology

Students who demonstrate understanding can design new technologies that could improve their daily lives.

**Clarifying Statement:** Children can brainstorm needs or wants and devise possible solutions to meet a need. Teachers and parents can pose “what if?” questions to young children. “What if you and your friends could build something in the school’s playground to make recess more fun? What would you build?”

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<p><b>Constructing Explanations and Designing Solutions</b></p> <p>Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions.</p> <ul style="list-style-type: none"> <li>Use tools and/or materials to design and/or build a device that solves a specific problem or a solution to a specific problem.</li> </ul>	<p><b>ETS1.A: Defining and Delimiting Engineering Problems</b></p> <ul style="list-style-type: none"> <li>A situation that people want to change or create can be approached as a problem to be solved through engineering.</li> </ul>	<p><b>Making and Doing</b></p> <ul style="list-style-type: none"> <li>Learns to use tools and materials to accomplish a task.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include but are not limited to manufacturing businesses.

**Pennsylvania Career Ready Skills:** Identify one’s own strengths, needs, and preferences.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	<p>CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers.</p> <p>CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers.</p> <p>CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest.</p> <p>CC.1.4.1-2.V: Participate in individual or shared research and writing projects.</p> <p>CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question.</p> <p>CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question.</p> <p>CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.</p>
PA Core Standards and Practices: Math	<p>MP.2: Reason abstractly and quantitatively.</p> <p>MP.4: Model with mathematics.</p> <p>MP.5: Use appropriate tools strategically.</p>
Science, Technology & Engineering, and Environmental Literacy & Sustainability Academic Standards	3.3.2.B: Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.

**3.5.K-2.K Technology and Engineering:** Core Concepts of Technology and Engineering

Students who demonstrate understanding can safely use tools to complete tasks.

**Clarifying Statement:** Many tools have specific functions and selecting the right tool makes the task easier. People use tools to make objects, to achieve a desired outcome, and to communicate. Children use scissors to cut paper, glue sticks to fasten components together, markers to sketch ideas, and computers to search for information.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<p><b>Constructing Explanations and Designing Solutions</b></p> <ul style="list-style-type: none"> <li>Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions.</li> <li>Use tools and/or materials to design and/or build a device that solves a specific problem or a solution to a specific problem.</li> </ul>	N/A	<p><b>Making and Doing</b></p> <ul style="list-style-type: none"> <li>Learns to use tools and materials to accomplish a task.</li> </ul>

**Pennsylvania Context:** N/A

**Pennsylvania Career Ready Skills:** Identify consequences of a decision to oneself and others prior to action.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers. CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers. CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest. CC.1.4.1-2.V: Participate in individual or shared research and writing projects. CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. MP.5: Use appropriate tools strategically.
Science, Technology & Engineering, and Environmental Literacy & Sustainability Academic Standards	N/A

**3.5.K-2.L Technology and Engineering: Influence of Society on Technological Development**

Students who demonstrate understanding can explore how technologies are developed to meet individual and societal needs and wants.

**Clarifying Statement:** For example, people need clean, safe water, so systems are developed to provide water to homes and schools. Human-made technology requires some knowledge of the natural world and uses materials from it as well.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<p><b>Asking Questions and Defining Problems</b></p> <p>Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested.</p> <ul style="list-style-type: none"> <li>Define a simple problem that can be solved through the development of a new or improved object or tool.</li> </ul>	<p><b>ETS1.A: Defining and Delimiting Engineering Problems</b></p> <ul style="list-style-type: none"> <li>Before beginning to design a solution, it is important to clearly understand the problem.</li> </ul>	<p><b>Systems Thinking</b></p> <ul style="list-style-type: none"> <li>Learns that human-designed things are connected.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include but are not limited to manufacturing businesses.

**Pennsylvania Career Ready Skills:** Respond to others given a sense of the others' point of view.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers. CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers. CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest. CC.1.4.1-2.V: Participate in individual or shared research and writing projects. CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. MP.5: Use appropriate tools strategically.
Science, Technology & Engineering, and Environmental Literacy & Sustainability Academic Standards	N/A

**3.5.K-2.M Technology and Engineering:** Design in Technology and Engineering Education

**Students who demonstrate understanding can** *demonstrate essential skills of the engineering design process.*

**Clarifying Statement:** Young children identify that there are some essential skills, such as creative thinking, building, and testing, that are required to succeed in technology and engineering design.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<p><b>Constructing Explanations and Designing Solutions</b></p> <p>Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions.</p> <ul style="list-style-type: none"> <li>Use tools and/or materials to design and/or build a device that solves a specific problem or a solution to a specific problem.</li> </ul>	<p><b>ETS1.B: Developing Possible Solutions</b></p> <ul style="list-style-type: none"> <li>Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem’s solutions to other people.</li> </ul>	<p><b>Creativity</b></p> <ul style="list-style-type: none"> <li>Learns that humans create products and ways of doing things.</li> </ul> <p><b>Making and Doing</b></p> <ul style="list-style-type: none"> <li>Learns to use tools and materials to accomplish a task.</li> </ul> <p><b>Collaboration</b></p> <ul style="list-style-type: none"> <li>Learns to share technological products and ideas.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include but are not limited to manufacturing businesses.

**Pennsylvania Career Ready Skills:** Explain ways to establish relationships that are positive and supportive of others.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	<p>CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers.</p> <p>CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers.</p> <p>CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest.</p> <p>CC.1.4.1-2.V: Participate in individual or shared research and writing projects.</p> <p>CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question.</p> <p>CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question.</p> <p>CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.</p>
PA Core Standards and Practices: Math	<p>MP.2: Reason abstractly and quantitatively.</p> <p>MP.4: Model with mathematics.</p> <p>MP.5: Use appropriate tools strategically.</p>
Science, Technology & Engineering, and Environmental Literacy & Sustainability Academic Standards	N/A

**3.5.K-2.N Technology and Engineering:** Applying, Maintaining, and Assessing Technological Products and Systems

**Students who demonstrate understanding can** *analyze how things work.*

**Clarifying Statement:** This can be done by safely and carefully taking something apart and then putting it back together. The ability to observe, analyze, and document is vital to successfully accomplishing this task.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<p><b>Asking Questions and Defining Problems</b></p> <p>Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested.</p> <ul style="list-style-type: none"> <li>Define a simple problem that can be solved through the development of a new or improved object or tool.</li> </ul>	<p><b>ETS1.A: Defining and Delimiting Engineering Problems</b></p> <ul style="list-style-type: none"> <li>Before beginning to design a solution, it is important to clearly understand the problem.</li> </ul>	<p><b>Critical Thinking</b></p> <ul style="list-style-type: none"> <li>Engages in listening, questioning, and discussing.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include but are not limited to manufacturing businesses.

**Pennsylvania Career Ready Skills:** Identify consequences of a decision to oneself and others prior to action.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers. CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers. CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest. CC.1.4.1-2.V: Participate in individual or shared research and writing projects. CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics.
Science, Technology & Engineering, and Environmental Literacy & Sustainability Academic Standards	N/A

**3.5.K-2.O Technology and Engineering: Design in Technology and Engineering Education**

Students who demonstrate understanding can illustrate that there are different solutions to a design and that none are perfect.

**Clarifying Statement:** Young children recognize that there is more than one plausible solution to a design challenge.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<p><b>Constructing Explanations and Designing Solutions</b></p> <p>Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions.</p> <ul style="list-style-type: none"> <li>Generate and/or compare multiple solutions to a problem.</li> </ul>	<p><b>ETS1.A: Defining and Delimiting Engineering Problems</b></p> <ul style="list-style-type: none"> <li>A situation that people want to change or create can be approached as a problem to be solved through engineering. Such problems may have many acceptable solutions.</li> </ul>	<p><b>Optimism</b></p> <ul style="list-style-type: none"> <li>Sees opportunities for making technologies better.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include but are not limited to manufacturing businesses.

**Pennsylvania Career Ready Skills:** Demonstrate respect for the uniqueness of others.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers. CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers. CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest. CC.1.4.1-2.V: Participate in individual or shared research and writing projects. CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. MP.5: Use appropriate tools strategically.
Science, Technology & Engineering, and Environmental Literacy & Sustainability Academic Standards	3.2.1.A: Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.

**3.5.K-2.P Technology and Engineering:** Design in Technology and Engineering Education

**Students who demonstrate understanding can** *discuss that all designs have different characteristics that can be described.*

**Clarifying Statement:** Young children recognize and categorize basic features of design, which represent principles and elements of design. In drawing, they begin to differentiate between lines, colors, and shapes. In thinking about early ideas on design, they might brainstorm with other children, draw sketches, and see how well their ideas worked out.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<p><b>Constructing Explanations and Designing Solutions</b></p> <p>Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions.</p> <ul style="list-style-type: none"> <li>Generate and/or compare multiple solutions to a problem.</li> </ul>	<p><b>ETS1.B: Developing Possible Solutions</b></p> <ul style="list-style-type: none"> <li>Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem’s solutions to other people.</li> </ul>	<p><b>Communication</b></p> <ul style="list-style-type: none"> <li>Learns that humans have many ways to communicate.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include but are not limited to manufacturing businesses.

**Pennsylvania Career Ready Skills:** Select and utilize expressive communication strategies (e.g., tone, body language, facial expressions) with an understanding of its effect on others.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers. CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers. CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest. CC.1.4.1-2.V: Participate in individual or shared research and writing projects. CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. MP.5: Use appropriate tools strategically.
Science, Technology & Engineering, and Environmental Literacy & Sustainability Academic Standards	N/A

**3.5.K-2.Q Technology and Engineering:** Design in Technology and Engineering Education

**Students who demonstrate understanding can** *apply skills necessary for making in design.*

**Clarifying Statement:** Providing opportunities to use tools and manipulate materials can facilitate making skills in young children. Structuring design experiences at this age may take the form of tinkering and play.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<p><b>Constructing Explanations and Designing Solutions</b></p> <p>Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions.</p> <ul style="list-style-type: none"> <li>Use tools and/or materials to design and/or build a device that solves a specific problem or a solution to a specific problem.</li> </ul>	<p><b>ETS1.B: Developing Possible Solutions</b></p> <ul style="list-style-type: none"> <li>Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem’s solutions to other people.</li> </ul>	<p><b>Making and Doing</b></p> <ul style="list-style-type: none"> <li>Learns to use tools and materials to accomplish a task.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include but are not limited to manufacturing businesses.

**Pennsylvania Career Ready Skills:** Identify one’s own strengths, needs, and preferences.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers. CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers. CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest. CC.1.4.1-2.V: Participate in individual or shared research and writing projects. CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. MP.5: Use appropriate tools strategically.
Science, Technology & Engineering, and Environmental Literacy & Sustainability Academic Standards	N/A

**3.5.K-2.R Technology and Engineering:** Integration of Knowledge, Technologies, and Practices

Students who demonstrate understanding can draw connections between technology and human experiences.

**Clarifying Statement:** Young children learn to count through nursery rhymes and playing with manipulatives. Children’s books often include graphics and some even generate sound. Teachers can have students identify technological connections from their homes, traveling in vehicles, and other experiences, and through this help young students understand the role of technology in their lives.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<b>Asking Questions and Defining Problems</b> Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested. <ul style="list-style-type: none"> <li>Define a simple problem that can be solved through the development of a new or improved object or tool.</li> </ul>	N/A	<b>Systems Thinking</b> <ul style="list-style-type: none"> <li>Learns that human-designed things are connected.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include but are not limited to robotic industries and agriculture industries.

**Pennsylvania Career Ready Skills:** Identify multiple ways to solve conflicts and practice solving problems.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers. CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers. CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest. CC.1.4.1-2.V: Participate in individual or shared research and writing projects. CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. MP.5: Use appropriate tools strategically.
Science, Technology & Engineering, and Environmental Literacy & Sustainability Academic Standards	N/A



**3.5.K-2.S Technology and Engineering:** Design in Technology and Engineering Education

**Students who demonstrate understanding can** *apply design concepts, principles, and processes through play and exploration.*

**Clarifying Statement:** Design experiences build on young children’s natural curiosity, desire to explore, and persistence. Familiar materials, tools, and environments will enhance these experiences.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<p><b>Constructing Explanations and Designing Solutions</b></p> <p>Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions.</p> <ul style="list-style-type: none"> <li>Use tools and/or materials to design and/or build a device that solves a specific problem or a solution to a specific problem.</li> </ul>	<p><b>ETS1.C: Optimizing the Design Solution</b></p> <ul style="list-style-type: none"> <li>Because there is always more than one possible solution to a problem, it is useful to compare and test designs.</li> </ul>	<p><b>Making and Doing</b></p> <ul style="list-style-type: none"> <li>Learns to use tools and materials to accomplish a task.</li> </ul> <p><b>Creativity</b></p> <ul style="list-style-type: none"> <li>Learns that humans create products and ways of doing things.</li> </ul>

**Pennsylvania Context:** N/A

**Pennsylvania Career Ready Skills:** Identify possible behaviors and anticipate reactions in response to a specific social context.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	<p>CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers.</p> <p>CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers.</p> <p>CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest.</p> <p>CC.1.4.1-2.V: Participate in individual or shared research and writing projects.</p> <p>CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question.</p> <p>CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question.</p> <p>CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.</p>
PA Core Standards and Practices: Math	<p>MP.2: Reason abstractly and quantitatively.</p> <p>MP.4: Model with mathematics.</p> <p>MP.5: Use appropriate tools strategically.</p>
Science, Technology & Engineering, and Environmental Literacy & Sustainability Academic Standards	N/A

**3.5.K-2.T Technology and Engineering:** Design in Technology and Engineering Education

**Students who demonstrate understanding can** *demonstrate that designs have requirements.*

**Clarifying Statement:** Young children recognize that all designs must meet certain expectations. These expectations are related to the purpose, function, and requirements of a solution.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<p><b>Constructing Explanations and Designing Solutions</b></p> <p>Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions.</p> <ul style="list-style-type: none"> <li>Generate and/or compare multiple solutions to a problem.</li> </ul>	<p><b>ETS1.A: Defining and Delimiting Engineering Problems</b></p> <ul style="list-style-type: none"> <li>Before beginning to design a solution, it is important to clearly understand the problem.</li> </ul>	<p><b>Critical Thinking</b></p> <ul style="list-style-type: none"> <li>Engages in listening, questioning, and discussing.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include but are not limited to Pennsylvania Department of Labor & Industry regulations.

**Pennsylvania Career Ready Skills:** Identify one’s own strengths, needs, and preferences.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers. CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers. CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest. CC.1.4.1-2.V: Participate in individual or shared research and writing projects. CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. MP.5: Use appropriate tools strategically.
Science, Technology & Engineering, and Environmental Literacy & Sustainability Academic Standards	N/A

**3.5.K-2.U Technology and Engineering:** Design in Technology and Engineering Education

Students who demonstrate understanding can explain that design is a response to wants and needs.

**Clarifying Statement:** Young children begin to understand that design is driven by wants and needs. These wants and needs often derive from familiar environments such as home, school, and community.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<b>Constructing Explanations and Designing Solutions</b> Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions. <ul style="list-style-type: none"> <li>Generate and/or compare multiple solutions to a problem.</li> </ul>	<b>ETS1.A: Defining and Delimiting Engineering Problems</b> <ul style="list-style-type: none"> <li>Asking questions, making observations, and gathering information are helpful in thinking about problems.</li> </ul>	<b>Communication</b> <ul style="list-style-type: none"> <li>Learns that humans have many ways to communicate.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include but are not limited to Pennsylvania’s food production industries.

**Pennsylvania Career Ready Skills:** Identify one’s own strengths, needs, and preferences.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers. CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers. CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest. CC.1.4.1-2.V: Participate in individual or shared research and writing projects. CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. MP.5: Use appropriate tools strategically.
Science, Technology & Engineering, and Environmental Literacy & Sustainability Academic Standards	N/A

**3.5.K-2.V Technology and Engineering:** Core Concepts of Technology and Engineering

**Students who demonstrate understanding can explain that materials are selected for use because they possess desirable properties and characteristics.**

**Clarifying Statement:** Paper, wood, cloth, cardboard, and found objects are the most common materials young children use in making the items they design. By working with materials, they learn through observation and testing which materials perform better for given tasks.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<b>Asking Questions and Defining Problems</b> Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested. <ul style="list-style-type: none"> <li>Define a simple problem that can be solved through the development of a new or improved object or tool.</li> </ul>	<b>PS1.A: Structure and Properties of Matter</b> <ul style="list-style-type: none"> <li>Different properties are suited to different purposes.</li> </ul> <b>ETS1.A: Defining Engineering Problems</b> <ul style="list-style-type: none"> <li>A situation that people want to change or create can be approached as a problem to be solved through engineering. Such problems may have many acceptable solutions.</li> </ul>	<b>Communication</b> <ul style="list-style-type: none"> <li>Learns that humans have many ways to communicate.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include but are not limited to waste removal and recycling facilities.

**Pennsylvania Career Ready Skills:** Demonstrate respect for the uniqueness of others.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers. CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers. CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest. CC.1.4.1-2.V: Participate in individual or shared research and writing projects. CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. MP.5: Use appropriate tools strategically.
Science, Technology & Engineering, and Environmental Literacy & Sustainability Academic Standards	N/A

**3.5.K-2.W Technology and Engineering:** Integration of Knowledge, Technologies, and Practices

**Students who demonstrate understanding can apply concepts and skills from technology and engineering activities that reinforce concepts and skills across multiple content areas.**

**Clarifying Statement:** Young children can use building blocks to develop computational and critical thinking skills by introducing design, measurement, and structural concepts. The intentional translation of skills learned in physical education, such as teamwork, can be applied to problem solving. Drawing in art class can lead to new ways of thinking about design and visual appeal.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<b>Analyzing and Interpreting Data</b> Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations. <ul style="list-style-type: none"> <li>Analyze data from tests of an object or tool to determine if it works as intended.</li> </ul>	<b>ETS1.A: Defining and Delimiting Engineering Problems</b> <ul style="list-style-type: none"> <li>A situation that people want to change or create can be approached as a problem to be solved through engineering.</li> <li>Asking questions, making observations, and gathering information are helpful in thinking about problems.</li> <li>Before beginning to design a solution, it is important to clearly understand the problem.</li> </ul>	<b>Collaboration</b> Learns to share technological products and ideas.

**Pennsylvania Context:** Examples of Pennsylvania context include but are not limited to Pennsylvania’s food production industries.

**Pennsylvania Career Ready Skills:** Identify one’s own strengths, needs, and preferences.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers. CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers. CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest. CC.1.4.1-2.V: Participate in individual or shared research and writing projects. CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. MP.5: Use appropriate tools strategically.
Science, Technology & Engineering, and Environmental Literacy & Sustainability Academic Standards	3.3.K.E: Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.

**3.5.K-2.X Technology and Engineering: Core Concepts of Technology and Engineering**

Students who demonstrate understanding can develop a plan in order to complete a task.

**Clarifying Statement:** For example, young children learn that if they want to accomplish something, such as design and make a birthday card for a parent, they must have the materials available, and they must have the card ready by a given date.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<b>Asking Questions and Defining Problems</b> Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested. <ul style="list-style-type: none"> <li>Define a simple problem that can be solved through the development of a new or improved object or tool.</li> </ul>	<b>ETS1.B: Developing Possible Solutions</b> <ul style="list-style-type: none"> <li>Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem’s solutions to other people.</li> </ul>	<b>Collaboration</b> <ul style="list-style-type: none"> <li>Learns to share technological products and ideas.</li> </ul>

Pennsylvania Context: N/A

Pennsylvania Career Ready Skills: Distinguish among and set short-term, mid-range, and long-term goals.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers. CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers. CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest. CC.1.4.1-2.V: Participate in individual or shared research and writing projects. CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. MP.5: Use appropriate tools strategically.
Science, Technology & Engineering, and Environmental Literacy & Sustainability Academic Standards	N/A

**3.5.K-2.Y Technology and Engineering:** History of Technology

**Students who demonstrate understanding can** *discuss how the way people live and work has changed throughout history because of technology.*

**Clarifying Statement:** Once people learned to provide shelter for themselves—first with simple huts and later with houses, castles, and skyscrapers—they were no longer forced to seek natural shelter, such as caves. The invention of the plow and other agricultural technologies, along with such simple devices as fish hooks and the bow and arrow, made it easier for people to feed themselves, freeing up time for other pursuits. People’s ability to communicate with one another over space and time has been improved by the use of tools and processes like smoke signals, alarms, papermaking, printing, telephones, and the internet.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<b>Asking Questions and Defining Problems</b> Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested. <ul style="list-style-type: none"> <li>Define a simple problem that can be solved through the development of a new or improved object or tool.</li> </ul>	<b>ETS1.A: Defining &amp; Delimiting Engineering Problems</b> <ul style="list-style-type: none"> <li>Asking questions, making observations, and gathering information are helpful in thinking about problems.</li> </ul>	<b>Critical Thinking</b> <ul style="list-style-type: none"> <li>Engage in listening, questioning, and discussing.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include but are not limited to manufacturing businesses.

**Pennsylvania Career Ready Skills:** Demonstrate respect for the uniqueness of others.

**Connections to Other Standards Content and Practices**

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers. CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers. CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest. CC.1.4.1-2.V: Participate in individual or shared research and writing projects. CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. MP.5: Use appropriate tools strategically.
Science, Technology & Engineering, and Environmental Literacy & Sustainability Academic Standards	N/A

**3.5.K-2.Z Technology and Engineering:** Core Concepts of Technology and Engineering

**Students who demonstrate understanding can** *illustrate how systems have parts or components that work together to accomplish a goal.*

**Clarifying Statement:** Once people learned to provide shelter for themselves—first with simple huts and later with houses, castles, and skyscrapers—they were no longer forced to seek natural shelter, such as caves. The invention of the plow and other agricultural technologies, along with such simple devices as fish hooks and the bow and arrow, made it easier for people to feed themselves, freeing up time for other pursuits. People’s ability to communicate with one another over space and time has been improved by the use of tools and processes like smoke signals, alarms, papermaking, printing, telephones, and the internet.

**Assessment Boundary:** N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Technology and Engineering Practices (TEP)
<b>Developing and Using Models</b> Modeling in K–2 builds on prior experiences and progresses to include using and developing models (i.e., diagram, drawing, physical replica, diorama, dramatization, storyboard) that represent concrete events or design solutions. <ul style="list-style-type: none"> <li>Develop and/or use a model to represent amounts, relationships, relative scales (bigger, smaller), and/or patterns in the natural and designed world(s).</li> </ul>	<b>ETS1.A: Defining and Delimiting Engineering Problems</b> <ul style="list-style-type: none"> <li>A situation that people want to change or create can be approached as a problem to be solved through engineering. In solving the problem, there may be different parts that need to connect.</li> </ul>	<b>Systems Thinking</b> <ul style="list-style-type: none"> <li>Learns that human-designed things are connected.</li> </ul>

**Pennsylvania Context:** Examples of Pennsylvania context include but are not limited to robotic industries and agriculture industries.

**Pennsylvania Career Ready Skills:** Explain ways to establish relationships that are positive and supportive of others.

Connections to Other Standards Content and Practices

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: Reading and Writing in Science and Technical Areas	CC.1.4.K.U: With guidance and support, explore a variety of digital tools to produce and publish writing or in collaboration with peers. CC.1.4.1-2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers. CC.1.4.K.V: Participate in individual or shared research projects on a topic of interest. CC.1.4.1-2.V: Participate in individual or shared research and writing projects. CC.1.4.K-1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.4.2.W: Recall information from experiences or gather information from provided sources to answer a question. CC.1.5.K-2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. MP.4: Model with mathematics. MP.5: Use appropriate tools strategically.
Science, Technology & Engineering, and Environmental Literacy & Sustainability Academic Standards	N/A

## Scientific Thinking Glossary

**Characteristic** – A feature or quality belonging typically to a person, place, or thing and serving to identify it.

**Climate** – The weather conditions prevailing in an area in general or over a long period.

**Energy** – The capacity of a body or system to do work.

**Energy Flow** – Flow of energy is the way energy flows through circuits or a food chain.

**Experiment** – A test done in order to learn something or to discover if something works or is true

**Fact** – Information that has been objectively verified.

**Force** – Strength or energy as an attribute of physical action or movement.

**Form** – The visible shape or configuration of something.

**Function** – An activity or purpose natural to or intended for a person or thing.

**Hypothesis** – An assertion subject to verification or proof as a premise from which a conclusion is drawn.

**Inquiry** – A systematic process for using knowledge and skills to acquire and apply new knowledge.

**Investigation** – The action of investigating something or someone; formal or systematic examination.

**Life Cycle** – The series of changes in the life of an organism, including reproduction.

**Matter** – The substance or substances of which any physical object consists or is composed.

**Model** – A description, analogy, or a representation of something that helps us understand it better (e.g., a physical model, a conceptual model, a mathematical model).

**Motion** – The action or process of moving or being moved.

**Organism** – An individual animal, plant, or single-celled life form.

**Patterns** – Repeated processes that are exhibited in a wide variety of ways; identifiable recurrences of the element and/or the form.

**Prediction** – To declare or indicate in advance; especially foretell on the basis of observation, experience, or scientific reason.

**Properties** – The characteristic that can be used to describe an object or substance.

**Science** – Search for understanding of the natural world using inquiry and experimentation.

**Scientist** – A person who is studying or has expert knowledge of one or more of the natural or physical sciences.

**Species** – A group of individual organisms that are capable of interbreeding to produce fertile offspring in nature.

**Substances** – Any type of matter or material.

**System** – A group of related objects that work together to achieve a desired result.

**Temperature** – The degree or intensity of heat present in a substance or object, especially as expressed according to a comparative scale and shown by a thermometer or perceived by touch.

## Environment and Ecology Glossary

**Adaptation** – Special, inherited characteristics that help an organism survive in its environment and which are developed over time.

**Ecosystem** – A biological community of interacting organisms and their physical environment.

**Litter** – Waste materials carelessly discarded or accidentally deposited in an inappropriate place. Littering is against the law.

**Natural Resources** – Those raw materials supplied by the Earth and its processes. Natural resources include nutrients, minerals, water, plants, animals, etc.

**Nonrenewable Resources** – Natural materials such as oil, gas, coal, etc. which are considered exhaustible because of their scarcity, the great length of time required for their formation, or their rapid depletion.

**Pollution** – Harmful substances deposited in the air, water, or land, leading to a state of dirtiness, impurity, or unhealthiness.

**Recycle** – To make materials such as glass, aluminum, paper, steel, and plastic into new products.

**Reduce** – To decrease the amount of waste we produce by buying only what we need, avoiding disposables, and buying products that are not over-packaged.

**Renewable Resource** – A naturally occurring resource that has the capacity to be replenished through natural processes; the sun, wind, trees, and animals are renewable resources.

**Reuse** – To extend the life of an item by using it again, repairing it, or creating new uses for it.

**Sustainable** – Conserving an ecological balance by avoiding depletion of natural resources.

**Waste Management** – The collection, transport, processing, recycling, or disposal, and monitoring of waste materials.

## Technology and Engineering Glossary

**Design Solution** – The process of creating a detailed blueprint or plan for the implementation of a specific solution to a problem or challenge.

**Engineer** – An engineer conceives, designs, and creates equipment or processes to solve economic, environmental, or social problems.

**Engineering Design Process** – The process is a set of steps that guide us - or any professional engineer, scientist, or mathematician - through solving a problem.

**Technologist** – An expert in modern technology, especially technology relating to a particular activity or industry

**Technology and Engineering** – The combined disciplinary study of the engineered (human-designed) world, the goal of which is to develop individuals with a breadth of knowledge and capabilities who see the interactions between technology, engineering, and society and can use, create, and assess current and emerging Technologies.

**Tools** – Anything used to extend human capability also referred to as technology.

**STEELS Hub: STEELS Standards - SAS ([pdesas.org](http://pdesas.org))**  
an-overview-of-state-developed-p-12-standards-for-technological-and-engineering-literacy-other (5).pdf

# Social Studies Thinking

## Connecting to Communities

- 5.1 Principles and Documents of Government
- 5.2 Rights and Responsibilities of Citizenship
- 5.3 How Government Works
- 5.4 How International Relationships Function
- 6.1 Scarcity and Choice
- 6.2 Market and Economic Systems
- 6.3 Functions of Government
- 6.4 Economic Dependence
- 6.5 Income, Profit, and Wealth

- 7.1 Basic Geographic Literacy
- 7.2 Physical Characteristics of Places and Regions
- 7.3 Human Characteristics of Places and Regions
- 7.4 Interactions Between People and the Environment
- 8.1 Historical Analysis and Skills Development
- 8.2 Pennsylvania History
- 8.3 United States History
- 8.4 World History

### Inclusive Classrooms

**E**arly childhood classrooms should be inclusive ones where children with disabilities and developmental delays engage in classroom experiences alongside their typically developing peers. When teachers, specialists, and families work together to understand and adapt teaching strategies, materials, and/or environment to children's unique needs, every child can experience success. Adults must celebrate children's accomplishments and appreciate what children can learn and do.



**T**he foundation of social studies, economics, history, and the workings of government begin with children's personal experiences and their initial understanding of themselves in relation to their families, homes, and schools. Gradually, students expand their understanding to include communities

and the larger world. As their perception grows, they further expand their scope to understand how systems work together. Adults facilitate children's social studies skill development by helping them engage in active investigations that build knowledge and understanding.



# Civics and Government

**BIG IDEA:** Learning to be a good citizen helps one contribute to society in a meaningful way.

**ESSENTIAL QUESTIONS:** What rules and consequences are important? Can I identify some American symbols?

## 5.1 PRINCIPLES AND DOCUMENTS OF GOVERNMENT

### A. RULE OF LAW

Standard	Concepts and Competencies	Supportive Practices
<b>5.1 K.A</b> <b>Explain the purpose of rules.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>Identify a rule.</li> <li>Identify rules are different in different places.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>Engage students in identifying rules (e.g., library, hallway, classroom, lunchroom).</li> <li>Explain and demonstrate rules are for safety, fairness, and respect for others.</li> <li>Create rules with students for the classroom community and appropriate consequences if not followed.</li> <li>Explain, model, practice, and reinforce rules for all areas of the building.</li> <li>Consistently cite and enforce rules and dialog with students on why the rule is in place.</li> <li>Provide consistent consequences for infractions.</li> </ul>

### B. LAWS AND GOVERNMENT

Standard	Concepts and Competencies	Supportive Practices
<b>5.1 K.B</b> <b>Explain the need for rules.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>Discuss the purpose of rules (e.g., keep people safe, show respect).</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>Engage students in developing a set of classroom rules and appropriate consequences if not followed.</li> <li>Consistently cite and enforce rules and dialog with students on why the rule is in place.</li> <li>Explain, model, practice, and reinforce rules for all areas of the building.</li> <li>Provide consistent consequences for infractions.</li> </ul>

### C. PRINCIPLES AND IDEALS THAT SHAPE GOVERNMENT

Standard	Concepts and Competencies	Supportive Practices
<b>5.1 K.C</b> <b>Define respect for self and others.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>Demonstrate respect for rules through positive behavior and acceptance of consequences when necessary.</li> <li>Participate in social stories.</li> <li>Engage in discussion about rules and respect.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>Engage students in developing a set of classroom rules and appropriate consequences if not followed.</li> <li>Explain, model, practice, and reinforce rules for all areas of the building.</li> <li>Dialog with students about their actions when following rules.</li> <li>Provide consistent consequences for infractions.</li> </ul>

**E. INDIVIDUAL RIGHTS**

Standard	Concepts and Competencies	Supportive Practices
<b>5.1 K.E</b> <b>Demonstrate responsibilities in the classroom.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>• Demonstrate the right to learn by contributing to a positive learning environment.</li> <li>• Demonstrate the ability to maintain personal materials in an orderly manner.</li> <li>• Acknowledge others personal materials.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>• Define that a right cannot be taken from an individual (e.g., in a school—students have the right to learn).</li> <li>• Define the expectations of responsibilities in the classroom in respecting the right to learn.</li> <li>• Model and dialog how to care for classroom and personal materials.</li> <li>• Support students in classroom jobs and responsibilities that contribute to a positive learning environment.</li> </ul>

**F. SYMBOLS**

Standard	Concepts and Competencies	Supportive Practices
<b>5.1 K.F</b> <b>Identify significant American holidays and their symbols.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>• Identify images, pictures, songs, poems, or items that are symbols of America (e.g., George Washington, Abraham Lincoln, the Flag, Liberty Bell, Thanksgiving).</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>• Read books that relate to symbols of America and discuss their significance.</li> <li>• Incorporate American holiday celebrations into classroom learning events (e.g., songs, poems, visuals, activities).</li> </ul>

**5.2 RIGHTS AND RESPONSIBILITIES OF CITIZENSHIP**

**A. CIVIC RIGHTS AND RESPONSIBILITIES**

Standard	Concepts and Competencies	Supportive Practices
<b>5.2 K.A</b> <b>Identify responsibilities at school.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>• Demonstrate behavior for learning.</li> <li>• Participate in classroom jobs.</li> <li>• Demonstrate appropriate use of school materials and property.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>• Define the expectations of responsibilities in the classroom in contributing to a positive learning environment.</li> <li>• Model and dialog how to care for classroom and personal materials and their use in learning.</li> <li>• Support students in classroom jobs and responsibilities in contributing to a positive learning environment.</li> </ul>

**B. CONFLICT AND RESOLUTION**

Standard	Concepts and Competencies	Supportive Practices
<b>5.2 K.B</b> <b>Identify a problem and discuss possible solutions.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>• State a problem.</li> <li>• State the cause of a problem.</li> <li>• Suggest solutions for a problem.</li> <li>• Attempt to solve a problem.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>• Provide instruction in conflict resolution strategies.</li> <li>• Provide support in working together to resolve a problem.</li> <li>• Use questions to enhance and expand students’ thinking about problems.</li> <li>• Model problem-solving.</li> <li>• Incorporate literature that supports positive conflict/resolution strategies.</li> </ul>

**C. LEADERSHIP AND PUBLIC SERVICE**

Standard	Concepts and Competencies	Supportive Practices
<p><b>5.2 K.C</b>  <b>Identify classroom projects/activities that support leadership and service.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Participate in leadership opportunities in the classroom and school community.</li> <li>• Accept job responsibilities.</li> <li>• Offer to assist the teacher or peers.</li> <li>• Demonstrate acceptance of others leadership roles.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Provide opportunities for job responsibilities (e.g., classroom, learning project, recess).</li> <li>• Provide opportunities to assist teacher or peers.</li> <li>• Introduce text that discuss the importance of leadership.</li> <li>• Provide support for independent student learning as a model for positive learning climate.</li> </ul>

**D. COMPETENT AND RESPONSIBLE CITIZENS**


Standard	Concepts and Competencies	Supportive Practices
<p><b>5.2 K.D</b>  <b>Explain responsible classroom behavior.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Demonstrate responsible behavior for play and learning to contribute to a positive learning environment.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Encourage participation in cooperative games and play experiences.</li> <li>• Facilitate student interactions to obtain positive outcome.</li> <li>• Model and discuss appropriate actions and words (e.g., during classroom/school events).</li> </ul>

**5.3 HOW GOVERNMENT WORKS**

**B. STRUCTURE, ORGANIZATION, AND OPERATION OF GOVERNMENTS**

Standard	Concepts and Competencies	Supportive Practices
<p><b>5.3 K.B</b>  <b>Identify the role of adults in authority at home or in school.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Identify people of authority within the school community (e.g., principal, teachers, guidance counselor).</li> <li>• Name authority figures at home (e.g., grandmother, father, mother).</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Talk about the role of adults who direct the actions of others in the school community that support their right to learn.</li> <li>• Observe and interact in students’ dramatic play to correct misinterpretations of actions and roles of adults in authority.</li> <li>• Read books about people who support and serve the family and community.</li> <li>• Use materials from an “Anti-Bullying” curriculum to assist students in understanding the difference between “authority” and “authoritarian.”</li> </ul>

**C. GOVERNMENT SERVICES**

Standard	Concepts and Competencies	Supportive Practices
<p><b>5.3 K.C</b>  <b>Identify roles of firefighters, police officers, and emergency workers.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Identify police officers, firefighters, and first responders as people of authority in the community.</li> <li>• Model community workers (e.g., dramatic play, actions, art, or music).</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>•  Invite community workers (e.g., police officers, firefighters, first responders) to visit the classroom.</li> <li>• Observe dramatic play situations to correct misinterpretations of roles.</li> <li>• Provide a variety of texts that highlight local community workers.</li> </ul>

**F. CONFLICT AND THE COURT SYSTEM**

Standard	Concepts and Competencies	Supportive Practices
<p><b>5.3 K.F</b>  <b>Identify and explain behaviors for responsible classroom citizens.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Identify classroom rules and expectations (e.g., of self and others).</li> <li>• Describe acceptable behavior within the classroom (e.g., structured and unstructured situations).</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Verbalize and model expectations of behavior in structured and unstructured situations.</li> <li>• Support instruction of classroom rules and routines.</li> <li>• Model and encourage participation in cooperative games and play.</li> <li>• Use teachable moments to discuss responsibilities and actions.</li> <li>• Support a bully-free class and school.</li> <li>• Support students being up-standers vs. bystanders.</li> </ul>

**5.4 HOW INTERNATIONAL RELATIONSHIPS FUNCTION**

**A. COUNTRIES AND CONFLICTS**

Standard	Concepts and Competencies	Supportive Practices
<p><b>5.4 K.A</b>  <b>Identify conflict in the classroom.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• State a conflict.</li> <li>• Identify the cause of a conflict.</li> <li>• Suggest solutions for a conflict.</li> <li>• Attempt to solve a conflict.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Provide instruction in conflict resolution strategies.</li> <li>• Support students working together to resolve a conflict.</li> <li>• Use questioning strategies to enhance and expand thinking about conflicts.</li> <li>• Model problem-solving dialog throughout the day.</li> <li>• Incorporate literature which supports positive conflict/resolution strategies.</li> </ul>

**B. TOOLS OF FOREIGN POLICY**

Standard	Concepts and Competencies	Supportive Practices
<p><b>5.4 K.B</b>  <b>Identify how students can work together.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Participate in group decision-making and consensus building.</li> <li>• Work cooperatively with peers to achieve an outcome.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Provide opportunities for students to problem-solve.</li> <li>• Provide cooperative learning activities.</li> <li>• Engage students in class meetings and decision-making.</li> <li>• Provide opportunities for students to experience non-routine or non-predictable situations in learning (e.g., having class outside, or in a different location in the building).</li> </ul>



## Economics

**BIG IDEAS:** Money can be used to purchase goods and services, or can be saved. People make choices about how to spend money based on different influences.

**ESSENTIAL QUESTIONS:** How can I use money? What influences the choices I make about spending what I have earned?

### 6.1 SCARCITY AND CHOICE

#### A. SCARCITY AND CHOICE

Standard	Concepts and Competencies	Supportive Practices
<b>6.1 K.A</b> <b>Identify how scarcity influences choice.</b>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Understand that wants cannot be met all the time.</li> <li>Identify resources that are scarce (e.g., time, money, supplies, classroom materials).</li> <li>Participate in discussions on how limited resources influence a personal choice (e.g., not enough money to buy something).</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>Facilitate discussions on how choices can be influenced by scarcity.</li> <li>Provide text on scarcity and choice.</li> <li>Explain how limited choices can lead to conflict.</li> </ul>


#### B. LIMITED RESOURCES

Standard	Concepts and Competencies	Supportive Practices
<b>6.1 K.B</b> <b>Identify family wants and needs.</b>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Distinguish between wants and needs (e.g., own or family).</li> <li>Discuss personal wants and needs.</li> <li>Identify how wants might differ, depending on individual circumstances (e.g., age, location, time of year).</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>Talk about basic items all families need (e.g., food, clothing, shelter).</li> <li>Engage students in conversation about wants.</li> <li>Provide opportunities to identify whether items are wants or needs.</li> <li>Provide text on wants and needs and strategies to obtain them (e.g., books about people who save money to get things they want).</li> </ul>

#### C. OPPORTUNITY COSTS

Standard	Concepts and Competencies	Supportive Practices
<b>6.1 K.C</b> <b>Identify choices to meet needs.</b>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Make a choice to meet a need (e.g., sharpen pencil, use restroom).</li> <li>Describe times when choices were made (e.g., own, classroom, family).</li> <li>Identify choices people make to meet needs.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>Talk about choices people make in everyday life and identify what is given up by making the choice.</li> <li>Engage students in a discussion about how people save, spend, or share their money.</li> <li>Create a mock store within the classroom (e.g., students shop and pay for items).</li> <li>Have students make a choice in a learning environment.</li> </ul>

#### D. INCENTIVES AND CHOICE

Standard	Concepts and Competencies	Supportive Practices
<b>6.1 K.D</b> <b>Identify a choice based on family interest.</b>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Explain why a choice may be necessary. (e.g., wanting two items at the same time but only having enough money to buy one)</li> <li>Identify how preferences influence choice. (e.g., types of food people like influence what they eat)</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li> Provide opportunities for students to make decisions and choices. (e.g., create a token system)</li> <li>Engage students in discussions about times people and families make choices.</li> </ul>

6.2 MARKETS AND ECONOMIC SYSTEMS


A. GOODS AND SERVICES

Standard	Concepts and Competencies	Supportive Practices
<p><b>6.2 K.A</b>  <b>Identify goods and consumers.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Identify and define goods (e.g., classroom or at home).</li> <li>Identify and define consumers (e.g., person who purchases goods and services for personal use).</li> <li>Describe self as a consumer.</li> <li>Identify what goods they consume.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>Provide examples of goods and discuss who consumes each.</li> <li>Support students in listing goods used in the home.</li> <li>Prompt students to identify consumers of specific goods (e.g., carpenters buy nails).</li> <li>Talk about how goods are distributed (e.g., trucks, trains).</li> <li>Provide text that identify goods and consumers.</li> </ul>

C. ADVERTISING AND MEDIA




Standard	Concepts and Competencies	Supportive Practices
<p><b>6.2 K.C</b>  <b>Identify advertisements that encourage us to buy things.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Define an advertisement.</li> <li>State that advertisements encourage us to purchase goods or services.</li> <li>Distinguish advertisements from programing/stories (e.g., magazines, TV, in the environment).</li> <li>Give examples of advertising that is designed to influence the purchase of goods or services.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>Show examples of commercials (e.g., on TV, billboards) that encourage us to purchase things.</li> <li>Provide advertisements from magazines, newspapers, or TV for students to identify.</li> <li>Talk about the purposes of advertisements and encourage students to think about them in terms of wants or needs.</li> <li>Read and discuss text about advertising.</li> <li>Refer to current popular trends in toys or games and identify how advertisements influence the purchase of goods and services.</li> </ul>

D. PRICE DETERMINATION

Standard	Concepts and Competencies	Supportive Practices
<p><b>6.2 K.D</b>  <b>Identify currency and how it is used.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Identify some coins and paper currency as forms of money.</li> <li>Discuss how money is exchanged to pay for goods.</li> <li>Use pretend money or tokens to purchase items.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li> Develop a classroom store where students have the opportunity to make purchases from a selection of items.</li> <li>Discuss how money is the medium of exchange for most goods and services.</li> <li>Explain how currency is valued for trading goods and services.</li> <li>Introduce different coins and paper money and discuss the different values for exchange of goods and services.</li> </ul>

6.3 FUNCTIONS OF GOVERNMENT

D. GOVERNMENT’S ROLE IN INTERNATIONAL TRADE


Standard	Concepts and Competencies	Supportive Practices
<p><b>6.3 K.D</b>  <b>Identify products produced in the region or state.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Identify products produced in the community.</li> <li>Identify products produced in Pennsylvania.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li> Discuss products produced in the community and state.</li> <li>  Provide examples of products produced in the community and state.</li> <li>Discuss why some places produce certain goods and others don't (e.g., Florida is known for citrus while Pennsylvania has apples and Christmas trees).</li> <li>Use digital media to locate locally and regionally-produced items.</li> <li>Identify products used in the classroom and determine where they were produced.</li> </ul>

6.4 ECONOMIC INDEPENDENCE

A. SPECIALIZATION

Standard	Concepts and Competencies	Supportive Practices
<p><b>6.4 K.A</b> Identify the specialized role performed by each member of the family.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Identify family members living at home.</li> <li>Describe family members' roles (e.g., grandmother makes dinner, dad cuts grass).</li> <li>Participate in discussions on family member roles (e.g., current versus past).</li> <li>Describe tasks performed in the home or school community and who performs each.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>Provide text on family members' diverse roles.</li> <li>Facilitate discussions on family members roles (e.g., current versus past).</li> <li>Provide opportunities to visually represent family members and roles.</li> <li>Facilitate discussion to lead students to why tasks are performed by specific people.</li> <li>Dialog with students throughout the school day to indicate how specific people in the school have specialized tasks.</li> </ul>

D. FACTORS CONTRIBUTING TO ECONOMIC INTERDEPENDENCE


Standard	Concepts and Competencies	Supportive Practices
<p><b>6.4 K.D</b> Identify individual wants and needs.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Make connections between the needs and wants of buyers and the choices producers make in meeting them.</li> <li>Identify a want or need people have and describe a new invention or service that would help meet the need.</li> <li>Identify where the goods and services would come from to fulfill the personal list of wants and needs.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li> Connect with literature on meeting wants and needs through production, purchase, or invention.</li> <li>Use cause-and-effect charts to explain how consumer needs and wants influence the production of goods and services.</li> <li>Discuss businesses in the area and why some get more economic activity than others.</li> <li>Dialog with students about wants and needs for a learning task.</li> <li>Identify where the goods or services would come from to meet a want or need.</li> </ul>

6.5 INCOME, PROFIT, AND WEALTH

A. FACTORS INFLUENCING WAGES

Standard	Concepts and Competencies	Supportive Practices
<p><b>6.5 K.A</b> Identify individuals in the community who volunteer.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Identify what a volunteer is (e.g., person who provides a good or service and receives no payment/compensation for doing so).</li> <li>Brainstorm ways people can volunteer (e.g., home, school, community).</li> <li>Volunteer in the classroom and at home.</li> <li>Participate in discussions on the benefits of volunteering (e.g., to both the volunteer and organization).</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>Brainstorm ways people can volunteer (e.g., home, school, community).</li> <li>Provide opportunities to volunteer (e.g., classroom, school).</li> <li>Facilitate discussions on the benefits of volunteering.</li> <li>Invite a familiar organization to talk about volunteering and the benefits to the community (e.g., Salvation Army, Food Bank).</li> </ul>

C. TYPES OF BUSINESSES

Standard	Concepts and Competencies	Supportive Practices
<p><b>6.5 K.C</b> Identify goods and services provided by local businesses.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Identify local businesses within the community.</li> <li>Discuss the types of goods and services provided by the local businesses.</li> <li>Identify a favorite local business and explain why it is a favorite.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li> Provide opportunities to research local businesses and the goods/services provided.</li> <li>Take tour (e.g., real or virtual) of the local community and identify businesses.</li> <li>Compare and contrast local businesses and goods/services provided.</li> <li>Encourage students to identify a favorite local business and support with an explanation.</li> </ul>

## Geography

**BIG IDEA:** Location can be represented using a variety of tools.

**ESSENTIAL QUESTIONS:** What tools help me to understand the location of places and things? How can I represent the location of places and things?

### 7.1 BASIC GEOGRAPHIC LITERACY

#### A. GEOGRAPHIC TOOLS

Standard	Concepts and Competencies	Supportive Practices
<b>7.1 K.A</b> <b>Interpret a simple map of a known environment.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>Identify a map.</li> <li>Identify map as a tool (e.g., gets us from one place to another).</li> <li>Use simple map to get from one location to another.</li> <li>Make maps to represent familiar places (e.g., classroom, school playground, home).</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>Facilitate discussions on maps (e.g., usage, type, purpose).</li> <li>Show examples of maps (e.g., electronic and real).</li> <li>Provide opportunities to use a simple map to get from one location to another.</li> <li>Create scavenger hunts with map-based clues.</li> <li>Provide materials and samples for students to create maps independently.</li> <li>Provide a variety of texts that show maps.</li> </ul>

#### B. LOCATION OF PLACES AND REGIONS

Standard	Concepts and Competencies	Supportive Practices
<b>7.1 K.B</b> <b>Describe the location of places in the home, school, and community to gain an understanding of relative location.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>State their address.</li> <li>Know that an address is an example of relative location.</li> <li>Describe items in the classroom using appropriate vocabulary (e.g., the sink is next to the door).</li> <li>Demonstrate understanding of relative location by using appropriate vocabulary (e.g., over, under, near, far, left, right) to orally describe locations of items in the classroom.</li> <li>Locate places around the school and describe their relative location.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>Explain an address gives information on an exact location.</li> <li>Model labeling of exact locations and why they have a label (e.g., cafeteria, gym, hallway, office, book rack, art shelves).</li> <li>Provide opportunities for students to place objects in appropriate locations (e.g., paint in the art supply closet, food in a kitchen).</li> <li>Provide opportunities to locate objects (e.g., classroom, school) to reinforce relative location.</li> <li>Model vocabulary (e.g., over, under, near, far, left, right) while locating examples within classroom.</li> <li>Take a walking tour of the school and model vocabulary (e.g., over, under, near, far, left, right) while locating items within the school.</li> <li>Reinforce relative location by using vocabulary to describe places around the community.</li> </ul>





**7.2 PHYSICAL CHARACTERISTICS OF PLACES AND REGIONS**

**A. PHYSICAL CHARACTERISTICS**

Standard	Concepts and Competencies	Supportive Practices
<p><b>7.2 K.A</b> Describe the characteristics of homes and businesses located in the community to gain an understanding of physical features.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Identify physical characteristics of places that shape the community (e.g., church, post office, hospital, police station, fire station, restaurant, school).</li> <li>Identify different types of homes found in the community.</li> <li>Identify physical characteristics of the town (e.g., photographs).</li> <li>Compare and contrast home with other homes found in the United States.</li> <li>Create representations of places using drawing, clay, cardboard.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>Describe how what is seen in the landscape gives clues for how the area is used by the community (e.g., stream, flagpole, church, trees).</li> <li>Show photographs of physical characteristics found in the community (e.g., buildings, roads, and landforms).</li> <li>Use areas of the classroom to demonstrate understanding of physical features (e.g., coats, boots, and hats—give clues it is a closet or locker; books on the shelf—give clues that it is a library).</li> <li>Take a walking field trip around the school and/or local community and identify physical features.</li> <li>Read fiction and/or nonfiction books that have pictures of physical characteristics (e.g., local, state).</li> </ul>

**B. PHYSICAL PROCESSES**

Standard	Concepts and Competencies	Supportive Practices
<p><b>7.2 K.B</b> Identify land and water forms.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Identify land forms (e.g., mountain, plain).</li> <li>Identify water forms (e.g., river, stream, ocean).</li> <li>Sort pictures of land and water forms.</li> <li>Make a collage of land and water forms.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>Introduce and display physical characteristics of places with an emphasis on new vocabulary (e.g., mountain, plain, river, stream, lake, ocean).</li> <li>Read stories with physical characteristics in the setting.</li> </ul>

**7.3 HUMAN CHARACTERISTICS OF PLACES AND REGIONS**

**A. HUMAN CHARACTERISTICS**

Standard	Concepts and Competencies	Supportive Practices
<p><b>7.3 K.A</b> Describe how weather affects daily life.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Explain what people do or wear in different types of seasons.</li> <li>Participate in discussions on how weather may inconvenience people (e.g., snow—driving; extreme heat—outdoor play).</li> <li>Discuss how temperature change is related to seasonal change.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>Read fiction and nonfiction books that depict each of the seasons.</li> <li>Provide activities that support understanding of each season.</li> <li>Identify and discuss various weather conditions.</li> <li>Provide seasonal clothing and props for dramatic expression.</li> </ul>

**7.4 INTERACTIONS BETWEEN PEOPLE AND THE ENVIRONMENT**

**A. IMPACT OF PHYSICAL SYSTEMS ON PEOPLE**

Standard	Concepts and Competencies	Supportive Practices
<p><b>7.4 K.A</b> Identify local bodies of water and landforms to gain an understanding of their impact on the local community.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Describe how they interact with the physical characteristics of the town or neighborhood (e.g., park—recreation; stream—fishing; mountains/forests—hiking, trails—biking, walking).</li> <li>Identify various areas in the community as places where people live, work, and play because of the physical features.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>Display photographs of people interacting with physical characteristics of the town or neighborhood.</li> <li>Explain how physical features determine how people interact with place (e.g., where there are bridges or curves in the highway, where cities are built, where the parks are located).</li> </ul>

# History

**BIG IDEA:** Past experiences and ideas help us make sense of the world.

**ESSENTIAL QUESTIONS:** In what ways can events be sequenced? How do I use past experiences and events to understand the present?

## 8.1 HISTORICAL ANALYSIS AND SKILLS DEVELOPMENT


### A. CONTINUITY AND CHANGE OVER TIME

Standard	Concepts and Competencies	Supportive Practices
<b>8.1 K.A</b> <b>Identify chronological sequence through days, weeks, months, and years (calendar time).</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>Use the classroom calendar to demonstrate understanding of yesterday, today, and tomorrow.</li> <li>Sequence a series of events either from personal experience or from literature.</li> <li>Create a personal timeline (e.g., birth to present).</li> <li>Practice past, present, and future time (e.g., daily weather recording).</li> <li>Role-play characters with events occurring over a period of time.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>Provide opportunities for grandparents and senior citizens to visit the classroom to provide “living history.”</li> <li>Provide photographs or artifacts of classroom events for sequencing.</li> <li>Practice past, present, and future time with a classroom calendar.</li> <li>Create a classroom memory book in chronological order with student narratives, artifacts, pictures, etc.</li> </ul>

### B. FACT/OPINION AND POINTS OF VIEW

Standard	Concepts and Competencies	Supportive Practices
<b>8.1 K.B</b> <b>With guidance and support, differentiate facts from opinions as related to an event.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>Identify facts and opinions related to given examples or real-life events (e.g., classroom or school).</li> <li>Give examples of a fact and opinion.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>As events occur in the classroom, identify examples as fact and opinion.</li> <li>As students communicate experiences, use as a learning opportunity to identify if the communication is a fact or opinion.</li> <li>Provide current examples to lead a discussion on what is a fact, and what is an opinion.</li> <li>Give examples from history and decide what is fact and opinion about each event (e.g., George Washington was the first president versus George Washington was a great president).</li> </ul>

### C. RESEARCH

Standard	Concepts and Competencies	Supportive Practices
<b>8.1 K.C</b> <b>Explain how to locate information in a source.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>Use books, computers, and other sources to get information about a topic.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li> Model locating information (e.g., going to the library, looking in books, computer).</li> <li>Provide opportunities to locate information.</li> <li>Provide multimedia information about a theme.</li> </ul>

## 8.2 PENNSYLVANIA HISTORY

### A. CONTRIBUTIONS OF INDIVIDUALS AND GROUPS (PA)

Standard	Concepts and Competencies	Supportive Practices
<b>8.2 K.A</b> <b>Identify people in authority.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>Identify authority figures in the school.</li> <li>Identify authority figures in the community.</li> <li>Identify authority figures in the state.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>Provide explanations and examples of levels of authority with in the school community.</li> <li>Provide explanations and examples of how the levels of authority support the right to learn.</li> <li>Provide text on authority figures.</li> </ul>

**B. HISTORICAL DOCUMENTS, ARTIFACTS, AND PLACES (PA)**

Standard	Concepts and Competencies	Supportive Practices
<p><b>8.2 K.B</b>                      Examine photographs of documents, artifacts, and places unique to Pennsylvania.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Identify major cities in Pennsylvania.</li> <li>• Identify major attractions in Pennsylvania.</li> <li>• Identify landforms in Pennsylvania.</li> <li>• Identify and collect artifacts, documents, photographs or items from events to create a memory box/book.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Identify and discuss the state’s major cities (e.g., map, photographs, virtually).</li> <li>• Provide information (e.g., pictures, brochures) of major attractions and landforms in Pennsylvania.</li> <li>• Collect and display photographs, artifacts, documents, and items from events in the classroom or community.</li> <li>• Explain how the collection of items from events in the classroom or community documents the history of the class over time.</li> </ul>

**D. CONFLICT AND COOPERATION (PA)**

Standard	Concepts and Competencies	Supportive Practices
<p><b>8.2 K.D</b>                      Demonstrate an understanding of conflict.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• State a conflict.</li> <li>• State the cause of a conflict.</li> <li>• Suggest solutions for a conflict.</li> <li>• Attempt to solve a conflict.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Facilitate discussions on recognizing conflict.</li> <li>• Provide instruction in conflict resolution strategies.</li> <li>• Provide support as students work together to resolve a conflict.</li> <li>• Use questions to enhance and expand children’s thinking about conflict.</li> </ul>

**8.3 UNITED STATES HISTORY**

**A. CONTRIBUTIONS OF INDIVIDUALS AND GROUPS (U.S.)**

Standard	Concepts and Competencies	Supportive Practices
<p><b>8.3 K.A</b>                      Identify American people related to national holidays.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Identify people associated with federal holidays celebrated in the classroom and the school community.</li> <li>• Identify presidents on President’s Day.</li> <li>• Discuss Martin Luther King on Martin Luther King Day.</li> <li>• Discuss Christopher Columbus on Columbus Day.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Facilitate discussions on key American figures (e.g., why each is unique, contribution).</li> <li>• Provide text on key American figures.</li> </ul>

**B. HISTORICAL DOCUMENTS, ARTIFACTS, AND PLACES (U.S.)**

Standard	Concepts and Competencies	Supportive Practices
<p><b>8.3 K.B</b>                      Identify documents and artifacts important to the classroom community.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Identify documents used to guide the procedures of the classroom community (e.g., rule chart, attendance, calendar).</li> <li>• Discuss why these documents are important.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Facilitate activities to discover how each document (e.g., rule chart, attendance, calendar, etc.) is important for the success of the classroom.</li> <li>• Discuss what the day would be like without certain documents in the classroom.</li> <li>• Throughout the day note the documents for students to be aware of their importance in the procedures of the class routine.</li> <li>• Incorporate literature which supports or examines museums, memorabilia, and their importance to triggering memories.</li> </ul>

**C. IMPACT OF CONTINUITY AND CHANGE ON U.S. HISTORY**

Standard	Concepts and Competencies	Supportive Practices
<p><b>8.3 K.C</b>  <b>Demonstrate an understanding of time order.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Put given events in sequential order (e.g., first, second, third).</li> <li>Follow given directions and complete tasks in sequential order.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>Dialog with students concerning events that happen over time.</li> <li>Provide daily events for the students to put in order.</li> <li>Provide a task with sequential directions for the students to complete.</li> <li>At end of an event, day, week, grading period review the order of events and occurrences that happened in the school or classroom community.</li> <li>Incorporate literature which supports continuity and change over time.</li> </ul>

**8.4 WORLD HISTORY**

**A. CONTRIBUTIONS OF INDIVIDUALS AND GROUPS (WORLD)**

Standard	Concepts and Competencies	Supportive Practices
<p><b>8.4 K.A</b>  <b>Explain how cultures celebrate.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Identify and discuss own method of celebrating (e.g., birthday, holidays).</li> <li>Compare and contrast methods of celebrating with peers.</li> <li>Use digital media to explore ways various cultures celebrate (e.g., birthday, holidays).</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>Celebrate student success in the classroom.</li> <li>Provide a variety of ways and reasons to celebrate using various cultural models.</li> <li>Model use of digital media to explore various cultural celebrations.</li> <li>Discuss own methods of celebrating (e.g., birthday, holidays).</li> <li>Provide opportunities to compare and contrast methods of celebration.</li> </ul>

**C. IMPACT OF CONTINUITY AND CHANGE ON WORLD HISTORY**

Standard	Concepts and Competencies	Supportive Practices
<p><b>8.4 K.C</b>  <b>Identify different celebrations of different cultures from around the world.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>Identify common cultural celebrations.</li> <li>Discuss relevant cultural celebrations of peers and why it is a celebration.</li> <li>Compare and contrast celebrations from around the world.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>Identify and discuss how various groups and individuals celebrate success and events.</li> <li>Model use of digital media to explore various celebrations from around the nation.</li> <li>Provide literature that supports celebrations from around the world.</li> </ul>

**D. CONFLICT AND COOPERATION (WORLD)**

Standard	Concepts and Competencies	Supportive Practices
<p><b>8.4 K.D</b>  <b>Demonstrate an understanding of conflict and cooperation.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>State a conflict.</li> <li>State the cause of a conflict.</li> <li>Suggest solutions for a conflict.</li> <li>Attempt to solve a conflict.</li> <li>Brainstorm ways to cooperate in the classroom.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>Facilitate discussions on recognizing conflict.</li> <li>Provide instruction in conflict resolution strategies.</li> <li>Provide support as students work together to resolve a conflict.</li> <li>Use questions to enhance and expand children’s thinking about conflict.</li> <li>Discuss ways to cooperate in the classroom.</li> </ul>

# Social Studies Thinking Glossary

## CIVICS AND GOVERNMENT

**Authority**—Right to control or direct the actions of others, legitimized by law, morality, custom, or consent.

**Citizen**—Member of a political society who therefore owes allegiance to and is entitled to protection by and from the government.

**Civic Rights**—The rights belonging to an individual by virtue of citizenship.

**Community**—A group of people who share a common social, historical, regional, or cultural heritage.

**Conflict**—Inherent incompatibility between two or more people or two or more choices.

**Conflict Resolution**—Process by which issues arising from a disagreement or clash between ideas, principles, or people are settled.

**Country**—The acceptable political boundaries or borders recognized throughout the world.

**Decision-Making Process**—An organized approach to making choices.

**Government**—Institutions and procedures through which a territory and its people are ruled.

**Law**—The system of rules that a particular country or community recognizes as regulating the actions of its members.

**Leadership**—State or condition of one who guides or governs.

**Public Service**—Community service; a service that is performed for the benefit of the public.

**State**—A commonwealth; a nation; a civil power.

## ECONOMICS

**Community Helpers**—Any group or individual who plays a role in the community such as doctors, nurses, dentists, teachers, parents, firefighters, police officers, trash collectors, animal control officers.

**Competition**—The rivalry among people and/or business firms for resources and/or consumers.

**Consumer**—One who buys or rents goods or services and uses them.

**Cost**—What is given up when a choice is made; monetary and/or non-monetary.

**Demand**—The different quantities of a resource, good, or service that potential buyers are willing and able to purchase at various prices during a specific time period.

**Goods**—Objects that can satisfy people's wants.

**Household**—The group of people living together under one roof; a group of individuals whose economic decision-making is interrelated.

**Money**—A medium of exchange.

**Natural Resource**—Anything found in nature that can be used to produce a product (e.g., land, water, coal).

**Price**—The amount people pay in exchange for a particular good or service.

**Producer**—One who makes goods.

**Profit**—Total revenue minus total costs.

**Scarcity**—A small and inadequate amount.

**Services**—Actions that are valued by others.

**Supply**—The different quantities of a resource, good, or service that potential sellers are willing and able to sell at various prices during a specific time period.

**Wage**—A fixed regular payment, typically paid on a daily or weekly basis by an employer.

**Wants**—Desires that can be satisfied by consuming goods, services, or leisure activities.

## GEOGRAPHY

**Climate**—Long-term patterns and trends in weather elements and atmospheric conditions.

**Culture**—The way of life of a group of people, including customs, beliefs, arts, institutions, and worldview. Culture is acquired through many means and is always changing.

**Environment**—Everything in and on earth's surface and its atmosphere within which organisms, communities, or objects exist.

**Geographic Tools**—Tools used by geographers to organize and interpret information. Tools range from the very simple (maps and globes) to the complex (Geographic Information Systems, population pyramids, satellite images, and climate graphs).

**Place**—An area with distinctive human and physical characteristics; these characteristics give it meaning and character and distinguish it from other areas.

**Resource**—An aspect of the physical environment that people value and use to meet a need for fuel, food, industrial product, or something else of value.

## HISTORY

**Document**—A formal piece of writing that provides information or acts as a record of events or arrangements.

**Media Sources**—Various forms of mass communication such as television, radio, magazines, newspapers, and Internet.

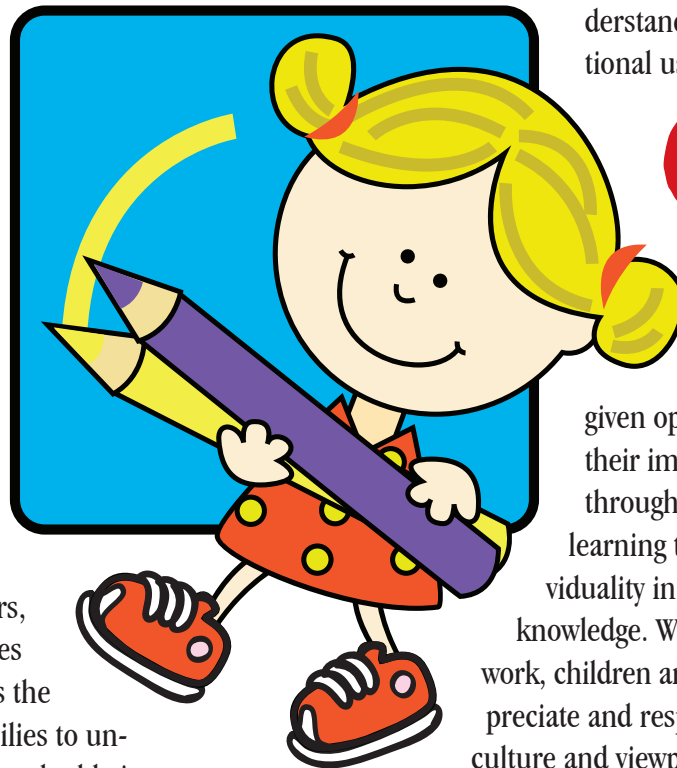
# Creative Thinking and Expression

## Communicating through the Arts

- 9.1.M Production and Performance – Music and Movement
- 9.1.D Production and Performance – Dramatic and Performance Play
- 9.1.V Production and Performance – Visual Arts
- 9.2 Historical and Cultural Context of Works of Art
- 9.3 Critical Response to Works of Art
- 9.4 Aesthetic Response to Works of Art

### Digital Media Literacy

**M**edia literacy includes competencies that enable people to analyze, evaluate, and create messages in a variety of forms. Children today are growing up in a digital age and are faced with increasingly new types of digital media and technology. Some current examples include electronic tablets, computers, digital cameras, video recorders, and a variety of assistive technologies for children with special needs. It is the responsibility of educators and families to understand that digital media can be a valuable instructional tool when used appropriately. Appropriate media use should not replace concrete experiences and personal interactions, but can be used to extend play and interactions. For example, use of video conferences can be used during the school day to connect a parent with his/her child. Educators and families are encouraged to engage in professional development opportunities to un-



derstand the role and instructional uses of digital media.

**C**reative thinking and expression is an important component of children's early learning experiences. Children who are given opportunities to develop their imagination and creativity through a variety of media are learning to express their individuality in interests, abilities, and knowledge. When they view others' work, children are also learning to appreciate and respect differences in culture and viewpoint. Creative expression influences children's growing competence as creative problem-solvers and provides insight about their world around them. Teachers support creative learning by providing concrete, process-oriented play experiences that encourage children to use their imagination and to experiment with new ideas and materials.

## 9.1.M Production and Performance – Music and Movement

**BIG IDEA:** Music can be used to express and initiate aesthetic and physical responses.

**ESSENTIAL QUESTION:** How can I express my thoughts, feelings, and ideas through music and movement?


### A. ELEMENTS AND PRINCIPLES

Standard	Concepts and Competencies	Supportive Practices
<b>9.1.M K.A</b> <b>Know and use basic elements and principles of music and movement.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>Practice rhythms in different forms of music and dance.</li> <li>Explore rhythm instruments.</li> <li>Participate in music and movement activities.</li> <li>Participate in group movement activities demonstrating an awareness of shared space.</li> <li>Demonstrate an understanding of “fast,” “slow,” “loud,” and “soft.”</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>Explicitly use vocabulary for elements and principles of music and movement (e.g., rhythm, space, tempo, pitch).</li> <li>Model appropriate use of instruments.</li> <li>Call attention to the changes in music as students are listening.</li> <li>Provide experiences through large and small group activities that focus on movement elements and principles.</li> <li>Include music vocabulary (e.g., high/low, up/down, fast/slow, short/long).</li> </ul>


### B. DEMONSTRATION

Standard	Concepts and Competencies	Supportive Practices
<b>9.1.M K.B</b> <b>Respond to different types of music and dance through participation and discussion.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>Participate in music and movement activities.</li> <li>Sing familiar songs, chants, and finger plays.</li> <li>Express self through movement while listening to different types of music.</li> <li>Discuss music and movement experiences.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>Provide time, space and materials for exploration of music and movement.</li> <li>Play a variety of music types for listening and participation.</li> <li>Introduce students to a variety of songs, finger plays, and rhythms.</li> <li>Encourage students to discuss experiences.</li> <li>Provide large and small group activities that focus on movement and music participation.</li> </ul>

### E. REPRESENTATION

Standard	Concepts and Competencies	Supportive Practices
<b>9.1.M K.E</b> <b>Use imagination and creativity to express self through music and dance.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>Initiate music and movement activities.</li> <li>Improvise songs and rhythmic patterns.</li> <li>Change words or tune of familiar songs to make new songs.</li> <li>Use body to represent form in space, finger plays, or stories.</li> <li>Use imagination and creativity to design and perform music and dance.</li> <li>Work with partner or others to represent form in space.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li> Create opportunities to express through a variety of music forms, dance, or body movements.</li> <li>Provide time, space, and materials for exploration of music and movement.</li> <li>Encourage students to be creative during singing by changing words and song endings.</li> <li>Use finger plays and stories that students can represent using their bodies.</li> <li>Provide props to use when dancing (e.g., ribbons, hoops, sticks).</li> <li>Demonstrate movement using time, space, and locomotion.</li> <li>Provide various objects that can be used to represent sound (e.g., wooden bowls, metal spoons).</li> </ul>

J. TECHNOLOGIES

Standard	Concepts and Competencies	Supportive Practices
<p><b>9.1.M K.J</b> Use a variety of technologies for producing or performing works of art.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Explore musical instruments.</li> <li>• Use instruments to accompany music.</li> <li>• Use instruments to demonstrate the melody of a song.</li> <li>• Use age-appropriate digital media applications to create music.</li> <li>• Use a variety of props to enhance movement activities (e.g., scarves, beanbags, ribbons).</li> <li>• Use recording devices (e.g., voice recorder, video recorder) to capture music and/or movement performances.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>•  Provide guidance during digital media application exploration.</li> <li>• Provide opportunities to explore a variety of musical instruments.</li> <li>• Provide a variety of props for musical expression and movement.</li> <li>• Model examples of works of art that use technology.</li> <li>• Offer constructive feedback as needed.</li> <li>• Engage a local expert (e.g., high school music students, college professors, musicians, dance instructors) as a guest speaker.</li> </ul>

9.1.D Production and Performance – Dramatic and Performance Play



**BIG IDEA:** Dramatic and performance play is a way to act out reality and fantasy.

**ESSENTIAL QUESTION:** How can I express my thoughts, feelings, and ideas through dramatic play?

B. DEMONSTRATION

Standard	Concepts and Competencies	Supportive Practices
<p><b>9.1.D K.B</b> Recreate a dramatic play experience for an audience.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Create various voice inflections and facial expressions in play.</li> <li>• Change voice inflections when recreating various characters.</li> <li>• Direct peers or follow peers' instructions about dramatic play schemes.</li> <li>• Act out stories with guidance of the adult.</li> <li>• Use vocabulary to discuss play activities (e.g., character, role, setting, story).</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Discuss and model appropriate audience behavior.</li> <li>• Provide props and costumes associated with favorite stories.</li> <li>• Participate in dramatic play events as the audience, providing constructive feedback.</li> <li>• Provide opportunities for dramatic activities (e.g., acting out a story, performing a short play for a special event).</li> <li>• Use appropriate vocabulary as students create plays and performances.</li> </ul>

E. REPRESENTATION

Standard	Concepts and Competencies	Supportive Practices
<p><b>9.1.D K.E</b> Use imagination and creativity to express self through dramatic play.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Use nonconforming objects to create representations of real life objects or activities.</li> <li>• Represent fantasy and real-life experiences through pretend play.</li> <li>• Imitate roles of people, animals, or objects observed in life experiences.</li> <li>• Use props and costumes during dramatic play.</li> <li>• Create props from available materials.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>•  Create situations where students can role-play familiar roles or situations (e.g., home living, grocery store, restaurants).</li> <li>•  Ask open-ended questions to extend student's play in new directions.</li> <li>• Provide dramatic play opportunities both inside and outside.</li> <li>• Provide clothing, materials, and props that facilitate pretend play.</li> </ul>



## 9.1.V Production and Performance – Visual Arts

**BIG IDEA:** Visual arts allow expression of interests, abilities, and knowledge.

**ESSENTIAL QUESTION:** How can I express my thoughts, feelings, and ideas through visual arts?

### A. ELEMENTS AND PRINCIPLES

Standard	Concepts and Competencies	Supportive Practices
<b>9.1.V K.A</b> <b>Know and use basic elements of visual arts.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>• Participate in visual arts activities.</li> <li>• Choose art center during free choice.</li> <li>• Demonstrate an understanding of “color,” “shape,” and “line.”</li> <li>• Create a work of art using different media and materials.</li> <li>• Use paints to create new shades and colors.</li> <li>• Begin using detail when creating a work of art.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>• Explicitly use vocabulary for elements of visual arts (e.g., color, shape, line).</li> <li>• Make a variety of art materials accessible throughout the day.</li> <li>• Model appropriate use of art materials.</li> <li>• Point out basic elements of visual arts in a variety of artworks.</li> <li>• Provide experiences through large and small group activities that focus on the elements of visual arts.</li> <li>• Provide examples of works of art that demonstrate the progression of detail (e.g., one color and little detail to multi-color and greater detail).</li> </ul>


### B. DEMONSTRATION

Standard	Concepts and Competencies	Supportive Practices
<b>9.1.V K.B</b> <b>Combine a variety of materials to create a work of art.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>• Participate in visual arts activities.</li> <li>• Choose art center during free choice.</li> <li>• Use a variety of materials. (e.g., chalk, paint, crayons, pencils, markers, wood, playdough)</li> <li>• Draw to explore and extend themes in the classroom.</li> <li>• Create simple sculptures using clay and various tools to create texture</li> <li>• Use paints to create new shades and colors.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>• Make a variety of art materials accessible to students throughout the day.</li> <li>• Rotate art materials to provide a variety of experiences.</li> <li>• Include art experiences in cross-curricular activities.</li> <li>• Provide opportunities to use three-dimensional materials (e.g., clay, playdough, wood).</li> <li>• Allow for individual or group projects to extend over several days.</li> <li>• Display students’ artwork.</li> </ul>

### E. REPRESENTATION

Standard	Concepts and Competencies	Supportive Practices
<b>9.1.V K.E</b> <b>Use imagination and creativity to express self through visual arts.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>• Participate in visual arts activities.</li> <li>• Draw self-portraits.</li> <li>• Create a work of art to represent a real or imagined object, animal, or person.</li> <li>• Use a growing number of details and make more realistic representations.</li> <li>• Choose different art materials to represent different types of thoughts or feelings.</li> <li>• Create pictures that define mood.</li> <li>• Recognize and discuss own and others’ artwork using appropriate vocabulary (e.g., color, shape, line and texture).</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>• Allow for individual or group projects to extend over several days.</li> <li>• Include art experiences in cross-curricular activities.</li> <li>• Provide a variety of art materials.</li> <li>• Rotate art materials to provide a variety of experiences.</li> <li>• Provide multicultural art materials for use in self-representation.</li> <li>• Encourage students to use materials for individual expression of feelings or thoughts.</li> <li>• Encourage students to talk about their artwork.</li> <li>• Display students’ artwork.</li> </ul>

J. TECHNOLOGIES

Standard	Concepts and Competencies	Supportive Practices
<p><b>9.1.V K.J</b> Use a variety of technologies for producing works of art.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Explore a variety of art materials and tools.</li> <li>• Participate in visual arts activities.</li> <li>• Manipulate materials in a variety of ways (e.g., pounding, squeezing, cutting, rolling).</li> <li>• Use age-appropriate digital media applications to create works of art.</li> <li>• Use recording devices (e.g., digital camera, video recorder) to capture work in progress and finished work of art.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>•  Use recording devices (e.g., digital camera, video recorder) to capture and share the creative process and finished works of art.</li> <li>• Provide a variety of art materials.</li> <li>• Rotate art materials to provide a variety of experiences.</li> <li>• Guide students use of digital media applications.</li> <li>• Engage a local expert (e.g., artist, sculptor, museum curator) as a guest speaker.</li> <li>• Take a virtual field trip to explore works of art (e.g., museum, artist in action).</li> </ul>

9.2 Historical and Cultural Context of Works of Art

**BIG IDEA:** Every culture has its own art forms.

**ESSENTIAL QUESTION:** Can I identify instruments and/or art forms from another culture?

D. PERSPECTIVE

Standard	Concepts and Competencies	Supportive Practices
<p><b>9.2 K.D</b> Explain that instruments or art forms represent cultural perspectives.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Explore instruments from different cultures.</li> <li>• Participate in discussions about where various instruments and art forms originate.</li> <li>• Identify cultures represented by various art forms.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Provide opportunities to explore instruments from different cultures (e.g., real or virtual).</li> <li>• Display works of art from a variety of cultures.</li> <li>• Share a variety of music and movement forms, explicitly using appropriate vocabulary to label the forms (e.g., jazz, classical, hip-hop, folk).</li> <li>• Play many types of music.</li> <li>• Discuss the cultures represented by art forms and instruments (e.g., hieroglyphics—Egyptian; maracas—Spanish).</li> <li>• Read books about a variety of cultures, pointing out similarities and differences in art forms.</li> </ul>

9.3 Critical Response to Works of Art

**BIG IDEA:** People evaluate art based upon a variety of characteristics.

**ESSENTIAL QUESTIONS:** Can I explain how I feel about a particular art form? Can I provide reasons that explain my feelings about a particular art form?

F. IDENTIFICATION

Standard	Concepts and Competencies	Supportive Practices
<p><b>9.3 K.F</b> Recognize and name a variety of art forms.</p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Identify a variety of art (e.g., photo, painting, drawing, sculpture).</li> <li>• Name music type using age-appropriate vocabulary (e.g., drumming, singing).</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Provide exposure to a variety of art forms.</li> <li>• Display students' and professional art throughout the classroom.</li> <li>• Discuss the various types and characteristics of art forms (e.g., photography, painting, dance, performance).</li> <li>• Take a virtual field trip to explore works of art (e.g., museum, artist in action).</li> </ul>

G. CRITICAL RESPONSE

Standard	Concepts and Competencies	Supportive Practices
<p><b>9.3 K.G</b>  <b>Formulate and share an opinion about one’s own work and that of others.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Observe, applaud, or comment on the works of others.</li> <li>• Share an opinion about artwork when asked.</li> <li>• Show respect for the response of others to a work of art.</li> <li>• Make comparative statements. (e.g., “I used color just like ...” “I can tap dance like ...”)</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Provide opportunities to work on creative activities in groups or individually.</li> <li>• Model and encourage students to comment on others’ work.</li> <li>• Provide opportunities to explore increasingly more complex art forms throughout the year.</li> <li>• Use appropriate vocabulary when discussing art (e.g., volume, rhythm, line, color, characters, action).</li> </ul>

9.4 Aesthetic Response to Works of Art

**BIG IDEA:** Artwork can mean different things to different people.  
**ESSENTIAL QUESTION:** How do I express my response to a work of art?

B. EMOTIONAL RESPONSE

Standard	Concepts and Competencies	Supportive Practices
<p><b>9.4 K.B</b>  <b>Demonstrate an emotional response to viewing or creating various works of art.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Respond through body language, facial expression, or oral language (e.g., humming, swaying, tapping foot).</li> <li>• Respond (e.g., laugh, sigh) at appropriate times at others’ performance.</li> <li>• Respond to works of art by vocalizing feelings (e.g., “This makes me feel happy because ...” “This makes me feel sad because ...”).</li> <li>• Respond to dramatic performances by vocalizing feelings about characters and actions.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Ask students how works of art (e.g., artwork, music, movement) make them feel.</li> <li>• Display students’ and professional art throughout the classroom.</li> <li>• Provide a wide variety of art materials.</li> <li>• Provide a wide variety of music and movement materials.</li> <li>• Provide a wide variety of dramatic and performance play materials.</li> </ul>



# Creative Thinking and Expression Glossary

**Aesthetics**—A branch of philosophy that focuses on the nature of beauty, the nature and value of the arts, and the inquiry processes and human responses they produce.

**Aesthetic Response**—A philosophical reply to works of art.

**Artistic Choices**—Selections made by artists to convey meaning.

**Arts Resource**—An outside community asset (e.g., performances, exhibitions, performers, artists).

**Assess**—To analyze and determine the nature and quality of the process/product through means appropriate to the art form.

**Community**—A group of people who share a common social, historical, regional, or cultural heritage.

**Create**—To produce works of art using materials, techniques, processes, elements, principles, and analysis.

**Culture**—The way of life of a particular social, ethnic, or age group of people which includes beliefs, customs, arts, and behaviors.

**Elements**—Core components that support the principles of the arts.

**Genre**—A type of category (e.g., music—opera, oratorio; theater—tragedy, comedy; dance—modern, ballet; visual arts—pastoral, scenes of everyday life).

**Humanities**—The branch of learning that connects the fine arts, literature, languages, philosophy and cultural science. The humanities are concerned with the understanding and integration of human thought and accomplishment.

**Multimedia**—The combined use of media, such as movies, CD-ROMs, television, radio, print, and the Internet, for entertainment and publicity.

**Original Works of Art**—Dance, music, theatre, and visual arts pieces created by performing or visual artists.

**Style**—A distinctive or characteristic manner or expression.

**Technique**—Specific skills and details employed by an artist, craftsman, or performer in the production of works of art.

**Timbre**—A unique quality of sound.

**Visual Arts**—Art forms which are primarily visual in nature, such as ceramics, drawing, painting, sculpture.



# Health, Wellness, and Physical Development

## Learning about My Body

10.1 Concepts of Health

10.2 Healthful Living

10.3 Safety and Injury Prevention

10.4 Physical Activity – Gross Motor Coordination

10.5 Concepts, Principles, and Strategies of Movement – Fine Motor Coordination

### Get Up and Move!



Obesity is a growing concern even for very young children. Research indicates that even children are eating inappropriate foods with too many calories. Early childhood settings have a unique opportunity to influence children's healthy

eating and physical activity habits. Teachers need to plan adequate opportunities for children to exercise and engage in movement activities including outdoor play. Including active movement games and songs as part of the indoor routine can also extend the amount of time children are exercising each day. Menus must be carefully planned that offer healthy foods and limit snacks



and extras, like dessert, to nutritionally-appropriate selections. Adults should work together to introduce and sustain healthy choices and habits influence children's ongoing development and school success.

**T**eachers should model healthy and safe practices and promote

healthy lifestyles for children. In addition, opportunities to experience active indoor and outdoor play in which children use their bodies provide a foundation for lifelong healthy habits. Children's health, safety, and ability to learn are inextricably linked. Health and safety activities, integrated throughout the day, provide a means to support children's cognition.

## 10.1 Concepts of Health

**BIG IDEA:** Awareness of health concepts provides a foundation for healthy decision-making.

**ESSENTIAL QUESTIONS:** Do I have a basic understanding of my body? Can I identify basic health concepts that help my body develop?

### B. INTERACTION OF BODY SYSTEMS

Standard	Concepts and Competencies	Supportive Practices
<b>10.1 K.B</b> <b>Identify and describe function of basic body parts and organs.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>Name and point to specific body parts and organs when asked.</li> <li>Describe the basic functions of body organs (e.g., heart pumps blood).</li> <li>Participate in body identification games and songs (e.g., Hokey Pokey).</li> <li>Draw pictures that include some body parts and organs.</li> <li>Participate in discussions about the functions of specific body parts.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>Provide informational text that review basic body organs and their functions.</li> <li>Make outlines of body and add details to body parts.</li> <li>Provide experiences that highlight the functions of body parts (e.g., add turkey baster to water table and discuss how a heart pumps).</li> </ul>

### C. NUTRITION

Standard	Concepts and Competencies	Supportive Practices
<b>10.1 K.C</b> <b>Identify foods that keep our bodies healthy.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>Identify healthy and unhealthy foods.</li> <li>Classify foods by their food groups (e.g., fruits, vegetables, dairy).</li> <li>Make healthy food choices.</li> <li>Classify food as nutritious.</li> <li>Identify foods to include in specific food groups.</li> <li>Design a meal using foods from several food groups.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>Provide a variety of healthy choices at snack or meal time.</li> <li>Create a healthy/not healthy picture sort game.</li> <li>Label storage bins in dramatic play area by food group classification (encourage food classification).</li> <li>Discuss the importance of making healthy food choices.</li> <li>Model healthy eating.</li> <li>Provide cross-curricular activities that include nutrition topics.</li> <li>Display <i>MyPlate</i> graphic near eating area to encourage healthy portioning of food.</li> <li>Provide examples of healthy meals.</li> </ul>

### D. ALCOHOL, TOBACCO, AND CHEMICAL SUBSTANCES

Standard	Concepts and Competencies	Supportive Practices
<b>10.1 K.D</b> <b>Distinguish between healthy and unhealthy behaviors.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>Describe healthy behaviors.</li> <li>Identify unhealthy behaviors (e.g., smoking).</li> <li>Participate in discussions on times when medicine is needed versus misuse of medication.</li> <li>Participate in discussions on safety practices related to proper medicine use and storage (e.g., out of reach, locked cabinet, refrigerator).</li> <li>Demonstrate how to say “No” to drugs.</li> <li>Identify trusted adults who can give medicine (e.g., family members, school nurse).</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>Provide opportunities to discuss what happens when we are sick and what we do to feel better.</li> <li>Discuss positive and negative characteristics of medicine use.</li> <li>Remind students to only take medicine from a trusted adult (e.g., family member, school nurse).</li> <li>Discuss the purposes of safety caps on medicine.</li> <li>Discuss what to do when unhealthy substances are found (e.g., medicine, tobacco).</li> <li>Model proper use of medicine (e.g., proper storage in first aid kits, double-checking medicine is going to appropriate student).</li> </ul>

## E. HEALTH PROBLEMS AND DISEASE PREVENTION


Standard	Concepts and Competencies	Supportive Practices
<b>10.1 K.E</b> <b>Identify and discuss common health problems and risk factors.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>Participate in discussions about infectious (e.g., colds, flu, chicken pox, pink eye) and non-infectious illnesses (e.g., asthma, allergies).</li> <li>Discuss the concept of “germs.”</li> <li>Participate in activities that exemplify the spread of germs to learn healthy practices.</li> <li>Describe ways that germs can spread.</li> <li>Explain how germs can make someone ill.</li> <li>Explain how rest, exercise, and good nutrition keep us healthy.</li> <li>Identify signs of illness (e.g., fever, headache, stomach ache, vomiting, diarrhea).</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>Use teachable moments (e.g., many students absent due to flu, students needing an inhaler) to discuss different types of illnesses.</li> <li>Model healthy practices that prevent the spread of germs (e.g., cough into elbow, wash hands).</li> <li>Discuss illness prevention.</li> <li>Engage students in hands-on experiences that exemplify the spread of germs to encourage healthy practices.</li> <li>Read books about specific illnesses and illness prevention.</li> </ul>

## 10.2 Healthful Living


**BIG IDEA:** Children need to make healthy choices to optimize their learning potential.

**ESSENTIAL QUESTION:** What are things I can do to keep myself healthy?

## A. HEALTH PRACTICES, PRODUCTS, AND SERVICES

Standard	Concepts and Competencies	Supportive Practices
<b>10.2 K.A</b> <b>Identify fundamental practices for good health.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>Practice basic hygiene routines with adult reminders (e.g., hand washing, tooth brushing, cover nose and mouth when sneezing).</li> <li>Identify specific practices that support body development and function (e.g., exercise, good nutrition, rest).</li> <li>Discuss the role hygiene plays in keeping us healthy.</li> <li>Identify people that help keep us healthy (e.g., doctor, nurse, or dentist; gym teacher).</li> <li>Identify tools and practices that doctors and dentists use to keep us healthy.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li> Invite local health experts (e.g., dentist, doctor, nurse, physical trainer) to the classroom to discuss how they help to keep us healthy.</li> <li>Provide daily opportunities to practice hygiene routines.</li> <li>Display <i>MyPlate</i> near mealtime area to encourage healthy portioning of food.</li> <li>Encourage children to rest to help their bodies stay healthy.</li> <li>Model and encourage exercise and active play.</li> <li>Use a variety of resources to review healthy practices (e.g., books, videos, songs, applications).</li> </ul>

## E. HEALTH AND THE ENVIRONMENT

Standard	Concepts and Competencies	Supportive Practices
<b>10.2 K.E</b> <b>Identify environmental factors that affect health.</b>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Discuss plants, insects, and animals that could be harmful (Share personal experiences when relevant.).</li> <li>• Identify harmful substances.</li> <li>• Describe things in the environment that can be harmful (e.g., loud noise, smoke, pollution, temperature, insects, plants).</li> <li>• Discuss how we protect our bodies in different seasons (e.g., use sunscreen in summer, wear warm clothing in winter).</li> <li>• Describe ways to protect oneself from harmful factors in the environment.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>•  Engage a local expert (e.g., pest control professional, high school or college professional, florist) as a guest speaker.</li> <li>• Read books about plants, insects, and animals that might be harmful.</li> <li>• Explicitly label plants within the classroom as “nontoxic” and explain.</li> <li>• Talk about harmful substances and objects.</li> <li>• Recognize and use teachable moments (e.g., avoiding insect nest on playground, avoiding stray dog, applying sunscreen, locking up cleaners) to discuss how to stay safe in the natural environment.</li> </ul>

## 10.3 Safety and Injury Prevention

**BIG IDEA:** Awareness of safe and unsafe practices provides a foundation for healthy decision-making.

**ESSENTIAL QUESTION:** What are things I can do to keep myself and others safe?

## A. SAFE AND UNSAFE PRACTICES

Standard	Concepts and Competencies	Supportive Practices
<b>10.3 K.A</b> <b>Recognize safe and unsafe practices.</b>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Identify and follow basic safety rules (e.g., on playground, in classroom, on field trip, crossing street).</li> <li>• Identify consequence of an unsafe behavior.</li> <li>• Identify and avoid unsafe practices (e.g., playing with matches, talking to strangers).</li> <li>• Explain community workers (e.g., firefighters, police officers) keep us safe.</li> <li>• Identify behaviors to assure safe practice (e.g., looking both ways when crossing the street, not talking to strangers, wearing a helmet when riding a bike).</li> <li>• Demonstrate and describe the importance of safety rules.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Display and discuss classroom safety rules.</li> <li>• Discuss basic rules (e.g., crossing street, stranger danger, car seat safety, water safety, bike safety).</li> <li>• Use a variety of resources to review safe and unsafe practices (e.g., videos, songs).</li> <li>• Use natural consequences as teachable moments to reinforce safe practices.</li> <li>• Discuss consequences of unsafe behavior.</li> <li>• Engage local experts (e.g., police officers, firefighters, emergency management personnel) as guest speakers.</li> </ul>



## B. EMERGENCY RESPONSES

Standard	Concepts and Competencies	Supportive Practices
<b>10.3 K.B</b> <b>Recognize emergency situations and discuss appropriate responses.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>Identify procedures for a variety of emergencies (e.g., fire, tornado, intruder, medical emergency).</li> <li>Participate in discussions that differentiate between emergencies and non-emergencies.</li> <li>Practice emergency procedures in school and at home.</li> <li>Identify personal identifying information (e.g., name, phone number, address).</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>Define what constitutes an emergency.</li> <li>Practice making 911 calls.</li> <li>Provide opportunities to practice sharing personal identifying information in case of emergency.</li> <li>Demonstrate and practice “STOP, DROP, ROLL” and other emergency procedures.</li> <li>Practice fire and emergency evacuation procedures.</li> <li>Use a variety of resources to discuss emergency situations. (e.g., books, songs, applications)</li> <li>Engage local experts (e.g., police officers, firefighters, emergency management personnel) as guest speakers.</li> <li>Provide feedback after practicing emergency procedures.</li> </ul>

## 10.4 Physical Activity – Gross Motor Coordination

**BIG IDEA:** Children gain control over their bodies and body movements through active experiences and exploration.

**ESSENTIAL QUESTION:** How do I control and coordinate my body during large motor activities and games?

## A. CONTROL AND COORDINATION

Standard	Concepts and Competencies	Supportive Practices
<b>10.4 K.A</b> <b>Demonstrate coordination of purposeful body movements.</b>	<b>The learner will:</b> <ul style="list-style-type: none"> <li>Combine large motor movements with the use of equipment (e.g., catch a ball, throw a beanbag or ball overhand with aim, kick a ball).</li> <li>Move and stop with control.</li> <li>Use outdoor gross motor equipment.</li> <li>Run with control and direction.</li> <li>Engage in gross motor games (e.g., Hokey Pokey, London Bridge, Simon Says).</li> <li>Perform a variety of movements alongside and with a partner.</li> <li>Participate in group games (e.g., Follow the Leader, Tag, Kickball).</li> <li>Hit a stationary target with an overhand throw.</li> </ul>	<b>The adult will:</b> <ul style="list-style-type: none"> <li>Review safety rules prior to large motor activities.</li> <li>Provide targets to throw toward (e.g., hula hoops or baskets).</li> <li>Include materials and equipment that encourage active play (e.g., three- or four-wheeled steerable vehicles, balls, climbers and slides, ramps).</li> <li>Provide daily outdoor time.</li> <li>Create opportunities to participate in large motor movement games that involve partners.</li> <li>Engage in gross motor play with students.</li> </ul>

## B. BALANCE AND STRENGTH

Standard	Concepts and Competencies	Supportive Practices
<b>10.4 K.B</b> <b>Exhibit balance, strength, stamina, and agility.</b>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Use gross motor movements to learn new skills and engage in new activities.</li> <li>• Engage in large motor activities that require strength and balance (e.g., marching, hopping, skipping, running, jumping on one foot, dancing, walking tip toe).</li> <li>• Walk on a balance beam.</li> <li>• Climb stairs using alternating feet.</li> <li>• Participate in an obstacle course (e.g., through tunnels, over or under equipment).</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Provide opportunities to participate in a variety of motor activities. (e.g., including sway, stretch, pull, push, bend, squat)</li> <li>• Provide space and opportunities daily for students to walk, run, and climb.</li> <li>• Provide daily opportunities to engage in gross motor activities inside (e.g., dancing and moving to music, beanbag toss).</li> <li>• Include large motor movements during transitional times (e.g., hop to the table, jump five times while you wait to wash your hands).</li> <li>• Include motor games and songs (e.g., <i>Skip to my Lou</i> and <i>The Farmer in the Dell</i>).</li> <li>• Create obstacle courses to practice gross motor movements.</li> </ul>

## 10.5 Concepts, Principles, and Strategies of Movement – Fine Motor Coordination

**BIG IDEA:** Fine motor practice helps children develop eye-hand coordination, strength, and controlled use of tools.

**ESSENTIAL QUESTIONS:** How do I use my hands and fingers to manipulate objects? How do I develop eye-hand coordination?

## A. STRENGTH, COORDINATION, AND MUSCLE CONTROL

Standard	Concepts and Competencies	Supportive Practices
<b>10.5 K.A</b> <b>Use dexterity and strength to manipulate objects.</b>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Practice self-help skills (e.g., zipping, snapping, buttoning, tying shoes).</li> <li>• Use scissors to cut on a line.</li> <li>• Trace templates or forms.</li> <li>• Use tongs or tweezers to pick up objects.</li> <li>• Manipulate smaller objects (e.g., pegs into a pegboard, puzzle pieces, string beads, trace a line or circle, pound pegs).</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Encourage students to dress independently (e.g., tie shoes, zip coat).</li> <li>• Provide opportunities to use scissors.</li> <li>• Provide opportunities to trace templates or forms.</li> <li>• Provide opportunities to manipulate objects (e.g., tweezers and tongs to grasp objects, puzzles).</li> </ul>

## B. EYE/HAND COORDINATION

Standard	Concepts and Competencies	Supportive Practices
<b>10.5 K.B</b> <b>Coordinate eye and hand movements to perform an advanced task.</b>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Act out finger plays.</li> <li>• Use scissors to cut on a straight line.</li> <li>• Complete self-help skills (e.g., zip, snap, button, or tie).</li> <li>• Manipulate smaller objects (e.g., pegs into a pegboard, puzzle pieces, string beads).</li> <li>• Use tools to pour (e.g., funnels, basters, and pitchers).</li> <li>• Use lined paper during daily writing experiences.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Teach and encourage students to participate in finger plays.</li> <li>• Provide opportunities to use scissors.</li> <li>• Encourage and allow students to dress independently (e.g., zip coat, tie shoes).</li> <li>• Supply tweezers and tongs to grasp objects.</li> <li>• Provide a variety of smaller objects to manipulate.</li> <li>• Provide opportunities to pour and serve own food.</li> <li>• Provide opportunities for writing across the curriculum.</li> </ul>

## C. USE OF TOOLS

Standard	Concepts and Competencies	Supportive Practices
<p><b>10.5 K.C</b>  <b>Use tools with control and skill to perform tasks.</b></p>	<p><b>The learner will:</b></p> <ul style="list-style-type: none"> <li>• Demonstrate control with writing and drawing implements.</li> <li>• Choose appropriate tool for a specific task.</li> <li>• Use writing and drawing implements with functional grasp (e.g., pincer grasp, tripod grip).</li> <li>• Use a variety of art tools (e.g., glue sticks, paintbrushes, scissors) for a specific purpose.</li> <li>• Use utensils for eating appropriately.</li> <li>• Practice using computer mouse.</li> </ul>	<p><b>The adult will:</b></p> <ul style="list-style-type: none"> <li>• Provide a variety of materials and experiences that offer manipulative practice (e.g., art, writing, puzzles).</li> <li>• Encourage students to create letters using proper letter formation and sizing.</li> <li>• Maintain a writing center with a variety of writing implements and art tools.</li> <li>• Encourage students to use utensils appropriately during snack and mealtimes.</li> </ul>



# Health, Wellness, and Physical Development Glossary

**Agility**—A component of physical fitness that relates to the ability to rapidly change the position of the entire body in space with speed and accuracy.

**Balance**—A skill-related component of physical fitness that relates to the maintenance of equilibrium while stationary or moving.

**Body Systems**—A group of organs that work together to perform a certain task.

**Coordination**—A skill-related component of physical fitness that relates to the ability to use the senses together with body parts in performing motor tasks smoothly and accurately.

**Developmental Differences**—Learners are at different levels in their motor, cognitive, emotional, social, and physical development. The learners' developmental status will affect their ability to learn or improve.

**Developmentally Appropriate**—Motor skill development and change that occur in an orderly, sequential fashion and are age- and experience-related.

**Directions**—Forward, backward, left, right, up, down.

**Fine Motor**—Action involving the small muscles of the hands and wrists.

**Flexibility**—A health-related component of physical fitness that relates to the range of motion available at a joint.

**Food Guide Pyramid**—A visual tool used to help people plan healthy diets according to the Dietary Guidelines for America.

**Health**—A state of complete physical, mental, and social well-being; not merely the absence of disease or infirmity.

**Health Education**—Planned, sequential PK-12 program of curricula and instruction that helps students develop knowledge, attitudes, and skills related to the physical, mental, emotional, and social dimensions of health.

**Gross Motor**—The abilities required to control the large muscles of the body for walking, running, sitting, crawling, and other activities.

**Locomotor Movement**—Movements producing physical displacement of the body, usually identified by weight transference via the feet. Basic locomotor steps are the walk, run, hop, and jump, as well as the irregular rhythmic combinations of the skip, slide, and gallop.

**Manipulate**—Handle or control, typically in a skillful manner.

**Motor Skills**—Non-fitness abilities that improve with practice and relate to one's ability to perform specific sports and other motor tasks (tennis serve, shooting a basketball).

**Movement Skills**—Proficiency in performing non-locomotor, locomotor, and manipulative movements that are the foundation for participation in physical activities.

**My Plate**—A visual cue to help consumers adopt healthy eating habits by encouraging them to build a healthy plate, consistent with the 2010 dietary guidelines for Americans.

**Non-Locomotor Movement**—Movements that do not produce physical displacement of the body.

**Nutrition**—The sum total of the processes involved in the taking in and the use of food substances by which growth, repair, and maintenance of the body are accomplished.

**Physical Activity**—Bodily movement produced by the contraction of the skeletal muscle and which substantially increases energy expenditure.

**Physical Education**—Planned, sequential, movement-based program of curricula and instruction that helps students develop knowledge, attitudes, motor skills, self-management skills, and confidence needed to adapt and maintain a physically active life.

**Physical Fitness**—A set of attributes that people have or achieve that relate to their ability to perform physical activity.

**Strength**—The quality or state of being strong; bodily or muscular power; vigor.

**Safety Education**—Planned, sequential program of curricula and instruction that helps students develop the knowledge, attitudes, and confidence needed to protect them from injury.

# Resources

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