Pennsylvania Learning Standards for Early Childhood

GRADE 1

UPDATED IN 2024

Office of Child Development and Early Learning

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Pennsylvania
Department of Human Services

Pennsylvania
Department of Education

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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

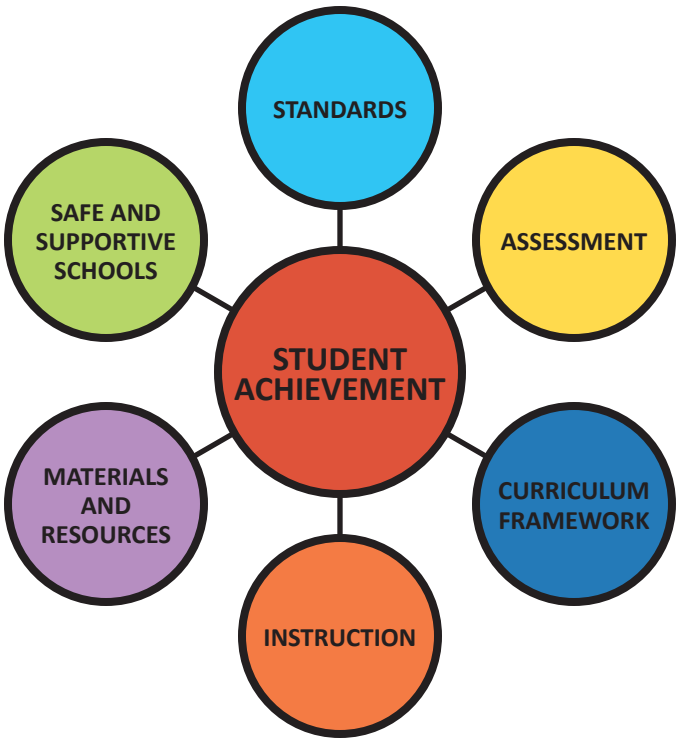
Children are born with an incredible capacity and desire to learn. More than 40 years of research confirms the foundational importance of early education and care for children's school and life success. It is essential that children's first experiences are robust ones, steeped in activities that develop 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.

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 developmental 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 addi-

tion 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.

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.

THE LEARNING STANDARDS CONTINUUM

Within 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 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

High-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.

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

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

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.

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

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.

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.

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.

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.

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

KEY LEARNING AREA- The domains of learning that assure child's holistic development

TAG LINE

ESSENTIAL QUESTIONS: Linked to the BIG IDEAS and provides the questions that support children's inquiry

BIG IDEAS: Describes the information that children should acquire across all age levels

STANDARD AREA: Organizes the content within the KEY LEARNING AREAS into smaller topics

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
AL.1.1.A **Explore and ask questions to seek meaningful information about a growing range of topics, ideas, and tasks.**	**The learner will:** • Utilize senses to explore and learn from the environment. • Show interest and inquire about other's work. • Ask questions to understand something (e.g., "How does that work?"). • Demonstrate interest in new materials and experiences introduced into the classroom (e.g., use play to practice new skills and knowledge, use vocabulary words or concepts learned in class during play). • Ask questions to learn from others (e.g., "How did you make that?").	**The adult will:** Design a classroom with clearly defined interest areas and materials that invite students to explore, discover, and create. Provide a variety of materials to stimulate experiences, knowledge, participation, and interests (e.g., materials/activities appealing to a variety of senses, learning styles, and multiple intelligences). Respond to student's questions (inquiry) with explanations that may help them understand. Encourage students to research answers to questions through books and other media. Provide a variety of subject integrated activities Ask open-ended and higher-level questions to facilitate sharing, engage the listener, seek meaningful information, and extend learning. • Provide ample time to practice new skills and knowledge through playful experiences. • 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!").

STANDARD: A specific skill a child should know by the end of the developmental age range

CONCEPTS AND COMPETENCIES: Skills that help to define the construct of the Standard

SUPPORTIVE PRACTICES: Practitioners can employ these strategies to help children learn or make progress with particular skills

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

Approaches 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 wellbeing 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.

From 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!

The 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
AL.1 1.A **Explore and ask questions to seek meaningful information about a growing range of topics, ideas, and tasks.**	**The learner will:** • Use senses to explore and learn from the environment. • Show interest and inquire about others' work. • Ask questions to understand something (e.g., "How does that work?"). • Use play to practice new skills and knowledge. • 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). • Ask questions to learn from others (e.g., "How did you make that?").	**The adult will:** Design a classroom with clearly defined interest areas and materials that invite students to explore, discover, and create. Provide a variety of materials to stimulate experiences, knowledge, participation, and interests (e.g., materials/activities appealing to a variety of senses, learning styles, multiple intelligences). Respond to students' questions (inquiry) with explanations that may help them understand. Encourage students to research answers to questions through books and other media. Provide a variety of subject-integrated activities. Ask open-ended and higher-level questions to facilitate sharing, engage the listener, seek meaningful information, and extend learning. Provide ample time to practice new skills and knowledge through playful experiences. 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!").

B. RISK-TAKING

Standard	Concepts and Competencies	Supportive Practices
AL.1 1.B **Participate in a variety of challenging experiences.**	**The learner will:** • Actively explore new materials that are introduced into the classroom. • Imitate peer or adult engaged in new or challenging activities. • State discomfort at trying something new but make attempts to try with encouragement. • Listen attentively to learn appropriate techniques for a new skill, and follow through using the learned technique. • 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). • Deal with success in a positive way and view challenges as growing experiences.	**The adult will:** Introduce new materials and activities by explaining what they are and providing instructions on use. Support students when activity becomes challenging (e.g., active listening, encouragement, offer specific feedback). Engage students in "what if" scenarios to discuss potentially dangerous or inappropriate responses to situations. Rotate materials in the classroom often to provide a variety of diverse experiences. Demonstrate enthusiasm when introducing new materials and challenges.

C. STAGES OF PLAY

Standard	Concepts and Competencies	Supportive Practices
AL.1 1.C **Engage in cooperative, purposeful, and interactive play experiences that enhance learning.**	**The learner will:** • Engage in simple games with rules demonstrating the ability to plan ahead and to develop strategies. • Engage in teacher- and student-driven activities. • Cooperate with peers during activities/experiences. • Dramatize a variety of roles reflecting real-life situations. • Create and use props during role-play activities.	**The adult will:** Create an environment that fosters cooperative learning. Model cooperation skills. Provide a variety of materials to support student learning through play. • Provide sufficient amount of time for playing games, cooperative activities, and role-play experiences. • Rotate materials often to support students learning through play.

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
AL.2 1.A **Complete a task, despite interruptions or classroom disruptions.**	**The learner will:** • Complete activities or tasks from beginning to end with independence. • Follow multi-step directions. • Move away from distractions to complete a task. • Self-monitor to remain focused on completing a task.	**The adult will:** Save students' work for later completion if transition to a new activity is necessary. Encourage students to complete tasks that are challenging. Allow ample time to complete tasks and activities. • Give clear and simple directions or explanations. • Minimize interruptions and disruptions for students who are concentrating on a specific task or activity. • Offer constructive feedback on process and product to all students, helping those who are demonstrating difficulty completing a task or activity. • Differentiate based on student needs. • Model self-monitoring behaviors.

B. TASK ANALYSIS

Standard	Concepts and Competencies	Supportive Practices
AL.2 1.B **Complete multi-step tasks with independence.**	**The learner will:** • Attend and follow through with three-step directions. • Explain the steps necessary to complete a task. • Share the desired outcome or end goal of a task or activity. • Break task into smaller components and complete one at a time.	**The adult will:** Ask students to describe the steps required to complete a certain task. Model goal-setting and breaking tasks into steps using explicit vocabulary (e.g., first, next, last). Encourage students to explain the sequence, steps, and desired outcomes of self-initiated tasks and activities. • Use clear and concise directions for the completion of tasks (e.g., written and/or oral). • Review steps of a task prior to completion, providing reminders throughout the process. • Differentiate based on student needs.

C. PERSISTENCE

Standard	Concepts and Competencies	Supportive Practices
AL.2 1.C **Accomplish challenging tasks by employing familiar and new strategies as needed.**	**The learner will:** • 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. • Implement familiar and new strategies independently. • Stick to a task after experiencing frustration. • Show pride in completion of a challenging task.	**The adult will:** 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). Encourage students to develop alternative solutions to accomplish a task. Ask open-ended questions to help develop alternative solutions without giving the answer. • Offer constructive feedback on students' efforts to work through challenging tasks. • Acknowledge students' completion of a challenging task.

D. PATTERNING

Standard	Concepts and Competencies	Supportive Practices
AL.2 1.D **Recognize and create increasingly complex patterns.**	**The learner will:** • Identify patterns in the environment. • Identify patterns in literacy (e.g., silent "e"). • Recognize, describe, extend, and transfer a three-element pattern (e.g., ABC). • Reproduce a more complex pattern and verbalize the pattern.	**The adult will:** • Engage students in finding patterns (e.g., in the environment, literacy, mathematical, scientific, arts). • Model creating patterns. • Provide opportunities to create and extend patterns. • Discuss patterns (e.g., "Why do you think that is a pattern?" "What is missing from this pattern?").

E. MEMORY

Standard	Concepts and Competencies	Supportive Practices
AL.2 1.E **Employ familiar strategies to recall information for a purpose.**	**The learner will:** • Recall information and/or experiences from the past. • Engage in use of mnemonic devices (e.g., singing a song to remember layers of the rainforest). • Recall details from stories, events, and experiences. • Share family experiences (e.g., stories, pictures, photos, and/or videos).	**The adult will:** Encourage students to talk about past experiences and events. Ask questions which challenge students to recall the details of experiences they are relating. Maintain documentation of past events through pictures, photos, videos, and/or quotes from students. Post and explore this documentation with the students over time. • Use visuals to support memory. • Introduce mnemonic devices as a strategy to promote recall. • Provide opportunities to write about past events (e.g., pictures, photos, videos, memory books, quotes).

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
AL.3 1.A **Use and connect materials/ strategies in uncommon ways to create something new or to solve problems.**	**The learner will:** • Use a variety of materials to explore and express ideas and emotions. • Recognize imagination and creativity in others. • Use previously learned strategies in a new situation. • Elaborate, refine, and evaluate own ideas. • Communicate own ideas. • Be open and responsive to new and diverse perspectives. ***See also 9.1.M 1.E; 9.1.D 1.E; 9.1.V 1.E; 1.4 1.M; 1.5 1.E***	**The adult will:** Provide a variety of materials to use in creating. Provide opportunities to use materials in uncommon ways. Use "I wonder" statements to encourage creativity with use of objects. Model how to elaborate, refine, evaluate, and communicate ideas, thoughts, and feelings. ***See also 9.1.M 1.E; 9.1.D 1.E; 9.1.V 1.E; 1.4 1.M; 1.5 1.E***

B. INVENTION

Standard	Concepts and Competencies	Supportive Practices
AL.3 1.B **Create an object to serve a functional purpose.**	**The learner will:** • Explore different ways to use everyday objects. • Describe a plan to create a functional object (e.g., develop a blueprint prior to building a block structure). • Answer questions to explain the purpose of a creation. • Show pride in a creation.	**The adult will:** Provide opportunities to explore and experiment with new objects. Encourage students to pre-plan their creative efforts. Provide opportunities to present and describe creations. Model a variety of ways to research new information. Provide a variety of text to support students' new ideas. • Ask questions about students' creations (e.g., "How did you make that?" "What is that used for?"). • Offer specific feedback on students' creative efforts.

C. REPRESENTATION

Standard	Concepts and Competencies	Supportive Practices
AL.3 1.C **Use materials and objects to represent new concepts.**	**The learner will:** • Create something new to demonstrate understanding of a learned concept. • Choose a preferred method of representation from a menu of choices. • Use music, art, stories, and/or open-ended materials to represent concepts, ideas, thoughts, and feelings.	**The adult will:** Provide open-ended materials. Provide opportunities to present and describe creations. • Provide opportunities to represent through music, art, or stories. • Differentiate based on student needs. • Encourage students to try multiple methods of representation. • Model and provide examples of representation in a variety of forms. • Provide constructive feedback.

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
AL.4 1.A **Relate knowledge learned from one experience to another.**	**The learner will:** • Relate personal (e.g., home, cultural, community) experiences during school activities. • Understand that appropriate activities and events may differ from one environment to another. • Share new skills or tasks learned or practiced. • Practice skills learned in whole group demonstration during small group or independent practice. • Apply a skill to multiple tasks (e.g., determining key details in text to solve a word problem).	**The adult will:** • Foster family partnerships to support student learning both at home and at school. • Provide families updates about activities that are occurring in school (e.g., daily message boards, newsletters, classroom websites, journals). • Talk with students about their interests and activities and connect those activities to student learning. • Acknowledge and value differences in class and home structure. • Provide materials that encourage practice of skills demonstrated during whole group meeting time. • Observe students and provide feedback as they practice applying and connecting skills. • Model and provide examples of making connections. • Differentiate based on student needs.

B. RESILIENCY

Standard	Concepts and Competencies	Supportive Practices
AL.4 1.B **Recognize that everyone makes mistakes and that using positive coping skills can result in learning from the experience.**	***Reference 16.1 1.C***	***Reference 16.1 1.C***

C. PROBLEM-SOLVING

Standard	Concepts and Competencies	Supportive Practices
AL.4 1.C **Use problem-solving strategies to achieve a positive outcome.**	**The learner will:** • Try new ways to complete an unfamiliar task. • 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. • Ask questions to clarify problems. • Discuss the different ways used to accomplish a task or to solve a problem. • Recall and use a previously successful strategy. • Change plan if a better strategy presents itself.	**The adult will:** 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). Create and provide opportunities for students to engage in problem-solving activities (e.g., role-play). Encourage use of 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?"). Engage students in interactions that use known strategies in new situations. Display a variety of materials and ask students to complete a task, allowing them to choose the materials that best suit the activity. 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. Observe how students solve problems in the classroom and offer assistance when needed.

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.

Gradual Release of Responsibility (GRRM)—The responsibility for task completion shifts gradually over time from the teacher to the student.

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
16.1 1.A **Examine the impact of emotions and responses on view of self and interactions with others.**	**The learner will:** • Recognize and label more complex feelings (e.g., frustrated, anxious, embarrassed). • Express feelings that are appropriate to the situation. • Express feelings in multiple ways (e.g., verbal or nonverbal, play, art, journal). • Control negative responses (e.g., express in appropriate way: talk with peer or tell teacher). • Know when to withhold expression of feelings in certain situations. • Discuss emotions and impact on others.	**The adult will:** • Use Positive Behavior Support to support students' social and emotional success. • Establish and state clear behavior expectations. • Offer materials to creatively express emotions. • Read books about feelings and talk about the outcomes. • Engage students in discussions about how they feel when they experience certain situations (e.g., positive and negative). • Model appropriate emotional responses (e.g., "I feel …"). • Explain appropriate "cool-down" strategies. • Respond to students' verbal and nonverbal cues.

B. INFLUENCES OF PERSONAL TRAITS ON LIFE ACHIEVEMENTS

Standard	Concepts and Competencies	Supportive Practices
16.1 1.B **Understand the impact of personal traits on relationships and school achievement.**	**The learner will:** • Demonstrate awareness of self and one's own preferences. • Know and state independent thoughts and feelings. • Demonstrate pride in own accomplishments. • Demonstrate confidence in own abilities. • Choose materials and activities based on preferences and personal interests. • Discuss personal traits and possible impact on school achievement.	**The adult will:** • Encourage an environment where cultural and personal diversity are valued. • Provide opportunities to make decisions and choices. • Support students in sharing opinions about classroom activities, choices, and other experiences. • Graph students' likes and dislikes. • Share enthusiasm and describe students' abilities and preferences. • Display students' work.

C. RESILIENCY

Standard	Concepts and Competencies	Supportive Practices
16.1 1.C **Identify adverse situations which all people encounter and healthy ways to address.**	**The learner will:** • Use positive coping strategies (e.g., stay calm when something does not go as intended, stop and take a deep breath, short break). • Recognize that all people experience challenges and respond to them in different ways. **** See also AL.4 1.B***	**The adult will:** • Foster a positive environment where students learn from success and unsuccessful attempts. • Model positive coping strategies. • Offer a space where students can regain composure. • Talk through an adverse situation with students. • Help students understand that adverse situations happen to everyone. • Acknowledge students' demonstration of efforts to persevere during difficult or frustrating times.

D. GOAL-SETTING

Standard	Concepts and Competencies	Supportive Practices
16.1 1.D **Describe the effect of goal-setting on self and others.**	**The learner will:** • Set, discuss, and reflect on goals (e.g., behavioral, learning, play). • Recognize and adopt strategies to meet short- and long-term goals. • Analyze and evaluate alternative strategies in meeting goals.	**The adult will:** Explicitly use words such as "goal," "plan," "achieve," "met," "challenge." • Use strategies to encourage planning and discussion about goals and follow-through (e.g., plan, do, reflect). • Establish and maintain a safe climate in which reasonable risks are accepted and encouraged. • Discuss students' choices in terms of "goals" to be met and alternative strategies in meeting them.

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
16.2 1.A **Establish relationships that are positive and supportive of others.**	**The learner will:** • Engage in reciprocal conversations with peers and adults. • Respond to adult's questions and directions. • Demonstrate appropriate affection for familiar adults and peers. • Seek out companionship from another student. • Use words denoting friendship. • Ask a peer to play. • Play cooperatively with peers for a sustained period of time. • Respond with empathy to others who are upset. • Share and take turns. • Respect feelings and belongings of others.	**The adult will:** • Use Positive Behavior Support to support students' social and emotional success. • Model appropriate methods and strategies of interaction based on school and community culture. • Talk about ideas related to school work, play, and home life. • Arrange the environment to encourage collaboration. • Use literature as a teaching strategy for appropriate and inappropriate interaction. • Provide duplicate materials so students can play together. • Set timers to encourage material or equipment sharing. • Incorporate daily blocks of time for uninterrupted student-directed purposeful play. • Provide daily opportunities for individual conversations between students and adults. • Describe others' feelings during difficult situations.

B. DIVERSITY

Standard	Concepts and Competencies	Supportive Practices
16.2 1.B **Recognize and tolerate the uniqueness of all people in all situations.**	**The learner will:** • Understand each person has a set of unique characteristics. • Label personal characteristics. • Discuss similarities and differences between self and others. • Understand family structures differ from one family to another. • Understand thoughts and feelings of others may differ from own. • Demonstrate respect for children's differences (e.g., including differences in thoughts and feelings).	**The adult will:** • Model and promote strategies that embrace individual and family diversity. • Provide opportunities to discuss and compare personal traits among members of the class. • Encourage family members to volunteer or share information, materials, and activities that reflect home cultures. • Include multicultural materials, especially those relevant to the cultures within the class (e.g., skin-tone crayons, books, dolls, music, dress-up clothing and props, posters). • Read and discuss text showing students/families of different races, cultures, ages, abilities, and family structure. • Explicitly discuss points of difference in thoughts and feelings.

C. COMMUNICATION

Standard	Concepts and Competencies	Supportive Practices
16.2 1.C **Explain the impact of communication on interactions with others.**	**The learner will:** • Communicate using details related to topic being discussed (including topics of personal interest, and special events). • Respond to conversation adding further detail, or contribute further to the topic being discussed. • Pose questions related to topic being discussed. • Link conversation to prior knowledge and past learning experiences. • Respond to questions posed by adults and peers using more than one word. • Recognize conversational cues (e.g., wait, turn-taking).	**The adult will:** • Explicitly restate comments made by students and encourage those responding to add further detail, or contribute further to the topic being discussed. • Help students create and pose questions to initiate or continue a conversation. • Encourage students to speak in complete sentences. • Model acceptable conversational cues (e.g., wait time, turn-taking). • Talk about events that are currently relevant to students.

D. MANAGING INTERPERSONAL CONFLICTS

Standard	Concepts and Competencies	Supportive Practices
16.2 1.D **Identify and apply appropriate ways to resolve conflict.**	**The learner will:** • Use appropriate words and actions to express own needs. • Identify a problem and discuss possible solutions. • Independently solve simple conflicts with peers. • Negotiate conflicts using words before seeking help. • Use words during a conflict instead of physically responding. • Accept and attempt teacher's or others' ideas on strategies to solve a conflict.	**The adult will:** • Provide opportunities for student reflection and discussion of conflict resolution strategies. • Model, teach, and discuss possible strategies for resolving conflict (e.g., use of role-playing and stories, cool-down strategies). • Be open and available to help students resolve conflicts (e.g., "I' messages). • Design an area in the room that encourages students to solve conflicts.

E. SUPPORT – ASKING FOR HELP

Standard	Concepts and Competencies	Supportive Practices
16.2 1.E **Determine who, when, where, or how to seek help for solving problems.**	**The learner will:** • Attempt tasks independently before asking for help. • Recognize when help is needed. • Recognize appropriate sources of help (e.g., familiar adult, community helpers, peers). • Develop beginning understanding of moral and ethical dilemmas. • Ask for adult help to solve a problem or to complete a task after multiple unsuccessful attempts. • Respond appropriately to offers of help (e.g., "That's okay, I can do it." or "Yes, thank you.").	**The adult will:** Encourage students to turn to peers for assistance. • Create an environment of trust by providing consistency and predictability (e.g., in daily routines, activities, staff). • Encourage students to try tasks independently before offering assistance. • Help students develop understanding of moral and ethical dilemmas. • Offer assistance in helping a student complete a task after multiple unsuccessful attempts. • Discuss where students can go to for help when needed (e.g., peers, familiar adult, community helpers).

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
16.3 1.A **Recognize that there are consequences for every decision which are the responsibility of the decision-maker.**	**The learner will:** • Recognize unsafe situations. • Tell an adult of an unsafe situation. • Warn a peer about a safety risk (e.g., chair not pushed in). • Encourage peers having a dispute to use positive decision-making strategies (e.g., use their words and work it out). • Discuss the reasons for having rules. • Develop understanding of natural consequences (e.g., lack of sleep, not brushing teeth).	**The adult will:** • Provide opportunities to create rules. • Discuss the reasons for having specific rules. • Model and teach a variety of decision-making strategies (e.g., vocabulary associated with decision-making strategies and consequences). • Provide reminders of rules and consequences when students test the rules. • Use natural consequences (e.g., falling due to running in the classroom) as opportunities to discuss consequences of behaviors.

B. UNDERSTANDING SOCIAL NORMS (Social Identity)

Standard	Concepts and Competencies	Supportive Practices
16.3 1.B **Demonstrate knowledge of how social norms affect decision-making and behavior.**	**The learner will:** • Use inside voices while indoors and outside voices when outdoors. • Cooperate in both large and small group activities. • Apply classroom rules to new situations. • Adjust to changes in routines and activities. • Follow rules and routines in classroom and other settings. • Discuss how social norms may affect decision-making behavior.	**The adult will:** • Use Positive Behavior Support to support students' understanding of social norms. • Discuss expectations of differing environments (e.g., library, restroom, cafeteria, classroom, outside). • Discuss expectations of a new or unfamiliar environment or situation (e.g., field trip, classroom visitor). • Model appropriate behavior. • Provide consistent rules and expectations in classroom environment. • Encourage families to provide consistent rules and expectations in home environment. • Provide literacy experiences related to socially acceptable ways to behavior in different places.

C. RESPONSIBLE ACTIVE ENGAGEMENT – EMPATHY

Standard	Concepts and Competencies	Supportive Practices
16.3 1.C **Actively engage in creating an environment that encourages healthy relationships.**	**The learner will:** • Respond with empathy to others. • Recognize when someone needs help and offer assistance. • Respect another's attempts to complete tasks independently.	**The adult will:** • Use Positive Behavior Support to support students' understanding of healthy relationships. • Encourage peers to help one another rather than offering adult assistance. • Identify and describe others' feelings including use of nonverbal cues. • Read and discuss books about empathy. • Provide specific feedback and acknowledgement on students' efforts to help others.

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.

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

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

Language and Literacy Development

English Language Arts

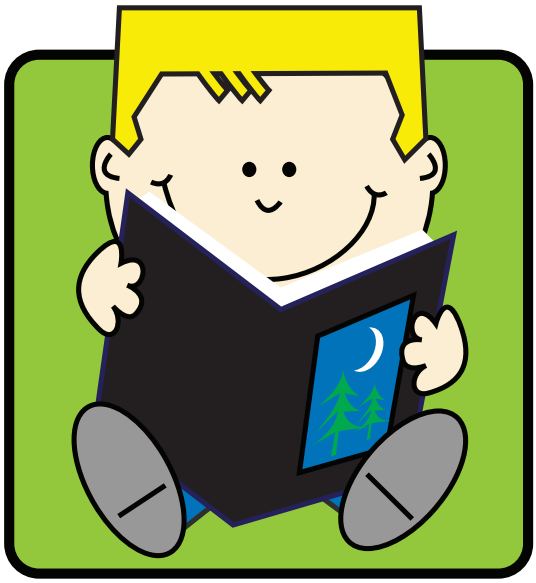
1.1 Foundational Skills

1.2 Reading Informational Text

1.3 Reading Literature

1.4 Writing

1.5 Speaking and Listening



Communication 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

Today'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?

B. PRINT CONCEPTS

Standard	Concepts and Competencies	Supportive Practices
1.1 1.B **Demonstrate understanding of the organization and basic features of print.**	**The learner will:** • Recognize and distinguish features of a sentence (e.g., capitalization, spaces, punctuation, complete thought).	**The adult will:** • Model print concepts while using different forms of text and genre (e.g., big books, names, poems). • Read to students daily. • Provide hands-on experience (e.g., small groups, independent, learning stations) with text. • Provide opportunities to distinguish between a phrase and a sentence. • Use print and digital-text materials for functional purposes.

C. PHONOLOGICAL AWARENESS

Standard	Concepts and Competencies	Supportive Practices
1.1 1.C **Demonstrate understanding of spoken words, syllables, and sounds (phonemes).**	**The learner will:** • Distinguish long from short vowel sounds in spoken single-syllable words. • Count, pronounce, blend, and segment syllables in spoken and written words. • Orally produce single syllable words, including consonant blends and digraphs. • Isolate and pronounce initial, medial vowel, and final sounds (phonemes) in spoken single-syllable words. • Add or substitute individual sounds (phonemes) in one-syllable words to make new words.	**The adult will:** • Provide oral practice with: ▫ Distinguishing long and short vowel sounds. ▫ Counting, pronouncing, blending, and segmenting syllables in spoken and written words. ▫ Producing one-syllable words with consonant blends and digraphs. ▫ Isolating and pronouncing initial, medial vowel, and final sounds (phonemes) in spoken one-syllable words. ▫ Adding or substituting individual sounds (phonemes) in one-syllable words to make new words. • Provide hands-on experiences (e.g., small groups, independent, learning stations).

D. PHONICS AND WORD RECOGNITION

Standard	Concepts and Competencies	Supportive Practices
1.1 1.D **Know and apply grade-level phonics and word analysis skills in decoding words.**	**The learner will:** • Identify common consonant digraphs, final-e, and common vowel teams. • Decode one- and two-syllable words with common patterns. • Read grade-level words with inflectional endings (An inflectional ending changes the meaning of the base word and creates a new word with a different meaning). • Read grade-appropriate, irregularly spelled words (e.g., was, Wednesday, again, Earth).	**The adult will:** • Provide hands-on experience (e.g., small groups, independent, learning stations). • Provide experiences for: ▫ Identifying consonants, digraphs, final-e, and common vowel teams. ▫ Decoding one- and two-syllable words. ▫ Reading grade-level words with inflectional endings. ▫ Reading grade-appropriate, irregularly spelled words. • Use print and digital-text materials for functional purposes.

E. FLUENCY

Standard	Concepts and Competencies	Supportive Practices
1.1 1.E **Read with accuracy and fluency to support comprehension.**	**The learner will:** • Read on-level texts with purpose and understanding. • Read on-level texts orally with accuracy, appropriate rate, and expression in successive readings. • Use context to confirm or self-correct word recognition and understanding, rereading as necessary.	**The adult will:** • Include self-selected reading opportunities. • Provide a variety of on-level texts. • Provide daily opportunities to practice reading on-level texts and high-frequency words. • Post high-frequency words in the classroom (e.g., word wall). • Incorporate high-frequency words into meaningful context.

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
1.2 1.A **Identify the main idea and retell key details of a text.**	**The learner will:** • Identify the main idea. • Know the details of a text can be used to support a topic or main idea. • Provide relevant details from a text which support the main idea.	**The adult will:** Provide and read a variety of appropriate informational texts. • Model identifying main idea and supporting details. • Provide multiple opportunities to identify main idea and supporting details. • Model retelling of key details.

B. KEY IDEAS AND DETAILS – TEXT ANALYSIS

Standard	Concepts and Competencies	Supportive Practices
1.2 1.B **Ask and answer questions about key details in a text.**	**The learner will:** • Use specific details from the text to answer questions. • Answer "who" or "what" the text is about. • Answer "how" and/or "why" questions using specifics from the text. • Generate questions about specific details in the text.	**The adult will:** • Ask directed questions about a text. • Encourage students to generate questions about specific details in the text. • Provide peer-to-peer opportunities to discuss informational texts. • Model proper questioning techniques. • Ask "who," "what," "how," and "why" questions.

C. KEY IDEAS AND DETAILS

Standard	Concepts and Competencies	Supportive Practices
1.2 1.C **Describe the connection between two individuals, events, ideas, or pieces of information in a text.**	**The learner will:** • Find similarities and differences between two individuals, events, ideas, or pieces of information in a text. • Answer cause-and-effect questions about events, ideas, and information in a text.	**The adult will:** • Model making connections. • Provide learning centers and a classroom library where students can interact independently with texts. • Ask prompting questions.

E. CRAFT AND STRUCTURE – TEXT STRUCTURE

Standard	Concepts and Competencies	Supportive Practices
1.2 1.E **Use various text features and search tools to locate key facts or information in a text.**	**The learner will:** • Use table of contents to locate information. • Use index or digital-text search feature to locate key facts or information. • Use headings and captions to locate key facts or information.	**The adult will:** Model the use of text features to identify key facts. Provide multiple opportunities to interact with informational texts. • Identify and define text features. • Use print and digital text materials for functional purposes.

F. CRAFT AND STRUCTURE – VOCABULARY

Standard	Concepts and Competencies	Supportive Practices
1.2 1.F **Ask and answer questions to help determine or clarify the meaning of words and phrases in a text.**	**The learner will:** • Connect prior knowledge to unfamiliar words. • Make predictions about word meanings. • Participate in discussions about unfamiliar words. • Use strategies to look up unfamiliar words.	**The adult will:** Provide experiences to engage with picture/text connections (e.g., cooking, construction, gardening). Provide concrete materials in learning centers to assist students in connecting prior knowledge to new words or phrases. • Model how to use context and text features to define unknown words. • Model researching unfamiliar words in a text.

G. INTEGRATION OF KNOWLEDGE AND IDEAS – DIVERSE MEDIA

Standard	Concepts and Competencies	Supportive Practices
1.2 1.G **Use the illustrations and details in a text to describe its key ideas.**	**The learner will:** • Refer to specific text details. • Describe illustrations in a text in detail to answer specific questions about the text.	**The adult will:** Provide various experiences to engage with picture/text connections (e.g., cooking, construction, gardening). • Model and provide practice using illustrations and details in text to describe key ideas. • Prompt students to refer back to text.

H. INTEGRATION OF KNOWLEDGE AND IDEAS – EVALUATING ARGUMENTS

Standard	Concepts and Competencies	Supportive Practices
1.2 1.H **Identify the reasons an author gives to support points in a text.**	**The learner will:** • Identify the evidence an author uses. • Refer to specific text details.	**The adult will:** • Model and provide practice identifying text supports. • Prompt students to refer back to text.

I. INTEGRATION OF KNOWLEDGE AND IDEAS – ANALYSIS ACROSS TEXTS

Standard	Concepts and Competencies	Supportive Practices
1.2 1.I **Identify basic similarities in and differences between two texts on the same topic.**	**The learner will:** • Recognize that texts have similar components that can be compared and contrasted (e.g., main ideas, details). • Participate in strategies that provide opportunities to compare and contrast texts and/or components of texts (e.g., Venn diagrams, T-charts).	**The adult will:** • Use structural supports (e.g., graphic organizers) to compare and contrast texts. • Model and provide practice identifying similarities and differences in text.

J. VOCABULARY ACQUISITION AND USE

Standard	Concepts and Competencies	Supportive Practices
1.2 1.J **Use words and phrases acquired through conversations, reading, and being read to, and respond to texts, including words that signal connections and relationships between the words and phrases.**	**The learner will:** • Talk about pictures and text using new vocabulary words or phrases. • Use new vocabulary in the context of dramatic play, daily routines, and classroom conversations. • Use new vocabulary when asking questions or describing situations or objects. • Use new vocabulary from a variety of content areas. • Use context clues to understand word and sentence meanings. • Classify conceptual categories of words (e.g., animals, colors, foods).	**The adult will:** Use Tier III vocabulary daily and throughout different contexts. Provide opportunities for oral language practice. Assist students in connecting new vocabulary to prior knowledge. • Read appropriate informational text. • Use vocabulary daily and throughout different contexts. • Use think-alouds to share how a fluent reader navigates through informational text. • Explore similarities and differences in words, meanings, and concepts. • Interactively use a vocabulary word wall to teach, reinforce, and encourage the use of new words. • Directly teach increasingly sophisticated words with examples and non-examples.

K. VOCABULARY ACQUISITION AND USE

Standard	Concepts and Competencies	Supportive Practices
1.2 1.K **Determine or clarify the meaning of unknown or multiple-meaning words and phrases based upon grade-level reading and content.**	**The learner will:** • Recognize words or phrases that are unfamiliar to them. • Connect prior knowledge to unfamiliar words. • Make predictions about word meanings. • Use strategies to look up unfamiliar words. • Talk about connections between familiar and unfamiliar words or phrases that mean similar things (e.g., grass, lawn). • Participate in discussions about unfamiliar words.	**The adult will:** Model researching unfamiliar words in a text. Provide experiences to engage with picture/text connections (e.g., cooking, construction, gardening). • Model how to use context and text features to define unknown words.

L. RANGE OF READING

Standard	Concepts and Competencies	Supportive Practices
1.2 1.L **Read and comprehend literary nonfiction (historical fiction) and informational text on grade level, reading independently and proficiently.**	**The learner will:** • Ask and answer questions about text being read aloud. • Share relevant prior knowledge about text being read aloud. • Respond to and build on comments from other children. • Use ideas gained in group reading activities in other daily routines, learning centers, and activities.	**The adult will:** • Select appropriate informational text. • Provide a variety of opportunities to demonstrate comprehension through different modalities (e.g., multiple choice, oral retell, drawing pictures).

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
1.3 1.A **Retell stories, including key details, and demonstrate understanding of their central message or lesson.**	**The learner will:** • Retell story in sequential order. • Recall key details of a story. • Use a variety of strategies to retell a story (e.g., picture cards, dramatic play, illustration). • Identify the central message or lesson.	**The adult will:** • Select appropriate literary text. • Model retelling with key details. • Provide multiple opportunities to practice retelling. • Provide students digital media opportunities to reinforce sequencing skills. • Ask questions that support the use of sequencing (e.g., "What was the first thing that happened?" "What happened after?").

B. KEY IDEAS AND DETAILS – TEXT ANALYSIS

Standard	Concepts and Competencies	Supportive Practices
1.3 1.B **Ask and answer questions about key details in a text.**	**The learner will:** • Use specific details from story to answer questions. • Answer "who" or "what" the story is about. • Answer "how" and/or "why" questions using specifics from the story. • Generate questions about specific details in the story.	**The adult will:** • Select appropriate literary text. • Ask probing questions about text. • Use reader-response journals.

C. KEY IDEAS AND DETAILS – LITERARY ELEMENTS

Standard	Concepts and Competencies	Supportive Practices
1.3 1.C **Describe characters, settings, and major events in a story, using key details.**	**The learner will:** • Identify narrative elements (e.g., characters, setting, major events). • Use descriptive vocabulary when responding to questions and prompts.	**The adult will:** • Select appropriate literary text. • Provide opportunities to identify narrative elements of a text. • Use reader-response journals.

D. CRAFT AND STRUCTURE – POINT OF VIEW

Standard	Concepts and Competencies	Supportive Practices
1.3 1.D **Identify who is telling the story at various points in a text.**	**The learner will:** • Demonstrate understanding that a narrator tells the story. • Understand that who is telling the story can change. • Identify when the narrator changes.	**The adult will:** • Select appropriate literary texts that offer a change in narrator. • Model identifying who is telling the story at various points in a text. • Use reader-response journals.

E. CRAFT AND STRUCTURE – TEXT STRUCTURE

Standard	Concepts and Competencies	Supportive Practices
1.3 1.E **Explain major differences between books that tell stories and books that give information, drawing on a wide reading or range of text types.**	**The learner will:** • 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). • Understand that different types of text are used for different purposes. • Choose texts on identified need or purpose. • Discuss differences stories and informational texts.	**The adult will:** • Select appropriate literary and informational text. • Provide a wide variety of texts. • Model how to determine and explain the difference between a book that tells a story and a book that gives information. • Use reader-response journals.

F. CRAFT AND STRUCTURE – VOCABULARY

Standard	Concepts and Competencies	Supportive Practices
1.3 1.F **Identify words and phrases in stories or poems that suggest feelings or appeal to the senses.**	**The learner will:** • Recognize and label basic feeling words and phrases. • Recognize and label sensory words and phrases. • Discuss personal reactions to words and phrases.	**The adult will:** • Provide a variety of text that include sensory and/or emotional words and phrases. • Model identifying sensory and emotional vocabulary in a text. • Use reader-response journals.

G. INTEGRATION OF KNOWLEDGE AND IDEAS – SOURCES OF INFORMATION

Standard	Concepts and Competencies	Supportive Practices
The adult will: • Provide a variety of text with vivid details and illustrations. • Use reader-response journals.	**The learner will:** • Demonstrate understanding that the "setting" is where the story takes place. • Demonstrate understanding that "characters" are people or animals who have a role in the story. • Connect illustrations to the text. • Describe the relationship between the illustrations and the text.	**The adult will:** • Provide a variety of text with vivid details and illustrations. • Use reader-response journals.

H. INTEGRATION OF KNOWLEDGE AND IDEAS – TEXT ANALYSIS

Standard	Concepts and Competencies	Supportive Practices
1.3 1.H **Compare and contrast the adventures and experiences of characters in stories.**	**The learner will:** • Understand that characters within the same story or characters from different stories can be compared and contrasted. • Participate in strategies that provide opportunities to compare and contrast the experiences of characters (e.g., Venn diagrams, T-charts, dramatic role-play).	**The adult will:** • Select appropriate literary texts. • Model finding similarities and differences between stories. • Use reader-response journals.

I. VOCABULARY ACQUISITION AND USE – STRATEGIES

Standard	Concepts and Competencies	Supportive Practices
1.3 1.I **Determine or clarify the meaning of unknown or multiple-meaning words and phrases based upon grade-level reading and content.**	**The learner will:** • Recognize words or phrases that are unfamiliar to them. • Connect prior knowledge to unfamiliar words. • Make predictions about word meanings. • Use strategies to look up unfamiliar words. • Talk about connections between familiar and unfamiliar words or phrases that mean similar things (e.g., grass, lawn). • Participate in discussions about unfamiliar words.	**The adult will:** • Provide a variety of text that include sensory and/or emotional words and phrases. • Model identifying sensory and emotional vocabulary in a text. • Use reader-response journals.

J. VOCABULARY ACQUISITION AND USE

Standard	Concepts and Competencies	Supportive Practices
1.3 1.J **Use words and phrases acquired through conversations, reading, and being read to, and respond to texts, including words that signal connections and relationships between the words and phrases.**	**The learner will:** • Talk about pictures and text using new vocabulary words or phrases. • Use new vocabulary in the context of dramatic play, daily routines, and classroom conversations. • Use new vocabulary when asking questions or describing situations or objects. • Use new vocabulary from a variety of content areas. • Use context clues to understand word and sentence meanings. • Classify conceptual categories of words (e.g., animals, colors, foods).	**The adult will:** Use vocabulary daily and throughout different contexts. Assist students in connecting new vocabulary to prior knowledge. Directly teach increasingly sophisticated words with examples and non-examples. • Read appropriate literary text. • Provide opportunities for oral language practice. • Use think-alouds to share how a fluent reader navigates through literary text. • Explore similarities and differences in words, meanings, and concepts. • Interactively use a vocabulary word wall to teach, reinforce, and encourage the use of new words. • Use reader-response journals.

K. RANGE OF READING

Standard	Concepts and Competencies	Supportive Practices
1.3 1.K **Read and comprehend literature on grade level, reading independently and proficiently.**	**The learner will:** • Ask and answer questions about text being read aloud. • Share relevant prior knowledge about text being read aloud. • Respond to and build on comments from other students. • Use ideas gained in group reading activities in other daily routines, learning centers, and activities.	**The adult will:** • Provide multiple opportunities to read on grade-level text. • Use reader-response journals.

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
1.4 1.A **Write informative/ explanatory texts to examine a topic and convey ideas and information.**	**The learner will:** • Create a picture about a particular nonfiction topic and write about it. • Use common spelling patterns, phonemic awareness, and spelling conventions when writing.	**The adult will:** Model writing using a combination of drawing and writing. Provide frequent opportunities to dictate and/or write. Provide opportunities to engage in shared, interactive, and independent writing. Use journals where students can write about specific topics of interest. • Encourage students to draw and talk about topics of interest.

B. INFORMATIVE/EXPLANATORY – FOCUS

Standard	Concepts and Competencies	Supportive Practices
1.4 1.B **Identify and write about one specific topic.**	**The learner will:** • Respond to writing prompts on a specific topic. • Choose a specific topic to write about.	**The adult will:** Provide opportunities for whole group or small group discussion on a topic before writing. Provide opportunities to engage in shared, interactive, and independent writing. • Model writing on a single topic. • Provide a topic for writing. • Conference with students and provide feedback (e.g., using district writing rubrics, reading program).

C. INFORMATIVE/EXPLANATORY – CONTENT

Standard	Concepts and Competencies	Supportive Practices
1.4 1.C **Develop the topic with two or more facts.**	**The learner will:** • Brainstorm main ideas on a chosen topic (e.g., topic—bats, ideas—helpful, mammal, scary). • Choose a main idea to focus writing on topic. • Generate relevant details that support the chosen topic. • Include two or more facts when writing.	**The adult will:** • Provide opportunities to engage in shared, interactive, and independent writing. • Model developing a topic with two or more facts. • Conference with students and provide feedback (e.g., using district writing rubrics, reading program).

D. INFORMATIVE/EXPLANATORY – ORGANIZATION

Standard	Concepts and Competencies	Supportive Practices
1.4 1.D **Group information and provide some sense of closure.**	**The learner will:** • Use graphic organizers to logically organize and group information. • Logically organize and group information when writing. • Include an ending sentence.	**The adult will:** • Provide opportunities to engage in shared, interactive, and independent writing. • Model organizational structure and ending sentences. • Conference with students and provide feedback (e.g., using district writing rubrics, reading program).

E. INFORMATIVE/EXPLANATORY – STYLE

Standard	Concepts and Competencies	Supportive Practices
1.4 1.E **Choose words and phrases for effect.**	**The learner will:** • Use vivid and precise language.	**The adult will:** • Provide opportunities to engage in shared, interactive, and independent writing. • Model using vivid and precise language. • Conference with students and provide feedback (e.g., using district writing rubrics, reading program).

F. INFORMATIVE/EXPLANATORY – CONVENTIONS OF LANGUAGE

Standard	Concepts and Competencies	Supportive Practices
1.4 1.F **Demonstrate a grade-appropriate command of the conventions of standard English grammar, usage, capitalization, punctuation, and spelling.**	**The learner will:** • Capitalize dates and names of people. • Use end punctuation; use commas in dates and words in series. • Spell words drawing on common spelling patterns, phonemic awareness, and spelling conventions.	**The adult will:** • Model using grade-appropriate conventions. • Model using grade-appropriate proofreading skills. • Provide opportunities to engage in shared, interactive, and independent writing. • Conference with students and provide feedback (e.g., using district writing rubrics, reading program).

G. OPINION/ARGUMENTATIVE

Standard	Concepts and Competencies	Supportive Practices
1.4 1.G **Write opinion pieces on familiar topics.**	**The learner will:** • Participate in discussions about fact and opinion. • Generate an opinion and write about it. • Use common spelling patterns, phonemic awareness, and spelling conventions when writing.	**The adult will:** • Model writing an opinion piece. • Facilitate discussions about fact and opinion. • Conference with students and provide feedback (e.g., using district writing rubrics, reading program). • Provide opportunities to engage in shared, interactive, and independent writing.

H. OPINION/ARGUMENTATIVE – FOCUS

Standard	Concepts and Competencies	Supportive Practices
1.4 1.H **Form an opinion by choosing among given topics.**	**The learner will:** • Choose topic. • State an opinion.	**The adult will:** • Provide a variety of topics for writing. • Provide examples of differences between fact and opinion. • Model how to choose a topic and form an opinion. • Conference with students and provide feedback (e.g., using district writing rubrics, reading program). • Provide opportunities to engage in shared, interactive, and independent writing.

I. OPINION/ARGUMENTATIVE – CONTENT

Standard	Concepts and Competencies	Supportive Practices
1.4 1.I **Support the opinion with reasons related to the opinion.**	**The learner will:** • Participate in discussions supporting opinions. • Generate relevant reasons that support the opinion.	**The adult will:** • Model how to support an opinion. • Provide frequent opportunities for writing and dictating stories. • Provide opportunities to engage in shared, interactive, and independent writing. • Conference with students and provide feedback (e.g., using district writing rubrics, reading program).

J. OPINION/ARGUMENTATIVE – ORIENTATION

Standard	Concepts and Competencies	Supportive Practices
1.4 1.J **Create an organizational structure that includes reasons and provides some sense of closure.**	**The learner will:** • Use graphic organizers to logically organize and group information. • Logically organize and group reasons when writing. • Include an ending sentence.	**The adult will:** • Model structure that includes reasons. • Model closing sentences. • Conference with students and provide feedback (e.g., using district writing rubrics, reading program). • Provide opportunities to engage in shared, interactive, and independent writing.

K. OPINION/ARGUMENTATIVE – STYLE

Standard	Concepts and Competencies	Supportive Practices
1.4 1.K **Use a variety of words and phrases.**	**The learner will:** • Use vivid and precise language.	**The adult will:** • Model using a variety of words and phrases in writing. • Provide opportunities to engage in shared, interactive, and independent writing. • Conference with students and provide feedback (e.g., using district writing rubrics, reading program).

L. OPINION/ARGUMENTATIVE – CONVENTIONS OF LANGUAGE

Standard	Concepts and Competencies	Supportive Practices
1.4 1.L **Demonstrate a grade-appropriate command of the conventions of standard English grammar, usage, capitalization, punctuation, and spelling.**	**The learner will:** • Capitalize dates and names of people. • Use end punctuation; use commas in dates and words in series. • Spell words drawing on common spelling patterns, phonemic awareness, and spelling conventions.	**The adult will:** • Model using grade-appropriate conventions. • Model using grade-appropriate proofreading skills. • Provide opportunities to engage in shared, interactive, and independent writing. • Conference with students and provide feedback (e.g., using district writing rubrics, reading program).

M. NARRATIVE

Standard	Concepts and Competencies	Supportive Practices
1.4 1.M **Write narratives to develop real or imagined experiences or events.**	**The learner will:** • Write about a real or imagined experience or event. • Use common spelling patterns, phonemic awareness, and spelling conventions when writing.	**The adult will:** • Model using grade-appropriate conventions. • Model using grade-appropriate proofreading skills. • Provide opportunities to engage in shared, interactive, and independent writing. • Conference with students and provide feedback (e.g., using district writing rubrics, reading program).

N. NARRATIVE – FOCUS

Standard	Concepts and Competencies	Supportive Practices
1.4 1.N **Establish who and what the narrative will be about.**	**The learner will:** • Generate ideas for writing. • Understand that "who" a story will be about refers to the person, animal, or animated object that the story will be about. • Understand that "what" a story will be about refers to the sequenced events that happen to the references "who." • Respond when asked "who" or "what" a story is about, and follow through when drawing about or dictating the story.	**The adult will:** • Facilitate discussions about characters and events. • Provide frequent opportunities for writing and dictating stories. • Provide opportunities to engage in shared, interactive, and independent writing. • Conference with students and provide feedback (e.g., using district writing rubrics, reading program).

O. NARRATIVE – CONTENT

Standard	Concepts and Competencies	Supportive Practices
1.4 1.O **Include thoughts and feelings to describe experiences and events.**	**The learner will:** • Participate in discussions describing experiences and events. • Include thoughts and feelings related to experiences and events.	**The adult will:** • Talk about an event or experience including thoughts and feelings. • Facilitate discussions about familiar and unfamiliar events. • Provide opportunities to engage in shared, interactive, and independent writing. • Conference with students and provide feedback (e.g., using district writing rubrics, reading program).

P. NARRATIVE – ORGANIZATION

Standard	Concepts and Competencies	Supportive Practices
1.4 1.P **Recount two or more appropriately sequenced events using temporal words to signal event order and provide some sense of closure.**	**The learner will:** • Understand stories can be told about a single event or several loosely linked events. • Understand that a single event is made up of a series of smaller events that are in a sequence (e.g., first, next, last, before). • Sequence two or more events using temporal words. • End with a closing sentence.	**The adult will:** • Model using two or more sequential events through writing. • Model using temporal words to signal order of events. • Provide opportunities to practice sequencing (e.g., graphic organizers, illustrations). • Engage students using digital media to reinforce sequencing skills. • Ask questions relating to sequencing (e.g., first, before, next, last). • Model writing a closing sentence. • Conference with students and provide feedback (e.g., using district writing rubrics, reading program). • Provide opportunities to engage in shared, interactive, and independent writing.

Q. NARRATIVE – STYLE

Standard	Concepts and Competencies	Supportive Practices
1.4 1.Q **Use a variety of words and phrases.**	**The learner will:** • Use vivid and precise language.	**The adult will:** • Model using a variety of words and phrases in writing. • Provide opportunities to engage in shared, interactive, and independent writing. • Conference with students and provide feedback (e.g., using district writing rubrics, reading program). • Use a variety of text to understand how authors use different words and phrases.

R. NARRATIVE – CONVENTIONS OF LANGUAGE

Standard	Concepts and Competencies	Supportive Practices
1.4 1.R **Demonstrate a grade-appropriate command of the conventions of standard English grammar, usage, capitalization, punctuation, and spelling.**	**The learner will:** • Capitalize dates and names of people. • Use end punctuation; use commas in dates and words in series. • Spell words drawing on common spelling patterns, phonemic awareness, and spelling conventions.	**The adult will:** • Model using grade-appropriate conventions. • Model using grade-appropriate proofreading skills. • Provide opportunities to engage in shared, interactive, and independent writing. • Conference with students and provide feedback (e.g., using district writing rubrics, reading program).

T. PRODUCTION AND DISTRIBUTION OF WRITING – WRITING PROCESS

Standard	Concepts and Competencies	Supportive Practices
1.4 1.T **Focus on a topic, respond to questions and suggestions from peers, and add details to strengthen writing as needed.**	**The learner, with guidance and support, will:** • Understand that drawings and dictation convey meaning to an audience. • Understand writing may have to be changed to make meaning more clear. • Share work with others. • Participate in discussions about their work. • When prompted make changes to work based on feedback. • Respond to questions and suggestions from peers. • Add details to strengthen writing as needed.	**The adult will:** • Model asking and answering questions about a peer's writing (focused on details of the writing). • Assure a supportive environment where students feel confident enough to share their work. • Use explicit prompts to encourage the use of both positive and constructive feedback (e.g., "I liked when …" "I wonder …"). • Model how to provide feedback to peers. • Model how details strengthen writing. • Provide frequent opportunities for writing and dictating stories. • Provide opportunities to engage in shared, interactive, and independent writing.

U. TECHNOLOGY AND PUBLICATION

Standard	Concepts and Competencies	Supportive Practices
1.4 1.U **Use a variety of digital tools to produce and publish writing, including collaboration with peers.**	**The learner, with guidance and support, will:** • Use a variety of digital tools to produce and publish writing.	**The adult will:** Provide opportunities to use available technology. • Model use of available technology.

V. CONDUCTING RESEARCH

Standard	Concepts and Competencies	Supportive Practices
1.4 1.V **Participate in individual or shared research and writing projects.**	**The learner will:** • 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?"). • Use a variety of resources with teacher support (e.g., adults and peers, books, digital media, maps, recipes, experts) to find new information.	**The adult will:** Encourage students to research why, how, where, and when answers to questions. Provide materials (e.g., videos, books, magazines, technology), structure, and opportunities to create an individual or shared research project. Model/guide procedures for how to research a project. Model/guide how to write about research.

W. CREDIBILITY, RELIABILITY, AND VALIDITY OF SOURCES

Standard	Concepts and Competencies	Supportive Practices
1.4 1.W **Recall information from experiences or gather information from provided sources to answer a question.**	**The learner, with guidance and support, will:** • Respond to prompts which require reference to prior experiences. • Relate prior experiences in learning to a current topic. • Recall information from experiences. • Use a variety of resources with teacher support (e.g., adults and peers, books, digital media, maps, recipes, experts) to find new information.	**The adult will:** Model connecting prior experiences in learning to answer a question. Model gathering information from sources to respond to a question.

X. RANGE OF WRITING

Standard	Concepts and Competencies	Supportive Practices
1.4 1.X **Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.**	**The learner will:** • Engage in writing opportunities including journaling. • Revisit previous work. • Respond to writing prompts. • Choose to write independently during play.	**The adult will:** • Provide frequent opportunities for writing. • Provide opportunities to engage in shared, interactive, and independent writing. • Provide a variety of materials and opportunities to write daily and over time (e.g., journals, "author's" chair, projects). • Provide opportunities and encourage students to revisit prior work. • Encourage persistence in drawing/dictation/writing.

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
1.5 1.A **Participate in collaborative conversations with peers and adults in small and larger groups.**	**The learner will:** • Communicate using detail related to topic being discussed. • Pose questions related to topic being discussed. • Allow wait time before responding. • Engage in turn-taking.	**The adult will:** Encourage asking questions to find out more information. Provide and monitor multiple opportunities for conversations throughout the day. • Explicitly restate comments made by students and encourage those responding to add further detail, or contribute further to the topic being discussed. • Encourage students to restate comments made by peers. • Model appropriate participation in discussions (e.g., polite interactions, one person speaking at a time, asking questions). • Embed opportunities to "turn and talk" to share ideas on a topic. • Model appropriate conversation skills (e.g., tone, volume, turn-taking, active listening, eye contact).

B. COMPREHENSION AND COLLABORATION – CRITICAL LISTENING

Standard	Concepts and Competencies	Supportive Practices
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.**	**The learner will:** • Respond to a question with an answer or details related to the topic being discussed. • Generate "who," "what," "when," and "where" questions. • Ask "What does that mean?"	**The adult will:** Provide opportunities for asking and answering questions. Engage in conversation about topics of interest daily. • Provide multiple opportunities to listen to text read aloud or through other media (e.g., video, YouTube, listening centers). • Ask "who," "what," "when," and "where" questions. • Ask students to identify facts from text. • Invite students to discuss how they would react to a situation if they were the character in the story.

C. COMPREHENSION AND COLLABORATION – EVALUATING INFORMATION

Standard	Concepts and Competencies	Supportive Practices
1.5 1.C **Ask and answer questions about what a speaker says to gather additional information or clarify something that is not understood.**	**The learner will:** • Ask for clarification (e.g., "What do you mean?" "I don't understand.").	**The adult will:** Model asking for help or clarifying information. Model oral discussion techniques. • Provide opportunities for oral language use. • Promote active listening and attention to key ideas and details.

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

Standard	Concepts and Competencies	Supportive Practices
1.5 1.D **Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.**	**The learner will:** • Use an appropriate voice level for the situation. • Share experiences and tell stories clearly with relevant detail. • Use appropriate pacing. • Speak clearly enough to be understood.	**The adult will:** • Provide opportunities for oral language use. • Model appropriate oral presentation skills. • Encourage use of appropriate volume and pacing. • Speak to and engage students in group and individual conversations daily. • Re-phrase student's sentence structure or grammar by repeating the sentence properly.

E. PRESENTATION OF KNOWLEDGE AND IDEAS – CONTEXT

Standard	Concepts and Competencies	Supportive Practices
1.5 1.E **Produce complete sentences when appropriate to task and situation.**	**The learner will:** • Recognize and express own knowledge, thoughts, and ideas in an appropriate manner using complete sentences. • Understand and produce simple and compound sentences.	**The adult will:** • Provide opportunities for oral language use. • Model speaking in complete sentences. • Reinforce complete sentence responses to questions. • Encourage students to express own knowledge and ideas using complete sentences. • Provide opportunities to engage in shared language activities. • Create an environment in which students have the opportunity to share knowledge and events through speaking and listening to one another.

F. INTEGRATION OF KNOWLEDGE AND IDEAS – MULTIMEDIA

Standard	Concepts and Competencies	Supportive Practices
1.5 1.F **Add drawings or other visual displays when sharing aloud to clarify ideas, thoughts, and feelings.**	**The learner will:** • Enhance oral presentations with a visual display (e.g., smart board).	**The adult will:** • Provide opportunities for oral language use. • Provide materials and time to produce a visual display. • Provide guidance (e.g., rubric) for expected displays. • Model the use of visual displays to clarify ideas.

G. CONVENTIONS OF STANDARD ENGLISH

Standard	Concepts and Competencies	Supportive Practices
1.5 1.G **Demonstrate command of the conventions of standard English when speaking, based on Grade 1 level and content.**	**The learner will:** • Use a variety of sentence structures. • Match correct subject-verb agreement. • Use most parts of speech correctly. • Use common, proper, and possessive nouns. • Use past, present, and future tense. • Use personal, possessive, and indefinite pronouns. • Use adjectives. • Use conjunctions. • Use articles. • Use demonstratives.	**The adult will:** • Model the proper use of standard English when speaking. • Provide multiple opportunities for oral language practice and use.

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 interference 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).

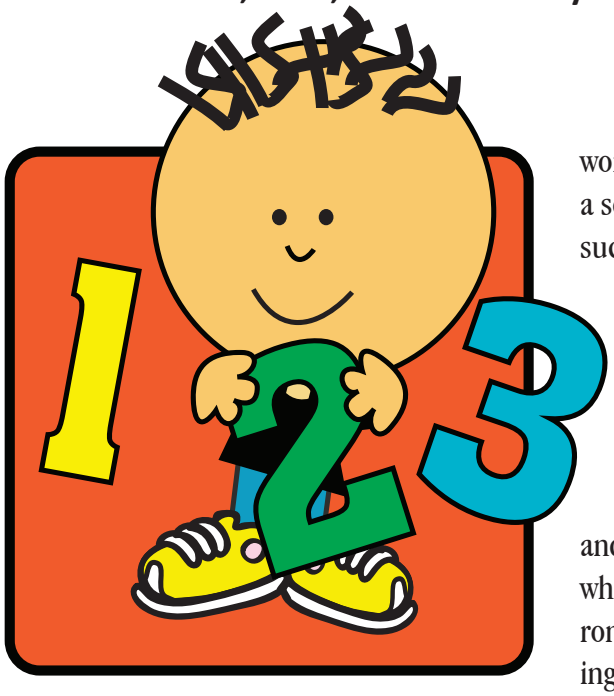
TIER III Words—Low-frequency words that occur in specific domains (including subjects in school, hobbies, occupations, geographic regions, technology, weather).

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



Mathematical 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 important 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 is 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?

B.1 NUMBERS AND OPERATIONS IN BASE TEN

Standard	Concepts and Competencies	Supportive Practices
2.1 1.B.1 **Extend the counting sequence to read and write numerals to represent objects.**	**The learner will:** • Count to 120, starting at any number less than 120. • Read and write numerals up to 120 and represent a number of objects with a written numeral.	**The adult will:** • Provide and incorporate opportunities (e.g., everyday occurrences and planned, purposeful instruction) to count, read, and write numerals. • Model the connection of the quantity to written symbols.

B.2 NUMBERS AND OPERATIONS IN BASE TEN

Standard	Concepts and Competencies	Supportive Practices
2.1 1.B.2 **Use place-value concepts to represent amounts of tens and ones and to compare two-digit numbers.**	**The learner will:** • Understand that the two digits of a two-digit number represent amounts of tens and ones. • Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.	**The adult will:** • Encourage students to share, discuss, and compare solution strategies after they solve problems. • Encourage students to develop the habit of checking their answer to a problem to determine if it makes sense for the situation and the given questions. • Connect symbols (< Less Than, > Greater Than, and = Equal To) to the meaning.

B.3 NUMBERS AND OPERATIONS IN BASE TEN

Standard	Concepts and Competencies	Supportive Practices
2.1 1.B.3 **Use place-value concepts and properties of operations to add and subtract within 100.**	**The learner will:** • Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10 using concrete models or drawings. • Relate the strategy to a written method and explain the reasoning used. • Subtract multiples of 10 in the range 10–90, using concrete models or drawings. Relate the strategy to a written method and explain the reasoning used.	**The adult will:** • Encourage students to share, discuss, and compare solution strategies after they solve problems. • Encourage students to develop the habit of checking their answer to a problem to determine if it makes sense for the situation and the given questions. • Demonstrate solving addition and subtraction story problems by providing a variety of manipulatives and drawings. • Provide opportunities to explain strategies for solving addition and subtraction problems.

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.1 OPERATIONS AND ALGEBRAIC THINKING

Standard	Concepts and Competencies	Supportive Practices
2.2 1.A.1 **Represent and solve problems involving addition and subtraction within 20.**	**The learner will:** • Use addition and subtraction within 20 to solve word problems by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. • Add and subtract within 20 (e.g., use strategies such as counting on, making 10, decomposing a number leading to a 10, using the relationship between addition and subtraction and creating equivalent but easier or known sums). • Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20. • Construct viable arguments and critique the reasoning of others.	**The adult will:** • Provide and incorporate opportunities for solving problems in both everyday occurrences and planned, purposeful instruction. • Model and incorporate appropriate math language and vocabulary. • Model and supply students with manipulatives to count, order, and group so they will recognize that a number represents a specific quantity. • Provide problems with different operations is essential. • Demonstrate and develop students' abilities to find differences using related addition facts. • Provide opportunities for students to explain various strategies for solving story problems or equations (by using concrete models or drawing). • Encourage students to check their thinking by asking themselves, "Does this make sense?" • Construct arguments using concrete referents, such as objects, pictures, drawings, and actions. • Guide students in creating a representation of a problem while attending to the meanings of the quantities (quantitative reasoning). • Provide practice for mathematical communication skills for students to participate in mathematical discussions involving questions (e.g., "How did you get that?" "Explain your thinking." and "Why is that true?") and listening to others' explanations. • Encourage students to consider the available tools when solving a mathematical problem. • Provide guidance in deciding when certain tools might be helpful.

A.2 OPERATIONS AND ALGEBRAIC THINKING

Standard	Concepts and Competencies	Supportive Practices
2.2 1.A.2 **Understand and apply properties of operations and the relationship between addition and subtraction.**	**The learner will:** • Apply properties of operations as strategies to add and subtract (e.g., commutative property of addition, associative property of addition). • Understand subtraction as an unknown-addend problem (e.g., subtract 10 – 8 by finding the number that makes 10 when added to 8).	**The adult will:** • Demonstrate and develop students' abilities to find differences using related addition facts. • Model and incorporate appropriate math language and vocabulary. • Supply students with manipulatives to count, order, and group.

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
2.3 1.A.1 **Compose and distinguish between two- and three-dimensional shapes based on their attributes.**	**The learner will:** • Compose two- and three-dimensional shapes and distinguish between attributes. • Build, create, and draw shapes that possess given attributes. • Develop mathematical communication skills. • Construct arguments using concrete referents (e.g., objects, pictures, drawings, actions).	**The adult will:** • Provide an environment rich in geometric design. • Use appropriate manipulatives (e.g., geoboards) and activities to create shapes and form congruent plane figures. • Create a chart with attributes of each object. • Use appropriate manipulatives (e.g., pattern blocks, building blocks, etc.) to allow for exploration and construction of new shapes. • Provide experiences with shapes in different orientations. • Provide opportunities to identify and name the properties of two- and three- dimensional shapes using plane figures and geometric solids. • Use real objects as examples of geometric solids. • Provide practice of mathematical communication skills as students participate in mathematical discussions. • Encourage students to explain their own thinking by listening to others' explanations and deciding if the explanations make sense.

A.2 GEOMETRY – APPLICATION

Standard	Concepts and Competencies	Supportive Practices
2.3 1.A.2 **Use the understanding of fractions to partition shapes into halves and quarters.**	**The learner will:** • Partition circles and rectangles into two and four equal shares. • Draw the conclusion that decomposing into more equal shares creates smaller shares.	**The adult will:** • Encourage students to compare the change in the size of the fractional parts as recommended in the folding shapes strategy. • Focus on concrete and representational activities (e.g., block play). • Provide opportunities to construct arguments using concrete referents (e.g., objects, pictures, drawings, actions).

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
2.4 1.A.1 **Order lengths and measure them both indirectly and by repeating length units.**	**The learner will:** • Order three objects by length; compare the lengths of two objects indirectly by using a third object. • Use standard and non-standard units of measure to express the length of an object as a whole number of length units. • Understand that the length measurement of an object is the number of same-size length units. • Determine the appropriate measurement tool, explore and apply understanding of estimation.	**The adult will:** • Guide students to understand that length is measured from one end point to another end point (both the length and the width of an object are measurements of length). • Model the appropriate math language and vocabulary. • Guide the process of comparing objects using a specified attribute. • Provide opportunities measuring with both standard and non-standard tools and units. • Provide materials/opportunities and support learners in making estimations. • Encourage students to check their thinking by asking questions (e.g., "Does this make sense?"). • Encourage students to consider the available tools when solving a mathematical problem.

A.2 MEASUREMENT AND DATA

Standard	Concepts and Competencies	Supportive Practices
2.4 1.A.2 **Tell and write time to the nearest half hour using both analog and digital clocks.**	**The learner will:** • Tell and write time in hours and half hours using analog and digital clocks.	**The adult will:** • Provide opportunities to work with a clock (e.g., manipulating the hands, telling the time). • Provide and incorporate opportunities in both everyday occurrences and planned, purposeful instruction with telling and writing time. • Model and incorporate appropriate math language and vocabulary.

A.4 MEASUREMENT AND DATA – DATA

Standard	Concepts and Competencies	Supportive Practices
2.4 1.A.4 **Represent and interpret data using tables/ charts.**	**The learner will:** • Organize, represent, and interpret data with up to three categories. • Ask and answer questions about the data.	**The adult will:** • Provide easy-to-read data sets. • Assist (as needed) learners in reading the data (e.g., deducing information, drawing conclusions, and applying data to future events/behaviors). • Pose open-ended questions to engage learners in reading data on a graph. • Provide opportunities to see graphs used in the real world. • Encourage and support learners in explaining how they applied their skills during mathematical work. • Provide opportunities to create and interpret graphs throughout the school day. • Model and verbalize the process of graphing using mathematical language and vocabulary. • Provide opportunities to construct arguments using concrete referents (e.g., objects, pictures, drawings, actions). • Provide opportunities to practice mathematical communication skills.

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

Children 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

The 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

According 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.

Engineering 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

NAEYC 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?

3.1.1.A Life Science: From Molecules to Organisms: Structures and Processes

Students who demonstrate understanding can *use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.*

Clarifying Statement: Examples of human problems that can be solved by mimicking plant or animal solutions could include designing clothing or equipment to protect bicyclists by mimicking turtle shells, acorn shells, and animal scales; stabilizing structures by mimicking animal tails and roots on plants; keeping out intruders by mimicking thorns on branches and animal quills; and, detecting intruders by mimicking eyes and ears.

Assessment Boundary: N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
Constructing Explanations and Designing Solutions 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. • Use materials to design a device that solves a specific problem or a solution to a specific problem.	**LS1.A: Structure and Function** • All organisms have external parts. Different animals use their body parts in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water and air. Plants also have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow. **LS1.D: Information Processing** • Animals have body parts that capture and convey different kinds of information needed for growth and survival. Animals respond to these inputs with behaviors that help them survive. Plants also respond to some external inputs.	**Structure and Function** • The shape and stability of structures of natural and designed objects are related to their function(s). ***Connections to Engineering, Technology, and Applications of Science*** **Influence of Science, Engineering and Technology on Society and the Natural World** • Every human-made product is designed by applying some knowledge of the natural world and is built using materials derived from the natural world.

Pennsylvania Context: Examples of Pennsylvania context include adaptations of Pennsylvania-recognized organisms such as hemlock, mountain laurel, and white-tailed deer.

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 work-places or scenarios using technology.
Science, Environmental Literacy and Sustainability (NAAEE)	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.
PA Core Standards: ELA	CC.1.4.1.V: Participate in individual or shared research and writing projects. CC.1.5.1.A: Participate in collaborative conversations with peers and adults in small and larger groups.
PA Core Standards and Practices: Math	CC.2.1.1.B.2: Use place value concepts to represent amounts of tens and ones and to compare two digit numbers. CC.2.4.1.A.4: Represent and interpret data using tables/charts.
PA Standards: Social Studies	6.5.1.E: Describe what tools (tangible assets) are necessary to complete a task.
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-4E: Design new technologies that could improve their daily lives.

3.1.1.B Life Science: From Molecules to Organisms: Structures and Processes

Students who demonstrate understanding can *read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.*

Clarifying Statement: Examples of patterns of behaviors could include the signals that offspring make (such as crying, cheeping, and other vocalizations) and the responses of the parents (such as feeding, comforting, and protecting the offspring).

Assessment Boundary: N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
Obtaining, Evaluating, and Communicating Information Obtaining, evaluating, and communicating information in K–2 builds on prior experiences and uses observations and texts to communicate new information. • Read grade-appropriate texts and use media to obtain scientific information to determine patterns in the natural world. ***Connections to Nature of Science*** **Scientific Knowledge is Based on Empirical Evidence** • Scientists look for patterns and order when making observations about the world.	**LS1.B: Growth and Development of Organisms** • Adult plants and animals can have young. In many kinds of animals, parents and the offspring themselves engage in behaviors that help the offspring to survive.	**Patterns** • Patterns in the natural and human designed world can be observed, used to describe phenomena, and used as evidence.

Pennsylvania Context: Examples of Pennsylvania context include Pennsylvania flora and fauna.

PA 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)
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 (NAAEE)	K-4 Strand 1.C. Collecting information: Learners locate and collect information about the environment and environmental topics.
PA Core Standards: ELA	CC.1.2.1.A: Identify the main idea and retell key details of text. CC.1.2.1.B: Ask and answer questions about key details in a text. CC.1.2.1.L: Read and comprehend literary non-fiction and informational text on grade level, reading independently and proficiently. CC.1.4.1.V: Participate in individual or shared research and writing projects.
PA Core Standards and Practices: Math	MP.2: Reason abstractly and quantitatively. CC.2.1.1.B.2: Use place value concepts to represent amounts of tens and ones and to compare two digit numbers. CC.2.4.1.A.4: Represent and interpret data using tables/charts.
PA Standards: Social Studies	8.3.1.D: Identify conflict and describe ways to cooperate with others by making smart choices.
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-3A: Apply concepts and skills from technology and engineering activities that reinforce concepts and skills across multiple content areas.

3.1.1.C Life Science: Heredity: Inheritance and Variation of Traits

Students who demonstrate understanding can *make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.*

Clarifying Statement: Examples of patterns could include features plants or animals share. Examples of observations could include leaves from the same kind of plant are the same shape but can differ in size; and, a particular breed of dog looks like its parents but is not exactly the same.

Assessment Boundary: Assessment does not include inheritance or animals that undergo metamorphosis or hybrids.

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
Constructing Explanations and Designing Solutions 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. • Make observations (firsthand or from media) to construct an evidence-based account for natural phenomena.	**LS3.A: Inheritance of Traits** • Young animals are very much, but not exactly like, their parents. Plants also are very much, but not exactly, like their parents. **LS3.B: Variation of Traits** • Individuals of the same kind of plant or animal are recognizable as similar but can also vary in many ways.	**Patterns** • Patterns in the natural and human designed world can be observed, used to describe phenomena, and used as evidence.

Pennsylvania Context: Examples of Pennsylvania context include examples of native Pennsylvania animals and plants.

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.02.02.01.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 (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.1.4.1.V: Participate in individual or shared research and writing projects. CC.1.4.1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question.
PA Core Standards and Practices: Math	MP.5: Use appropriate tools strategically. CC.2.4.1.A.1: Order lengths and measure them both indirectly and by repeating length units.
PA Standards: Social Studies	8.3.1.C: Identify examples of change.
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-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?

3.2.1.A Physical Science: Waves and Their Applications in Technologies for Information Transfer

Students who demonstrate understanding can *plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.*

Clarifying Statement: Examples of vibrating materials that make sound could include tuning forks and plucking a stretched string. Examples of how sound can make matter vibrate could include holding a piece of paper near a speaker making sound and holding an object near a vibrating tuning fork.

Assessment Boundary: N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
Planning and Carrying Out Investigations 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. • Plan and conduct investigations collaboratively to produce evidence to answer a question. ***Connections to Nature of Science*** **Scientific Investigations Use a Variety of Methods** • Science investigations begin with a question. • Scientists use different ways to study the world.	**PS4.A: Wave Properties** • Sound can make matter vibrate, and vibrating matter can make sound.	**Cause and Effect** • Simple tests can be designed to gather evidence to support or refute student ideas about causes.

Pennsylvania Context: N/A

PA Career Ready Skills: Distinguish among a set of 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)
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.

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
PA Core Standards: ELA	CC.1.4.1.A: Write informative/explanatory texts to examine a topic and convey ideas and information. CC.1.4.1.V: Participate in individual or shared research and writing projects. CC.1.4.1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.5.1.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.2.4.1.A.1: Order lengths and measure them both indirectly and by repeating length units.
PA Standards: Social Studies	6.5.1.E: Describe what tools (tangible assets) are necessary to complete a task.
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.

3.2.1.B Physical Science: Waves and Their Applications in Technologies for Information Transfer

Students who demonstrate understanding can *make observations to construct an evidence-based account that objects can be seen only when illuminated.*

Clarifying Statement: Examples of observations could include those made in a completely dark room, a pinhole box, and a video of a cave explorer with a flashlight. Illumination could be from an external light source or by an object giving off its own light.

Assessment Boundary: N/A

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
Constructing Explanations and Designing Solutions 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. • Make observations (firsthand or from media) to construct an evidence-based account for natural phenomena.	**PS4.B: Electromagnetic Radiation** • Objects can be seen if light is available to illuminate them or if they give off their own light.	**Cause and Effect** • Simple tests can be designed to gather evidence to support or refute student ideas about causes.

Pennsylvania Context: Examples of Pennsylvania context include Pennsylvania's cave systems and mines.

PA 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)
Agriculture (AFNR)	CS.03.03.04.c: Create a plan to mitigate the level of contamination or injury identified as a risk in the workplace.
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.1.4.1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.5.1.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.2.4.1.A.1: Order lengths and measure them both indirectly and by repeating length units.
PA Standards: Social Studies	5.4.1.B: Describe how classrooms can work together.
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-2B: Safely use tools to complete tasks.

3.2.1.C Physical Science: Waves and Their Applications in Technologies for Information Transfer

Students who demonstrate understanding can *plan and conduct an investigation to determine the effect of placing objects made with different materials in the path of a beam of light.*

Clarifying Statement: Examples of materials could include those that are transparent (such as clear plastic), translucent (such as wax paper), opaque (such as cardboard), and reflective (such as a mirror).

Assessment Boundary: Assessment does not include the speed of light.

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
Planning and Carrying Out Investigations 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. • Plan and conduct investigations collaboratively to produce evidence to answer a question.	**PS4.B: Electromagnetic Radiation** • Some materials allow light to pass through them, others allow only some light through and others block all the light and create a dark shadow on any surface beyond them, where the light cannot reach. Mirrors can be used to redirect a light beam. (Boundary: The idea that light travels from place to place is developed through experiences with light sources, mirrors, and shadows, but no attempt is made to discuss the speed of light.)	**Cause and Effect** • Simple tests can be designed to gather evidence to support or refute student ideas about causes.

Pennsylvania Context: N/A

PA Career Ready Skills: Distinguish among a set of 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)
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.1.4.1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.5.1.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.2.4.1.A.1: Order lengths and measure them both indirectly and by repeating length units.
PA Standards: Social Studies	6.5.1.E: Describe what tools (tangible assets) are necessary to complete a task.
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-2C: Explain that materials are selected for use because they possess desirable properties and characteristics.

3.2.1.D Physical Science: Waves and Their Applications in Technologies for Information Transfer

Students who demonstrate understanding can *use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.*

Clarifying Statement: Examples of devices could include a light source to send signals, paper cup and string "telephones," and a pattern of drum beats.

Assessment Boundary: Assessment does not include technological details for how communication devices work.

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
Constructing Explanations and Designing Solutions 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. • Use tools and materials provided to design a device that solves a specific problem.	**PS4.C: Information Technologies and Instrumentation** • People also use a variety of devices to communicate (send and receive information) over long distances.	***Connections to Engineering, Technology, and Applications of Science*** **Influence of Engineering, Technology, and Science, on Society and the Natural World** • People depend on various technologies in their lives; human life would be very different without technology.

Pennsylvania Context: N/A

PA Career Ready Skills: Distinguish among a set of 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)
Agriculture (AFNR)	CS.01.02.01.a: Research technologies used in AFNR systems.
Science, Environmental Literacy and Sustainability (NAAEE)	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.1.4.1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.5.1.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.2.4.1.A.1: Order lengths and measure them both indirectly and by repeating length units.
PA Standards: Social Studies	6.5.1.E: Describe what tools (tangible assets) are necessary to complete a task.
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-2B: Safely use tools to complete tasks. STEL-5B: Explore how technologies are developed to meet individual and societal needs and wants.

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?

3.3.1.A Earth and Space Sciences: Earth's Place in the Universe

Students who demonstrate understanding can *use observations of the sun, moon, and stars to describe patterns that can be predicted.*

Clarifying Statement: Examples of patterns could include that the sun and moon appear to rise in one part of the sky, move across the sky, and set; and stars other than our sun are visible at night but not during the day.

Assessment Boundary: Assessment of star patterns is limited to stars being seen at night and not during the day.

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
Analyzing and Interpreting Data Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations. • Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions.	**ESS1.A: The Universe and Its Stars** • Patterns of the motion of the sun, moon, and stars in the sky can be observed, described, and predicted.	**Patterns** • Patterns in the natural world can be observed, used to describe phenomena, and used as evidence. ***Connections to Nature of Science*** **Scientific Knowledge Assumes an Order and Consistency in Natural Systems** • Science assumes natural events happen today as they happened in the past. • Many events are repeated.

Pennsylvania Context: N/A

PA Career Ready Skills: Distinguish among a set of 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)
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.C. Collecting information: Learners locate and collect information about the environment and environmental topics.
PA Core Standards: ELA	CC.1.4.1.V: Participate in individual or shared research and writing projects. CC.1.4.1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.5.1.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.2.4.1.A.4: Represent and interpret data using tables/charts.
PA Standards: Social Studies	8.3.1.C: Identify examples of change.
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-1A: Compare the natural world and human-made world.

3.3.1.B Earth and Space Sciences: Earth's Place in the Universe

Students who demonstrate understanding can *Make observations at different times of year to relate the amount of daylight to the time of year.*

Clarifying Statement: Emphasis is on relative comparisons of the amount of daylight in the winter to the amount in the spring or fall.

Assessment Boundary: Assessment is limited to relative amounts of daylight, not quantifying the hours or time of daylight.

Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	Crosscutting Concepts (CCC)
Planning and Carrying Out Investigations 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.\ • Make observations (firsthand or from media) to collect data that can be used to make comparisons.	**ESS1.B: Earth and the Solar System** • Seasonal patterns of sunrise and sunset can be observed, described, and predicted.	**Patterns** • Patterns in the natural world can be observed, used to describe phenomena, and used as evidence.

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

PA Career Ready Skills: Distinguish among a set of 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)
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.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.1.4.1.V: Participate in individual or shared research and writing projects. CC.1.4.1.W: With guidance and support, recall information from experiences or gather information from provided sources to answer a question. CC.1.5.1.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.2.2.1.A.1: Represent and solve problems involving addition and subtraction within 20. CC.2.4.1.A.4: Represent and interpret data using tables/charts.
PA Standards: Social Studies	7.3.1.A: Identify the local climate and how it determines the way people live.
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-1A: Compare the natural world and human-made world.

3.4 Environmental Literacy and Sustainability

BIG IDEAS: 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)
Obtaining, Evaluating, and Communicating Information Obtaining, evaluating, and communicating information in K–2 builds on prior experiences and uses observations and texts to communicate new information. • 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. **Analyzing and Interpreting Data** Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations. • Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions.	**ESS3.A: Natural Resources** • 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.	**Cause and Effect** • Events have causes that generate observable patterns. **Systems and System Models** • Systems in the natural and designed world have parts that work together.

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)
Obtaining, Evaluating, and Communicating Information Obtaining, evaluating, and communicating information in K–2 builds on prior experiences and uses observations and texts to communicate new information. • Read grade-appropriate texts and/or use media to obtain scientific information to describe patterns in the natural world.	**ESS3.A: Natural Resources** • 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. **ESS3.C: Human Impacts on Earth Systems** • 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.	**Patterns** • Patterns in the natural world can be observed, used to describe phenomena, and used as evidence. **Cause and Effect** • Events have causes that generate observable patterns.

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 (NAAEE)	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.

Standard Source	Possible Connections to Other Standard(s) or Practice(s)
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)
Analyzing and Interpreting Data Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations. • Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. **Obtaining, Evaluating, and Communicating Information** Obtaining, evaluating, and communicating information in K–2 builds on prior experiences and uses observations and texts to communicate new information. • 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.	**LS4.D: Biodiversity and Humans** • There are many different kinds of living things in any area, and they exist in different places on land and in water. **ESS3.C: Human Impacts on Earth Systems** • 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.	**Patterns** • Patterns in the natural world can be observed, used to describe phenomena, and used as evidence. **Stability and Change** • Things may change slowly or rapidly.

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 (NAAEE)	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)
Planning and Carrying Out Investigations 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. • With guidance, plan and conduct an investigation in collaboration with peers.	**ESS3.C: Human Impacts on Earth Systems** • 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.	**Stability and Change** • Things may change slowly or rapidly. **Patterns** • Patterns in the natural world can be observed, used to describe phenomena, and used as evidence.

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 (NAAEE)	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 IDEAS: 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)
Analyzing and Interpreting Data Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations. • Analyze data from tests of an object or tool to determine if it works as intended.	**ETS1.B: Developing Possible Solutions** • 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.	**Communication** • Learns that humans have many ways to communicate.

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)
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.
Integrated Standards for Science, Environmental Literacy & Sustainability, and Technology & Engineering Standards Grades K–12	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)
Asking Questions and Defining Problems Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested. • Define a simple problem that can be solved through the development of a new or improved object or tool.	**ETS1.A: Defining and Delimiting Engineering Problems** • A situation that people want to change or create can be approached as a problem to be solved through engineering. • Asking questions, making observations, and gathering information are helpful in thinking about problems. • Before beginning to design a solution, it is important to clearly understand the problem.	**Creativity** • Learns that humans create products and ways of doing things. **Making and Doing** • Learns to use tools and materials to accomplish a task.

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)
Asking Questions and Defining Problems Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested. • Ask questions based on observations to find more information about the natural and/or designed world(s).	**PS1.A: Structure and Properties of Matter** • Different properties are suited for different purposes.	**Communication** • Learns that humans have many ways to communicate.

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)
Asking Questions and Defining Problems Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested. • Define a simple problem that can be solved through the development of a new or improved object or tool.	**ESS3.A: Natural Resources** • 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.	**Systems Thinking** • Learns that human-designed things are connected. **Critical Thinking** Engages in listening, questioning, and discussing.

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)
Asking Questions and Defining Problems Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested. • Define a simple problem that can be solved through the development of a new or improved object or tool.	**ETS1.A: Defining and Delimiting Engineering Problems** Asking questions, making observations, and gathering information are helpful in thinking about problems.	**Communication** • Learns that humans have many ways to communicate.

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)
Obtaining, Evaluating, and Communicating Information 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. • Compare and/or combine across complex texts and/or other reliable media to support the engagement in other scientific and/or engineering practices.	N/A	**Communication** • Learns that humans have many ways to communicate.

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.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)
Asking Questions and Defining Problems Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested. • Define a simple problem that can be solved through the development of a new or improved object or tool.	**ESS3.C: Human Impacts on Earth Systems** • 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. **ETS1.B: Developing Possible Solutions** • 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.	**Attention to Ethics** • Learns that use of technology affects humans and the environment.

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.
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)
Asking Questions and Defining Problems Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested. • Define a simple problem that can be solved through the development of a new or improved object or tool.	N/A	**Collaboration** • Learns to share technological products and ideas.

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)
Asking Questions and Defining Problems Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested. • Define a simple problem that can be solved through the development of a new or improved object or tool.	N/A	**Communication** • Learns that humans have many ways to communicate. **Attention to Ethics** • Learns that use of technology affects humans and the environment.

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)
Asking Questions and Defining Problems Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested. • Define a simple problem that can be solved through the development of a new or improved object or tool.	**ETS1.A: Defining and Delimiting Engineering Problems** • Asking questions, making observations, and gathering information are helpful in thinking about problems.	**Critical Thinking** • Engages in listening, questioning, and discussing.

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)
Asking Questions and Defining Problems Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested. • Define a simple problem that can be solved through the development of a new or improved object or tool.	**ETS1.A: Defining and Delimiting Engineering Problems** • A situation that people want to change or create can be approached as a problem to be solved through engineering. • Asking questions, making observations, and gathering information are helpful in thinking about problems. • Before beginning to design a solution, it is important to clearly understand the problem.	**Critical Thinking** • Engages in listening, questioning, and discussing.

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)
Asking Questions and Defining Problems Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested. • Define a simple problem that can be solved through the development of a new or improved object or tool.	**ETS1.A: Defining and Delimiting Engineering Problems** • A situation that people want to change or create can be approached as a problem to be solved through engineering.	**Communication** • Learns that humans have many ways to communicate.

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)
Asking Questions and Defining Problems Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested. • Define a simple problem that can be solved through the development of a new or improved object or tool.	**ETS1.C: Optimizing the Design Solution** • Because there is always more than one possible solution to a problem, it is useful to compare and test designs.	**Critical Thinking** • Engages in listening, questioning, and discussing.

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)
Constructing Explanations and Designing Solutions 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. • Use tools and/or materials to design and/or build a device that solves a specific problem or a solution to a specific problem.	**ETS1.A: Defining and Delimiting Engineering Problems** • A situation that people want to change or create can be approached as a problem to be solved through engineering.	**Making and Doing** • Learns to use tools and materials to accomplish a task.

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	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)
Constructing Explanations and Designing Solutions • 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. • Use tools and/or materials to design and/or build a device that solves a specific problem or a solution to a specific problem.	N/A	**Making and Doing** • Learns to use tools and materials to accomplish a task.

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)
Asking Questions and Defining Problems Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested. • Define a simple problem that can be solved through the development of a new or improved object or tool.	**ETS1.A: Defining and Delimiting Engineering Problems** • Before beginning to design a solution, it is important to clearly understand the problem.	**Systems Thinking** • Learns that human-designed things are connected.

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)
Constructing Explanations and Designing Solutions 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. • Use tools and/or materials to design and/or build a device that solves a specific problem or a solution to a specific problem.	**ETS1.B: Developing Possible Solutions** • 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.	**Creativity** • Learns that humans create products and ways of doing things. **Making and Doing** • Learns to use tools and materials to accomplish a task. **Collaboration** • Learns to share technological products and ideas.

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	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.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)
Asking Questions and Defining Problems Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested. • Define a simple problem that can be solved through the development of a new or improved object or tool.	**ETS1.A: Defining and Delimiting Engineering Problems** • Before beginning to design a solution, it is important to clearly understand the problem.	**Critical Thinking** • Engages in listening, questioning, and discussing.

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)
Constructing Explanations and Designing Solutions 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. • Generate and/or compare multiple solutions to a problem.	**ETS1.A: Defining and Delimiting Engineering Problems** • 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.	**Optimism** • Sees opportunities for making technologies better. .

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)
Constructing Explanations and Designing Solutions 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. • Generate and/or compare multiple solutions to a problem.	**ETS1.B: Developing Possible Solutions** • 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.	**Communication** • Learns that humans have many ways to communicate.

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)
Constructing Explanations and Designing Solutions 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. • Use tools and/or materials to design and/or build a device that solves a specific problem or a solution to a specific problem.	**ETS1.B: Developing Possible Solutions** • 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.	**Making and Doing** • Learns to use tools and materials to accomplish a task.

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)
Asking Questions and Defining Problems Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested. • Define a simple problem that can be solved through the development of a new or improved object or tool.	N/A	**Systems Thinking** • Learns that human-designed things are connected.

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)
Constructing Explanations and Designing Solutions 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. • Use tools and/or materials to design and/or build a device that solves a specific problem or a solution to a specific problem.	**ETS1.C: Optimizing the Design Solution** • Because there is always more than one possible solution to a problem, it is useful to compare and test designs.	**Making and Doing** • Learns to use tools and materials to accomplish a task. **Creativity** • Learns that humans create products and ways of doing things.

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	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.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)
Constructing Explanations and Designing Solutions 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. • Generate and/or compare multiple solutions to a problem.	**ETS1.A: Defining and Delimiting Engineering Problems** • Before beginning to design a solution, it is important to clearly understand the problem.	**Critical Thinking** • Engages in listening, questioning, and discussing. .

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)
Constructing Explanations and Designing Solutions 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. • Generate and/or compare multiple solutions to a problem.	**ETS1.A: Defining and Delimiting Engineering Problems** • Asking questions, making observations, and gathering information are helpful in thinking about problems.	**Communication** • Learns that humans have many ways to communicate.

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)
Asking Questions and Defining Problems Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested. • Define a simple problem that can be solved through the development of a new or improved object or tool.	**PS1.A: Structure and Properties of Matter** • Different properties are suited to different purposes. **ETS1.A: Defining Engineering Problems** • 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.	**Communication** • Learns that humans have many ways to communicate.

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)
Analyzing and Interpreting Data Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations. • Analyze data from tests of an object or tool to determine if it works as intended.	**ETS1.A: Defining and Delimiting Engineering Problems** • A situation that people want to change or create can be approached as a problem to be solved through engineering. • Asking questions, making observations, and gathering information are helpful in thinking about problems. • Before beginning to design a solution, it is important to clearly understand the problem.	**Collaboration** 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)
Asking Questions and Defining Problems Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested. • Define a simple problem that can be solved through the development of a new or improved object or tool.	**ETS1.B: Developing Possible Solutions** • 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.	**Collaboration** • Learns to share technological products and ideas.

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)
Asking Questions and Defining Problems Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested. • Define a simple problem that can be solved through the development of a new or improved object or tool.	**ETS1.A: Defining & Delimiting Engineering Problems** • Asking questions, making observations, and gathering information are helpful in thinking about problems.	**Critical Thinking** • Engage in listening, questioning, and discussing.

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)
Developing and Using Models 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. • Develop and/or use a model to represent amounts, relationships, relative scales (bigger, smaller), and/or patterns in the natural and designed world(s).	**ETS1.A: Defining and Delimiting Engineering Problems** • 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.	**Systems Thinking** • Learns that human-designed things are connected.

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)
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

Early 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.

The 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
5.1 1.A **Explain the purposes of rules in the classroom and school community.**	**The learner will:** • Demonstrate knowledge of the rules in all areas of the classroom and school community. • Accept consequences for non-adherence to the posted rules.	**The adult will:** • Engage students in identifying rules in various places (e.g., library, hallway, classroom, lunchroom). • Explain and demonstrate rules are for safety, fairness, and respect for others. • Involve students in creating classroom rules and appropriate consequences if not followed. • Explain, model, practice, and reinforce rules for all areas of the school building. • Consistently cite and enforce rules. • Provide consistent consequences for infractions.

B. LAWS AND GOVERNMENT

Standard	Concepts and Competencies	Supportive Practices
5.1 1.B **Explain the importance of rules in the classroom.**	**The learner will:** • Contribute to creating classroom rules and consequences. • Demonstrate respect for the rules (e.g., positive behavior).	**The adult will:** • Involve students in creating classroom rules. • Consistently cite and enforce rules. • Explain, model, practice, and reinforce rules for all areas of the school building. • Provide consistent consequences for infractions.

C. PRINCIPLES AND IDEALS THAT SHAPE GOVERNMENT

Standard	Concepts and Competencies	Supportive Practices
5.1 1.C **Define equality and the need to treat everyone equally.**	**The learner will:** • Identify similarities between self and others. • Engage in positive interactions with peers. • Brainstorm ways to treat everyone equally.	**The adult will:** • Model and explain how people share more similarities than differences. • Model positive interactions with all students and adults. • Accept and encourage diversity in the classroom community. • Facilitate discussions on equality and ways to treat everyone equally. • Provide consistent consequences for infractions.

D. DOCUMENTS AND IDEALS THAT SHAPE PENNSYLVANIA AND U.S. GOVERNMENT

Standard	Concepts and Competencies	Supportive Practices
5.1 1.D **Explain the importance of written rules and laws.**	**The learner will:** • Refer to written, posted rules as part of community interactions. • Contribute to making the classroom rules.	**The adult will:** • Engage students in developing a set of classroom rules and consequences. • Consistently cite and enforce rules. • Dialog with students on why rules are in place. • Post all rules in the classroom and review regularly.

E. INDIVIDUAL RIGHTS

Standard	Concepts and Competencies	Supportive Practices
5.1 1.E **Describe students' responsibilities in the school and the community.**	**The learner will:** • Contribute to a positive learning environment through action. • Demonstrate ability to keep own belongings in order. • Complete jobs and responsibilities in the classroom with independence. • Respect others' personal belongings. • Identify classroom and community responsibilities.	**The adult will:** • Define that a right cannot be taken from an individual (e.g., in school—students have the right to learn and the responsibility to do so). • Provide a written classroom responsibility/job chart to use independently. • Support students' work independently (e.g., visual cues, classroom routine). • Discuss responsibilities (e.g., classroom, home, community).

F. SYMBOLS

Standard	Concepts and Competencies	Supportive Practices
5.1 1.F **Identify national symbols.**	**The learner will:** • Identify images, pictures, songs, poems, or items that are symbols of America (e.g., George Washington, Abraham Lincoln, the flag, Liberty Bell, Thanksgiving).	**The adult will:** • Read books that relate to symbols of various nations and discuss their significance. • Incorporate national holiday celebrations into classroom learning events (e.g., songs, poems, visuals, activities).

5.2 RIGHTS AND RESPONSIBILITIES OF CITIZENSHIP

A. CIVIC RIGHTS AND RESPONSIBILITIES

Standard	Concepts and Competencies	Supportive Practices
5.2 1.A **Identify and explain the importance of responsibilities at school and at home.**	**The learner will:** • Demonstrate appropriate actions that support classroom responsibility. • Demonstrate appropriate actions for learning.	**The adult will:** • Support students' varying levels of independence (e.g., visual, verbal, physical cues). • Establish classroom expectations for responsibilities. • Provide models of responsible actions.

B. CONFLICT AND RESOLUTION

Standard	Concepts and Competencies	Supportive Practices
5.2 1.B **Identify a problem and attempt to solve with adult or peer assistance.**	**The learner will:** • Identify characteristics of a problem. • State a problem. • State the cause of a problem. • Suggest solutions for a problem. • Attempt to solve a problem until there is a solution.	**The adult will:** • Provide instruction in conflict resolution strategies. • Provide support in working together to resolve a problem. • Use questions to enhance and expand students' thinking about problems. • Model problem-solving. • Incorporate literature that supports positive conflict/resolution actions.

C. LEADERSHIP AND PUBLIC SERVICE

Standard	Concepts and Competencies	Supportive Practices
5.2 1.C **Identify school projects/activities that support leadership and public service.**	**The learner will:** • Demonstrate actions which assist others when needed. • Interact positively with peers. • Demonstrate acceptance of others' leadership roles. • Brainstorm activities that involve leadership and service (e.g., classroom, school, community).	**The adult will:** Provide daily opportunities for collaboration. • Provide opportunities to volunteer in classroom responsibilities or routines. • Offer opportunities to organize and care for classroom environment. • Facilitate discussions on activities that involve leadership and service (e.g., classroom, school, community).

D. COMPETENT AND RESPONSIBLE CITIZENS

Standard	Concepts and Competencies	Supportive Practices
5.2 1.D **Explain responsible school behavior.**	**The learner will:** • Consistently demonstrate actions within the rules of the classroom and school community in creating a positive learning environment. • Identify behaviors that are considered to demonstrate responsibility (e.g., respect peers, contribute to the good of the whole, sets goals and achieves them).	**The adult will:** • Support students in meeting expectations of classroom rules. • Reinforce appropriate behavior (e.g., classroom, school, field trip). • Discuss what behaviors are associated with responsibility (e.g., dependable, consistent, prepared, productive).

5.3 HOW GOVERNMENT WORKS

A. BRANCHES OF GOVERNMENT

Standard	Concepts and Competencies	Supportive Practices
5.3 1.A **Identify the roles of local government (e.g., fire, police etc.).**	**The learner will:** • Identify and discuss the role of a firefighter. • Identify and discuss the role of a police officer. • Identify and discuss the role of other government workers (e.g., librarian, EMT).	**The adult will:** • Provide instruction on the services needed to help and protect members of the community that are provided by local government (e.g., highway construction crews, fire departments, police, emergency teams, social workers). • Invite a member of local government as a guest speaker. • Take a field trip (e.g., virtual or real) to a member of local government.

B. STRUCTURE, ORGANIZATION, AND OPERATION OF GOVERNMENTS

Standard	Concepts and Competencies	Supportive Practices
5.3 1.B **Identify the services of local government.**	**The learner will:** • Identify safety services in local community (e.g., police, fire station, garbage collection). • Identify health services in local community (e.g., hospitals, doctor's office).	**The adult will:** • Instruct on the services provided by local government which help or protect the members of the community (e.g., highway construction crews, fire departments, police, emergency teams, social workers). • Invite a local government official to serve as guest speaker. • Provide a variety of texts that highlight local government services. • Take a field trip (e.g., virtual or real) to a community service organization.

C. GOVERNMENT SERVICES

Standard	Concepts and Competencies	Supportive Practices
5.3 1.C **Identify the value of firefighters, police officers, and emergency workers in the community.**	**The learner will:** • Identify work performed by community helpers (e.g., police officers fight crime, firefighters put out fires). • Role-play work performed by community helpers.	**The adult will:** Invite community workers to serve as guest speakers (e.g., sharing the value of work performed). • Facilitate discussions on the important work performed by community helpers.

D. LEADERSHIP AND POLITICAL ELECTIONS

Standard	Concepts and Competencies	Supportive Practices
5.3 1.D **Identify positions of authority in the classroom community.**	**The learner will:** • Participate in classroom responsibilities. • Demonstrate leadership skills in the classroom (e.g., help a peer).	**The adult will:** • Offer opportunities to practice leadership skills. • Talk about the role of adults who direct the actions of others in the school community that support their right to learn. • Provide texts that highlight leadership. • Use materials from an "Anti-Bullying" curriculum to assist students in understanding the difference between "authority" and "authoritarian."

E. ELEMENTS OF THE ELECTION PROCESS

Standard	Concepts and Competencies	Supportive Practices
5.3 1.E **Identify situations in the school or community when it is beneficial to have an elected official represent the people.**	**The learner will:** • Describe scenarios when it is important to have a teacher intervene (e.g., someone gets hurt). • Participate in discussions on elected officials (e.g., how they get elected, roles, responsibilities to the people). • Participate in a voting activity. • Participate in compiling voting results.	**The adult will:** • Provide opportunities to discuss scenarios where adult intervention is helpful (e.g., injury, safety). • Facilitate discussions on elected officials (e.g., how they get elected, roles, responsibilities to the people). • Provide opportunities for students to vote on various topics. • Provide various voting options from show of hands to secret ballot. • Involve students in compiling voting results.

F. CONFLICT AND THE COURT SYSTEM

Standard	Concepts and Competencies	Supportive Practices
5.3 1.F **Identify and explain behaviors for responsible classroom citizens and possible consequences for inappropriate actions.**	**The learner will:** • Identify appropriate behavior (e.g., in and outside of classroom). • Identify consequences for inappropriate behavior. • Demonstrate the knowledge of how classroom rules and expectations contribute to a positive learning environment. • Describe the acceptable behavior of a member of the classroom in structured and unstructured situations.	**The adult will:** • Verbalize and model expectations of behavior in structured and unstructured situations that support a positive learning environment. • Facilitate discussions on appropriate and inappropriate behavior (e.g., in and outside of classroom). • Support instruction of classroom rules and routines. • Model and support children to participate in cooperative games and play. • Provide texts that highlight appropriate behavior. • Model appropriate behavior. • Use natural consequences as opportunities to discuss consequences of inappropriate action. • Support a bully-free class and school. • Support students being up-standers vs. bystanders.

H. MEDIA INFLUENCES

Standard	Concepts and Competencies	Supportive Practices
5.3 1.H **Explain how information/news is conveyed to the public.**	**The learner will:** • Describe what constitutes news (e.g., current information). • Identify different types of news (e.g., weather, sports). • Identify how news is heard (e.g., television, radio, computer).	**The adult will:** • Dialog with students on how information is received in the school community. • Encourage students to identify the source of information they share and how they received it. • Facilitate discussions on different types of news (e.g., weather, local, world). • Provide opportunities to watch a piece of a news broadcast (e.g., weather) through various platforms (e.g., computer, television). • Invite a local news celebrity to serve as a guest speaker.

I. TAXES

Standard	Concepts and Competencies	Supportive Practices
5.3 1.I **Provide examples of taxation.**	**The learner will:** • Participate in discussions on taxation. • Identify services provided by local government and if the services are paid or volunteer services. • Explain taxes pay for the services provided.	**The adult will:** • Explain why people pay taxes. • Provide examples of goods and services that are paid with taxes (e.g., roads, parks, playgrounds). • Facilitate discussion on different types of taxes (e.g., income, sales, property). • Explain the basic process of collecting taxes. • Dialog with students how taxes from the community members who receive the services pay the people who provide the service.

J. SYSTEMS OF GOVERNMENT

Standard	Concepts and Competencies	Supportive Practices
5.3 1.J **Describe situations where voting eases conflict.**	**The learner will:** • Understand a vote as a choice that is counted. • Understand voting as a right. • Participate in classroom voting experiences. • Participate in compiling voting results.	**The adult will:** • Explain that voting is an individual's right to make a choice. • Provide classroom voting opportunities (e.g., show of hands, secret ballot). • Discuss how a majority determines a decision. • Introduce voting vocabulary (e.g., ballot, cast, ticket, poll, majority, minority). • Involve students in compiling voting results. • Support the losing parties in acceptance of the winning vote. • Provide opportunities to brainstorm ways voting eases conflict.

5.4 HOW INTERNATIONAL RELATIONSHIPS FUNCTION

A. COUNTRIES AND CONFLICTS

Standard	Concepts and Competencies	Supportive Practices
5.4 1.A **Identify ways to avoid conflict.**	**The learner will:** • Identify potential problems or conflicts in everyday events. • Explain how different reactions can affect conflict outcomes. • Practice avoiding conflict throughout the day.	**The adult will:** • Use questioning strategies to spark discussion (e.g., What could you do or say that would lead to a conflict? What could you do or say that would not start a conflict? How could you calm things down?). • Provide a variety of texts (e.g., informative and literature) on conflict resolution strategies. • Model problem-solving dialog throughout the day. • Incorporate literature which supports positive conflict/resolution actions.

B. TOOLS OF FOREIGN POLICY

Standard	Concepts and Competencies	Supportive Practices
5.4 1.B **Describe how classrooms can work together.**	**The learner will:** • Engage with other classrooms to complete a project. • Work cooperatively with other children to achieve a common goal. • Understand individual role in classroom collaboration (e.g., part of a team). • Brainstorm ways that classrooms can collaborate.	**The adult will:** Discuss collaboration roles (e.g., individual, small group, whole group). Offer opportunities for classrooms to work together (e.g., goal, project). • Engage children in class meetings and decision-making. • Provide a variety of texts on collaboration. • Model collaboration with teaching peers.

D. MEDIA AND ITS INFLUENCE

Standard	Concepts and Competencies	Supportive Practices
5.4 1.D **Identify different means of receiving information/ news.**	**The learner will:** • Receive information through a variety of means (e.g., spoken, electronic, paper). • State how news is shared (e.g., television, radio, spoken).	**The adult will:** • Dialog with students on how information is received in the school community. • Encourage students to identify the source of information they share and how they received it. • Provide opportunities to receive information through a variety of ways (e.g., radio, television, spoken). • Use visual graphics to note similarities and differences in news media. • Provide a variety of texts on news media. • Brainstorm future methods that news/information may be shared.

E. HOW FOREIGN POLICY IS INFLUENCED

Standard	Concepts and Competencies	Supportive Practices
5.4 1.E **Explain how a classroom community reaches compromise.**	**The learner will:** • Practice making compromises with adult support. • Participate in classroom experiences that involve compromise. • Role-play reaching compromise with peers. • Participate in group decision-making and consensus building. • Work cooperatively with other children to achieve an outcome. • Demonstrate acceptance of final consensus.	**The adult will:** • Offer opportunities to practice making compromises. • Support students in making a compromise. • Provide text on compromise. • Support students who display difficulty accepting others leadership, or consensus.

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
6.1 1.A **Identify scarcity of resources within the family.**	**The learner will:** • Understand that wants cannot be met all the time. • Identify resources that are scarce within the family (e.g., time, money, supplies). • Participate in discussions on how limited resources influence a family choice (e.g., not having enough money to buy something).	**The adult will:** • Talk about times scarcity impacts the choices families make. • Read or tell a story in which a character cannot get something because of limited resources. • Explain how limited choices can lead to conflict.

B. LIMITED RESOURCES

Standard	Concepts and Competencies	Supportive Practices
6.1 1.B **Identify classroom wants and needs.**	**The learner will:** • Distinguish between wants and needs in a classroom setting. • Discuss classroom wants and needs. • List classroom wants and needs for a specific learning activity. • Identify how classroom wants might differ (e.g., grade, teacher, time of year).	**The adult will:** • Talk about basic items all classrooms need (e.g., teacher, desks, books, pencils). • Engage students in conversation about classroom wants. • Use graphic organizers to visually represent wants and needs. • Provide opportunities to identify whether classroom items are wants or needs. • Read and discuss books about people who save money to get things they want.

C. OPPORTUNITY COSTS

Standard	Concepts and Competencies	Supportive Practices
6.1 1.C **Identify choice based on needs versus wants.**	**The learner will:** • Make a choice to meet a need (e.g., sharpen pencil, use restroom). • Identify choices people make based on need. • Describe how people make choices with the money they earn (e.g., save, spend, or share). • Identify what is given up when making a choice.	**The adult will:** • Talk about choices people make in everyday life and identify what is given up by making the choice. • Engage students in a discussion about how people save, spend, or share their money. • Discuss how these choices require giving something up (e.g., saving money for later means not being able to buy something you want right now).

D. INCENTIVES AND CHOICE

Standard	Concepts and Competencies	Supportive Practices
6.1 1.D **Identify a choice based on classroom interest.**	**The learner will:** • Participate in discussions on how student and teacher preferences influence classroom choice (e.g., type of food students like influences snack, teacher liking a certain author influences what books are read). • Make a choice or cast a vote based on preferences.	**The adult will:** Provide opportunities for students to make decisions and choices (e.g., create a token system, offer choice of books or songs). Model decision-making thought process (think-a-louds). • Engage students in discussions about times teachers, students, and classrooms make choices. • Support students in accepting the consequences of their choices.

6.2 MARKETS AND ECONOMIC SYSTEMS

A. GOODS AND SERVICES

Standard	Concepts and Competencies	Supportive Practices
6.2 1.A **Identify goods, consumers, and producers.**	**The learner will:** • Identify and define goods (e.g., classroom or at home). • Identify and define consumers (e.g., person who purchases goods and services for personal use). • Describe self as a consumer, and identify what goods they consume.	**The adult will:** • Provide examples of goods (e.g., discuss who consumes each). • Support students in listing goods used (e.g., classroom or home). • Prompt students to identify consumers of specific goods (e.g., families with babies buy diapers, carpenters buy nails). • Talk about how goods are distributed (e.g., trucks, trains).

C. ADVERTISING AND MEDIA

Standard	Concepts and Competencies	Supportive Practices
6.2 1.C **Identify advertisements that encourage us to buy things on want rather than need.**	**The learner will:** • Define an advertisement. • State that advertisements encourage us to purchase goods or services. • Recognize advertisements (e.g., magazines, TV, in the environment).	**The adult will:** • Show examples of commercials (e.g., on TV, billboards) that encourage us to purchase things. • Provide advertisements (e.g., magazines, newspapers, TV) for students to identify. • Talk about the purposes of advertisements and encourage students to think about them in terms of wants or needs. • Refer to current popular trend in toys or popular games and identify how advertisements influence the purchase of goods and services. • Read and discuss books about advertising.

D. PRICE DETERMINATION

Standard	Concepts and Competencies	Supportive Practices
6.2 1.D **Explain the role of money in determining price.**	**The learner will:** • Identify some coins and paper currency as forms of money. • Discuss how money is exchanged to pay for goods. • Use pretend money or tokens to purchase items.	**The adult will:** Develop a classroom store where students have the opportunity to make purchases from a selection of items. • Explain how money is the medium of exchange for most goods and services. • Discuss names of coins and currency. • Discuss values of currency and which are worth more/less.

E. ECONOMIC HEALTH

Standard	Concepts and Competencies	Supportive Practices
6.2 1.E **Identify the impact on a community when a business opens.**	**The learner will:** • Research and discuss new businesses within the local community. • Brainstorm effects of the new business on the community (e.g., job creation, availability of goods or services).	**The adult will:** • Provide opportunities to research new businesses within the local community. • Facilitate discussions on the benefits or drawbacks of new businesses within the local community. • Invite a new local business owner as a guest speaker to discuss how the community and the business interact.

G. ECONOMIC SYSTEMS

Standard	Concepts and Competencies	Supportive Practices
6.2 1.G **Define an economic system at the individual level.**	**The learner will:** • Participate in discussions on economic systems. • Participate in discussions on the benefits of an economic system. • Identify quantities of goods vary depending on demand and consumption.	**The adult will:** • Facilitate discussions on economic systems and the benefits and potential challenges of such systems. • As materials are distributed for learning events, dialog how items used frequently (demand) may diminish over time versus those seldom used. • Create settings and events for students to experience high demand (consumption) and limited goods versus low demand and plentiful goods.

6.3 FUNCTIONS OF GOVERNMENT

A. GOODS AND SERVICES

Standard	Concepts and Competencies	Supportive Practices
6.3 1.A **Identify examples of goods and services.**	**The learner will:** • Describe goods and services consumed (e.g., self or family). • Identify a local business and the good or service they provide.	**The adult will:** • Describe and discuss local businesses.. • Create a KWL chart with information about local businesses. • Use visual graphics to compare and contrast goods and services provided by local businesses. • Invite a local business owner as a guest speaker to talk about the goods or services provided.

D. GOVERNMENT'S ROLE IN INTERNATIONAL TRADE

Standard	Concepts and Competencies	Supportive Practices
6.3 1.D **Identify products produced in the United States.**	**The learner will:** • Participate in discussions about products that are made in the United States. • Participate in discussions of products that are made in other countries. • Brainstorm why products made in other countries are found in the United States.	**The adult will:** • Introduce the "Made in the USA" logo. • Facilitate discussions on products that are made in the United States and those made in other countries. • Use questioning strategies to explore why products made in other countries are found in the United States (e.g., hot tropical climate—coffee beans).

6.4 ECONOMIC INDEPENDENCE

A. SPECIALIZATION

Standard	Concepts and Competencies	Supportive Practices
6.4 1.A **Identify specialization of work in the community.**	**The learner will:** • Describe how people in the community perform specialized services (e.g., work done by postal workers is different from bankers). • Compare stores that specialize in selling certain goods (e.g., video game store versus department store).	**The adult will:** • Provide a list of local businesses for students to describe and compare the goods and services provided by each. • Share examples of businesses that specialize in a specific good. • Provide literature that highlights characters specializing in a good or service.

D. FACTORS CONTRIBUTING TO ECONOMIC INTERDEPENDENCE

Standard	Concepts and Competencies	Supportive Practices
6.4 1.D **Describe how individuals differ in their wants and needs and why people buy and sell things.**	**The learner will:** • Make connections between the needs and wants of buyers and the choices producers make in meeting those needs. • Identify a want or need people have and brainstorm a new invention or service to help meet the need.	**The adult will:** Provide opportunities to brainstorm and create a new invention to help a need or want. Read fiction and nonfiction books about entrepreneurs and inventors. • Use cause-and-effect charts to explain how consumer needs and wants influence the production of goods and services. • Discuss businesses in the area and why some get more economic activity than others.

6.5 INCOME, PROFIT, AND WEALTH

A. FACTORS INFLUENCING WAGES

Standard	Concepts and Competencies	Supportive Practices
6.5 1.A **Identify individuals in the community who work for wages.**	**The learner will:** • Make the connection between earning and spending money. • List reasons people work. • Understand that money cannot be spent until it is earned. • Describe ways individuals use money that is earned (e.g., buy wants, needs). • Brainstorm who earns money. • Identify people who are paid wages over time for producing goods and services. • Determine that wages are payment for work done in providing a good or service (a job).	**The adult will:** • Brainstorm why people work (e.g., teachers, family member). • Discuss how wages provide income for families to use to meet their wants and needs. • Reinforce the connection between earning, spending, and saving money. • Create cause-and-effect charts showing the relationship between earning and spending money. • Provide opportunities to explore how much work someone would need to do to earn enough money to purchase a want.

B. LABOR PRODUCTIVITY

Standard	Concepts and Competencies	Supportive Practices
6.5 1.B **Identify different jobs and the purpose of each.**	**The learner will:** • Identify different jobs found locally (e.g. grocery store, gas station, hospital) • Identify the goods or services produced in the jobs found locally • Participate in discussions on the roles each of these jobs play in contributing to the community • Identify interest in a local job.	**The adult will:** Provide opportunities to explore job types, roles, and purposes within the community. Read fiction and nonfiction books about entrepreneurs and inventors. Invite a variety of businesses as guest speakers (e.g., talk about jobs, roles, and purposes). Read fiction and nonfiction books about entrepreneurs and inventors. • Provide text on various jobs found locally.

C. TYPES OF BUSINESSES

Standard	Concepts and Competencies	Supportive Practices
6.5 1.C **Identify businesses and their corresponding goods and services.**	**The learner will:** • Categorize local businesses by their industry. (e.g., retail, travel, health services) • Identify goods and services provided by local businesses. • Brainstorm a new business for the local community.	**The adult will:** • Use a map of the community and identify local businesses. • Review a phone book or online directory to see categories of businesses. • Offer opportunities to brainstorm new business for the local community.

D. PROFITS AND LOSSES

Standard	Concepts and Competencies	Supportive Practices
6.5 1.D **Identify ways to earn money.**	**The learner will:** • Identify how money is saved at home. • Provide ideas for ways they can earn a wage by producing a good or service. • Practice saving (e.g., token system within the classroom). • Describe factors that influence whether or not people save money and how much.	**The adult will:** • Read and discuss books with characters that save money. • Brainstorm reasons people save money. • Provide opportunities to save (e.g., token system within the classroom). • Provide examples of earning a wage and spending for wants and needs.

E. DISTRIBUTION OF WEALTH

Standard	Concepts and Competencies	Supportive Practices
6.5 1.E **Describe what tools (tangible assets) are necessary to complete a task.**	**The learner will:** • Identify items/tools/materials needed to complete a given task. • Identify strengths when completing a task. • Identify items needed to complete a given task. • Identify character traits that make people likely to be able to complete certain tasks.	**The adult will:** Provide opportunities to students to organize/gather items needed to complete a task. Acknowledge students' strengths when completing a task. Provide opportunities to state items needed to complete a task. Discuss the importance of positive character traits (e.g., perseverance, organization) on one's ability to perform tasks.

F. ENTREPRENEURSHIP

Standard	Concepts and Competencies	Supportive Practices
6.5 1.F **Identify buyers and sellers (people) who buy and sell things.**	**The learner will:** • Participate in buying and selling (e.g., token system, trade). • Identify characteristics of buying. • Identify characteristics of selling.	**The adult will:** • Provide opportunities to buy and sell (e.g., token system, class store). • Facilitate discussions on buying and selling (e.g., exchange of money, gain or loss of something).

G. COSTS AND BENEFITS OF SAVING

Standard	Concepts and Competencies	Supportive Practices
6.5 1.G **Explain the need to save money.**	**The learner will:** • Explain the connection between earning, saving, and spending money. • Identify something purchased through saving money (e.g., game, toy).	**The adult will:** • Facilitate discussions on earning and saving money (e.g., benefits, challenges). • Talk about how people save money towards a goal. • Make literature connections with story characters who are savers or spenders, patient or impulsive.

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
7.1 1.A **Identify geographic tools.**	**The learner will:** • Identify a map and globe and describe purpose. • Identify and interpret the key for map/globe. • Compare and contrast a map and a globe. • Know that landforms and bodies of water are represented differently on geographic tools. • Use geographic terms to describe and find places.	**The adult will:** • Display a map and describe the main features (e.g., title, legend, compass rose). • Display a globe highlighting land and water features. • Facilitate discussions on how people use geographic tools to describe and find locations and places. • Provide a map where students color the pre-labeled continents and oceans.

B. LOCATION OF PLACES AND REGIONS

Standard	Concepts and Competencies	Supportive Practices
7.1 1.B **Describe places in geographic reference in physical features.**	**The learner will:** • Describe the purpose of a compass rose. • Identify cardinal directions. • Locate Pennsylvania on a map of the United States in relation to its surrounding states. • Know there are seven continents and four oceans. • Know their continent, country, state, town, and address. • Identify and interpret the features of a map.	**The adult will:** • Model and give examples of spatial directions for location identification. • Post cardinal directions in the classroom. • Read fiction or nonfiction books that reinforce map skills. • Provide opportunities to locate and describe a variety of locations.

7.2 PHYSICAL CHARACTERISTICS OF PLACES AND REGIONS

A. PHYSICAL CHARACTERISTICS

Standard	Concepts and Competencies	Supportive Practices
7.2 1.A **Identify physical characteristics in the community and region.**	**The learner will:** • Differentiate between natural and man-made physical characteristics (e.g., natural—forests, mountains, rivers, oceans; man-made—buildings, roads, bridges). • Sort pictures by man-made and natural origin.	**The adult will:** • Define natural physical characteristics and give examples. • Define man-made physical characteristics and give examples. • Create sorting activities using man-made and natural physical characteristics found in the community.

B. PHYSICAL PROCESSES

Standard	Concepts and Competencies	Supportive Practices
7.2 1.B **Identify the basic physical processes that affect the physical characteristics of places.**	**The learner will:** • Explain why various areas of the community are located where they are. • Describe how weather effects the local community.	**The adult will:** • Provide photographs to reinforce understanding (e.g., physical processes affecting physical characteristics of places). • Discuss how weather impacts the school, individual families, and the community. • Create a cause-and-effect activity that allows students to show understanding of how weather effects the community.

7.3 HUMAN CHARACTERISTICS OF PLACES AND REGIONS

A. HUMAN CHARACTERISTICS

Standard	Concepts and Competencies	Supportive Practices
7.3 1.A **Identify the local climate and how it determines the way people live.**	**The learner will:** • Identify activities that occur during each season. • Identify what is given up/gained during a season (e.g., no swimming in winter but sledding). • Compare and contrast types of activities occurring in different seasons. • Explain why certain activities can only take place during a certain season. • Explain how the climate/weather in the community impacts their interactions with others.	**The adult will:** • Review the four seasons. • Facilitate discussions on similarities and differences of the seasons. • Offer opportunities to draw and label the seasons and typical activities of the seasons. • Dialog with students on the impact of the weather on their activities, dress, and homes. • Read fiction books that show the people engaged in seasonal activities.

7.4 INTERACTIONS BETWEEN PEOPLE AND THE ENVIRONMENT

A. IMPACT OF PHYSICAL SYSTEMS ON PEOPLE

Standard	Concepts and Competencies	Supportive Practices
7.4 1.A **Describe how lakes, rivers, and streams impact people.**	**The learner will:** • Identify ways that people use lakes, rivers, and streams. • Identify ways that lakes, rivers, and streams affect how people live. • Identify various areas in the community as places where people live, work, and play because of the physical features. • Draw a picture of a positive and negative effect of rivers, lakes, and streams.	**The adult will:** • Read fiction/nonfiction books that show the positive and negative effects of lakes, rivers, and streams. • Display pictures that depict people using lakes, rivers, and streams. • Display pictures that show the negative effect of rivers, lakes, and streams (e.g., flooding). • Provide literature with characters using various water sources for transportation or determining location of homes, businesses, or recreation sites.

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
8.1 1.A **Demonstrate an understanding of chronology.**	**The learner will:** • Use correct phrases related to time (e.g., now, yesterday, tomorrow). • Sequence a series of events either from personal experience or from literature. • Participate in daily calendar activities and discuss past, present, and future events. • Develop a timeline of own life (e.g., photographs, drawings, brief descriptions) • Compare children today to those in the past (e.g. Pilgrim).	**The adult will:** • Define timeline. • Create a timeline of the school day. • Illustrate how various timelines can be used and what they represent. • Provide text (e.g., literature and informational) that depicts chronology. • Provide photographs or artifacts of classroom/community events for sequencing. • Practice past, present, and future time with a classroom schedule. • Create a classroom memory book in chronological order with student narratives, artifacts, pictures, etc.

B. FACT/OPINION AND POINTS OF VIEW

Standard	Concepts and Competencies	Supportive Practices
8.1 1.B **Identify a problem or dilemma surrounding an event.**	**The learner will:** • Practice identifying a problem or dilemma within the school day (e.g., not enough chocolate milk at lunch). • Discuss the problem or dilemma. • Identify how we know there is a dilemma or problem during an event.	**The adult will:** • Provide opportunities to identify a problem or dilemma (e.g., classroom, school, home). • Brainstorm solutions to the problem or dilemma. • Discuss how to recognize a problem or dilemma. • Provide literature with characters who have different points of view.

C. RESEARCH

Standard	Concepts and Competencies	Supportive Practices
8.1 1.C **Identify sources of historical information.**	**The learner will:** • Identify where to find information about the past (e.g., book, computer). • Use books, computers, and other sources to get information about a topic.	**The adult will:** • Expose students to various historical sources (e.g., artifacts, letters, maps, photographs, newspapers). • Brainstorm ways to locate information about the past. • Model obtaining information from various sources.

8.2 PENNSYLVANIA HISTORY

A. CONTRIBUTIONS OF INDIVIDUALS AND GROUPS (PA)

Standard	Concepts and Competencies	Supportive Practices
8.2 1.A **Identify groups of people who contribute to a community.**	**The learner will:** • Identify groups of people who contribute to the interactions of daily life in the community (e.g., Rotary, Kiwanis). • Participate in discussions on how these groups affect the community (e.g., service, volunteer). • Identify groups or individuals that support a community over time.	**The adult will:** • Provide opportunities to research groups of people found within the community. • Invite a group member as a guest speaker (e.g., discuss mission, community contributions). • Provide explanations and examples of social networks within the school community. • Provide examples of volunteers, public offices, and other members of the community who support the classroom community.

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

Standard	Concepts and Competencies	Supportive Practices
8.2 1.B **Identify symbols, slogans, or mottos that are representative of the state.**	**The learner will:** • Research and identify the state motto. • Research and identify symbols and slogans that are common in Pennsylvania (e.g., local, regional).	**The adult will:** • Provide opportunities to research slogans, mottos, and symbols known in Pennsylvania (e.g., local, regional). • Provide text that highlights examples of common state symbols (e.g., Liberty Bell). • Collect and display photographs, artifacts, documents, and items from events in the community or state. • Explain how the collection of items from events document a story over time.

C. IMPACT OF CONTINUITY AND CHANGE ON PA HISTORY

Standard	Concepts and Competencies	Supportive Practices
8.2 1.C **Identify holiday and cultural celebrations in a community and why they are celebrated.**	**The learner will:** • Discuss how the local community celebrates (e.g., fairs, fireworks). • Compare family customs and traditions. • Depict and present own family culture (e.g., drawing, photographs, writing). • Celebrate events or successes in a variety of ways.	**The adult will:** • Define holiday, celebration. • Explore the cultural diversity of the local community (e.g., identify activities that introduced by different cultural groups). • Provide opportunities to research local celebrations. • Provide text on cultural celebrations. • Encourage students to share own family culture with peers. • Explore with students the cultural diversity of their local community by identifying activities that have been introduced by different cultural groups.

D. CONFLICT AND COOPERATION (PA)

Standard	Concepts and Competencies	Supportive Practices
8.2 1.D **Identify historical conflict in the community.**	**The learner will:** • Participate in discussions on the historical past of the community (e.g., industry no longer present). • Brainstorm how the historical past affects the community now (e.g., community is smaller).	**The adult will:** • Provide opportunity to research the historical past of the community (e.g., computer, books). • Invite a historian to share past events that shape the current community.

8.3 UNITED STATES HISTORY

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

Standard	Concepts and Competencies	Supportive Practices
8.3 1.A **Identify Americans who played a significant role in American history.**	**The learner will:** • Participate in discussions on historical Americans. • Research and identify historical Americans.	**The adult will:** • Read text about historical Americans. • Facilitate discussions on historical Americans. • Invite a local historian as a guest speaker.

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

Standard	Concepts and Competencies	Supportive Practices
8.3 1.B **Identify American landmarks and their significance.**	**The learner will:** • Identify monuments/artifacts/ landmarks associated with the group, individual, or event being celebrated/ honored in the classroom and the school community. • Understand the United States has patriotic symbols and traditions. • Brainstorm why landmarks are important. • Participate in discussions on American landmarks and their significance.	**The adult will:** • Facilitate activities demonstrating how a monument/artifact/ landmark serves as a reminder of the event or group or individual being celebrated. • Define the term landmark. • Provide opportunities with literature and informational text. • Facilitate discussions on American landmarks and their significance.

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

Standard	Concepts and Competencies	Supportive Practices
8.3 1.C **Identify examples of change.**	**The learner will:** • Identify things that change (e.g., seasons, time). • Research and identify change (e.g., local, state). • Examine families of the past and compare to families today. • Give examples of change over time.	**The adult will:** • Provide opportunities to research and discuss change (e.g., local, state). • Provide opportunities to discuss individual change (e.g., height, weight). • Dialog with students concerning events that happen over time. • Assist students in identifying the small or large changes that happened over time. • At end of an event, day, week, grading period, review the order of events and occurrences that happened in the school or classroom community.

D. CONFLICT AND COOPERATION (U.S.)

Standard	Concepts and Competencies	Supportive Practices
8.3 1.D **Identify conflict and describe ways to cooperate with others by making smart choices.**	**The learner will:** • Identify what makes a conflict (e.g., disagreement). • Brainstorm ways to resolve conflict (e.g., each party is heard, compromise made). • Participate in role-playing conflict and cooperation.	**The adult will:** • Define conflict. • Describe, discuss, and demonstrate appropriate social skills necessary for working in a cooperative group (e.g., sharing concerns, caring, and respect among group members). • Use questions to enhance and expand thinking about conflict and cooperation. • Provide opportunities to role-play various conflicts.

8.4 WORLD HISTORY

A. CONTRIBUTIONS OF INDIVIDUALS AND GROUPS (WORLD)

Standard	Concepts and Competencies	Supportive Practices
8.4 1.A **Explain why cultures celebrate.**	**The learner will:** • Identify reasons to celebrate (e.g., birthday, good grades). • Share how own family celebrates certain events. • Compare and contrast own celebrations to those of peers. • Celebrate events or successes in a variety of ways.	**The adult will:** • Explain that Americans have a variety of different religious, community, and family celebrations and customs. • Describe celebrations and customs held by members of the class and their families. • Invite family members to share cultural celebrations with class. • Support students in celebrating personal and class success. • Explore with students the cultural diversity of their local community by identifying activities that have been introduced by different cultural groups.

B. HISTORICAL DOCUMENTS, ARTIFACTS, AND PLACES (WORLD)

Standard	Concepts and Competencies	Supportive Practices
8.4 1.B **Explain the importance of world landmarks.**	**The learner will:** • Identify what it means to be a landmark. • Brainstorm why landmarks around the world are important. • Research and identify world landmarks.	**The adult will:** • Facilitate activities demonstrating how the monument/artifact/landmark serves as a reminder of the event, group, or individual being celebrated. • Define the term landmark. • Identify and describe well-known sites, events, or landmarks in at least three different countries from which students' families come. • Use photographs to aid in student understanding.

C. IMPACT OF CONTINUITY AND CHANGE ON WORLD HISTORY

Standard	Concepts and Competencies	Supportive Practices
8.4 1.C **Identify holidays and ceremonies of selected world cultures.**	**The learner will:** • Research and identify holidays and ceremonies for a particular culture. • Compare and contrast holidays and ceremonies for two cultures.	**The adult will:** • Define the term holiday. • Read nonfiction books on holidays/ceremonies of other cultures. • Provide opportunities to compare and contrast holidays and ceremonies. • Explore with students the cultural diversity of the world by identifying activities/celebrations that have been introduced by different international cultures.

D. CONFLICT AND COOPERATION (WORLD)

Standard	Concepts and Competencies	Supportive Practices
8.4 1.D **Describe examples of conflict and cooperation in the classroom community.**	**The learner will:** • Identify what conflict in the classroom looks like (e.g., not working with peers). • Identify what cooperation in the classroom looks like (e.g., talking with each other, working together, accomplishing a task). • Brainstorm potential classroom conflicts.	**The adult will:** • Provide opportunities to identify potential problems or conflicts in everyday events. • Brainstorm how different reactions can make a conflict better or worse. • Facilitate discussions on the decision-making process for resolving (rather than escalating) a conflict.

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

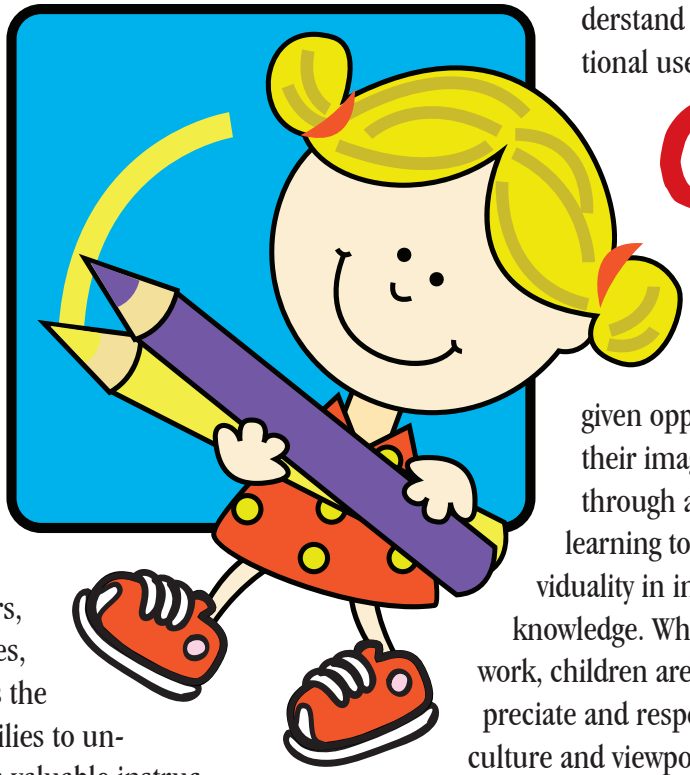
9.1.V Production and Performance – Visual Arts

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



Media 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 understand the role and instructional uses of digital media.

Creative 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
9.1.M 1.A **Know and use basic elements and principles of music and movement.**	**The learner will:** • Explore rhythms in different forms of music and dance. • Explore rhythm instruments. • Use rhythm instruments as intended. • Participate in music and movement activities. • Participate in group movement activities demonstrating an awareness of shared space. • Demonstrate an understanding of "fast," "slow," "loud," and "soft."	**The adult will:** • Explicitly use vocabulary for elements and principles of music and movement (e.g., rhythm, space, tempo, pitch). • Model appropriate use of instruments. • Call attention to the changes in music as students are listening. • Provide experiences through large and small group activities that focus on movement elements and principles. • Include music vocabulary (e.g., high/low, up/down, fast/slow, short/long).

B. DEMONSTRATION

Standard	Concepts and Competencies	Supportive Practices
9.1.M 1.B **Perform different forms of music and dance.**	**The learner will:** • Perform movement with kinesthetic awareness (e.g., know the body moves) and concentration. • Describe actions while responding to music. • Move to various sounds, including rhythmic accompaniment, and respond to changes in tempo. • Use gestures while responding to music.	**The adult will:** • Play a variety of music types for listening and participation. • Introduce students to a variety of songs, finger plays, and rhythms. • Encourage students to discuss experiences. • Provide large and small group activities that focus on movement and music participation. • Provide props to use when dancing (e.g., ribbons, hoops, sticks). • Provide a dedicated place and time to explore music. • Provide opportunities to experience performance (e.g., real or virtual). • Discuss and model appropriate audience behavior. • Provide opportunities to warm up and practice prior to performing.

E. REPRESENTATION

Standard	Concepts and Competencies	Supportive Practices
9.1.M 1.E **Use imagination and creativity to perform music and dance.**	**The learner will:** • Improvise songs and rhythmic patterns. • Change words or tune of familiar songs to make new songs. • Use body to represent form in space, finger plays, or stories. • Work with partner or others to represent form in space. • Use improvisation to explore and create movement ideas. • Create and perform a dance by self or with a partner based on a theme or idea.	**The adult will:** Create situations where students can role-play familiar roles or situations (e.g., home living, grocery store, restaurants). Ask open-ended questions to extend students' knowledge of the meanings of various types of plays. • Create opportunities to express through a variety of music forms, dance, or body movements. • Encourage students to be creative during singing by changing words and song endings. • Provide props to use when dancing (e.g., ribbons, hoops, sticks). • Demonstrate movement using time, space, and locomotion. • Provide various objects that can be used to represent sound (e.g., wooden bowls, metal spoons). • Provide space for performing improvised dance. • Discuss and model appropriate audience behavior.

J. TECHNOLOGIES

Standard	Concepts and Competencies	Supportive Practices
9.1.M 1.J **Use a variety of technologies for producing or performing works of art.**	**The learner will:** • Explore musical instruments. • Use instruments to accompany music. • Use instruments to demonstrate the melody of a song. • Use age-appropriate digital media applications to create music. • Use a variety of props to enhance movement activities (e.g., scarves, beanbags, ribbons). • Use recording devices (e.g., voice recorder, video recorder) to capture music and/or movement performances.	**The adult will:** Provide guidance during digital media application exploration. • Provide opportunities to explore a variety of musical instruments. • Provide a variety of props for musical expression and movement. • Engage a local expert (e.g., high school music student, college professor, musician, dance instructor) as a guest speaker. • Demonstrate use of technologies in music.

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
9.1.D 1.B **Recreate a familiar story individually or cooperatively for an audience.**	**The learner will:** • Create various voice inflections and facial expressions in play. • Change voice inflections when recreating various characters. • Direct peers or follow peers' instructions about dramatic play schemes. • Use vocabulary to discuss play activities (e.g., character, role, setting, story). • Participate in rehearsals and practice sessions. • View and discuss recordings of rehearsals and practice sessions.	**The adult will:** • Model the use of various voice inflections and facial expressions during read-aloud. • Provide props and costumes associated with favorite stories. • Develop teacher-guided dramatic activities (e.g., acting out a story, performing a short play for a special event). • Use appropriate vocabulary as students create plays and performances. • Provide opportunities to create, rehearse, and perform simple improvised dramas. • Discuss and model appropriate audience behavior. • Record rehearsals and encourage students to discuss performance. • Provide cross-curricular connections with dramatic play.

E. REPRESENTATION

Standard	Concepts and Competencies	Supportive Practices
9.1.D 1.E **Use imagination and creativity to express self through dramatic play.**	**The learner will:** • Use nonconforming objects to create representations of real-life objects or activities for use in dramatic play. • Represent real-life experiences through pretend play. • Imitate roles of people, animals, or objects observed in life experiences. • Use props and costumes during dramatic play. • Use appropriate tone, actions, and speech to represent characters, setting, and plot in a play.	**The adult will:** Ask open-ended questions to extend student's play in new directions. Provide clothing, materials, and props that facilitate pretend play. • Provide dramatic play opportunities both indoors and outdoors. • Create situations where students can role-play familiar roles or situations (e.g., home living, grocery store, restaurants). • Label specific emotions in students' pretend play (e.g., "You are frustrated."). • Identify themes or emotions in stories and in real-life situations and encourage students to imitate those scenarios.

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
9.1.V 1.A **Know and use basic elements of visual arts.**	**The learner will:** • Participate in visual arts activities. • Demonstrate an understanding of "color," "shape," "line," "tone," and "hue." • Create a work of art using different media and materials. • Use paints to create new shades and colors. • Begin using detail when creating a work of art.	**The adult will:** Explicitly use vocabulary for elements of visual arts (e.g., color, shape, line). Provide a variety of art materials. • Model appropriate use of art materials. • Point out basic elements of visual arts in a variety of artwork. • Provide experiences through large and small group activities that focus on the elements of visual arts.

B. DEMONSTRATION

Standard	Concepts and Competencies	Supportive Practices
9.1.V 1.B **Create works of art and identify art materials, techniques, and processes.**	**The learner will:** • Participate in visual arts activities. • Use a variety of materials (e.g., chalk, paint, crayons, pencils, markers, wood, playdough). • Identify color, texture, form, line, size, and patterns in nature and in the human-made environment. • Draw to explore and extend themes in the classroom. • Create simple sculptures using clay and various tools to create texture. • Use paints to create new shades and colors.	**The adult will:** Provide a variety of art materials. Rotate art materials to provide a variety of experiences. Use appropriate art vocabulary (e.g., color, texture, form, line, size, pattern). Allow for individual or group projects to extend over several days. Display students' artwork. • Provide opportunities to use three-dimensional materials (e.g., clay, playdough, wood).

E. REPRESENTATION

Standard	Concepts and Competencies	Supportive Practices
9.1.V 1.E **Use imagination and creativity to express self through visual arts.**	**The learner will:** • Participate in visual arts activities. • Draw self-portraits. • Create a work of art to represent a real or imagined object, animal, or person. • Use a growing number of details and make more realistic representations. • Choose different art materials to represent different types of thoughts or feelings. • Create pictures that define mood. • Recognize and discuss own and others' artwork using appropriate vocabulary (e.g., color, shape, line, texture).	**The adult will:** Allow for individual or group projects to extend over several days. Relate art activities to other classroom experiences. • Provide a variety of art materials. • Rotate art materials to provide a variety of experiences. • Provide multicultural art materials for use in self-representation. • Encourage students to use materials for individual expression of feelings or thoughts. • Encourage students to talk about their artwork. • Display student's artwork.

J. TECHNOLOGIES

Standard	Concepts and Competencies	Supportive Practices
9.1.V 1.J **Use a variety of technologies for producing works of art.**	**The learner will:** • Explore a variety of art materials and tools. • Participate in visual arts activities. • Manipulate materials in a variety of ways (e.g., pounding, squeezing, cutting, rolling). • Use age-appropriate digital media applications to create works of art. • Use recording devices (e.g., digital camera, video recorder, iPad) to capture work in progress and finished works of art. • Explore traditional technologies used to create visual arts (e.g., paper folding, painting, sculpting). • Use contemporary technologies (e.g., music-writing programs). • Use two- and three-dimensional media and processes to depict art.	**The adult will:** Use recording devices (e.g. digital camera, video recorder, iPad, iPod) to capture and share the creative process and finished works of art. • Model and use a variety of technologies to produce student work (e.g., MP3s, CD player, iPod) • Provide a variety of art materials. • Rotate art materials to provide a variety of experiences. • Provide guidance while using digital media applications. • Engage a local expert (e.g., artist, sculptor, museum curator) as a guest speaker. • Introduce and use traditional and contemporary technology terms as appropriate. • Demonstrate the use of traditional and contemporary technologies in visual arts. • Provide opportunities to experiment with technologies.

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
9.2 1.D **Identify the historical and cultural context of works of art.**	**The learner will:** • Explore instruments from different cultures. • Participate in discussions about where various instruments and art forms originate. • Identify cultures represented by various art forms. • Participate in discussions about time periods or cultures relating to works of art. • Begin to use vocabulary appropriate to the time period (e.g., present, past) and culture being discussed in the work of art. • Recognize differences in cultures as represented in works of art.	**The adult will:** • Display works of art from a variety of cultures. • Play many types of music from different eras. • Discuss the cultures represented by art forms and instruments (e.g., masks—Africa, Japan, Native American; maracas—Spanish). • Read books about a variety of cultures, pointing out similarities and differences in art forms. • Introduce and use vocabulary appropriate to the time period and culture being discussed in the work of art. • Use cross-curricular resources to assist in learning about cultural perspective in the arts. • Lead a discussion of the historical and cultural context of a work of art using appropriate social studies vocabulary. • Provide opportunities to explore works of art from other cultures (e.g., real or virtual).

9.3 Critical Response to Works of Art

BIG IDEA: People evaluate art based upon a variety of characteristics.
ESSENTIAL QUESTION: 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
9.3 1.F **Categorize and classify works of art.**	**The learner will:** • Identify works of art (e.g., photo, painting, drawing, dance, songs). • Name music type using age-appropriate vocabulary (e.g., drumming, singing). • Categorize and classify works of art based on the materials and processes used in their creation. • Identify the different materials used to create a work of art.	**The adult will:** • Display students' and professional art throughout the classroom. • Discuss the various types and characteristics of works of art (e.g., photography, painting, dance, performance). • Encourage students to explore and evaluate various works of art. • Take a virtual field trip to explore works of art (e.g., museum, artist in action).

G. CRITICAL RESPONSE

Standard	Concepts and Competencies	Supportive Practices
9.3 1.G **Compare and contrast the characteristics of works of art.**	**The learner will:** • Provide constructive critiques on the works of others. • Share an opinion about artwork when asked (e.g., "What do you think this is about?"). • Show respect for the response of others to a work of art. • Make comparative statements (e.g., "I used bright colors just like …" "I can tap dance like …").	**The adult will:** • Provide opportunities for students to work on creative activities in groups or individually. • Model and encourage students to appropriately comment on others' work. • Provide opportunities to explore increasingly more complex art forms throughout the year. • Encourage students to self-critique using simple prompts and suggestions for success. • Lead students in discussion using graphic organizers to compare and contrast works of art.

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
9.4 1.B **Demonstrate and discuss feelings about various works of art.**	**The learner will:** • Respond through body language, facial expression, or oral language (e.g., humming, swaying, tapping foot). • Respond (e.g., laugh, sigh) at appropriate times to others' performance. • Respond to works of art by communicating feelings (e.g., "This makes me feel happy because …" "This makes me feel sad because …"). • Respond to dramatic performances by communicating feelings about characters and actions. • Actively listen to others' opinions about works of art. • View a work of art and articulate an opinion of its meaning and intent.	**The adult will:** • Encourage students to share how various works of art make them feel. • Display students' and professional art throughout the classroom. • Provide a wide variety of materials (e.g., art, music, movement, dramatic, performance play). • Model use of appropriate responses to works of art. • Provide works of art (e.g., real or virtual) for viewing and exploration.

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, craftsperson, 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

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.

Teachers 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
10.1 1.B **Identify and describe functions of basic body parts and organs.**	**The learner will:** • Name and point to organs. • Describe the basic functions of body organs. • Participate in body identification games and songs (e.g., Hokey Pokey). • Draw pictures that include some body parts. • Participate in discussions about the functions of specific body parts and organs. • Describe functions of basic body parts and organs.	**The adult will:** • Read books about the body organs. • Introduce specific organs and discuss function (e.g., brain, heart). • Make outline of body and add details to body parts. • Provide experiences that highlight the functions of body parts and organs (e.g., health care professional to demonstrate a beating heart or virtual experience).

C. NUTRITION

Standard	Concepts and Competencies	Supportive Practices
10.1 1.C **Identify foods that keep our bodies healthy.**	**The learner will:** • Identify healthy and unhealthy foods. • Explain how food provides fuel and energy for the body. • Classify foods by food groups using the *MyPlate* graphic (e.g., fruits, vegetables, dairy). • Make healthy food choices. • Identify foods to include in specific food groups. • Design a meal using foods from several groups. • Classify food as nutritious.	**The adult will:** • Create a healthy/unhealthy picture sort game. • Discuss the importance of making healthy food choices. • Discuss the benefits of specific foods as they relate to parts of the body (e.g., teeth, heart). • Model healthy eating. • Display *MyPlate* near eating area to encourage healthy portioning of food. • Provide examples of healthy meals. • Provide opportunities to sort food (e.g., food groups, nutritious versus not nutritious).

D. ALCOHOL, TOBACCO, AND CHEMICAL SUBSTANCES

Standard	Concepts and Competencies	Supportive Practices
10.1 1.D **Distinguish between healthy and unhealthy behaviors.**	**The learner will:** • Describe healthy behaviors. • Identify unhealthy behaviors (e.g., smoking). • Discuss times when medicine is needed versus misuse of medication. • Discuss safety practices related to proper medicine use and storage (e.g., out of reach, locked cabinet, refrigerator). • Demonstrate how to say "No" to drugs. • Identify trusted adults who can give medicine (e.g. family members, school nurse).	**The adult will:** • Provide opportunities to discuss what happens when we are sick and what we do to feel better. • Discuss positive and negative characteristics of medicine use. • Remind students to only take medicine from a trusted adult (e.g., family member, school nurse). • Discuss the purposes of safety caps on medicine. • Discuss what to do when unhealthy substances are found (e.g., medicine, tobacco). • Model proper use of medicine (e.g., proper storage in first aid kits, double checking medicine is going to appropriate student).

E. HEALTH PROBLEMS AND DISEASE PREVENTION

Standard	Concepts and Competencies	Supportive Practices
10.1 1.E **Identify and discuss common health problems and risk factors.**	**The learner will:** • Participate in discussions about infectious (e.g., colds, flu, chicken pox, pink eye) and non-infectious (e.g., asthma, allergies) illnesses. • Discuss the concept of "germs." • Participate in activities that exemplify the spread of germs to learn healthy practices. • Describe ways that germs can spread. • Explain how germs can make someone ill. • Explain how rest, exercise, and good nutrition keep us healthy. • Demonstrate respect for the health problems of others. • Identify signs of illness (e.g., fever, headache, stomach ache, vomiting, diarrhea).	**The adult will:** • Use teachable moments (e.g., many students absent due to flu, students needing an inhaler) to discuss different types of illnesses. • Model healthy practices that prevent the spread of germs (e.g., cough into elbow, wash hands). • Promote understanding of the importance of food restrictions. • Provide instruction on a variety of health issues (e.g., pertaining to the classroom population). • Discuss illness prevention. • Engage students in hands-on experiences that exemplify the spread of germs to encourage healthy practices. • Use resources (e.g., books, video) to teach about specific illnesses and illness prevention.

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
10.2 1.A **Identify fundamental practices for good health.**	**The learner will:** • Practice basic hygiene routines (e.g., hand washing, covering nose and mouth when sneezing). • Identify people who help keep us healthy (e.g., doctor, nurse or dentist, gym teacher). • Identify tools and practices that doctors and dentists use to keep us healthy. • Identify specific practices that support body development and function (e.g., exercise, good nutrition, rest). • Discuss the role hygiene plays in keeping us healthy.	**The adult will:** Invite local health experts (e.g., dentist, doctor, nurse, physical trainer) to the classroom to discuss how they help keep us healthy. • Provide daily opportunities to practice hygiene routines. • Display *MyPlate* near mealtime area to encourage healthy portioning of food. • Encourage children to rest to help their bodies stay healthy. • Use role-play situations to develop competence using basic refusal skills. • Model and encourage exercise and active play. • Use a variety of resources to review healthy practices (e.g., books, videos, songs, applications).

E. HEALTH AND THE ENVIRONMENT

Standard	Concepts and Competencies	Supportive Practices
10.2 1.E **Identify environmental factors that affect health.**	**The learner will:** • Discuss plants, insects, and animals that could be harmful (Share personal experiences when relevant.). • Identify harmful substances. • Discuss how we protect our bodies in different seasons (e.g., use sunscreen in summer, wear warm clothing in winter). • Describe ways to protect oneself from harmful factors in the environment. • Describe things in the environment that can be harmful (e.g., loud noise, smoke, pollution, temperature, insects, plants).	**The adult will:** Engage a local expert (e.g., pest control professional, high school or college professional, florist) as a guest speaker. • Read books about plants, insects, and animals that might be harmful. • Explicitly label plants within the classroom as "nontoxic" and explain. • Talk about harmful substances and objects. • 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.

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

10.3 1.A
Recognize safe and unsafe practices.
	The learner will:
	• Identify and follow basic safety rules
	  ▫ School (e.g., on playground, in classroom, on field trip, crossing street)
	  ▫ Home (e.g., poison, electrical outlets, Internet)
	  ▫ Community (e.g., strangers, motor vehicle, bicycle)
	• Identify consequence of an unsafe behavior.
	• Identify and avoid unsafe practices (e.g., playing with matches, talking to strangers).
	• Explain how community workers (e.g., firefighter, police officer) keep us safe.
	• Identify behaviors to assure safe practice (e.g., looking both ways when crossing the street, not talking to strangers, wearing a helmet when riding the bike).
	• Demonstrate and describe the importance of rules.
		The adult will:
		• Display and discuss classroom safety rules.
		• Discuss basic safety rules (e.g., crossing street, stranger danger, car seat safety, water safety, bike safety, Internet).
		• Use a variety of resources to review safe and unsafe practices (e.g., videos, songs).
		• Use natural consequences as teachable moments to reinforce safe practices.
		• Discuss consequences of unsafe behavior.
		• Engage local experts (e.g., police officers, firefighters, emergency management personnel) as guest speakers.

B. EMERGENCY RESPONSES

Standard	Concepts and Competencies	Supportive Practices
10.3 1.B **Recognize emergency situations and discuss appropriate responses.**	**The learner will:** • Identify procedures for a variety of emergencies (e.g., fire, tornado, intruder, medical emergency). • Participate in discussions that differentiate between emergencies and non-emergencies. • Practice emergency procedures in school and at home. • Identify personal identifying information (e.g., name, phone number, address). • Demonstrate appropriate fire safety practices and emergency procedures.	**The adult will:** • Define what constitutes an emergency. • Practice making 911 calls. • Practice sharing personal identifying information in case of emergency. • Demonstrate and practice "STOP, DROP, ROLL" and other emergency procedures. • Practice fire and emergency evacuation procedures. • Use a variety of resources to discuss emergency situations (e.g., books, songs, applications). • Engage local experts (e.g., police officers, firefighters, emergency management personnel) as guest speakers. • Provide specific feedback after practicing emergency procedures.

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
10.4 1.A **Demonstrate coordination of purposeful body movements.**	**The learner will:** • Combine large motor movements with the use of equipment (e.g., use feet to pedal, catch a ball, throw a beanbag or ball overhand with aim, kick a ball). • Move and stop with control. • Use outdoor gross motor equipment. • Engage in gross motor games (e.g., Duck Duck Goose, Four Square). • Perform a variety of movements alongside and with a partner. • Participate in group games (e.g., Follow the Leader, Tag, Kickball). • Hit a stationary target with an overhand throw. • Demonstrate quicker reaction time in catching.	**The adult will:** • Review safety rules prior to large motor activities. • Provide targets to throw toward (e.g., hula hoops or baskets). • Include materials and equipment that encourage active play (e.g., balls, climbers and slides, ramps). • Provide daily outdoor time. • Provide instruction on varying roles pertaining to a type of game/sport (e.g., goalie/soccer). • Provide educational experiences that emphasize cooperative games. • Create opportunities to participate in large motor movement games that involve partners. • Engage in gross motor play with students.

B. BALANCE AND STRENGTH

Standard	Concepts and Competencies	Supportive Practices
10.4 1.B **Exhibit balance, strength, stamina, and agility.**	**The learner will:** • Use gross motor movements to learn new skills and engage in new activities. • Engage in large motor activities that require strength and balance (e.g., marching, hopping, skipping, running, jumping on one foot, dancing, walking tip toe). • Walk on a balance beam forward and backward. • Climb stairs using alternating feet. • Participate in an obstacle course (e.g., through tunnels, over or under equipment). • Identify why regular, active participation may help skills (e.g., balance, strength, stamina, agility) improve.	**The adult will:** • Provide opportunities to participate in a variety of motor activities (e.g., including sway, stretch, pull, push, bend, squat). • Provide space and opportunities daily for students to walk, run, and climb. • Provide different amounts of time for practicing motor skills. • Discuss how short- and long-term practices affect motor skill performance. • Provide daily opportunities for students to engage in gross motor activities inside (e.g., dancing and moving to music, beanbag toss). • Include large motor movements during transitional times (e.g., hop to the table, jump five times while you wait to wash your hands). • Include motor games and songs. • Create obstacle courses to practice gross motor movements.

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
10.5 1.A **Use dexterity and strength to manipulate objects.**	**The learner will:** • Practice self-help skills (e.g., zipping, buttoning, tying). • Use scissors to cut a variety of shapes. • Trace templates or forms. • Manipulate smaller objects (e.g., puzzle pieces, string beads, trace a line or circle).	**The adult will:** • Provide opportunities to use scissors. • Provide opportunities to trace templates or forms. • Provide opportunities to manipulate objects (e.g., puzzles).

B. EYE/HAND COORDINATION

Standard	Concepts and Competencies	Supportive Practices
10.5 1.B **Coordinate eye and hand movements to perform an advanced task.**	**The learner will:** • Act out finger plays with hands and fingers. • Use scissors to cut a variety of shapes. • Complete self-help skills (e.g., zip, button, tie). • Manipulate smaller objects (e.g., puzzle pieces, string beads). • Use lined paper during daily writing experiences.	**The adult will:** • Teach and encourage students to participate in finger plays. • Provide opportunities to use scissors. • Encourage students to dress independently (e.g., zip coat, tie shoes). • Provide a variety of smaller objects to manipulate. • Provide opportunities for writing across the curriculum.

C. USE OF TOOLS

Standard	Concepts and Competencies	Supportive Practices
10.5 1.C **Use tools with control and skill to perform tasks.**	**The learner will:** • Demonstrate control with writing and drawing implements. • Choose appropriate tool for a specific task. • Use writing and drawing implements with functional grasp (e.g., pincer grasp, tripod grip). • Use a variety of art tools (e.g., glue sticks, paintbrushes, scissors) for a specific purpose. • Practice using computer mouse.	**The adult will:** • Provide a variety of materials and experiences that offer manipulative practice (e.g., art, writing, puzzles). • Encourage students to create letters using proper letter formation and sizing. • Maintain a writing center with a variety of writing implements and art tools.

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.

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