



An Educator's Guide to Understanding

THE FLORIDA EARLY LEARNING

AND DEVELOPMENTAL STANDARDS:

4 YEARS OLD TO KINDERGARTEN



The Florida Department of Education Office of Early Learning developed An Educator’s Guide to Understanding the Florida Early Learning Developmental Standards: Birth to Kindergarten and An Educator’s Guide to Understanding the Florida Early Learning Developmental Standards: 4 Years Old to Kindergarten to provide educators support in implementing the Standards, adopted by the Florida State Board of Education, consistent with the requirements of Section 1002.82 and F.S. Section 1002.67, F.S.

Direct questions relating to the Florida Early Learning and Developmental Standards—
Birth to Kindergarten (2017) to:

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TABLE OF CONTENTS

ACKNOWLEDGEMENTS	III
PURPOSE.	XI
BACKGROUND	XII
HOW TO USE THE STANDARDS	XIII
USING THE STANDARDS WITH DIVERSE LEARNERS	XV
ENVIRONMENTAL CONSIDERATIONS	XX
CONCEPTS ACROSS THE STANDARDS	XXII
I. PHYSICAL DEVELOPMENT	1
Physical Development Standards: Birth – Kindergarten	1
Physical Development Introduction.	6
Physical Development Environmental Considerations	7
A. HEALTH AND WELLBEING	9
a. Active Physical Play	9
b. Safety	10
c. Personal Care Routines	11
d. Feeding and Nutrition.	13
B. MOTOR DEVELOPMENT	14
a. Gross Motor Development	14
b. Gross Motor Perception	18
c. Fine Motor Development	20
Physical Development Related Books.	25
Physical Development Glossary	26
II. APPROACHES TO LEARNING.	27
Approaches to Learning Standards: Birth – Kindergarten	27
Approaches to Learning Introduction.	28
Approaches to Learning Environmental Considerations	29
A. EAGERNESS AND CURIOSITY	30
B. PERSISTENCE	33
C. CREATIVITY AND INVENTIVENESS	34
D. PLANNING AND REFLECTION	36
Approaches to Learning Related Books	38
Approaches to Learning Glossary	40



III. SOCIAL AND EMOTIONAL DEVELOPMENT	41
Social and Emotional Development Standards: Birth – Kindergarten	41
Social and Emotional Development Introduction	45
Social and Emotional Development Environmental Considerations	47
A. EMOTIONAL FUNCTIONING	48
B. MANAGING EMOTIONS	50
C. BUILDING AND MAINTAINING RELATIONSHIPS WITH ADULTS AND PEERS	53
D. SENSE OF IDENTITY AND BELONGING	61
Social and Emotional Development Related Books	66
Social and Emotional Development Glossary	68
IV. LANGUAGE AND LITERACY	69
Language and Literacy Standards: Birth – Kindergarten	69
Language and Literacy Introduction	80
Language and Literacy Environmental Considerations	85
A. LISTENING AND UNDERSTANDING	86
B. SPEAKING	90
C. VOCABULARY	93
D. SENTENCES AND STRUCTURE	100
E. CONVERSATION	107
F. EMERGENT READING	112
G. EMERGENT WRITING	128
Language and Literacy Related Books	130
Language and Literacy Glossary	131
V. MATHEMATICAL THINKING	135
Mathematical Thinking Standards: Birth – Kindergarten	135
Mathematical Thinking Introduction	140
Mathematical Thinking Environmental Considerations	143
A. NUMBER SENSE	144
B. NUMBER AND OPERATIONS	154
C. PATTERNS	156
D. GEOMETRY	159
E. SPATIAL RELATIONS	164
F. MEASUREMENT AND DATA	166
Mathematical Thinking Related Books	173
Mathematical Thinking Glossary	177



VI. SCIENTIFIC INQUIRY	175
Scientific Inquiry Standards: Birth – Kindergarten	175
Scientific Inquiry Standards Introduction.	182
Scientific Inquiry Standards Environmental Considerations	183
A. SCIENTIFIC INQUIRY THROUGH EXPLORATION AND DISCOVERY	184
B. LIFE SCIENCE	192
C. PHYSICAL SCIENCE	194
D. EARTH AND SPACE SCIENCE	198
E. ENVIRONMENT	204
F. ENGINEERING AND TECHNOLOGY	206
Scientific Inquiry Related Books	211
Scientific Inquiry Glossary.	213
VII. SOCIAL STUDIES	215
Social Studies Standards: Birth – Kindergarten	215
Social Studies Introduction	220
Social Studies Environmental Considerations	221
A. CULTURE	222
B. INDIVIDUAL DEVELOPMENT AND IDENTITY	224
C. INDIVIDUALS AND GROUPS	227
D. SPACES, PLACES AND ENVIRONMENTS	232
E. TIME, CONTINUITY AND CHANGE	236
F. GOVERNANCE, CIVIC IDEALS AND PRACTICES	238
G. ECONOMICS AND RESOURCES	240
H. TECHNOLOGY AND OUR WORLD	242
Social Studies Related Books	244
Social Studies Glossary.	246



VIII. CREATIVE EXPRESSION THROUGH THE ARTS	247
Creative Expression Through the Arts Standards: Birth – Kindergarten	247
Creative Expression Through the Arts Introduction.	249
Creative Expression Through the Arts Environmental Considerations	249
A. SENSORY ART EXPERIENCE	250
B. MUSIC	251
C. CREATIVE MOVEMENT	253
D. IMAGINATIVE AND CREATIVE PLAY	254
E. APPRECIATION OF THE ARTS	255
Creative Expression Through the Arts Related Books.	258
Creative Expression Through the Arts Glossary	260
APPENDICES	261
A. Centers for Disease Control and Prevention (CDC) Immunization Chart	261
B. Centers for Disease Control and Prevention (CDC) Clinical Growth Charts	264
C. Centers for Disease Control and Prevention (CDC) Body Mass Index Charts	272
D. U.S. Department of Agriculture (USDA) Food Plate	274
Glossary	275
References	281



PURPOSE

The first five years of life is a period of rapid development for young children. Beginning at birth, young infants are able to form relationships with adults, develop trust and explore the world. With adequate **nutrition**, an appropriate **environment**, and nurturing by responsive adults, young children become actively engaged in **exploration** and in learning about their environments. Each child’s special **temperament** and family context mean that, while development will follow a somewhat predictable sequence, the child’s development will be unique.

Working with young children requires knowledge of early childhood growth and development, as well as a recognition of **diversity** (e.g., racial, ethnic, cultural, economic, language, familial and social background differences). Although families and communities are most influential, high-quality early learning **environments** are associated with improved cognitive, social and language **skills**. With a sound understanding of what children should know and be able to do, educators can individualize the curriculum and create learning **environments** that ultimately move children toward kindergarten ready to learn.

The Florida Early Learning and Developmental Standards—Birth to Kindergarten (2017) is a comprehensive document containing age-appropriate information and reflections about how young children explore, create and think. The Standards are grounded in Florida’s conviction that children’s early experiences are directly related to later success in school, in the workforce and in life.

The information in this document is for families, caregivers and educators so that their interactions with young children in the home, and in School Readiness, Voluntary Prekindergarten (VPK) and other early care and education programs can build upon children’s **emerging** talents and strengths in appropriate and enriching ways.

Florida’s Early Learning and Developmental Standards—Birth to Kindergarten (2017) are based on principles that incorporate our collective knowledge about child development and best practices.

THESE PRINCIPLES INCLUDE:

- The first five years is a period of rapid growth and development.

Development begins prenatally and continues throughout life. During the first three years of development, a child’s brain connections become increasingly complex, and interference with those connections could have long-term effects on development. Children’s increasing physical prowess facilitates learning across all domains. Forming and maintaining productive and nurturing relationships with other people supports the development of cognitive and language skills.

- Nurturing and responsive relationships are the foundation of health, growth and development.

Young children depend on the unconditional love, support and guidance of those adults who care for them in order to maximize new learning opportunities. The most important relationship in a young child’s life is the one between that child and the child’s parents. Other significant adults must work in partnership with families for a seamless and supportive environment. Creating **intentional** opportunities for connection can enhance the child’s cooperation and willingness to explore.

- Consistency and continuity of experiences promotes development.

Young children thrive when there are common threads across the settings in which they develop. Trying new **skills** and finding unique information is more likely to occur when they can more accurately predict their environments, and have a sense of trust in the adults who care for them.



- **Developmental milestones occur in a somewhat predictable order, but each child develops at a unique pace.**

Development occurs in all eight domains, but not necessarily at the same pace. Growth in one domain can affect growth in other domains. Many factors shape development, including genetics, individual **temperament**, cultural background and the **environment** in which the child lives.

- **Children learn in many ways and in multiple settings.**

Learning occurs in all parts of the child’s world – at home, in early childhood settings and in communities. Young children learn from their daily **routines** and from both planned and unplanned activities. They learn from adults and from other children. This learning is enhanced when adults actively guide and expand young children’s play through **exploration**, encouragement, imitation and repetition. Limited overt direction from adults may be necessary as well.

- **Adults can provide intentional and appropriate experiences that enhance children’s learning.**

Significant adults in a child’s life can support and enrich development by ensuring that basic health and safety needs are met. Providing a supportive and joyous **environment** can encourage a young child to love **exploration** and **problem-solving**, and to try new **skills** and take risks. The quality and **quantity** of a child’s early experiences can impact that child’s later success in school, in the workforce and in life.

BACKGROUND

In 2007, the Florida Office of Early Learning created a steering committee to provide guidance for a comprehensive set of standards that would provide a developmentally-appropriate educational path for Florida’s children from birth through kindergarten entry. In 2010-2011, the Florida Office of Early Learning and the Department of Education’s Office of Early Learning worked collaboratively to develop one set of standards for Florida’s 4-year-olds participating in either the School Readiness or Voluntary Prekindergarten (VPK) Education Program.

In 2017, the Department of Education’s Office of Early Learning convened a panel of national and state experts to review Florida’s current early learning standards to propose revisions. The goal was to propose, based on current research, high-quality standards that are rich, interactive and lead to better preparation. The revised Florida Early Learning and Developmental Standards–Birth to Kindergarten (2017), were adopted for use in the School Readiness Program. A subset of these standards, Florida Early Learning and Developmental Standards–4 Years Old to Kindergarten, were adopted for use in the Voluntary Prekindergarten Education Program. These Standards, both adopted by the State Board of Education were promulgated into rules by the Office of Early Learning in December 2017 (6M-4.700, FAC and 6M-8.602).

An Educator’s Guide to Understanding the Florida Early Learning and Developmental Standards: Birth to Kindergarten is a resource for educators that contains information supporting Standards implementation. ***An Educator’s Guide to Understanding the Florida Early Learning and Developmental Standards: 4 Years Old to Kindergarten***, a subset of the birth to kindergarten guide, is available for educators who only serve children in the VPK Education Program.

These Standards will continue providing guidance for early learning programs as they support young children’s growth and development.



HOW TO USE THE STANDARDS

The Florida Early Learning and Developmental Standards–Birth to Kindergarten (2017) are based on what we know about children, including what they should know and be able to do along a continuum of development. The Standards are organized into eight domains, or areas of development: **Physical Development**; Approaches to Learning; **Social and Emotional Development**; Language and **Literacy**; Mathematical Thinking; Scientific **Inquiry**; Social Studies and Creative Expression Through the Arts.

The **domains**, or areas of development, are a useful way to look at the developmental progression of children’s related **skills** and abilities. They are identified with a capital Roman **numeral** (e.g., I, II, III). Each domain is further divided into **components, sub-components** (where applicable), **standards** and, where appropriate, **benchmarks**. Components are the organizing concepts of each domain and represent the major topics to be addressed within each age range. They are identified in the color of the domain with a capital letter (e.g., A, B, C).

Standards are expectations of what children on a developmental trajectory (progression) should know and be able to do by the end of each age range; they are identified by a **numeral** (e.g., 1, 2, 3). A description of each standard is also provided.

Benchmarks are more precise than standards and are set to reflect the level of skill and knowledge a child should demonstrate at the end of the experience for each age range (e.g., a, b, c). The purpose of these benchmarks is to establish goals for children that maximize their chances for success.

Examples provided to clarify standards and benchmarks do not represent an inclusive list of all possible examples. Standards and benchmarks can assist educators in **planning** instruction and discussing expectations and growth with a child’s family. Examples are provided for each standard and benchmark of what children may do (standard examples), what educators may do (instructional strategies or environmental considerations) and what families may do (tips for families to support learning and development at home).

Glossary terms that appear in **bold italic** are defined at the end of each domain. The glossary found at the end of the book includes definitions of all glossary terms found throughout the entire document.

It is important to remember that, although individual development proceeds through a predictable sequence of **milestones**, there are wide variations in the pace at which children achieve **milestones**. The lack of behaviors that correspond to a specific example should not be viewed with great significance; rather, educators should consider the full range of developmental behaviors. Significant delays or interruptions in the sequence of **milestones** are signals for further assessment and evaluation, keeping in mind that children with special needs may reflect the achievement of the standards in ways that are unique to their strengths and challenges.

To make the Standards useful for families, caregivers, and educators, suggestions for integrating the Standards into daily interactions with young children can be found in the **Environmental Considerations** section for each domain.



THE STANDARDS CAN BE USED IN MULTIPLE WAYS BY A VARIETY OF AUDIENCES, INCLUDING:

- The Standards can help adults understand what children may be able to do, and what to expect as they develop. While the Standards are not designed to be a screening or an assessment tool, they can serve to help adults understand the typical order of development during the early years.
- The Standards can be a useful tool for enriching the learning experiences of young children with special needs. Children with special needs may develop less or more rapidly, or even out of sequence in the various domains. Understanding and *planning* for children with special needs can help not only children with special needs, but all who participate in early care and education programs.
- The Standards can guide families, caregivers and educators as they plan intentional and appropriate experiences for young children, based on an understanding of each child’s developmental accomplishments and anticipated next steps.
- The Standards create a common language for families, caregivers and educators. A hallmark of sound, early experiences is that the adults who care about young children work together toward a seamless and enriching early experience. Having a shared language for communication increases the probability that these adult partnerships will be successful.



USING THE STANDARDS WITH DIVERSE LEARNERS

It is well understood that children learn at different rates and have varying abilities and interests, and that children’s learning is significantly influenced by the experiences they bring to the educational **environment**. When **diverse** learners (e.g., children with special needs and children whose native language is other than English) are in the early childhood classroom, the variations in learning rates and abilities increase. Each child must be viewed as a unique person with an individual **pattern** and timing for growth, raised in a cultural context that may impact the acquisition of certain **skills** and competencies. Adults who recognize and appreciate differences in children readily adapt instruction. Adaptations are crucial if all children in the setting are to have the opportunity to participate fully and make developmental progress.

RESPONDING TO LINGUISTIC AND CULTURAL DIVERSITY

Children whose native language is other than English are still learning their native language. It is important to foster acquisition of their native language along with English. The goal is to provide language- and **literacy**-rich **environments** that foster their mastery of the Standards while they begin to acquire English. There will be times when they are learning English that these children may appear not to be proficient in either language. This is a developmental stage that should be expected.

With appropriate supports, most children whose native language is other than English will be able to become proficient in both English and their native language.

The National Association for the Education of Young Children (NAEYC), in its position statement, “Responding to Linguistic and Cultural **Diversity**—Recommendations for Effective Early Childhood Education,” stresses how important it is that early childhood educators:

- Recognize that all children are cognitively, linguistically, and emotionally connected to the language and **culture** of their home.
- Acknowledge that children can demonstrate their knowledge and capabilities in many ways.
- Understand that, without comprehensible input, second-language learning can be difficult.





Some general strategies that can be used in the early childhood classroom to support children whose native language is other than English are listed below. Some of these are similar to those used in helping younger children develop their language **skills**:

- Recognize that the child’s native language serves as a foundation for knowledge acquisition.
- Start with what the child knows—involve families by asking them to provide a few important words in the language used in their home.
- Use children’s current strengths and **skills** as the starting point for new experiences and instruction.
- Build on what they know to expand and extend their language **skills**.
- Provide instruction in a manner that children can understand, consistent with their proficiency level in English.
- Interact in meaningful ways and use language related to the immediate early learning situation.
- Establish a consistent set of **routines** for children and provide cues for what they should do when.
- Support communication by using words along with gestures or actions. Use repetition.
- Recognize that children may communicate nonverbally (through gestures) before they begin producing words and phrases in English.
- Help children listen purposefully to English-speaking educators and children to gather information about their new language.
- Help children experiment with the sounds and **intonation** of the English language.
- Help children increase their listening **vocabulary** and begin to develop a **vocabulary** of object names and common phrases in English.
- Include children in group activities.
- Help children feel secure and competent so they will be more likely to interact and communicate with children and adults.
- Recognize that the more opportunities children have to participate, the more their language and communication **skills** will develop.

It is important to note that although some **phonological awareness skills** appear to transfer between languages (e.g., **skills** in a first language help the child develop and demonstrate the same **skills** in a second language), some basic proficiency in English may be prerequisite to the development of **phonological awareness** in English for those learning English as a second language.





RESPONDING TO CHILDREN WITH SPECIAL NEEDS

Children with special needs may need accommodations or modifications of expectations or experiences to meet their individual needs so that they will be successful in attaining the standards. High-quality settings use inclusive practices to improve the quality of services, instruction, and supports to all young children and their families. Best practices applied to areas such as the **environment**, the family, collaboration between educators and the child's specialized care team, interaction with the child and his/her peers, instruction, child screening and child assessment and the child's transition, greatly enhance the quality of services educators provide. Please refer to the *Best Practices in Early Childhood Education (BPIECE)* for more information. The following are suggestions for educators when planning on enhancing their inclusive practices:

ENVIRONMENT:

- Arrange learning environments to support all children's needs for all **daily transitions** and increase active participation.
- Identify barriers to participation and develop **adaptations** to support children's needs.
- Provide predictable routines in daily/weekly schedule but remain flexible to meet the needs of individual children.
- Design a flexible **learning environment** to promote interactive activities and to support the learning of all children.
- Use adaptations, which are most similar to what other same-age children are using while meeting individual needs.
- Change adaptations as needed.
- Change **environment** according to children's **sensory needs**.
- Ensure all planned **supports** (scheduling, materials, and visual supports) are available and used across daily activities and environments.

FAMILY:

- Design effective two-way communication with families to share successful supports and revise plans as needed.
- Engage families in conversations about child's strengths and needs.
- Support and encourage family participation and decision-making while providing complete and unbiased information.
- Present child progress, reports and information in understandable language.
- Promptly problem solve with families and administration, as concerns are identified, to develop strategies that address current priorities.
- Identify and use families' current strengths, needs, resources and priorities as the foundation for developing strategies and plans for the child.
- Identify multiple resources and services to provide information to parents to support and strengthen their knowledge and **skills**.
- Share and demonstrate how to implement effective strategies in everyday family activities.



COLLABORATION:

- Identify all members of a **specialized care team** and actively engage with members to review and modify plan.
- Communicate environmental changes in plans/ supports to all team members.
- Use suggestions developed by specialized care team in the early learning setting.
- Invite **service providers** into the classroom for therapy sessions.
- Seek further knowledge of topics discussed by the specialized care team to enhance problem-solving.

INTERACTION:

- Foster a sense of classroom community by promoting acceptance, safety and membership.
- Use information about children's interests and behaviors to guide and inform meaningful interaction with other children.
- Promote, sustain and extend positive social interactions between peers.
- Promote positive self-expression.
- Facilitate collaborative problem-solving among peers.

TRANSITION:

- Exchange information about strategies to support the child's successful adjustment with programs/ classrooms a child is transitioning to/from.
- Provide activities and resources for parents to learn about or visit the next program.
- Provide children with opportunities to develop and practice **skills** they need to be successful in the next program/classroom.

INSTRUCTION:

- Use a variety of instructional strategies to support participation and engagement of all children.
- Provide children with multiple ways of demonstrating knowledge and **skills**.
- Build and plan individual learning objectives into classroom concepts and reinforce them throughout the day.
- Provide individual adaptations to support children's engagement and participation in all daily activities.
- Adapt communication with individual children.
- Model appropriate language and alternate forms of communication as needed.
- Clearly display and use visual supports to clarify environmental expectations.
- Use specific feedback to increase child engagement, play and **skills**.

SCREENING AND ASSESSMENT:

- Use a variety of methods to gather assessment information from multiple sources to determine child's strengths and needs in all areas of development.
- Communicate results of assessment with families/ caregivers.
- Continuously observe and document the child's progress to begin working on next learning goal.



ENVIRONMENTAL CONSIDERATIONS

Designing environments that help children make progress in their learning and development as described in the Florida Early Learning and Developmental Standards–Birth to Kindergarten (2017) requires knowledge, **planning, reflection**, and modification of the **environment** to meet children’s needs. Optimal early learning environments evolve as children’s interests and needs are discovered and nourished. While there are many different ways to design a **developmentally-appropriate environment**, there are key elements that should be included in each design. These elements include, but are not limited to, ample spaces and props for play, implementation of a schedule that assures a balance of activities and choices and opportunities for educator observation and intentionality.

PHYSICAL DEVELOPMENT

Children learn through their play, and spaces and props for play are an important part of the early learning **environment**. Studies show the relationship between, play, **dramatic play** and all domains of development, including foundational and complex cognitive **skills**. Children engaged in “playing house” consider roles and relationships and use **self-regulation**. They practice their language **skills** and learn about friendships. As children design roadways and buildings in the block area, they compare sizes and shapes, show self-direction, and problem solve when they run into difficulties. Play affords children many choices and therefore fosters their approaches to learning **skills**. They show **eagerness** and **curiosity; persistence, creativity**, and inventiveness; and **planning** and **reflection** as they make play choices.

Play does not always happen automatically. Some children spend a lot of time inside and alone and little time playing with peers. Television and video games are often their playmates. Early childhood educators need to support play development by designing daily schedules that provide ample time for play. Short free-play times are not sufficient; often it takes children 15 minutes simply to get ready to play.

Play also needs to afford children opportunities for choices. Activities that are exclusively educator-directed offer fewer chances for children to practice their developing **skills** and for educators to observe and scaffold learning. A well-planned **environment** provides children with many ideas and choices to support play development. Recognizing and supporting play does not mean that all play is “free,” and that the role of the educator is simply to ensure safety. Educators have very important responsibilities during play. By carefully **observing** children during **dramatic play**, educators gather important information about learning styles, skill levels and individual needs and abilities. **Observing** play becomes the basis for making decisions about hands-on learning experiences, interest centers and materials. Careful observation and **reflection** enables educators to add intentionality to their curriculum **planning**. Having watched a child struggle with fastening the doll clothes during play, an educator can intentionally direct that child to **center** activities later that promote **hand-eye coordination**.

Work sheets, drills, or simply allowing children to play without educator **planning** and **reflection** will not facilitate optimal progress for children.



SOCIAL ENVIRONMENT

The social **environment**, or climate, refers to the prevailing mood, attitudes, values and tone that educators and children experience in the classroom. An effective learning **environment** should convey safety, respect, kindness and support. Providing a positive climate helps preschoolers feel secure, and encourages learning, play and **exploration**. A positive climate reflects the emotional connection between the educator and children as well as among the children themselves.

An **environment** that fosters connection and positive interaction is essential to the development of social and emotional competence. Proficiency in these areas is critical to a child’s successful transition to kindergarten, early school success and overall well-being. In fact, children’s social and emotional functioning in the classroom is increasingly recognized as an indicator of school readiness.

Educators may create a positive classroom climate by:

- Developing an affectionate and supportive relationship with each child.
- Fostering the development of warm and caring relationships among children.
- Demonstrating respect for the children by providing eye-contact and using a pleasant, calm voice.
- Providing an **environment** of inclusivity, where every child is valued and all cultures, ethnicities, languages, religions and special needs are embraced.
- Demonstrating positive affect through smiling, laughing, body language and enthusiasm.
- Encouraging peer assistance by modeling cooperation and collaboration.
- Communicating frequently with families.
- Engaging in frequent social conversations with children.
- Conveying positive expectations.
- Providing verbal and physical attention.
- Modeling and fostering **empathy**.
- Listening to children and encouraging them to listen to others.
- Using polite and respectful language.
- Planning and implementing relationship-building activities that encourage positive interactions.
- Greeting each child by name when they arrive in the classroom.
- Following the children’s lead and interests during play.
- Assisting children to identify, understand and manage their emotions.

By providing a positive climate in their early childhood classroom, educators are acknowledging the importance of cultivating the social and emotional competencies of young children. Nurturing and supportive interactions and relationships are powerful learning “tools”!

Achievement of the Florida Early Learning and Developmental Standards–Birth to Kindergarten (2017) will be supported in early learning environments where educators have thoughtfully considered room arrangement, carefully planned a schedule that incorporates ample time for child-directed play and educator-directed activities, provided children with choices and included opportunities for observation and **reflection** that guide the educator’s lesson **planning**. Classrooms with these elements provide the foundation for children to thrive and afford them the best opportunity to be ready for success in kindergarten.



CONCEPTS ACROSS THE STANDARDS

The Florida Early Learning and Developmental Standards–Birth to Kindergarten (2017) feature four concepts that are encountered frequently throughout the standard domains:

- Play
- Cause and Effect
- Patterns
- Communication

These concepts across the standards provide opportunities for children to learn and apply **skills** and **vocabulary** in different contexts that build familiarity and grow in complexity across the age ranges, birth to kindergarten. **Play** is a child’s work. Play is important for children’s development as children learn social and motor **skills** and cognitive thinking. There are many benefits to play. Children gain knowledge through their play. They learn to think, remember and solve problems. Children increase their **problem-solving** abilities through games and puzzles. They strengthen their language **skills** by modeling other children and adults. Books, games and toys that show pictures and matching words add to a child’s **vocabulary**. Children gain an understanding of size, shape and texture through play. Play allows children to be creative while developing their own imaginations. Play with other children helps children learn how to be part of a group, discover their own interests and leads to more physical movement.

Patterns exist everywhere—in regularly occurring shapes or structures and in repeating events and relationships. Patterns help children make sense of the world by breaking and sorting information into meaningful “chunks,” allowing children to create new understandings. Patterns can be found in nature as children explore shapes, **characteristics** and sort objects found on a nature walk. Children can observe patterns in seasons and in the sky through the shapes and movement of the clouds, sun, moon and stars. Children encounter patterns in language through speech and rhymes. Children can make sound patterns with musical instruments or experience patterns when participating in chants and songs and movement activities. Patterns help children learn to make **predictions** to understand what comes next in early numeracy through numbers, shapes and images that repeat in a logical way. Children will notice similarities and differences of patterns in their **environment** leading to ideas for how they might be classified or help in solving a problem.

Children learn **cause-and-effect** at a very young age. They cry to get attention. They drop something and it breaks. They bang a pot and it makes noise. Through their own observations, children begin to make a connection between actions and reactions. Understanding cause-and-effect helps children predict and explain events in new contexts. Building with blocks, mixing paint at the art **center**, experimenting with items that sink or float in water, listening to books with cause-and-effect elements such as *If You Give a Mouse a Cookie* by Laura Numeroff and experiencing fatigue after running outside during play are all examples of young children building an understanding of cause-and-effect. Children also learn cause-and-effect through positive and negative consequences from behavior in individual settings and when interacting with peers.





Young children depend on language and **communication** to make their **wants and needs** known, solve problems, ask questions and play with others. Reading books and telling stories are important ways to support young children’s communication and language **skills**. Children have opportunities to practice communication **skills** in many interest areas in their learning **environment**. Books, magazines, maps or other printed materials should be available in every interest area (e.g., providing maps, books or magazines in the block area for children to use while building or constructing or in the **dramatic play** area for children to engage in imaginative play). Educators expose children to new **vocabulary**, books based on children’s interests and cultures, labeled classroom spaces and objects and many writing and drawing experiences.” Children communicate and interact with adults and peers during unstructured play, participation in simple scientific **inquiry** experiments, painting and creating art, singing and moving to **music** and asking and answering questions about their **exploration** and discoveries in their **environment**.

The understanding that concepts of play, patterns, cause-and-effect and communication are encountered throughout the Florida Early Learning and Developmental Standards–Birth to Kindergarten (2017) will support educators in providing meaningful learning experiences for children. For example, an activity with children playing together and building a tower out of multi-colored blocks involves play, patterns (building and using colors), cause-and-effect (blocks fall down when there is not a strong foundation or someone bumps the blocks) and communication as children plan and talk about how they will design or rebuild their tower. Young children learn through the concepts across the standards by engaging in activities that are real and meaningful to them — activities that encourage the development of **skills**, knowledge and ways of thinking and learning.





I. PHYSICAL DEVELOPMENT DOMAIN					
Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years (24 - 36 months)	3 - 4 years (36 - 48 months)	4 years- Kindergarten (48 months - Kindergarten)
A. HEALTH AND WELLBEING					
a. Active Physical Play					
1. Engages in physical activities with increasing balance, coordination, endurance and intensity					
Benchmark a: Demonstrates beginning signs of balance, control and coordination	Benchmark a: Uses movement and senses to explore and learn	Benchmark a: Engages in brief instances of physical play (e.g., pushes wheeled toy for short distance, puts toys in wagon and pulls wagon around the room)	Benchmark a: Engages in active physical play for short periods of time	Benchmark a: Engages in active games or outdoor play and other forms of physical activity for sustained periods of time (e.g., dancing in circle time)	Benchmark a: Seeks to engage in physical activities or active play routinely with increased intensity and duration
b. Safety					
1. Shows awareness of safety and increasingly demonstrates knowledge of safe choices and risk assessment when participating in daily activities					
<i>Not typically observed</i>	<i>Not typically observed</i>	Benchmark a: Follows adult's guidance about basic safety practices (e.g., use walking feet, pet gently, hold familiar adult's hand when crossing street)	Benchmark a: Demonstrates difference between safe and unsafe play behaviors (e.g., chairs are for sitting, keeps inappropriate items out of nose/mouth)	Benchmark a: Follows basic safety practices with close adult supervision (e.g., tries to buckle own seatbelt, seeks adult assistance to use step stool)	Benchmark a: Consistently follows basic safety rules independently across different situations Benchmark b: Identifies consequences of not following safety rules
c. Personal Care Routines					
1. Responds to and initiates care routines that support personal hygiene					
<i>Not typically observed</i>	Benchmark a: Responds and cooperates in ways that demonstrate awareness of a hygiene routine (e.g., grabs for washcloth as adult washes child's face)	Benchmark a: Actively participates in simple steps of hygiene routines with adult	Benchmark a: Carries out some steps of own personal hygiene routines with specific adult guidance or demonstration	Benchmark a: Carries out familiar hygiene routines with occasional reminders of how to do them	Benchmark a: Initiates and completes familiar hygiene routines independently

I. PHYSICAL DEVELOPMENT DOMAIN

Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years (24 - 36 months)	3 - 4 years (36 - 48 months)	4 years- Kindergarten (48 months - Kindergarten)
A. HEALTH AND WELLBEING					
d. Feeding and Nutrition					
1. Responds to feeding or feeds self with increasing efficiency and demonstrates increasing interest in eating habits and making food choices					
Benchmark a: Shows interest in the process of being fed (e.g., holds bottle, uses lips to take food off the spoon, attempts to grab or reaches for spoon while being fed)	Benchmark a: Feeds self some finger food items (feeds self small pieces of food from tray)	Benchmark a: Periodically feeds self some foods using developmentally-appropriate basic utensils, sometimes needing help	Benchmark a: Feeds self a wide variety of foods using developmentally-appropriate basic utensils	Benchmark a: Serves self or others by scooping or pouring from containers	Benchmark a: Assists adults in preparing simple foods to serve to self or others
	Benchmark b: Shows interest in new foods that are offered	Benchmark b: Shows willingness to try new foods when offered on multiple occasions	Benchmark b: Expresses preferences about foods, specifically likes or dislikes	Benchmark b: Begins to recognize nutritious food choices and healthy eating habits	Benchmark b: Recognizes nutritious food choices and healthy eating habits
	Benchmark c: Shows preference for food choices	Benchmark c: Sometimes makes choices about which foods to eat when offered several choices	Benchmark c: Communicates to adults when hungry, thirsty or has had enough to eat		
	Benchmark d: Explores food with fingers	Benchmark d: Distinguishes between food and non-food items			





I. PHYSICAL DEVELOPMENT DOMAIN					
Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years (24 - 36 months)	3 - 4 years (36 - 48 months)	4 years- Kindergarten (48 months - Kindergarten)
B. MOTOR DEVELOPMENT					
a. Gross Motor Development					
1. Demonstrates use of large muscles for movement, position, strength and coordination					
Benchmark a: Explores new body positions and movements (e.g., rolling over, sitting, crawling, hitting/kicking at objects)	Benchmark a: Moves from crawling to walking, learns new muscle coordination for each new skill, and how to manage changing ground surfaces	Benchmark a: Begins to gain control of a variety of postures and movements including stooping, going from sitting to standing, running and jumping	Benchmark a: Gains control of a variety of postures and movements including stooping, going from sitting to standing, running and jumping	Benchmark a: Begins to balance, such as on one leg or a beam, for short periods	Benchmark a: Balances, such as on one leg or on a beam, for longer periods of time both when standing still and when moving from one position to another
				Benchmark b: Begins to perform some skills, such as jumping for height and hopping	Benchmark b: Demonstrates more coordinated movement when engaging in skills, such as jumping for height and distance, hopping and running
				Benchmark c: Engages in physical activity that requires strength and stamina for brief periods	Benchmark c: Engages in more complex movements (e.g., riding a tricycle with ease)
					Benchmark d: Engages in physical activities of increasing levels of intensity for sustained periods of time
2. Demonstrates use of large muscles to move in the environment					
Benchmark a: Uses each new posture (e.g., raising head, rolling onto back, sitting) to learn new ways to explore the environment (e.g., sits up to be able to reach for or hold objects)	Benchmark a: Uses body position, balance and especially movement to explore and examine materials, activities and spaces (e.g., uses furniture to pull self up)	Benchmark a: Uses complex movements, body positions and postures to participate in active and quiet, indoor and outdoor play	Benchmark a: Uses a variety of increasingly complex movements, body positions and postures to participate in active and quiet, indoor and outdoor play	Benchmark a: Begins to combine and coordinate two or more motor movements (e.g., runs with long strides showing arm and leg opposition, uses wheelchair to move in classroom)	Benchmark a: Combines and coordinates more than two motor movements (e.g., moves a wheelchair through an obstacle course)

I. PHYSICAL DEVELOPMENT DOMAIN

Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years (24 - 36 months)	3 - 4 years (36 - 48 months)	4 years- Kindergarten (48 months - Kindergarten)
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B. MOTOR DEVELOPMENT

b. Gross Motor Perception (Sensorimotor)

1. Uses perceptual information to guide motions and interactions with objects and other people

Benchmark a: Exhibits body awareness and starts to move intentionally	Benchmark a: Begins to act and move with intention and purpose	Benchmark a: Acts and moves with intention and purpose	Benchmark a: Develops independence through coordinated and purposeful movements and activities	Benchmark a: Begins to act and move with purpose and recognizes differences in direction, distance and location	Benchmark a: Acts and moves with purpose and independently recognizes differences in direction, distance and location
	Benchmark b: Begins to discover how the body fits and moves through space	Benchmark b: Begins to demonstrate awareness of own body in space	Benchmark b: Demonstrates awareness of own body in space	Benchmark b: Demonstrates awareness of own body in relation to others	Benchmark b: Demonstrates spatial awareness through play activities
		Benchmark c: Begins to coordinate perceptual information and motor actions to participate and play in daily routines (e.g., singing songs with hand motions or rolling ball)	Benchmark c: Coordinates perceptual information and motor actions to participate in play and activities (e.g., singing songs with hand motions or rolling/catching ball)		



I. PHYSICAL DEVELOPMENT DOMAIN					
Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years (24 - 36 months)	3 - 4 years (36 - 48 months)	4 years- Kindergarten (48 months - Kindergarten)
B. MOTOR DEVELOPMENT					
c. Fine Motor Development					
1. Demonstrates increasing precision, strength, coordination and efficiency when using hand muscles for play and functional tasks					
Benchmark a: Begins to use hands for play and functional tasks (e.g., putting hands on bottle, reaching for and grasping toy)	Benchmark a: Uses hands for play and functional tasks (e.g., putting hands on bottle, reaching for and grasping toy)	Benchmark a: Gains control of hands and fingers	Benchmark a: Coordinates the use of hands and fingers	Benchmark a: Uses various drawing and art tools with developing coordination	Benchmark a: Shows hand control using various drawing and art tools with increasing coordination
2. Increasingly coordinates hand and eye movements to perform a variety of actions with increasing precision					
Benchmark a: Displays beginning signs of strength, control and Hand-eye coordination	Benchmark a: Coordinates the use of arms, hands, fingers to accomplish tasks	Benchmark a: Uses hand-eye coordination when participating in routines, play and activities (e.g., painting at an easel, putting objects into shape sorter, putting blocks into defined space, tearing paper)	Benchmark a: Coordinates the use of arms, hands, fingers to accomplish tasks with hand-eye coordination when participating in routines, play and activities (e.g., painting at an easel, placing simple pieces of puzzle, folding paper)	Benchmark a: Uses hand-eye coordination to manipulate objects and materials (e.g., completing large-piece puzzles or threading beads with large holes, begins to use scissors)	Benchmark a: Easily coordinates hand and eye movements to carry out tasks (e.g., working on puzzles or stringing beads together)
				Benchmark b: Uses hand-eye coordination in handling books (e.g., turning pages, pointing to a picture or looking for favorite page)	Benchmark b: Uses developmentally appropriate grasp to hold and manipulate tools for writing, drawing and painting
					Benchmark c: Uses coordinated movements to complete complex tasks (e.g., cuts along a line, pours or buttons, buckles/unbuckles, zips, snaps, laces shoes, fastens tabs)



I. PHYSICAL DEVELOPMENT



During their first five years, young children undergo more rapid and dramatic changes in their **physical development** than at any other time in their lives. Changes in body proportion, coordination and strength occur, as does increasingly complex brain development. Children develop remarkable physical, motor and **sensory** capabilities that enhance **exploration** and mastery of the **environment**.

Physical development impacts other developmental areas. Research and experience suggest that planned physical activities and exposure to a wide array of experiences are keys to the **physical development** of young children. Increased body control enables young children to become active partners in managing their own **health**, safety and physical fitness. Because many health-related behaviors (e.g., eating preferences, exercise patterns) develop in childhood, it is vital that the adults who care for young children consciously promote **physical development**.

There are two components to young children's physical development:

HEALTH AND WELLBEING includes active physical play, safety, personal care **routines** and feeding and **nutrition**.

MOTOR DEVELOPMENT refers to the use, refinement and coordination of the body's large and small muscles.





Throughout their early years, children demonstrate increasingly complex capacities that enable them to create their own learning experiences. As they master new and more complicated tasks, children's self-confidence increases. Parents, caregivers and educators can provide safe and supportive **exploration**, excitement about new accomplishments and respect for individual differences. While this domain represents general expectations for physical **health** and motor development, each child will reach the individual learning goals at his or her own pace and in his or her own way.

ENVIRONMENTAL CONSIDERATIONS

4 YEARS - KINDERGARTEN

(48 months - Kindergarten)

- ♥ Include a variety of materials and equipment to promote movement, balance and coordination.
- ♥ Post **health** and safety procedures (e.g., proper hand washing, first aid and safety).
- ♥ Include a variety of books, reading and writing materials, and other learning props that promote focusing and tracking with the eyes.
- ♥ Include props in **dramatic play** and books on **oral health**, as well as toothbrushes for children to brush their teeth after breakfast, snack or lunch.
- ♥ Include **health** props for the **dramatic play** area, books about **health** issues and procedures, and materials and equipment to promote good **health routines**.
- ♥ Involve children with special needs.





I. PHYSICAL DEVELOPMENT



A. HEALTH AND WELLBEING | a. ACTIVE PHYSICAL PLAY

4 YEARS – KINDERGARTEN (48 months - Kindergarten)

As four year-olds develop increasing control of their muscles, they are able to master more difficult physical activities. As they practice, they become more confident in their abilities.

STANDARD 1.

Engages in physical activities with increasing balance, coordination, endurance and intensity

BENCHMARK a.

Seeks to engage in physical activities or active play routinely with increased intensity and duration

Children may...

- Jump, gallop and skip.
- Throw, catch and kick a ball.
- Run, stop quickly and run around obstacles.
- Climb ladders on play equipment with alternating feet and increasing confidence.

Educators may...

- Provide daily structured physical activities such as obstacle course, dancing to **music** or class walk.
- Provide daily unstructured times for physical activities (e.g., free-play time), including with outdoor play with playground equipment.
- Plan teacher-directed movement activities and games such as Follow the Leader or Duck, Duck, Goose.

Families may...

- Take children to outdoor play areas to practice **gross motor skills** such as jumping, running and balancing.
- Make up silly games that include using **skills** such as skipping, hopping and navigating obstacles.



I. PHYSICAL DEVELOPMENT

A. HEALTH AND WELLBEING | b. SAFETY



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four-year-olds develop wellness behaviors and **skills** by observing those modeled by adults in their lives. They are beginning to understand more about how to keep themselves safe through repetition and demonstration of safety rules, stories and experiences.

STANDARD 1.

Shows awareness of safety and increasingly demonstrates knowledge of safe choices and risk assessment when participating in daily activities

BENCHMARK a.

Consistently follows basic safety rules independently across different situations

Children may...

- Recognize unsafe items (e.g., a spray bottle of bleach solution on the table) and tell an adult.
- Tell an adult when they see another child doing something dangerous, such as throwing rocks or sand.
- Use safe behaviors (e.g., walking in the classroom rather than running) with teacher guidance.

Educators may...

- Develop, discuss and regularly review **health** and safety rules (e.g., carrying scissors with points down, walking in classroom).
- Involve children in determining classroom safety rules.
- Conduct regular fire and emergency drills.
- Provide books on **health** and safety topics, written safety procedures and maps and **health** and safety play materials for the **dramatic play** and writing centers.

Families may...

- Discuss safety rules for their home.
- Point out safety rules being followed in public and private places.

BENCHMARK b.

Identifies consequences of not following safety rules

Children may...

- Use words to explain consequences to adults and peers.
- Assist in creating appropriate rules and consequences for the classroom and home (e.g., must clean-up after **self**, walking feet in the classroom).

Educators may...

- Involve children in creating rules and consequences.
- Explain alternative choices to 4-year-olds.
- Set clear and concise expectations for behavior and classroom **routines**.
- Give children opportunities to make choices throughout the day.

Families may...

- Read books about others following and breaking rules including consequences such as *Where the Wild Things Are*.
- Keep predictable **routines** in the home.



I. PHYSICAL DEVELOPMENT



A. HEALTH AND WELLBEING | c. PERSONAL CARE ROUTINES

4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four-year-olds are increasingly independent in their **self-care**. They like to dress themselves, go to the bathroom on their own, and are able to follow rules for **health routines** (e.g., washing their hands after using the toilet). Even with their growing abilities and independence, 4-year-olds still need consistent modeling and may need reminders about **self-care routines**.

STANDARD 1.

Responds to and initiates care **routines** that support personal hygiene

BENCHMARK a.

Initiates and completes familiar hygiene **routines** independently

Children may...

- Follow the classroom's procedures for toileting and hand-washing.
- Put on shoes and clothes with minimal assistance, including learning to zip, button and buckle.
- Cover the mouth when coughing and use a tissue to blow the nose.
- Decide, with a few prompts from adults, when to carry out **self-help** tasks such as washing hands.
- With some adult help, wash and dry hands before eating and after toileting.
- Cover mouth when coughing.

Educators may...

- Provide opportunities for child to select personal hygiene items for **self** and others (e.g., select own toothbrush, washcloth).
- Make a place for child's personal grooming items.
- Provide child with enough time to take care of personal hygiene.
- Post picture reminders with short phrases for **self-care** tasks.

Families may...

- Encourage their child to identify signs of a cold or flu (e.g., chills, running nose and coughing), and whom to tell.
- Support their child in brushing teeth at least twice daily.
- Have their child practice effective hand-washing.
- Read stories and talk about good **health** habits (e.g., going to bed on time helps children be ready to learn at school).





I. PHYSICAL DEVELOPMENT



A. HEALTH AND WELLBEING | d. FEEDING AND NUTRITION

4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Good **nutrition** is essential to physical wellness, and 4 year-old children are beginning to understand the importance of eating healthy foods. With guidance and modeling from adults, young children can identify and will choose healthy and **nutritious** foods.

STANDARD 1.

Responds to feeding or feeds **self** with increasing efficiency and demonstrates increasing interest in eating habits and making food choices.

BENCHMARK a.

Assists adults in preparing simple foods to serve to **self** or others

Children may...

- Identify healthy snacks.
- Participate in the preparation and sampling of **nutritious** foods.
- Name many different healthy foods and talk with classmates about healthy and unhealthy snack and lunch items.

Educators may...

- Plan and provide opportunities for children to help prepare or sample healthy and **nutritious** foods.
- Plant a garden involving the children with **planning**, planting, watering and harvesting.
- Locate children's recipe books to choose a snack to make.

Families may...

- Involve children in choosing or helping to prepare meals (e.g., tear lettuce for the salad, scrub potatoes to clean them and cut soft foods such as olives or strawberries with a butter knife or dull plastic knife).
- Take children to the grocery store and let them choose produce when shopping for groceries.
- Allow children to pour or scoop ingredients into measuring tools.

BENCHMARK b.

Recognizes **nutritious** food choices and healthy eating habits

Children may...

- Identify healthy snacks.
- Name many different healthy foods.
- Talk with classmates about healthy and unhealthy snack and lunch items.

Educators may...

- Provide healthy food choices.
- Use small group activities to explore how certain foods clean our teeth (apples) or make our teeth sticky/dirty (marshmallows).
- Invite families to bring in healthy foods for a class picnic, parties, or packed lunches.
- Involve children in creating charts, collages and bulletin boards of healthy foods.

Families may...

- Keep healthy food at hand. Children will eat what is readily available.
- Praise healthy choices.



I. PHYSICAL DEVELOPMENT



B. MOTOR DEVELOPMENT | a. GROSS MOTOR DEVELOPMENT

4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four-year-olds are gaining increasing control over their **gross motor skills** and coordinated movements. As they practice, they become more confident in their abilities.

STANDARD 1.

Demonstrates use of large muscles for movement, position, strength and coordination

BENCHMARK a.

Balances, such as on one leg or on a beam, for longer periods of time both when standing still and when moving from one position to another

Children may...

- Jump, gallop or skip.
- Climb ladders on play equipment with alternating feet and increasing confidence.
- Run, stop quickly and run around obstacles.
- Hop up and down on one foot.

Educators may...

- Provide daily structured physical activities (e.g., obstacle course, dancing to **music**, class walk).
- Play "Simon Says" with more complex **gross motor** movements.
- Provide daily unstructured times for physical activity (e.g., free-play time) including outdoor play with playground equipment.

Families may...

- Play balancing games by encouraging child to walk along cracks in the sidewalk or lines of a tile floor.
- Make a hopscotch **pattern** on the floor using paper plates for children to use hopping and jumping **skills**.
- Use a laundry basket and recycled paper to make a bunch of paper balls for children to practice throwing into the basket from different distances.

BENCHMARK b.

Demonstrates more coordinated movement when engaging in **skills**, such as jumping for height and distance, hopping and running

Children may...

- Jump, hop and gallop.
- Pedal a tricycle.
- Run, stop quickly and dodge an obstacle.
- Throw, catch and kick a ball.

Educators may...

- Include a variety of props, materials and equipment, as well as modifications to ensure all children participate.
- Plan teacher-directed movement activities such as "Duck, Duck, Goose" and "Follow the Leader."
- Provide items like jump ropes and hula hoops.
- Provide a variety of **music** and opportunities for free rhythmic expression.

Families may...

- Create an obstacle course at home for children to crawl, hop and run.
- Use a pool noodle to create a jumping challenge, starting with the noodle on the floor and moving it slightly higher each time.





BENCHMARK c.

Engages in more complex movements (e.g., riding a tricycle with ease)

Children may...

- Jump forward to a target without falling.
- Catch a ball that has been bounced.
- Skip using alternating feet.
- Pedal consistently with alternating feet and navigate turns when riding a wheeled toy or tricycle.

Educators may...

- Create an obstacle course.
- Provide opportunities for children to play group games that involve bouncing or throwing a ball to one another.
- Teach coordinated dance moves such as line dancing or step **routines**.

Families may...

- Set up targets and provide opportunities for children to throw or roll a ball to knock targets over.
- Practice volleying **skills** with children by finding a balloon and trying to keep it up in the air.
- Set up an obstacle course using objects for children to jump over, go around and even move under.

BENCHMARK d.

Engages in physical activities of increasing levels of intensity for sustained periods of time

Children may...

- Play for longer periods of time without rest.
- Engage in more physically competitive games (e.g., foot races, scooter races, obstacle courses).

Educators may...

- Provide a variety of play materials such as bikes, balls, parachutes, bean bags, jump ropes and hula hoops.
- Offer opportunities for free-style dance.

Families may...

- Create a movement sequence such as hop, twist, reach, and join in with children.
- Visit the local playground and allow children time to run, play and climb.



I. PHYSICAL DEVELOPMENT



B. MOTOR DEVELOPMENT | a. GROSS MOTOR DEVELOPMENT

4 YEARS - KINDERGARTEN (48 months - Kindergarten)

As 4-year-olds develop increasing control of the muscles in their arms and legs, they are able to master more difficult physical activities. Activities that use one side of the body and activities that require use of both sides of the body help children improve coordination and balance. Children develop these new **skills** through self-practice with adult involvement.

STANDARD 2.

Demonstrates use of large muscles to move in the **environment**

BENCHMARK a.

Combines and coordinates more than two motor movements (e.g., moves a wheelchair through an obstacle course)

Children may...

- Walk up stairs holding an object.
- Jump over an object, landing with both feet together.
- Catch a ball, then throw it.

Educators may...

- Create obstacle courses to navigate with a wheelchair, scooter, or balance bike.
- Have the children play catch/ toss with a bean bag during circle time activities.
- Provide opportunities for children to throw, catch and kick a ball.

Families may...

- Go for a walk and practice other ways to move, such as skipping, galloping, sliding and leaping.
- Complete some outdoor chores as a family while reaching, pulling, pushing and bending.
- Practice tossing and catching balls.





I. PHYSICAL DEVELOPMENT



B. MOTOR DEVELOPMENT | b. GROSS MOTOR PERCEPTION

4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four-year-olds are gaining increasing control over **gross motor skills** and more complex movements (e.g., walking, running, jumping, dancing and climbing). As they practice, 4-year-olds become more coordinated and confident in their physical abilities. They improve their **skills** through free-play activities where they can move as they wish, and through structured, planned activities where they are challenged to develop new **skills** with adult guidance and support.

STANDARD 1.

Uses perceptual information to guide motions and interactions with objects and other people

BENCHMARK a.

Acts and moves with purpose and independently recognizes differences in directions, distance and location.

Children may...

- Anticipate and adjust aspects of movement (e.g., effort, spatial, directional) during new activities, in changed environments or on different surfaces.
- Attempt to throw a ball to a friend and say "Move closer." or "Back up, you're too close."
- Navigate a human obstacle course, avoiding collision with others.

Educators may...

- Play a game like "Mother May I?" allowing children to take turns asking, "Mother may I jump forward two steps?" or "Mother May I hop backwards on one foot?"
- Provide opportunities for children to lead games like "Simon Says" and "Red Light, Green Light," allowing them to control speed and directions.

Families may...

- Dance with children to songs that give positions and directions to encourage purposeful movement. These include The Electric Slide, The Cha-Cha Slide, The Macarena, or the Hokey Pokey.
- Play games with children such as "Simon Says" and "Red Light, Green Light," allowing children to control speed and directions.





BENCHMARK b.

Demonstrates spatial awareness through play activities

Children may...

- Play a game of tag by running away from and dodging another child who is "it."
- Place an item near, far, over, under, between and through when prompted.
- Maintain space around self during movement activities.
- Warn friends they are too close while playing with a jump rope or hula hoop.

Educators may...

- Have a scavenger hunt. Direct children to find objects that are under, next to, beneath, behind, in front of.
- Play the "Robot Game," where the child pretends to be a robot. Give directions such as "turn left," or "stop at the door" or "turn right."

Families may...

- Discuss locations of objects (e.g., the kettle is in the kitchen on top of the counter to the right of the toaster).
- Play movement games like "Follow the Leader" and "Simon Says" using directional words.



I. PHYSICAL DEVELOPMENT

B. MOTOR DEVELOPMENT | c. FINE MOTOR DEVELOPMENT

4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four-year-olds are continuing to strengthen the small muscles in their hands when they use tools for writing, drawing and creating art. **Fine motor** control is still developing. Four-year-olds are progressing through the stages of drawing and writing, from making marks and scribbles to eventually creating a realistic picture. Each child progresses differently; some may draw realistic pictures early and others may take much longer. Continued opportunities to practice with creative art materials and tools are important.

STANDARD 1.

Demonstrates increasing precision, strength, coordination and efficiency when using hand muscles for play and functional tasks

BENCHMARK a.

Shows hand control using various drawing and art tools with increasing coordination

Children may...

- Draw and color using pens, markers and crayons and sometimes form recognizable letters, numbers and images.
- Manipulate clay material (roll balls, make snakes, cookies) making identifiable creations.
- Use a proper pencil grasp.
- Establish left- or right-handedness.

Educators may...

- Provide different-sized brushes at the painting easel.
- Encourage the use of writing, drawing and art tools by **planning** age-appropriate activities and changing materials on a regular basis, including writing outside with chalk.
- Create a writing folder or journal for each child that is accessible throughout the day.

Families may...

- Encourage children to write a thank-you card for gifts received or experiences they had following a birthday or holiday. Spell the words "thank you" for children to write and have them sign their own name.
- Make homemade playdough for children to manipulate and make creations. Allow children to practice slicing, cutting and rolling with age-appropriate tools.





I. PHYSICAL DEVELOPMENT

B. MOTOR DEVELOPMENT | c. FINE MOTOR DEVELOPMENT

4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Fine motor development continues to progress, and 4-year-olds are increasingly able to control the small muscles in their hands, including using a **pincer grasp** to hold writing utensils. Children continue developing at their own pace. Some 4-year-olds may be able to cut accurately with scissors, while others may still need instruction and practice.

STANDARD 2.

Increasingly coordinates hand and eye movements to perform a variety of actions with increasing precision

BENCHMARK a.

Easily coordinates hand and eye movements to carry out tasks (e.g., working on puzzles or stringing beads together)

Children may...

- Build things with smaller linking blocks.
- Start to spread butter or cut soft foods with a small table knife (with supervision).

Educators may...

- Provide small objects to sort and handle (e.g., tiny shells in the science **center**).
- Provide various tools to use with playdough (e.g., rolling pins, cookie cutters, plastic utensils).

Families may...

- Encourage children to make their own peanut butter and jelly sandwich, or spread soft butter on their toast at breakfast.
- Provide age-appropriate puzzles for children to complete.

BENCHMARK b.

Uses developmentally appropriate grasp to hold and manipulate tools for writing, drawing and painting

Children may...

- Copy a **square** or a cross.
- Write name.
- Write numbers one through five.
- Copy letters.
- Have well-established handedness.

Educators may...

- Provide a variety of writing materials at learning centers (e.g., shopping lists in **dramatic play**, graph paper in the block **center**, greeting cards in the writing **center**).
- Provide children with daily opportunities to use a variety of writing tools (e.g., pencils, crayons and markers).
- Provide daily opportunities for children to use scissors (e.g., to cut paper and tape).

Families may...

- Encourage children to help write or draw the grocery list or the weekly chore list.
- Encourage children to cut out coupons from the newspaper or store circulars.





BENCHMARK c.

Uses coordinated movements to complete complex tasks (e.g. cuts along a line, pours or buttons, buckles/unbuckles, zips, snaps, laces shoes, fastens tabs).

Children may...

- Cut on line continuously.
- Pour water from a pitcher into a cup without spilling.
- Button large buttons on a sweater.
- Buckle or unbuckle a hook-and-loop belt.
- Lace shoes.
- Securely fasten Velcro straps on shoes.

Educators may...

- Encourage development of zipping, snapping and buttoning **skills** by providing a variety of clothing for dolls in the **dramatic play** area.
- Draw a spiral on a paper plate and encourage children to cut along the continuous line. Consider the direction of the curve of the line based on the children's preference for handedness.
- Provide daily opportunities to use art materials (e.g., scissors, markers, glue sticks, paint brushes).

Families may...

- Encourage children to dress themselves, allowing them time for zipping and unzipping, securing buttons and fastening snaps.
- Allow children to pour the milk or juice at dinner time.





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Noah the Narwhal: A Tale of Downs and Ups

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The Busy Body Book: A Kid's Guide to Fitness

by Lizzy Rockwell

The Very Hungry Caterpillar

by Eric Carle

We're Going on a Bear Hunt

by Helen Oxenbury



GLOSSARY

Environment: the circumstances, objects or conditions by which one interacts with and is surrounded (e.g., the indoor and outdoor area or setting where the child lives and interacts including home, neighborhood, classroom, etc.)

Hand-eye coordination: the ability to coordinate movements between the eye and hand to complete a task (e.g., hitting a softball or catching a bean bag)

Fine motor: abilities using the small muscles of the hands (e.g., grasping toys, picking up or holding food, connecting links, lacing, drawing, crushing paper, scissors, holding a writing utensil)

Gross motor: abilities using large muscles of the arms, legs and torso: activities using these **skills** include crawling, pulling up, walking, running, jumping, pedaling, throwing and dancing

Health: term that encompasses young children's physical, dental, auditory, visual and nutritional development and well-being

Nutrition: the process of absorbing nutrients from food and processing them in the body to stay healthy or to grow

Nutritious: containing the nutrients that are necessary for life and growth (e.g., raw fruits and vegetables are nutritious foods)

Oral health: overall **health** of mouth, free of disease, defect, or pain. This translates to much healthier teeth

Physical development: the growth of young children's gross and ***fine motor*** and ***self-help skills***, as well as their physical, dental and nutritional growth

Routines: customs or activities regularly practiced at home, in the classroom or in the community

Self-help: a child's ability to accomplish ***health*** and ***self-care routines***, such as dressing, washing hands, and toileting, with or without help from an adult

Planning: the process of mental preparation and problem-solving to accomplish an act (e.g., a child tells the teacher what he/she will do during ***center*** time)

Self-care: the capacity to take care of personal needs (e.g., drinking from a cup, getting dressed, washing hands, making choices, toileting independently)

Sensory: process of discovering through the senses

Skills: the ability to use knowledge effectively and readily in performance, the ability to transform knowledge into action

Spatial awareness: the ability to be aware of oneself in space in relationship to something else





II. APPROACHES TO LEARNING DOMAIN					
Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years (24 - 36 months)	3 - 4 years (36 - 48 months)	4 years- Kindergarten (48 months - Kindergarten)
A. EAGERNESS AND CURIOSITY					
1. Shows awareness of and interest in the environment	1. Begins to show eagerness and curiosity as a learner	1. Shows eagerness and curiosity as a learner	1. Shows increased eagerness and curiosity as a learner	1. Shows curiosity and is eager to learn new things and have new experiences	1. Shows increased curiosity and is eager to learn new things and have new experiences
B. PERSISTENCE					
1. Attends to sights, sounds and people for brief and increasing periods of time and tries to produce interesting and pleasurable outcomes	1. Pays attention briefly and persists in repetitive tasks	1. Pays attention for longer periods of time and persists at preferred activities	1. Spends more time engaging in child-initiated activities and seeks and accepts help when encountering a problem	1. Sustains attention for brief periods and finds help when needed	1. Attends to tasks for a brief period of time
C. CREATIVITY AND INVENTIVENESS					
1. Notices and shows interest in and excitement about familiar objects, people and events	1. Approaches and explores new experiences in familiar settings	1. Explores the various new properties and uses for familiar objects and experiences	1. Explores the environment with purpose and flexibility	1. Approaches daily activities with creativity	1. Approaches daily activities with creativity and inventiveness
D. PLANNING AND REFLECTION					
<i>Not yet typically observed</i>	<i>Not yet typically observed</i>	<i>Not yet typically observed</i>	<i>Not yet typically observed</i>	1. Shows initial signs of planning and learning from their experiences	1. Demonstrates some planning and learning from experiences



II. APPROACHES TO LEARNING



Approaches to Learning is a unique and critical domain of children’s development. Although each of the other developmental domains reflects specific content knowledge that document what children know and do, Approaches to Learning is not about specific content knowledge. Instead, it addresses how children deal with new environments, interactions and discoveries. Approaches to Learning describes children’s attitudes and dispositions towards learning.

As young children gain knowledge and **skills** across the domains – **Physical Development, Social and Emotional Development**, Language and **Literacy**, Mathematical Thinking, Scientific **Inquiry** and Social Studies and Creative Expression Through the Arts — they also develop specific strategies that help direct that learning. The Approaches to Learning domain includes three components shared by infants, young toddlers and 3-and 4-year-olds to support development, and a fourth component that supports toddler and 3 and 4 year olds’ development. Careful **planning** and arrangement of children’s environments and interactions provide opportunities for young children to use all four strategies.

The first component that children use to approach learning situations is **Eagerness** and **Curiosity**. This strategy is reflected in the desire of young children to engage with objects and people in their immediate environments. As development proceeds, those interactions expand to include interest in the challenges of a larger and more novel world. Encountering setbacks and obstacles is a normal part of children’s development. **Persistence**, or the

capacity to continue working on tasks that appear difficult or unsolvable, is necessary for a full **exploration** of the world. A young child’s first approach in a new learning situation may not result in success, and other strategies may be necessary.

Creativity and Inventiveness is a component that requires flexibility and imagination. Using familiar materials in new ways is an example of this strategy. Systematically trying out old solutions to solve new problems, followed by experimenting with new solutions, is another example. This requires flexibility of thought and imagination while relying on 4-year-olds’ increasing willingness to adapt familiar materials and activities in new situations and seek new ways to solve problems. The fourth component, **Planning** and **Reflection**, plays an increasingly important role in toddler and 3-and 4-year-olds’ development. Their early attempts at trying alternate approaches are often simple trial and error. With increasing practice and support from adults, children can reflect and think through the steps of their varied approaches to learning and begin planning solutions with increasing competence.



Parents, caregivers and educators need to be aware of these four learning components as they facilitate young children’s development of young children. As with all domains, children will demonstrate individual differences in the rates by which each strategy emerges and develops. The degree to which children successfully employ these strategies depends on the quality and **quantity** of interactions with supportive adults who encourage expansion of previously successful strategies and support using new strategies.

ENVIRONMENTAL CONSIDERATIONS

4 YEARS - KINDERGARTEN (48 months - Kindergarten)

- ◆ Include spaces for special exhibits, visitors and events.
- ◆ Include materials, supplies and equipment for all children enrolled, as well as sufficient space to support flexibility and foster smooth transitions.
- ◆ Include materials and supplies that children can move and use in different ways both inside and outside, as well as labeled storage spaces for materials and supplies so children and educators can readily find needed items.
- ◆ Include writing materials in every area of the classroom and help children document their plans and reflections.
- ◆ Use outdoor time for **creativity** – building with cardboard boxes, creating obstacle courses for crawling, painting (staple large pieces of craft paper on a privacy fence, or roll out paper on a sidewalk).



II. APPROACHES TO LEARNING



A. EAGERNESS AND CURIOSITY

4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four-year-olds are increasingly curious about their world and **initiate exploration** of their natural and social **environment**, such as family roles, plants, and animals. This interest in new things helps them make sense of the world around them, build a rich **vocabulary** and begin using new strategies to solve problems.

STANDARD 1.

Shows increased **curiosity** and is eager to learn new things and have new experiences

Children may...

- Investigate and experiment with new materials in activity areas to see how the materials work and what they can do.
- Share ideas by answering questions like, "Why does that happen?" and, "How can I do that?"
- Ask an adult or peers for more information.
- Work with peers, adults and materials to solve problems.
- Select or request their own activity and eagerly participate in all activities.
- Choose many ways to explore a special interest (e.g., looking for books about dinosaurs, playing with toy dinosaurs and drawing pictures about dinosaurs).

Educators may...

- Make additions and alterations to classroom activities and materials on a regular basis to encourage **curiosity** and promote new ideas.
- Ask open-ended questions and encourage dialogue to promote further questions and deeper understanding.
- Further children's thinking by posing questions that challenge their train of thought.
- Create **problem-solving** opportunities by providing materials on a variety of levels of complexity for children to engage with peers, adults and materials.
- Create opportunities to model **problem-solving** by "thinking out loud."

Families may...

- Go on a nature walk. Parks and backyards are filled with natural materials that can be used for art projects. Ask children to describe the things they have found: "What do you see? What does it feel like? What does it smell like?"
- On a sunny day, have children find their shadow. Ask what makes a shadow. Explore the shape of the shadow by moving around. Trace the shadow using sidewalk chalk. Go back later in the day and check the place where you traced the shadow.
- Explore the backyard by giving children a small area to dig in the dirt. Use a small shovel or gardening tools. Have children look for plants, rocks, insects, seeds and anything else they can find and then talk about the items.





II. APPROACHES TO LEARNING

B. PERSISTENCE



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four-year-olds are developing the **skills** they need to complete tasks, but the ability to stay on task may vary with the activity, the child’s individual **temperament**, and age. Attention spans should increase over the course of the year. Four-year-olds may become frustrated when they are unable to solve a problem. However, they are becoming more internally motivated to persist and discover alternative solutions to problems. In addition, they may ask for help from a trusted adult or another child.

STANDARD 1.

Attends to tasks for a brief period of time

Children may...

- Work with a friend to complete a task despite interruptions and distractions (e.g., fit puzzle pieces together or experiment with different sizes of blocks to make a block tower stable).
- Continue to work on self-selected activities that they find difficult.
- Sustain or **initiate** a new activity without needing external approval.
- Ask a teacher for help in solving a problem with a friend after attempting to resolve the problem themselves.

Educators may...

- Offer encouraging statements and suggestions when children are struggling with a problem (e.g., “Try turning the puzzle piece a little and see if it fits,” or, “You are really working hard to figure that out!”).
- Provide ample time for children to engage in activities and play to support longer attention to tasks and opportunities for problem-solving (e.g., a minimum of one hour for free-choice **center** time).
- Provide opportunities for children to work on activities (e.g., block construction or gardening) over an extended period of time (days or weeks).
- Offer a variety of materials and activities to encourage children to make their own choices based on their individual interests.
- Encourage children to perform routine tasks independently (e.g., hanging up their coats, placing bags in cubbies when arriving at school, putting coats on when going outside).

Families may...

- Play simple board games as a great way to practice counting **skills** while also helping children learn how to take turns and complete the game. Find games recommended for preschool ages and play them together.
- Make a book with children. Think about a topic that they are interested in and help them write a story about it. Ask children to draw pictures and help them write words on the page. Read the story together.
- Find easy chores children can do each morning: help pack own lunch, make own bed or feed a pet.
- Check the weather when children wake up in the morning and ask, “Is it sunny or cloudy outside? Is it raining or snowing?” Families can also look at the weather on the news or on a phone app. Talk about what to wear and ask, “Do you need a coat, gloves, umbrella, or hat?” Make it part of the morning routine.



II. APPROACHES TO LEARNING

C. CREATIVITY AND INVENTIVENESS



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Familiar, supportive people and **environments** are comforting to young children as they begin experimenting with new ways of solving problems. **Creativity** and inventiveness is expressed in many ways including movement, **music**, art, drama and verbal.

STANDARD 1.

Approaches daily activities with creativity and inventiveness

Children may...

- Make up roles for themselves and friends in **dramatic play** and use imaginary props to support **dramatic play**.
- Respond to open-ended questions (e.g., "What would happen if...?" or "What could we...?").
- Add creative details to a story.
- Experiment with open-ended materials (e.g., **recycled** objects, fabric, paint, paper, blocks, clay).
- Use trial-and-error in problem-solving activities (e.g., test for stability while building a tower using **unit** blocks).
- Use **creative movement** and **music** to express themselves.

Educators may...

- Provide a variety of open-ended materials (e.g., blank paper, modeling clay, ribbons, musical instruments, stencils) and allow children to create instead of replicating a teacher-directed project.
- Observe children carefully as they try to solve problems in order to **scaffold** their development.
- Provide ample time for children to engage in activities so they can try different ways to approach a project.
- Create opportunities for children to role-play characters and try on roles of community workers.
- Encourage children to solve problems step-by-step, asking questions in a series (e.g., "What would you do first?" "Then what?").

Families may...

- Play "What would you do if... you were a lion? It started to rain? You lost your shoe?" to promote conversation, imagination and **problem-solving**.
- Use simple everyday items like cardboard boxes, egg cartons, plastic containers and newspaper as props to spark young imaginations. Transform a cardboard box into a car and drive around the house. Spark a conversation by saying, "Today, let's pretend we are going to..."
- Play an imaginative guessing game. The adult can say, "I am imagining my own costume. It is going to be red. I am going to wear a hat and carry a hose. I will ride on a red truck. Who am I?" Let children guess or ask more questions to figure it out. Then see if children can give the adult clues so the adult can guess the costume children are imagining.
- Read children's favorite books and then act them out together. Find items around the house to use as props. Dress up like the characters in the books. Retell the events in the stories in own words by pretending to be the characters.





II. APPROACHES TO LEARNING

D. PLANNING AND REFLECTION



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four year-old children demonstrate an increasing ability to set goals and develop plans to reach their goals. They begin organizing their actions and materials into steps toward accomplishing a task and follow through with their plans by making choices independently. After completing their task, they are able to reflect on what worked and what did not. Four-year-olds' everyday experiences help them learn **skills** for **planning** activities and looking back at what has happened in the past. Cooperative play experiences provide opportunities for children to plan together and reflect.

STANDARD 1.

Demonstrates some **planning** and learning from experiences

Children may...

- Brainstorm ideas and multiple solutions for a task (e.g., helping the teacher figure out what children need to take with them on a field trip and then share details about the experience afterward).
- Respond to guiding questions (e.g., "What would happen if...?") and children telling what they plan to build at the block **center** before they start building at **center** time).
- Test multiple solutions (e.g., choosing clothes to fit a doll).
- Verbalize the steps to accomplish a task, either before or during the activity (e.g., tell a friend, "I will be the mommy, you be the daddy, and we are taking our baby to the doctor," in **dramatic play** or as they fill the bird feeder with seeds, say, "First I take the top off.").

Educators may...

- Introduce new equipment and materials before adding them to an interest area, and discuss possible uses.
- Include children in **planning** (e.g., a family picnic at school, a holiday program or the activity they will do during **center** time).
- Provide opportunities for children to discuss, review and document activities (e.g., reflect on a field trip, talk about activity choices, document activities in a picture journal).
- During the reflecting process, help children identify the cause-and-effect relationships in activities such as mixing red and yellow paint (cause) to make orange (effect).
- Allow time during the day for children to make a plan for their activity choices and allow time for children to reflect on their plan (e.g., ask child, "Where do you want to work during **center** time?" "What did you do during **center** time?").

Families may...

- Play games that require **planning**, such as building a block wall, seeing who can match the most pairs of socks. Talk about what children are thinking.
- Plan meals together. Ask children what they would like to eat. Make a list of meals the family will have that week. Discuss ingredients to buy to make the meals children requested. Did children choose something from each food group? Do the meals include healthy choices like fruits and vegetables?
- Ask children to help create a grocery list. Plan out meals the family will eat for the week and write down the ingredients while talking about the process: "We are going to have spaghetti this week, so I need to write down spaghetti noodles, sauce and cheese. Let's have broccoli with our spaghetti." Give children paper and a pencil to help "write."





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What Do You Do With a Problem?
By Kobi Yamada

You Can Do It, Sam
by Amy Hest







GLOSSARY

Center: area within the classroom arranged so that children are able to participate in a variety of related learning experiences (e.g., art **center**, reading **center**, science **center**, block **center**, **dramatic play center** or writing **center**)

Creative movement: moving in a new or unusual way that is not teacher directed (e.g., a child **dances** to **music** played by the teacher)

Creativity: individuality expressed by creating something new or original (e.g., creating a new representation of a flower)

Curiosity: a strong interest in learning about something. Children demonstrate curiosity when they ask questions about or show interest in activities within the classroom and the world around them (e.g., a child asks questions about new materials in the art **center** or a bug discovered on the playground)

Dramatic play: expressive and spontaneous play

Eagerness: energy and excitement about learning; wanting to learn (e.g., a child desires to participate in an activity)

Emerging: initial stages of a developing skill

Environment: the circumstances, objects or conditions with which one interacts with and is surrounded by (e.g., the indoor and outdoor area or setting where the child lives and interacts including home, neighborhood, classroom, etc.)

Exploration: the act of studying something new to better understand it

Initiate: to begin something, taking the first step

Investigating: **observing** or inquiring in detail

Music: sound in time that expresses ideas and emotions in significant forms through the elements of rhythm, melody, harmony

Persistence: the patience and endurance to finish a task (e.g., a child works at completing a puzzle until all the pieces are correctly placed)

Planning: the process of mental preparation and **problem-solving** to accomplish an act (e.g., a child tells the teacher what they will do during **center** time)

Reflection: the process of reviewing and critiquing one's own actions or one's own work (e.g., the child shares with the teacher what they did during **center** time)

Routines: customs or activities regularly practiced at home, in the classroom or in the community

Scaffolding: the provision of sufficient support to promote learning when concepts and **skills** are first being introduced to children (e.g., modeling, giving clues, asking questions and providing verbal prompts)

Skills: the ability to use knowledge effectively and readily in performance; the ability to transform knowledge into action

Vocabulary: all the words of a language. There are two types of vocabulary: receptive and expressive. Receptive language is what children understand. Expressive language is what they say aloud



III. SOCIAL AND EMOTIONAL DEVELOPMENT					
Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years (24 - 36 months)	3 - 4 years (36 - 48 months)	4 years- Kindergarten (48 months - Kindergarten)
A. EMOTIONAL FUNCTIONING					
1. Expresses, identifies and responds to a range of emotions					
Benchmark a: Uses sounds, facial expressions and gestures to respond to caregiver interactions and express a range of emotions	Benchmark a: Conveys an expanded repertoire of emotions and adjusts expressions in response to the reactions of familiar adults	Benchmark a: Begins to physically respond to the feelings of others	Benchmark a: Labels simple emotions in self and others (e.g., happy, sad)	Benchmark a: Identifies complex emotions in a book, picture or on a person's face (e.g., frustrated, confused)	Benchmark a: Recognizes the emotions of peers and responds with empathy and compassion
2. Demonstrates appropriate affect (emotional response) between behavior and facial expression					
Benchmark a: Shows recognition of familiar adults and imitates their facial expressions	Benchmark a: Begins to spontaneously express appropriate emotional gestures and facial expressions according to the situation	Benchmark a: Begins to put words to emotions in interactions with others	Benchmark a: Continues to expand the use of emotion words using them in appropriate settings	Benchmark a: Verbalizes own feelings and those of others	Benchmark a: Demonstrates cognitive empathy (recognizing or inferring other's mental states) and the use of words, gestures and facial expressions to respond appropriately
B. MANAGING EMOTIONS					
1. Demonstrates ability to self-regulate					
Benchmark a: Uses preferred adult to help soothe	Benchmark a: Soothes with preferred adult during distress to help calm self	Benchmark a: Looks to adults to soothe and may use a transitional object during times of distress	Benchmark a: Takes cues from preferred adult and others to expand their strategies and tools to self-regulate	Benchmark a: Begins to verbalize their emotions	Benchmark a: Recognizes and names own emotions and manages and exhibits behavioral control with or without adult support
2. Attends to sights, sounds, objects, people and activities					
Benchmark a: Attends to sights, sounds and people for brief and increasing periods of time	Benchmark a: Exhibits joint attention	Benchmark a: Maintains focus for longer periods of time and persists at preferred activities	Benchmark a: Spends more time in child-initiated activities	Benchmark a: Begins to sustain attention for brief period of time in group activities	Benchmark a: Increases attention to preferred activities and begins to attend to non-preferred activities



III. SOCIAL AND EMOTIONAL DEVELOPMENT

Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years (24 - 36 months)	3 - 4 years (36 - 48 months)	4 years- Kindergarten (48 months - Kindergarten)
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C. BUILDING AND MAINTAINING RELATIONSHIPS WITH ADULTS AND PEERS

1. Develops positive relationships with adults

Benchmark a: Experiences and develops secure relationship with a primary caregiver	Benchmark a: Develops secure and responsive relationships with consistent adults	Benchmark a: Enjoys games and other social exchanges with familiar adults	Benchmark a: Enjoys sharing new experiences with familiar adults	Benchmark a: Develops positive relationships and interacts comfortably with familiar adults	Benchmark a: Shows enjoyment in interactions with trusted adults while also demonstrating skill in separating from these adults
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2. Develops positive relationships with peers

Benchmark a: Notices peers by looking, touching or making sounds directed toward the child	Benchmark a: Shows interest in peers who are playing nearby and interacts with them briefly	Benchmark a: Plays alongside peers and engages in simple turn-taking	Benchmark a: Seeks out other children and plays alongside and on occasion with other children	Benchmark a: Builds social relationships and becomes more connected to other children	Benchmark a: Plays with peers in a coordinated manner including assigning roles, materials and actions
				Benchmark b: Demonstrates strategies for entry into social play with peers	Benchmark b: Maintains friendships and is able to engage in prosocial behavior such as cooperating, compromising and turn-taking
				Benchmark c: Develops an initial understanding of bullying	Benchmark c: Responds appropriately to bullying behavior



III. SOCIAL AND EMOTIONAL DEVELOPMENT

Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years (24 - 36 months)	3 - 4 years (36 - 48 months)	4 years- Kindergarten (48 months - Kindergarten)
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C. BUILDING AND MAINTAINING RELATIONSHIPS WITH ADULTS AND PEERS

3. Develops increasing ability to engage in social problem-solving

Benchmark a: Signals when there is a problem to seek adult attention and support	Benchmark a: Demonstrates emotional expressions to signal for adult assistance	Benchmark a: May imitate others in resolving problems using simple actions	Benchmark a: Identifies the problem and requests adult support to address the problem for their desired solution	Benchmark a: Able to suggest a potential solution to social problems and with adult support is able to follow through	Benchmark a: Able to independently engage in simple social problem-solving including offering potential solutions and reflecting on the appropriateness of the solution
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4. Exhibits empathy by demonstrating care and concern for others

Benchmark a: Cries when hearing other children cry	Benchmark a: Notifies the emotions of others and responds in a manner that shows understanding of that emotion (e.g., smiles when another child is happy, looks concerned when a child is sad)	Benchmark a: Notifies the emotions of others and engages in an intentional action in response	Benchmark a: Recognizes that others have feelings different than their own and often responds with comforting actions	Benchmark a: Responds to the emotions of others with comforting words or actions	Benchmark a: Able to take the perspective of others and actively respond in a manner that is consistent and supportive
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D. SENSE OF IDENTITY AND BELONGING

1. Develops sense of identity and belonging through play

Benchmark a: Eagerly bids for attention of adults	Benchmark a: Expectantly bids for attention from adults and other children	Benchmark a: Seeks out preferred companions and eagerly engages in parallel play with others	Benchmark a: Continues to engage in parallel play but also begins to play with other preferred playmates	Benchmark a: Continues to play with preferred playmates	Benchmark a: Engages in associative play and begins to play cooperatively with friends
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2. Develops sense of identity and belonging through exploration and persistence

Benchmark a: Shows interest and inclination to explore without adult direction	Benchmark a: Explores for extended periods and delights in discoveries	Benchmark a: Capable of sustained independent play at activities the child enjoys	Benchmark a: Continues sustained independent play while participating in more complex activities	Benchmark a: Continues sustained independent play and participates in more planned group activities	Benchmark a: Persists at individual planned experiences, caregiver directed experiences and planned group activities
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III. SOCIAL AND EMOTIONAL DEVELOPMENT					
Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years (24 - 36 months)	3 - 4 years (36 - 48 months)	4 years- Kindergarten (48 months - Kindergarten)
D. SENSE OF IDENTITY AND BELONGING					
3. Develops sense of identity and belonging through routines, rituals and interactions					
Benchmark a: Begins to respond positively to familiar routines and rituals initiated by familiar adult	Benchmark a: Responds positively to and expects patterned routines, rituals and interactions initiated by an adult	Benchmark a: Begins to initiate and participate in some familiar routines and rituals	Benchmark a: Initiates and participates in the rituals and routines of the day	Benchmark a: Begins to show a willingness to be flexible if routines must change in minor ways	Benchmark a: Demonstrates willingness to be flexible if routines must change
4. Develops sense of self-awareness and independence					
Benchmark a: Signals preferences related to objects and people (e.g., preferring one pacifier over another)	Benchmark a: Begins to use more complex means of communicating (e.g., sounds, gestures, some words) to express need for independence and individuation	Benchmark a: Initiates independent problem-solving efforts but appropriately asks for support from adults when needed	Benchmark a: Verbally or nonverbally communicates more clearly on wants and needs	Benchmark a: Increasingly uses words to communicate wants and needs	Benchmark a: Uses words to communicate personal characteristics, preferences, thoughts and feelings
Benchmark b: Begins to recognize own abilities and preferences	Benchmark b: Recognizes own abilities and preferences	Benchmark b: Begins to verbally or non-verbally communicate own preferences	Benchmark b: Communicates verbally or nonverbally own preferences	Benchmark b: Begins to recognize preferences of others	Benchmark b: Recognizes preferences of others
	Benchmark c: Responds to name when called	Benchmark c: Begins to recognize obvious physical similarities and differences between self and others	Benchmark c: Identifies differences and similarities between self and others; uses pronouns such as I, me, mine	Benchmark c: Begins to use words to demonstrate knowledge of personal information (e.g., hair color, age, gender or size)	Benchmark c: Uses words to demonstrate knowledge of personal information (e.g., hair color, age, gender or size)
				Benchmark d: Begins to identify self as part of a group (e.g., class or family)	Benchmark d: Identifies self as a unique member of a group (e.g., class, school, family or larger community)

III. SOCIAL AND EMOTIONAL DEVELOPMENT



Young children’s early relationships with parents and other caregivers become the framework for their future **social and emotional development**. Children construct knowledge about the world through their social exchanges, signifying the importance of **social and emotional development** to all other areas of development. For these reasons, early attachments are critical to children’s overall **health**, development and learning.

Infants and toddlers have developmental capacities that support their social interactions. Their relationships are influenced by their temperaments and by the cultural context in which these interactions occur. Cultural groups may have differing expectations for children’s rate of development, and caregivers and educators must be aware of and sensitive to these differences when working with families. For example, different cultural groups have different standards for expressing and managing emotions, making the task of emotional regulation particularly challenging for infants and toddlers who must manage expectations and responses between different cultural environments.

Young infants depend on their parents, caregivers, and educators to meet their physiological and emotional needs. When care is sensitive and responsive, infants learn that their world is safe and they can trust others to meet their needs. Nonresponsive and insensitive care creates a sense that people and the **environment** are inconsistent or untrustworthy. Without this basic trust, infants and toddlers find it hard to take risks or to develop a positive sense of **self**. With sensitive caregiving, infants can move into toddlerhood ready to confidently use their increasing motor, language and cognitive **skills**.

Toddlers acquire strategies for adapting their emotions within a variety of settings and with a limited number of people. Because they still have limited verbal **skills**, toddlers often express their feelings through actions. Emotions, from laughter to angry outbursts, can help toddlers develop new understandings about others’ feelings and motives. Their successful emotional development is linked to their relationships with parents, caregivers and educators and the adults’ knowledge and capacity to respond to toddlers’ individual and temperamental differences.

Social and **emotional readiness** is critical to a child’s successful kindergarten transition, early school success and later well-being. Studies indicate that young children who are able to understand and express their own feelings, understand the viewpoint and feelings of others, cooperate with peers and adults and resolve conflicts are more likely to be successful in school. These **skills** are rooted in relationships with adults. Adults who are capable of creating positive relationships with children provide a secure foundation from which children can master new learning challenges. Positive relationships with adults also lead to positive relationships with peers as 4-year-olds are developing important **interpersonal skills**. Four-year-olds construct knowledge by interacting with others and with their **environment**, and they learn how to interact successfully with a variety of people and in different settings and circumstances.



As children grow, their ability to establish relationships with peers and with additional adults influences how they view themselves and the world. Positive and adaptive social behaviors result from interacting with others who have different **characteristics** and backgrounds. With the help of supportive adults, preschool children expand their capacities to recognize and express their own feelings, and to understand and respond to others' emotions. For children with special needs, **social and emotional development** provides a foundation for progress in other areas of development. With nurturing and knowledgeable parents, caregivers and educators, tremendous strides are possible.

There are four primary components of **social and emotional development** in young children. **Emotional functioning** includes how children feel about themselves, as well as how safe they feel in their environments and relationships with others. The confidence a child develops through positive relationships with parents, caregivers and educators provides a foundation for the development of **prosocial** behaviors during the preschool years. For young children there should be a focus on those **skills** that enable them to engage positively with others, develop better understandings of themselves and others and express and interpret emotions.

Managing emotions is the second component and involves the ability to manage ones' own needs and emotions. Over time, young children move from reliance on others to competence. They accomplish tasks that include everything from learning and adjusting to their family's day-night rhythm of, to signaling their needs to responsive adults, to managing powerful emotions. These growing abilities to regulate behaviors are strongly influenced by **culture**, by children's relationships with others and by the growing maturity and integration of several areas of the brain.

The third component of **social and emotional development** is **building and maintaining relationships with adults and peers**. From warm and responsive reciprocal relationships, young children develop a sense of themselves as increasingly competent and confident. With support from their parents, caregivers and educators and safe and challenging **environments**, the perceptions of young children about their competencies become more accurate and satisfying.



Sense of identity and belonging is the fourth component of **social and emotional development**. Relationships with family members, other adults and children, friends and members of their community play a key role in building children's identities. When children feel a sense of belonging and sense of pride in their families, their peers and their communities, they can be emotionally strong, self-assured, and able to deal with challenges and difficulties. This creates an important foundation for their learning and development.

ENVIRONMENTAL CONSIDERATIONS

4 YEARS - KINDERGARTEN

(48 months - Kindergarten)

- ◆ Separate **skills** and behaviors into smaller steps.
- ◆ Teach and model specific appropriate social **skills**.
- ◆ Carefully observe social interactions and provide opportunities that will promote positive interactions.
- ◆ Provide opportunities for social interactions with typically developing peers.
- ◆ Provide choices so children have more control over their **environment**.
- ◆ Provide environmental cues that make it easy for children to understand expectations and be successful in classroom **routines**.
- ◆ Use predictable and consistent schedules, **routines** and activities and prepare children when changes are necessary.
- ◆ Limit the number of children in an area at any time to decrease overcrowding and conflict.



III. SOCIAL AND EMOTIONAL DEVELOPMENT



A. EMOTIONAL FUNCTIONING

4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Children continue identifying simple and complex emotions. They show understanding of and are responsive to feelings.

STANDARD 1.

Expresses, identifies and responds to a range of emotions

BENCHMARK a.

Recognizes the emotions of peers and responds with **empathy** and compassion

Children may...

- Demonstrate the ability to accurately identify and label own emotions as well as those of peers (e.g., "I am so excited! Today is my birthday." "Mary looks sad."), with teacher support.
- Assist a peer who is upset by giving them a hug or sharing a toy. Modify behavior to different settings (e.g., adapts noise and movement level to indoor or outdoor **environment**).

Educators may...

- Model appropriate expression of emotions (e.g., "I'm feeling frustrated because I can't find the book I wanted to read at group time. I'm going to take three deep breaths to calm down, and then choose a different book so we can continue.").
- Help children express their feelings (e.g., as they play with others, pretend with toys, listen to stories).
- Identify what triggers each child's emotional state (e.g., happy or frustrated).

Families may...

- Identify children's emotions using feeling words.
- Identify what triggers children's emotional state (e.g., happy or frustrated).



III. SOCIAL AND EMOTIONAL DEVELOPMENT



A. EMOTIONAL FUNCTIONING

4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four-year-olds continue developing **empathy**, care and concern for those around them. They are increasingly able to understand the feelings of others and are developing **skills** that allow them to respond to others in caring and helpful ways. Their cognitive development and social experience contributes to this increase in caring behaviors, so some 4-year-olds may still need help becoming aware of and identifying feelings and emotions.

STANDARD 2.

Demonstrates appropriate affect (emotional response) between behavior and facial expression

BENCHMARK a.

Demonstrates cognitive **empathy** (recognizing or inferring other's mental states) and the use of words, gestures and facial expressions to respond appropriately

Children may...

- Recognize when a peer is upset and try to comfort them (e.g., "I'll be your friend until your daddy comes back," while patting the peer on the back).
- Help a classmate with a physical disability line up to go outside.
- Label emotions or copy expressions on peers' faces (e.g., "You look sad.>").
- Go to the educator for help when a peer is hurt.
- Model **empathy** and verbalize while modeling (e.g., "I can see that Jasmine feels sad, so I'm going to comfort her").

Educators may...

- Teach children how to recognize emotions through posture and facial expressions of peers.
- Recognize helpful and kind interactions among children and acknowledge how the behavior helped someone else (e.g., "You shared your blue crayon with Aaron so he could color the sky. That was helpful.>").
- Read children's books that illustrate various emotions to increase children's understanding and **vocabulary**.

Families may...

- Empathize with their child and talk about feelings of others.
- Read stories relating to feelings with children (e.g., *Feelings* by Alikei, *The Feelings Book* by Todd Parr).



III. SOCIAL AND EMOTIONAL DEVELOPMENT

B. MANAGING EMOTIONS

4 YEARS - KINDERGARTEN *(48 months - Kindergarten)*

Children continue identifying their own basic and complex emotions and recognizing the emotions of others. They can calm themselves after having strong emotions (e.g., educators lead active calming techniques and visually display them for children to use).

STANDARD 1.

Demonstrates ability to self-regulate

BENCHMARK a.

Recognizes and names own emotions and manages and exhibits behavioral control with or without adult support

Children may...

- Show ability to control impulses (e.g., stopping and listening to instructions before jumping into activity), with teacher support.
- Modify behavior to different settings (e.g., adapts noise and movement level to indoor or outdoor **environment**).
- Demonstrate the ability to accurately identify and label own emotions (e.g., "I am so excited! Today is my birthday.").

Educators may...

- Model facial and verbal expressions.
- Identify what triggers each child's emotional state (e.g., happy or frustrated), what he or she does well, and what he or she needs help doing.
- Create a "safe area" (e.g., a beanbag or big floor pillow) that a child may use for 10 to 5 minutes, as needed, and provide visual steps for regaining emotional control.
- Teach behavioral expectations for the "safe area," as well as all other learning centers. Display clear visual reminders for all **routines** in the area in which **routines** are used (e.g., lining up routine by the door, hand-washing routine by the sink).

Families may...

- Provide choices for children (e.g., "Do you want an apple or banana?").
- Identify what triggers children's emotional state (e.g., happy or frustrated), what children do well and what they need help doing.

III. SOCIAL AND EMOTIONAL DEVELOPMENT

B. MANAGING EMOTIONS



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four-year-olds come to school with an **emerging** sense of **self** and an increasing awareness of their personal **characteristics** and preferences. Most 4-year-olds readily participate in classroom activities. They are also eager to make choices, explore the classroom **environment** and relate to others appropriately.

STANDARD 2.

Attends to sights, sounds, objects, people and activities

BENCHMARK a.

Increases attention to preferred activities and begins to attend to non-preferred activities

Children may...

- Identify personal **characteristics** and preferences (e.g., the color of own hair or favorite food).
- Select activities to explore and discover.
- Join in with other children (e.g., **dramatic play**, blocks, manipulatives, etc.).

Educators may...

- Identify activities that each child prefers.
- Plan a variety of activities for children to participate in daily.
- Support children as they are learning new concepts and **skills**.
- Celebrate accomplishments with specific feedback.

Families may...

- Help children identify and participate in activities they enjoy.
- Celebrate children's accomplishments with specific feedback.





III. SOCIAL AND EMOTIONAL DEVELOPMENT



C. BUILDING AND MAINTAINING RELATIONSHIPS WITH ADULTS AND PEERS



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four-year-olds continue developing close social relationships with adults who are significant to them. Secure attachment with at least one teacher supports children as they begin experimenting with independence and initiative, giving them self-confidence to take risks and try new things. Four-year-olds need help learning how to interact when meeting new adults.

STANDARD 1.

Develops positive relationships with adults

BENCHMARK a.

Shows enjoyment in interactions with trusted adults while also demonstrating skill in separating from these adults

Children may...

- Enter the classroom and greet the educator with increasing ease.
- Express affection to an educator or caregiver with hugs or words and accept affection in return. Cooperate with an adult who offers individualized instruction (e.g., a therapist).
- Go to a specific teacher for assistance when upset or if help with **problem-solving** is needed.
- Accept guidance and redirection from adults with whom they have a mutually affectionate relationship.
- Easily separate from a family member, teacher or caregiver, with teacher support, as needed.

Educators may...

- Introduce children to other adults in the facility (e.g., the cook, the principal or director, the nurse).
- Talk regularly with individual children and help each child in the classroom to build a secure attachment with at least one adult.
- Spend one-on-one time connecting with children throughout the week and let each child know that the adults are happy that he or she is a member of the classroom.
- Greet each child by name every morning and say goodbye to each child at the end of the day.

Families may...

- Provide personal photos for children's use in the classroom.
- Develop goodbye **routines**.



III. SOCIAL AND EMOTIONAL DEVELOPMENT



C. BUILDING AND MAINTAINING RELATIONSHIPS WITH ADULTS AND PEERS

4 YEARS - KINDERGARTEN (48 months - Kindergarten)

As 4-year-olds' communication increases and perspective-taking **skills** begin to develop, they are improving their social **skills**, developing positive relationships, and engaging in peer groups. Peers are often of the same gender, but not always. Four-year-olds are also beginning to use group entry and exit abilities appropriately. Through role-playing and educator-led discussions, children begin developing an initial understanding of **bullying** (e.g., the roles of the **bully**, the **target** and the **bystander**), with educator support and multiple experiences over time.

STANDARD 2.

Develops positive relationships with peers

BENCHMARK a.

Plays with peers in a coordinated manner including assigning roles, materials and actions

Children may...

- Talk with a peer to plan their play at the sand table.
- Notice that a friend needs help putting away blocks and goes to help.
- Exhibit appropriate behavior when placed in a group by the teacher (e.g., non-peers, mixed gender, mixed abilities).
- Play cooperative games with one or more friends.

Educators may...

- Teach children how to **initiate** activities (e.g., "Let's play with the blocks," "Do you want to paint?").
- Observe what the group is doing and add something to the play (e.g., "I could be the elephant. You don't have one in your zoo.").
- Show children how to make and be a friend.
- Build the classroom community based on cooperative activities and principles.

Families may...

- Include children in household chores (e.g., picking up toys, setting the table, sorting socks).
- Play cooperative games with children.

III. SOCIAL AND EMOTIONAL DEVELOPMENT



C. BUILDING AND MAINTAINING RELATIONSHIPS WITH ADULTS AND PEERS



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

As 4-year-olds' communication increases and perspective-taking **skills** begin to develop, they are improving their social **skills**, developing positive relationships, and engaging in peer groups. Peers are often of the same gender, but not always. Four-year-olds are also beginning to use group entry and exit abilities appropriately. Through role-playing and educator-led discussions, children begin developing an initial understanding of **bullying** (e.g., the roles of the **bully**, the **target** and the **bystander**), with educator support and multiple experiences over time.

STANDARD 2.

Develops positive relationships with peers

BENCHMARK b.

Maintains friendships and is able to engage in prosocial behavior such as cooperating, compromising and turn-taking

Children may...

- Engage in activities with peers (e.g., riding tricycles or **dramatic play**).
- Understand the difference between helpful and hurtful ways to get something or meet a need.
- Ask to join a group.
- Talk with a peer to decide who will get the first turn, with educator support and practice.
- Wait for a peer to finish speaking before talking during conversations.
- Move over during large-group time when a peer is sitting too close.

Educators may...

- Model how to be helpful instead of hurtful in difficult situations (e.g., "What could you do to be helpful instead of hurtful when someone calls you a name?").
- Show children group entry **skills** using a variety of formats (e.g., verbal gestures, role-play) and how they should respond when peers want to join their activity (e.g., "Only four people can play in this **center** so you have to wait.").
- Show children how to **initiate** activities with peers (e.g., "Let's play with the blocks." "Do you want to paint?").

Families may...

- Provide age-appropriate choices to help children make decisions.
- Provide opportunities for children to play and interact with peers.



III. SOCIAL AND EMOTIONAL DEVELOPMENT



C. BUILDING AND MAINTAINING RELATIONSHIPS WITH ADULTS AND PEERS



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

As 4-year-olds' communication increases and perspective-taking **skills** begin to develop, they are improving their social **skills**, developing positive relationships, and engaging in peer groups. Peers are often of the same gender, but not always. Four-year-olds are also beginning to use group entry and exit abilities appropriately. Through role-playing and educator-led discussions, children begin developing an initial understanding of **bullying** (e.g., the roles of the **bully**, the **target** and the **bystander**), with educator support and multiple experiences over time.

STANDARD 2.

Develops positive relationships with peers.

BENCHMARK c.

Responds appropriately to bullying behavior

Children may...

- Tell an adult when they see a peer being hurt (e.g., "Sally keeps pulling Sarah's hair and making her cry.").
- Say, "stop," when they see a child physically or verbally hurting another child.

Educators may...

- Discuss **bullying** behavior (e.g., physical, verbal, emotional) and demonstrate anti-**bullying** strategies (e.g., large-group, small group, one-on-one).
- Introduce the words **bully**, **target** and **bystander**.
- Role play or read a book about a **bullying** situation sharing ideas on how to deal with it.

Families may...

- Promote compassion for all family members (e.g., responsive, open communication, respect, trust etc.).
- Observe potential signs of **bullying** in children and report these to the **center** staff (e.g., child previously loved preschool, but no longer wants to go, constantly tells you that a child is being mean to him; does not want to play with a child that they at one time liked, etc.).



III. SOCIAL AND EMOTIONAL DEVELOPMENT



C. BUILDING AND MAINTAINING RELATIONSHIPS WITH ADULTS AND PEERS

4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four-year-olds are becoming better at working out conflicts on their own, but still need a lot of help from trusted adults. They may show physical (e.g., hitting, pushing) or verbal aggression, or exclude peers when they have conflicts. As language and thinking **skills** continue developing, however, 4-year-olds are increasingly able to use words, negotiate and offer ideas for solutions to their problems. Modeling how to compromise or share is an effective strategy for helping 4-year-olds solve social problems.

STANDARD 3.

Develops increasing ability to engage in social **problem-solving**

BENCHMARK a.

Able to independently engage in simple social **problem-solving** including offering potential solutions and reflecting on the appropriateness of the solution

Children may...

- Calm down before attempting to solve a problem, with educator support and practice.
- Use helpful words to express frustration and anger (e.g., "I don't like it when you get in front of me on the slide while I'm waiting for my turn. Please wait your turn.>").
- Share ideas to solve a problem.

Educators may...

- Encourage children to use language to express own wants and needs.
- Identify strategies to solve problems in stories.
- Provide a quiet place for children to talk.
- Use questions to help children define the problem and guide them in evaluating solutions.

Families may...

- Model **problem-solving** strategies at home.
- Encourage children to use language to express own wants and needs.

III. SOCIAL AND EMOTIONAL DEVELOPMENT



C. BUILDING AND MAINTAINING RELATIONSHIPS WITH ADULTS AND PEERS



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four-year-olds continue developing their friendship **skills**. They more frequently **initiate** activities with children they consider peers, and play in complex ways. **Empathy** and caring for others takes place when children have opportunities to develop friendships. Children who become friends are better at initiating and sustaining interactions and resolving conflicts with each other.

STANDARD 4.

Exhibits **empathy** by demonstrating care and concern for others

BENCHMARK a.

Able to take the perspective of others and actively respond in a manner that is consistent and supportive

Children may...

- Notice that a friend needs help putting away the blocks and goes to help.
- Assist a peer when the peer is hurt.

Educators may...

- Role-play helpful and hurtful situations (e.g., taking turns, expressing frustration with a friend, asking someone to move).
- Build the classroom community based on cooperative activities and principles.
- Read stories about friends and how they help one another.

Children may...

- Play games with children so they learn about cooperating and considering others.
- Read stories to children about friends.



III. SOCIAL AND EMOTIONAL DEVELOPMENT



D. SENSE OF IDENTITY AND BELONGING

4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four-year-olds are beginning to understand themselves as individuals within a community. They are able to have an active role in caring for themselves and in interactions throughout the day. They more frequently **initiate** activities with children they consider peers, and play in more complex ways.

STANDARD 1.

Develops sense of identity and belonging through play

BENCHMARK a.

Engages in associative play and begins to play cooperatively with friends

Children may...

- Talk with a peer to plan their play in the block **center**.
- Begin assigning roles in the **dramatic play center** (e.g., "I'm the mom, you are the baby.").

Educators may...

- Plan activities that encourage children to play together (e.g., murals, props in **dramatic play** for different roles, etc.).
- Provide ample time in the daily schedule for child choice (e.g., **center** time, outdoor play, etc.).

Families may...

- Allow children to be as independent as possible (e.g., choosing what clothing to wear, brushing their own teeth).





SOCIAL AND EMOTIONAL DEVELOPMENT

D. SENSE OF IDENTITY AND BELONGING

4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four-year-olds are developing the **skills** they need to complete tasks, but the ability to stay on task may vary with the activity, the child's individual **temperament** and age. Attention spans should increase over the course of the year. 4-year-olds may become frustrated when they are unable to solve a problem. However, they are becoming more internally motivated to persist and discover alternative solutions to problems. In addition, they may ask for help from a trusted adult or another child.

STANDARD 2.

Develops sense of identity and belonging through **exploration** and **persistence**

BENCHMARK a.

Persists at individual planned experiences, caregiver directed experiences and planned group activities

Children may...

- Work with a friend to complete a task despite interruptions and distractions (e.g., fit puzzle pieces together or experiment with different sizes of blocks to make a block tower stable).
- Continue working on self-selected activities that they find difficult.
- Ask a teacher for help in solving a problem with a friend after attempting to resolve the problem themselves.

Educators may...

- Offer encouraging statements and suggestions when children are struggling with a problem (e.g., "Try turning the puzzle piece a little and see if it fits," "You are really working hard to figure that out!").
- Provide ample time for children to engage in activities and play to support longer attention to tasks and opportunities for problem-solving (e.g., a minimum of one hour for free choice **center** time).
- Provide opportunities for children to work on activities (e.g., block construction or gardening) over an extended period of days or weeks).

Families may...

- Recognize children's **persistence** and effort (e.g., "You are working hard to finish that puzzle.>").
- Model and share problem-solving strategies with children (e.g., "Hmmm, that didn't work. I wonder what we could do instead?").

SOCIAL AND EMOTIONAL DEVELOPMENT

D. SENSE OF IDENTITY AND BELONGING



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four-year-olds can have an active role in caring for themselves and in their interactions throughout the day. The educator must actively support a predictable **environment** with **routines**, rituals and interactions that allow children to plan and follow through with daily activities and knowing what to expect next. Simple rules based on safety and familiar rituals and **routines** help 4-year-olds engage positively in activities and experiences.

STANDARD 3.

Develops sense of identity and belonging through **routines**, rituals and interactions

BENCHMARK a.

Demonstrates willingness to be flexible if **routines** must change

Children may

- Participate in classroom rituals, such as celebrations and welcoming a new child.
- Adapt when it rains and there is no outdoor play.
- Adapt when the group goes on field trips.

Educators may...

- Display clear visual reminders for all **routines** in the area in which they are used (e.g., lining up routine is posted by the door, hand washing routine is posted by the sink).
- Show and help children practice **self-care routines** (e.g., washing hands, toileting, zipping and buttoning).
- Model and practice daily **routines** (e.g., arrival, transitions, dismissal) using visual cues, reminders, advance warning and picture schedules.
- Engage children in setting appropriate rules and **planning routines**.
- Create classroom rituals for celebrations, mealtime and starting the day.
- Notify children, in advance, of changes in routine.

Families may...

- Develop rituals and **routines** at home (e.g., bedtime, mealtime, celebrations, etc.).
- Engage children in setting appropriate rules and **planning routines**.
- Notify children, in advance, of changes in routine.



SOCIAL AND EMOTIONAL DEVELOPMENT

D. SENSE OF IDENTITY AND BELONGING

4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four-year-olds come to school with an **emerging** sense of **self** and an increasing awareness of their unique **characteristics** and preferences. They are beginning to understand themselves as individuals within a community and are becoming more aware of similarities and differences among people. Social and emotional **skills**, including developing friendships, interacting appropriately with peers and adults in the classroom setting and expressing needs and feelings are enhanced in children who have larger vocabularies and greater **oral language skills**.

STANDARD 4.

Develops sense of self-awareness and independence

BENCHMARK a.

Uses words to communicate personal **characteristics**, preferences, thoughts and feelings

Children may...

- Identify personal **characteristics** and preferences (e.g., the color of their hair or their favorite food).
- Select activities they enjoy.
- Share how things are done at home or other environments (e.g., "At home we hang our clothes on the clothesline.").
- Communicate with peers to get their needs met, with teacher support (e.g., "I don't like it when you grab things. If you ask first, I will let you have a turn.").
- May notice the color of skin, hair, eyes, language and customs of **self** and others.

Educators may...

- Encourage children to use language when making requests, rather than only pointing or gesturing (e.g., ask the child, "Do you want milk or orange juice?" to encourage the child to use language to express own wants or needs).
- Model a large variety of **vocabulary** words throughout the day.
- Provide many opportunities daily for children to talk with peers and adults in the classroom.

Families may...

- Provide a question of the day to encourage conversation at home (e.g., What will you do this weekend? What activities do you like to do at home?).
- Ask children about their experiences at school (e.g., "Who did you play with today? What was your favorite activity?").



BENCHMARK b.

Recognizes preferences of others

Children may...

- Take on different roles in the **dramatic play center**.
- Take turns when speaking and listening with a peer.
- Ask peers what they would like to do.
- Share ways to use a piece of equipment or classroom material with their peer, with teacher support.

Educators may...

- Show children how to make and be a friend (e.g., read stories, share strategies for being a friend).
- Build a classroom community based on mutual respect, **diversity**, caring and kindness.
- Plan for and provide materials that meet the **diverse** interests of the group.

Families may...

- Involve all family members when **planning** outings, determining what TV shows to watch, etc. (e.g., provide strategies for family meetings).
- Help children see the point of view and preferences of others (e.g., "Casey likes bananas. You like oranges.").

BENCHMARK c.

Uses words to demonstrate knowledge of personal information (e.g., hair color, age, gender or size)

Children may...

- Share personal information (e.g., "I live in a house with my grandma. We have a dog.").
- Label and describe personal **characteristics** (e.g., "I have blue eyes. My hair is brown.").
- Describe events in a logical time sequence (e.g., "This morning I got up, brushed my teeth, and came to school.").
- Recognize and respond to own name.

Educators may...

- Plan times throughout the day for children to tell the group a simple story about a favorite personal experience (e.g., telling the class about a visit to a friend's house).
- Provide opportunities at meal times for children to engage in conversations with the educator and other children.
- Use open-ended questions to encourage conversation.

Families may...

- Have daily conversations with children where children can share personal experiences (e.g., "What was your favorite thing we did today?").
- Sing songs and play games that help children recognize their own unique **characteristics** (e.g., riddles... "Who has brown hair in our family? Who has green eyes and likes pizza?").

BENCHMARK d.

Identifies **self** as a unique member of a group (e.g., class, school, family or larger community)

Children may...

- Name significant family members and recognize their different roles.
- Point out the educator, cook, custodian, director, etc., at their school.
- May notice the color of skin, hair, eyes, language and customs of **self** and others.

Educators may...

- Display photographs of the children and their families, as well as children and families from other cultural groups around the world.
- Include cultural and ethnic activities and materials (e.g., books, clothes, **music**, etc., of different cultures and ethnicities) in the curriculum on a daily basis.
- Plan for field trips or bring community resources into the classroom.

Families may...

- Share family photographs for the child to use in the classroom.
- Participate in community events for preschool children.



RELATED BOOKS

PRESCHOOLERS

Alexander and the Terrible, Horrible, No Good, Very Bad Day

by Judith Viorst

Are You My Mother?

by P.D. Eastman

A Weekend with Wendell

by Kevin Henkes

Bear Feels Sick

by Karma Wilson and Jane Chapman

Best Friends

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Big Al

by Andrew Clements

Chester's Way

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The Grouchy Ladybug

by Eric Carle

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Today I Feel Silly and Other Moods that Make My Day

by Jamie Lee Curtis

What Went Right Today?

by Joan Buzick and Lindy Judd

When I Am/Cuando estoy

by Gladys Rosa Mendoza





GLOSSARY

Autonomy: independence

Bully: child who repeatedly commits negative acts with a conscious intent to hurt another child

Bullying: repeated negative act(s) committed by one or more children with a conscious intent to hurt another child. These negative acts can be verbal (e.g., making threats, name-calling), psychological (e.g., excluding children, spreading rumors) or physical (e.g., hitting, pushing, taking a child's possessions)

Bystander: anyone, other than the **bully** and victim, who is present during a **bullying** incident

Center: area within the classroom arranged so that children are able to participate in a variety of related learning experiences (e.g., art **center**, reading **center**, science **center**, block **center**, **dramatic play center**, or writing **center**)

Dramatic play: expressive and spontaneous play

Emerging: initial stages of a developing skill

Emotional readiness: the ability to understand and express one's own feelings, understand the feelings of others, cooperate with peers/adults and resolve conflicts

Empathy: ability to recognize the emotions and feelings experienced by peers and adults

Environment: the circumstances, objects, or conditions by which one interacts with and is surrounded

Initiate: to begin something, taking the first step

Initiation skills: socially acceptable ways to enter a group that is already engaged, such as mentioning a common interest (e.g., "I like cars too. Can I play race track with you?")

Interpersonal skills: the ability to get along with others

Planning: the process of mental preparation and **problem-solving** in order to accomplish an act (e.g., a child tells the teacher what he/she will do during **center** time)

Prosocial: Behaviors that are helpful, caring and respectful of others; **skills** that enable children to engage positively with others, understand themselves and others better and express and understand emotions

Routine: Customs or activities regularly practiced at home, in the classroom or in the community

Scaffold: to model and provide appropriate support to help a child acquire a skill or knowledge (e.g., giving clues, asking questions, and providing verbal prompts)

Self-regulation: a child's ability to gain control of bodily functions, manage powerful emotions, and maintain focus and attention

Self-help: a child's ability to accomplish **health** and **self-care routines**, such as dressing, washing hands, and toileting, with or without help from an adult

Social-Emotional Development: the growth of young children's capacity to form and maintain positive and productive relationships with others, and to understand and value their own abilities and uniqueness

Target: the victim or focus of a **bully**

Temperament: a person's characteristic style of approaching and responding to people and situations, including activity level, adaptability, regularity, approach-withdrawal, sensitivity, distractibility, intensity, quality of mood and attention span

IV. LANGUAGE AND LITERACY					
Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years (24 - 36 months)	3 - 4 years (36 - 48 months)	4 years- Kindergarten (48 months - Kindergarten)
A. LISTENING AND UNDERSTANDING					
1. Demonstrates understanding when listening					
Benchmark a: Begins to engage in multiple back-and-forth emerging communicative interactions with adults as part of sensory, social and emotional experiences	Benchmark a: Engages in multiple back-and-forth communicative interactions with adults as part of sensory, social and emotional experiences (e.g., simple games)	Benchmark a: Engages in multiple back-and-forth communicative interactions with adults in purposeful and novel situations, and responds to questions, requests and new information	Benchmark a: Engages in multiple back-and-forth communicative interactions with adults and peers during creative play and in purposeful and novel situations	Benchmark a: Engages in multiple back-and-forth communicative interactions with adults and peers in purposeful and novel situations to reach a goal	Benchmark a: Engages in multiple back-and-forth communicative interactions with adults (e. g., teacher-shared information, read-aloud books) and peers to set goals, follow rules, solve problems and share what is learned with others
Benchmark b: Responds to gestures of adults	Benchmark b: Uses gestures to direct adult attention	Benchmark b: Responds appropriately to simple requests	Benchmark b: Listens to and attends to spoken language and read-aloud texts and responds in ways that signal understanding using simple verbal responses and nonverbal gestures	Benchmark b: Shows understanding by answering factual questions and responding appropriately to what is said	Benchmark b: Shows understanding by asking and answering factual, predictive and inferential questions, adding comments relevant to the topic and reacting appropriately to what is said
Benchmark c: Responds to gestures that indicate understanding of what is being communicated	Benchmark c: Responds to adult's request using gestures or simple words, showing an understanding of what is being said	Benchmark c: Uses nonverbal gestures to respond to adult's language and oral reading			



IV. LANGUAGE AND LITERACY

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A. LISTENING AND UNDERSTANDING

2. Increases knowledge through listening

Benchmark a: Reacts to environmental sounds and verbal communication	Benchmark a: Responds to vocalizations during daily routines	Benchmark a: Responds verbally and nonverbally to spoken language	Benchmark a: Responds to an adult's simple questions about what is being learned	Benchmark a: Tells the main idea or topic of a conversation, story, informational text or creative play, and makes a connection	Benchmark a: Identifies the main idea; some details of a conversation, story or informational text; and can explicitly connect what is being learned to own existing knowledge
Benchmark b: Turns head towards familiar sounds	Benchmark b: Respond by turning and smiling when name is spoken	Benchmark b: Begins to participate in simple conversations	Benchmark b: Participates in simple conversations	Benchmark b: Observes simple aspects of child's world and responds and reacts	Benchmark b: Demonstrates increased ability to focus and sustain attention, set goals and solve dilemmas presented in conversation, story, informational text or creative play
Benchmark c: Responds to repeated words and phrases	Benchmark c: Begins to responds to adult questions	Benchmark c: Responds to language during conversations, songs, stories or other experiences	Benchmark c: Identifies specific sounds, such as animal sounds and environmental sounds		

3. Follows directions

Benchmark a: Responds in varied ways to the speaker's voice (e.g., turning head, making eye contact)	Benchmark a: Focuses attention on speaker when asked to do something	Benchmark a: Follows simple one-step directions with scaffolding	Benchmark a: Follows multi-step directions with reminders	Benchmark a: Achieves mastery of one-step directions and usually follows two-step directions	Benchmark a: Achieves mastery of two-step directions and usually follows three-step directions
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IV. LANGUAGE AND LITERACY					
Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years (24 - 36 months)	3 - 4 years (36 - 48 months)	4 years- Kindergarten (48 months - Kindergarten)
B. SPEAKING					
1. Speaks and is understood when speaking					
Benchmark a: Begins to vocalize by using speech-like sounds and communicates in various ways to indicate wants and needs	Benchmark a: Increases vocalizations	Benchmark a: Speaks using new words and phrases and is understood by familiar adult 50 percent of the time	Benchmark a: Speaks and is understood by familiar peer or adult most of the time	Benchmark a: Begins to speak and is usually understood by both a familiar and an unfamiliar adult, but may make some pronunciation errors	Benchmark a: Speaks and is understood by both a familiar and an unfamiliar adult, but may make some pronunciation errors
C. Vocabulary					
1. Shows an understanding of words and their meanings (receptive)					
Benchmark a: Begins to look at familiar people, objects or animals when they are named	Benchmark a: Looks intently at or points at person or object that has been named with the goal of establishing joint attention	Benchmark a: Points to pictures in book when named or points to body parts when asked	Benchmark a: Responds appropriately to almost all adult speech, including requests involving multiple steps	Benchmark a: Begins to demonstrate understanding of age-appropriate vocabulary across multiple topic areas and demonstrates a variety of words and their meanings within each area (e.g., world knowledge, names of body parts and feelings)	Benchmark a: Demonstrates understanding of age-appropriate vocabulary across many topic areas and demonstrates a wide variety of words and their meanings within each area (e.g., world knowledge, names of body parts and feelings)
Benchmark b: Begins orienting to own name and enjoys playful word games like peek-a-boo	Benchmark b: Responds to specific words and gestures and understands words for common items (typically understands up to 50 words)	Benchmark b: Responds to requests (typically understands approximately 300 words)	Benchmark b: Demonstrates understanding of words across varied topics, including words or lines from books, songs and stories, as well as body parts (typically understands between 500-900 words)	Benchmark b: Begins to understand the use of words in different context (including plurals and past tense in speech)	Benchmark b: Demonstrates understanding of functional and organizational language (e.g., same and different, in front of and behind, next to, opposite, below) in multiple environments
					Benchmark c: Understands or knows the meaning of many thousands of words, including subject area words (e.g., science, social studies, math and literacy), many more than he or she routinely uses (receptive language)



IV. LANGUAGE AND LITERACY

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C. Vocabulary

2. Uses increased vocabulary to describe objects, actions and events (expressive)

<p>Benchmark a: Uses signs or verbalizations for familiar people or objects, including babbling consonant-like sounds</p>	<p>Benchmark a: Builds and uses vocabulary through repeated exposure with language, pictures and books (may have a speaking vocabulary of between 10-50 words)</p>	<p>Benchmark a: Uses a number of different words and begins using two or more words together</p>	<p>Benchmark a: Increases vocabulary rapidly, including descriptive words, pronouns or plurals (e.g., big, happy, you, me, shoes) (typically has a speaking vocabulary of approximately 500 words)</p>	<p>Benchmark a: Adds new words to vocabulary weekly (e.g., repeats words and integrates new words in play scenarios) (typically has a speaking vocabulary of approximately 1,000 words)</p>	<p>Benchmark a: Uses a large speaking vocabulary, adding new words weekly (e.g., repeats words and uses them appropriately in context) (typically has a vocabulary of more than 1,500 words)</p>
<p>Benchmark b: Vocalizes pleasure and displeasure sounds differently (e.g., laugh, giggle, cry, fuss)</p>	<p>Benchmark b: Communicates with others using words, actions and gestures (e.g., may say one or more understandable but not clearly-articulated words)</p>	<p>Benchmark b: Has a vocabulary of between 50 - 200 words although pronunciation is not always clear</p>	<p>Benchmark b: Combines words into three-word sentences to describe the world around them, although unfamiliar adults may have difficulty understanding the child</p>	<p>Benchmark b: Describes what objects are used for and is able to express ideas (e.g., names some colors, shapes, and says full name)</p>	<p>Benchmark b: Uses a variety of word-meaning relationships (e.g., part-whole, object-function, object-location)</p>
					<p>Benchmark c: Identifies unfamiliar words, asking for clarification</p>
					<p>Benchmark d: Uses words in multiple contexts, with the understanding that some words have multiple meanings</p>



IV. LANGUAGE AND LITERACY					
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D. Sentences and Structure					
1. Uses age-appropriate grammar in conversations, and increasingly complex phrases and sentences					
Benchmark a: Begins to play with speech sounds	Benchmark a: Produces utterances of one, occasionally two, units of meaning in length	Benchmark a: Produces utterances of two units of meaning in length	Benchmark a: Produces utterances of three to four units of meaning in length	Benchmark a: Produces utterances of four to five units of meaning in length	Benchmark a: Typically uses complete sentences of five or more words, usually with subject, verb and object order
	Benchmark b: Produces words of which approximately half are nouns	Benchmark b: Produces words of which approximately one-third are nouns, with verbs becoming increasingly common	Benchmark b: Produces words and phrases using the present progressive "ing" suffix (e.g., "going," "playing"), the possessive "s" (e.g., "Ben's book") and pronouns (e.g., "She is jumping.")	Benchmark b: Produces words and phrases using the regular past tense and the regular third person (e.g., "Daddy jumped," "We're building.")	Benchmark b: Uses regular and irregular plurals, regular past tense, personal and possessive pronouns and subject-verb agreement
2. Connects words, phrases and sentences to build ideas					
<i>Not typically observed</i>	Benchmark a: Produces utterances of one to two words that communicate labeling of objects and sometimes actions	Benchmark a: Produces phrases of two words including labeling (e.g., "that dog"), action/agent (e.g., "mommy hug") and object/attribute (e.g., "soup hot")	Benchmark a: Produces sentences or phrases of two to three words, including subject/verb/object (e.g., "Juan fell down," "I did it.")	Benchmark a: Produces sentences or phrases of two to five words including subject/verb/object (e.g., "Suzy has cookies," "My shirt's got blue flowers.")	Benchmark a: Uses sentences with more than one phrase
		Benchmark b: Produces phrases of two words that convey negation (e.g., "no more," "kitty go")	Benchmark b: Asks basic questions (e.g., "Mommy gone?")	Benchmark b: Asks more complex questions, beginning with "is" (e.g., "Is David here?" "What was for lunch?")	Benchmark b: Combines more than one idea using complex sentences (e.g., sequences and cause/effect relationships)
				Benchmark c: Uses conjunctions "and" and sometimes "because" in sentences, and uses other complex sentence structures (e.g., elaborated phrases with adjectives and adverbs)	Benchmark c: Combines sentences that give lots of detail, stick to the topic and clearly communicate intended meaning



IV. LANGUAGE AND LITERACY

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E. Conversation

1. Uses verbal and nonverbal communication and language to express needs and feelings, share experiences and resolve problems

Benchmark a: Engages in verbal and nonverbal conversations using facial expressions, gestures or sounds to initiate or respond to communication	Benchmark a: Engages in conversations, asking and responding to simple questions through gestures (e.g., pointing, waving), signs (e.g., "more," "milk," "all done") and single words	Benchmark a: Engages in conversations by combining words or signs to indicate needs, wants or ideas, including one or two-word questions and statements to initiate conversations	Benchmark a: Engages in conversations using words, signs, two or three-word phrases, or simple sentences to initiate, continue or extend conversations with others	Benchmark a: Engages in conversations using sentences with four or more words, participates in simple, back-and-forth conversations to exchange ideas or information	Benchmark a: Engages in conversations with two to three back-and-forth turns using language, gestures, and expressions (e.g., words related to social conventions like "please" and "thank you")
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2. Asks questions, and responds to adults and peers in a variety of settings

Benchmark a: Responds to changes in tone of voice	Benchmark a: Asks and responds to simple questions using gestures, signs, vocalizations and single words	Benchmark a: Asks and responds to simple questions using one to two-word phrases, gestures and facial expressions in back-and-forth exchanges with others	Benchmark a: Asks and responds to simple questions (e.g., "Who?" "What?" "Where?" "Why?") using gestures and two or three-word phrases in back-and-forth exchanges	Benchmark a: Asks and responds to increasingly longer and more complex sentences and simple questions	Benchmark a: Asks and responds to more complex statements and questions, follows another's conversational lead, maintains multi-turn conversations, appropriately introduces new content and appropriately initiates or ends conversations
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IV. LANGUAGE AND LITERACY					
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E. Conversation					
3. Demonstrates understanding of the social conventions of communication and language use					
Benchmark a: Begins to demonstrate awareness of nonverbal conversational rules by responding to adult nonverbal eye contact and facial cues	Benchmark a: Begins to demonstrate awareness of nonverbal conversational rules by responding to and replicating adult nonverbal eye contact and facial cues	Benchmark a: Begins to demonstrate awareness of nonverbal conversational rules	Benchmark a: Begins to demonstrate awareness of nonverbal conversational rules	Benchmark a: Demonstrates awareness of nonverbal conversational rules	Benchmark a: Demonstrates increased awareness of nonverbal conversational rules
Benchmark b: Begins to demonstrate awareness of verbal conversational rules (e.g., responding to adult speech with coos and babble)	Benchmark b: Begins to demonstrate awareness of verbal conversational rules (e.g., responding to adult speech with babble, jargonizing, or single word)	Benchmark b: Begins to demonstrate awareness of verbal conversational rules (e.g., responding to adult speech with one to two-word phrases)	Benchmark b: Begins to demonstrate knowledge of verbal conversational rules (e.g., responding to adult speech with two or three-word phrases)	Benchmark b: Begins to demonstrate knowledge of verbal conversational rules (e.g., appropriately takes turns, does not interrupt, uses appropriate verbal expressions and uses appropriate intonation)	Benchmark b: Demonstrates knowledge of verbal conversational rules (e.g., appropriately takes turns, does not interrupt, uses appropriate verbal expressions and uses appropriate intonation)
				Benchmark c: Begins to match language to social and academic contexts (e.g., uses volume appropriate to context)	Benchmark c: Matches language to social and academic contexts (e.g., uses volume appropriate to context)



IV. LANGUAGE AND LITERACY

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F. Emergent Reading

1. Shows motivation for and appreciation of reading

Benchmark a: Shows enjoyment of the sounds and rhythms of language	Benchmark a: Begins to show interest in print and books	Benchmark a: Shows growing interest in print and books	Benchmark a: Shows increased interest in print and books	Benchmark a: Begins to select books for reading enjoyment and reading-related activities, including pretending to read to self or others	Benchmark a: Selects books for reading enjoyment and reading-related activities including, pretending to read to self or others
	Benchmark b: Begins to learn that pictures represent real objects, events and ideas (stories)	Benchmark b: Learns that pictures represent real objects, events and ideas (stories)	Benchmark b: Demonstrates that pictures represent real objects, events and ideas (stories)	Benchmark b: Begins to make real-world connections between stories and real-life experiences	Benchmark b: Makes real-world connections between stories and real-life experiences
			Benchmark c: Pretends to read print or books	Benchmark c: Interacts appropriately with books; pretends to read, holds book appropriately or picture reads	Benchmark c: Interacts appropriately with books and other materials in a print-rich environment
				Benchmark d: Asks to be read to or asks the meaning of written text	Benchmark d: Asks to be read to, asks the meaning of written text or compares books/stories
				Benchmark e: Participates in conversations that demonstrate appreciation of printed materials	Benchmark e: Initiates and participates in conversations that demonstrate appreciation of printed materials



IV. LANGUAGE AND LITERACY					
Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years (24 - 36 months)	3 - 4 years (36 - 48 months)	4 years- Kindergarten (48 months - Kindergarten)
F. Emergent Reading					
2. Shows age-appropriate phonological awareness					
<i>Not typically observed</i>	<i>Not typically observed</i>	<i>Not typically observed</i>	Benchmark a: Begins to demonstrate appreciation for sounds and patterns in language (e.g., wordplay, listening to nursery rhymes, singing songs with repetitive phrases and sounds)	Benchmark a: Listens and matches rhythm, volume and pitch of rhymes, songs and chants	Benchmark a: Distinguishes individual words within spoken phrases or sentences
					Benchmark b: Combines words to make a compound word (e.g., "foot" + "ball" = "football")
					Benchmark c: Deletes a word from a compound word (e.g., "starfish" – "star" = "fish")
					Benchmark d: Combines syllables into words (e.g., "sis" + "ter" = "sister")
					Benchmark e: Deletes a syllable from a word (e.g., "trumpet" – "trum" = "pet" or "candy" – "dy" = "can")
					Benchmark f: Combines onset and rime to form a familiar one-syllable word with and without pictorial support (e.g., when shown several pictures and adult says "/c/" + "at," child can select the picture of the cat)



IV. LANGUAGE AND LITERACY

Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years (24 - 36 months)	3 - 4 years (36 - 48 months)	4 years- Kindergarten (48 months - Kindergarten)
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F. Emergent Reading

3. Shows alphabetic and print knowledge

<i>Not typically observed</i>	<i>Not typically observed</i>	<i>Not typically observed</i>	Benchmark a: Begins to recognize that print and other symbols convey meaning (e.g., common signs, lists, nametags, labels)	Benchmark a: Recognizes that print conveys meaning	Benchmark a: Recognizes that print conveys meaning
				Benchmark b: Recognizes some letters when named (e.g., when shown a group of letters, can accurately identify, verbally or nonverbally, the letter that is named)	Benchmark b: Recognizes almost all letters when named (e.g., when shown a group of letters, can accurately identify, verbally or nonverbally, the letter that is named)
				Benchmark c: Names some letters (e.g., when shown an uppercase or lowercase letter, can accurately say its name)	Benchmark c: Names most letters (e.g., when shown an uppercase or lowercase letter, can accurately say its name)
					Benchmark d: Recognizes some letter sounds (e.g., when shown a group of letters, can accurately identify, verbally or nonverbally, the letter of the sound given)



IV. LANGUAGE AND LITERACY

Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years <i>(24 - 36 months)</i>	3 - 4 years <i>(36 - 48 months)</i>	4 years- Kindergarten <i>(48 months - Kindergarten)</i>
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F. Emergent Reading

4. Demonstrates comprehension of books read aloud

Benchmark a: Responds to adult reading a book	Benchmark a: Interacts with an adult reading a book	Benchmark a: Points to pictures in a book, making sounds or saying words and interacting with an adult reading a book	Benchmark a: Demonstrates comprehension of meaning of text via pointing to pictures, responding to conversations	Benchmark a: Retells or reenacts parts of a story after it is read aloud	Benchmark a: Retells or reenacts story with increasing accuracy and complexity after it is read aloud
					Benchmark b: Asks and answers appropriate questions about the story (e.g., "What just happened?" "What might happen next?" "What would happen if...?" "What was so silly about...?" "How would you feel if you...?")

G. EMERGENT WRITING

1. Begins to show motivation to engage in written expression and appropriate knowledge of forms and functions of written composition

<i>Not typically observed</i>	Benchmark a: Makes random marks and scribbles (e.g., scribbles on paper with a crayon or on a small chalkboard with chalk)	Benchmark a: Makes more controlled scribbling (e.g., using paintbrush and paint or finger in shaving cream)	Benchmark a: Begins to use scribbles, marks and drawings to represent thoughts and ideas	Benchmark a: Uses scribbling, letter-like shapes and drawings to represent thoughts and ideas	Benchmark a: Intentionally uses scribbles/writing to convey meaning (e.g., signing artwork, captioning, labeling, creating lists, making notes)
					Benchmark b: Uses letter-like shapes or letters to write words or parts of words
					Benchmark c: Writes own name (e.g., first name, last name, or nickname), not necessarily with full correct spelling or well-formed letters



IV. LANGUAGE AND LITERACY



Language, communication and early reading and writing are critical to a child's ability to learn, work and play with others. Communication through **oral language** and the written word are essential in daily living. Adaptive languages or strategies are especially important for individuals who have no or limited verbal or **literacy skills** (due to developmental, mental or physical status). The development of language is a complex process that enables children to actively communicate their questions, desires and understanding of the world around them. Children's communication allows adults to support, plan and respond to children's needs and inquiries. Language and communication **skills** impact all other areas of development and are essential for the development of cognition, logic, and reasoning **skills**. Good communication **skills** help children negotiate relationships and have their needs met. Supportive adults and a print-rich **environment** are important to every child's success in developing early reading and writing **skills**.

Infants are born "wired" for developing language. They come into the world able to recognize human speech and different sounds. Young infants use their own sounds, facial expressions and body movements to communicate their feelings and needs. They gaze intently at the faces of their parents, caregivers and educators and quickly learn to direct the adults' attention to particular objects by "pointing" with their eyes. The developing communication **skills** of young infants are reinforced when adults respond positively to their smiles, frowns and coos. Older infants become better at expressing themselves through gestures, babbling, and their first words. They enjoy having books read to them and listening to stories and songs.

Young toddlers expand their **vocabulary** with new words at a very rapid pace. Their larger **vocabulary** allows them to begin stringing words together into two-word sentences. They understand that pictures can represent real objects and delight in acting out familiar **routines** and using pictures to represent ideas

in their play. The marks and scribbles that toddlers make when coloring or painting (with their fingers or tools) become purposeful and are the precursor to developing early writing **skills**. Three- or four-word sentences are typical for older toddlers, as are an appreciation for books and a preference for familiar books (or books on familiar topics).

Preschool children begin to use language in multiple ways. They use language to communicate their needs, to interact with others, and to describe their thoughts, feelings and experiences. Over the course of only a few years, children gain an understanding of the meaning and structure of words, the meaning and structure of print, and how to use words to articulate and exchange ideas.

All children's **oral language** development, including listening and speaking **skills**, proceeds at an individual pace. However, for most children, the prekindergarten period is one of rapid growth and expansion of understanding, interest and **expressive language skills**. When immersed in environments rich in language,





novel experiences and conversation, children make dramatic gains in their **comprehension** of spoken language and in their ability to effectively use **oral language** to communicate their own ideas and experiences. Social and emotional **skills**, including developing friendships, interacting appropriately with peers and adults in the classroom setting and expressing needs and feelings, are enhanced in children who have larger vocabularies and greater **oral language skills**.

Four-year-olds who can readily describe an experience, ask for help, and express excitement and **curiosity** adapt more easily to the challenges, expectations and new situations in the classroom setting in prekindergarten and beyond. Children bring with them, and share with one another, the language knowledge and **skills** acquired from their unique home experiences.

For children who are learning English as a second language, development and maintenance of the **vocabulary** and language conventions of

their primary language increases the likelihood that they will become readers and writers of English. Children learning multiple languages from birth appear to develop each language in a similar fashion to children reared with only one language. Developing a solid foundation in multiple languages requires a partnership among parents, caregivers and educators to ensure that a rich, multilingual **environment** is consistently available. Partnerships among parents, caregivers and educators are also particularly important for children with disabilities. It is very important to have knowledge, **skills** and a plan to help children with special needs develop language and communication **skills**. Communication strategies for these children may include swallows, eye movements, head nods, communication boards, sounds or other gestures. It is imperative that children of all abilities are exposed to language-rich environments.







Children advance their language and **literacy** development through learning opportunities in seven primary components: **listening and understanding, speaking, vocabulary, sentences and structure, conversation, emergent reading** and **emergent writing**. **Listening**, or **receptive language**, the first component, is demonstrated by the way a child verbally and behaviorally responds to oral communication. The second component, **speaking**, or **expressive language**, refers to the child's own skill at clearly expressing themselves in words. The third component, **vocabulary**, includes a huge expansion in the words that a child understands, especially words related to a growing knowledge of the world and the ways that people describe objects and actions, as well as substantial growth in the words children use in their own verbal expression. The fourth component is **sentences and structure**. Children expand their use of words, phrases and complete sentences and demonstrate growing mastery of correct structure in the way they arrange the words they use to communicate. Children gain a more sophisticated understanding of **conversation**, the fifth component, including how to **initiate**, participate appropriately and modify their speaking patterns for different contexts and settings.



Children from **diverse** cultural and language backgrounds have opportunities to learn the **language of school**, including **vocabulary**, sentence structure, and **content** that are key parts of the educational experience in the United States. Understanding these concepts is a first step toward success in the school **environment**. In addition, children learn words and concepts related to the wide variety of activities, books and materials in prekindergarten classrooms. This expanded **vocabulary** allows children to gain a deeper and broader understanding of the world in which they live. Every additional word in their **oral language vocabulary** will also later help children comprehend and create written text.

Learning to read and learning to write are among the most important tasks, and achievements, of young children today. These **skills** open the door to a world of learning, **discovery** and **creativity** found in written texts and in the writings of the children themselves. Research shows that children who learn to read early and well in their elementary school education read more independently; achieve more in content area classes (e.g., math, social studies, and science); and are more likely to graduate from high school and pursue higher education. Children who learn to read early in their education benefit from the huge increase in the number of new words they come across each year. These experiences enrich their own oral **vocabulary**, their reading **comprehension** and their writing. Prekindergarten provides children

with experiences that help them get ready to read once they reach elementary school.

When given ample opportunities to interact with books and other forms of print, as well as some instruction in **emergent literacy**, children can learn much more about the purposes and concepts of written language and about the sounds and letters that combine to form print. Four-year-olds learn best through experiences that are meaningful and interesting to them and through repetition over time, rather than through drill.

Emergent literacy includes the development of the knowledge, conceptual understanding and **skills** that form the basis for later reading and writing. In the sixth component, **emergent reading**, children show increasing motivation for reading, demonstrated by interest in being read to and told what written words mean and development in the appropriate use of books and other printed materials. Children also develop age-appropriate **phonological awareness**, demonstrated by their growing capacity to recognize that words are made up of smaller units of sound, and that they can **blend** sounds together to form words or break words apart into smaller pieces. **Alphabetic knowledge** refers to children's growing recognition of and ability to name the letters and the sounds they make. As children are growing in their ability to comprehend spoken language, they also are developing their understanding of text read aloud, as demonstrated by their correct





reenactment or retelling of stories read to them and by their ability to ask and answer factual and abstract questions about the texts. These are **oral language skills** that emerge with adult support; children who are four years old typically are not reading text.

In **emergent writing**, the seventh component, children develop motivation for written expression and learn the concept that print conveys meaning. Just as children grow in their ability to name and recognize alphabet letters, they also gain **skills** in using letter-like shapes, symbols and letters to convey meaning and age-appropriate skill at writing letters.

Children’s knowledge of the structure of written composition is demonstrated in their dictated stories and their own beginning forms of written expression. A vast amount of research accumulated across the last several decades tells us that the **emergent literacy** knowledge and **skills** that children can develop during prekindergarten are the key foundations upon which much of their later reading, writing and **content** learning capabilities are built. These **skills** allow children to easily break the code of reading, especially once their formal reading instruction begins in kindergarten. Together with a growing mastery of **oral language** and an expanding **vocabulary**, the print-related **skills** learned early on pave the way toward success at creative and clear writing **skills** and reading **comprehension**.

ENVIRONMENTAL CONSIDERATIONS

4 YEARS - KINDERGARTEN

(48 months - Kindergarten)

- Provide a variety of books, tapes and CDs for individual and group listening.
- Provide alternative versions of texts (e.g., audiobooks, books in Braille).
- Provide child-size materials and equipment to facilitate autonomy and mastery of self-help skills.
- Include spaces that invite conversations, small groups of children to work together and large-group interactions.
- Include evidence of the value of children’s language (e.g., bulletin boards, charts and homemade books) based on children’s conversations and comments about their drawings.
- Provide books of increasing complexity.
- Include a variety of books, puppets, felt boards and other language materials to spark discussions of feelings and experiences.



IV. LANGUAGE AND LITERACY

A. LISTENING AND UNDERSTANDING



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four-year-olds are eager to communicate with others. During the prekindergarten year, their listening **skills** are becoming further refined through experiences in the classroom setting, which can include peer interactions one on- one or in small groups, teacher-child interactions, and large-group activities (e.g., large-group time). Over the course of the prekindergarten year, with teacher support, the children’s ability to sustain a conversation and listen for longer periods should increase.

STANDARD 1.

Demonstrates understanding when listening

BENCHMARK a.

Engages in multiple back-and-forth communicative interactions with adults (e.g., teacher-shared information, read-aloud books) and peers to set goals, follow rules, solve problems and share what is learned with others

Children may...

- Respond to a friend appropriately (e.g., Jeremy says, “Let’s put the gorillas in the jungle next.” Addie responds, “Yeah, I think the gorillas should live in this part over here.”).
- Sing/chant during group time and add hand and body motions to the song/chant at the appropriate time.
- Act appropriately in response to a game (e.g., “Simon Says”).
- Provide ideas relevant to context, when the teacher asks “What will happen next?” while reading a book during large-group time.

Educators may...

- Ask children **recall questions** and **expansion questions** during “Show and Tell,” **read alouds** and similar large-group discussions about own experiences.
- Ask children “who”, “what”, “where” and “why” questions during shared reading.
- Engage in daily conversations with children on themes and **content**-related topics or in social conversations where children take multiple turns listening and responding.
- Create an **environment** where educators and children listen attentively to all ideas expressed.

Families may...

- Introduce new and unusual words in conversations, play and reading while helping children understand the meanings and how to use the words you introduce.
- Play games that require listening and thinking (e.g., “I Spy”: “I spy something that has wings, and flies in the air and is resting on the window ledge right now!” or “Who or What Am I?”: “I come by your house every day of the week, I pick up children at the corner, I take them to school and I am yellow. What am I?”).
- Read favorite books again and again asking “who”, “what”, “where” and “why” questions.



IV. LANGUAGE AND LITERACY

A. LISTENING AND UNDERSTANDING



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

The classroom is full of opportunities for young children to use language in a variety of ways. Four-year-olds are adept at communicating wants, needs, ideas and feelings. They will use new **vocabulary** and complex language in various situations. During the prekindergarten year, their listening **skills** become further refined through experiences in the classroom, which can include peer interactions one-on-one or in small groups, educator-child interactions and large-group activities (e.g., large-group time).

STANDARD 1.

Demonstrates understanding when listening

BENCHMARK b.

Shows understanding by asking and answering factual, predictive and inferential questions, adding comments relevant to the topic and reacting appropriately to what is said

Children may...

- Respond to a friend appropriately (e.g., Jeremy says, "Let's put the gorillas in the jungle next." Addie responds, "Yeah, I think the gorillas should live in this part over here.").
- Sing/chant during group time and add hand and body motions at the appropriate time.
- Act appropriately in response to a game (e.g., "Simon Says").
- Provide ideas relevant to context when the teacher asks, "What will happen next?" when reading a book to the class.

Educators may...

- Ask children **recall questions** and **expansion questions** during "Show and Tell," **read alouds** and similar large-group discussions about their experiences.
- Ask children "who," "what," "where," and "why" questions during shared reading.
- Engage in daily conversations with children on themes and **content**-related topics or in social conversations where children take multiple turns listening and responding.
- Create an **environment** where educators and children listen attentively to all ideas expressed.
- Use props and modeling to demonstrate and reinforce active listening (e.g., talking stick, giant ear prop).

Families may...

- Ask children "who," "what," "where," and "why" questions while reading a book with children.
- Engage in conversations with children about what is happening around them.



IV. LANGUAGE AND LITERACY

A. LISTENING AND UNDERSTANDING



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four-year-olds are eager to communicate with others. During the prekindergarten year, their listening **skills** become further refined through experiences in the classroom, which can include peer interactions one-on-one or in small groups, teacher-child interactions, and large-group activities (e.g., large-group time). Over the course of this year, with teacher support, the children's ability to sustain a conversation and listen for longer periods should increase.

STANDARD 2.

Increases knowledge through listening

BENCHMARK a.

Identifies the main idea, some details of a conversation, story or informational text and can explicitly connect what is being learned to own existing knowledge

Children may...

- Select specific details in a story and repeats them.
- Listen to others in a group discussion for a short period.
- Respond to questions with appropriate answers.
- Talk about a dream after reading *Where the Wild Things Are*.

Educators may...

- Stimulate talking and discussion by providing children with pictures or other material.
- Increase the length and complexity of books read and stories told to children.
- Play games that require listening and understanding (e.g., "Simon Says," "Red light Green Light").

Families may...

- Share books and ask children questions about the story.
- Give children wait time to express themselves.
- Play games that require careful listening (e.g., "Simon Says").
- Ask everyone at the dinner table to share "news" about their day.

BENCHMARK b.

Demonstrates increased ability to focus and sustain attention, set goals and solve dilemmas presented in conversation, story, informational text or creative play

Children may...

- Listen and comment, ask or answer questions.
- Use language for different purposes (e.g., asking, expressing, answering, discussing, taking a role during play).
- State point-of-view, likes/dislikes and opinions using words, signs or picture boards.

Educators may...

- Encourage children to talk about feelings and ideas instead of solving problems with force.
- Provide opportunities to listen for different purposes (e.g., to learn what happened in a story, to receive instructions, to talk with an adult or friend).

Families may...

- Provide opportunities for children to plan out the next day. What will they do? What should they wear? Talk about what the weather will be. Give children two or three clothing options to choose from.
- Follow a recipe and cook with children. Show them how to follow a recipe and allow them to help with measuring, stirring, etc.



IV. LANGUAGE AND LITERACY

A. LISTENING AND UNDERSTANDING



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

The group life of preschool and later school years requires that young children be able to listen to, understand and follow directions. As they develop these **skills**, 4-year-olds become more independent and need less individual guidance from adults.

STANDARD 3.

Follows directions

BENCHMARK a.

Achieves mastery of two-step directions and usually follows three-step directions

Children may...

- Follow directions for washing hands (e.g., wet hands, apply soap, scrub, rinse).
- “Read” and follow directions for getting a snack (e.g., a Rebus chart that indicates each child should get one napkin, 11 pretzels and two pieces of cheese).

Educators may...

- Instruct children in setting tables for meals and snacks by giving two- and three-step directions.
- Provide two- and three-step directions for children to complete tasks during clean-up and learning activities (e.g., “Make a **pattern** with the beads, copy it one time on the same string, and show your **pattern** to me.”).
- Play or sing songs requiring children to act out multiple behaviors and multi-step directions (e.g., “Going on a Bear Hunt” or “Head, Shoulders, Knees, and Toes”).

Families may...

- Before going to bed ask children to put away their toys, put on pajamas and choose a book to read.
- Ask children to put the plates, napkins and utensils on the table at supper time.
- Make getting ready for the day into a fun game for children. Play “Simon Says” by giving children easy directions to follow: “Simon says, put on your shiry,” “Simon says, brush your hair.”



IV. LANGUAGE AND LITERACY

B. SPEAKING



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Children's language becomes more understandable through experience talking and interacting with peers and educators. With experience, 4-year-olds typically refine their **articulation** and grammar, applying rules of language.

STANDARD 1.

Speaks and is understood when speaking

BENCHMARK a.

Speaks and is understood by both a familiar and an unfamiliar adult but may make some pronunciation errors

Children may...

- Show willingness and desire to talk with classmates and educators without showing frustration.
- Be understood by familiar adults and other children.
- Be understood by other individuals who do not regularly interact with them.

Educators may...

- Model clear speech at a comfortable pace (not too fast or too slow) using an easily heard volume inside and outdoors.
- Encourage children to use language when making requests, rather than only pointing or gesturing (e.g., ask the child "Do you want milk or orange juice?" to encourage the child to use language to express his/ her wants or needs).
- When children mispronounce a word or speech sound, repeat back to them using clear and correct pronunciation. (e.g., "You would like to paint next?").

Families may...

- Provide wait time for children to express themselves.
- Provide back-and-forth talk during daily **routines**. For example, at meal-times, during the morning routine, when traveling, at the grocery store.
- Encourage children to talk about events of the day and things in which they are interested.







IV. LANGUAGE AND LITERACY

C. VOCABULARY



4 YEARS – KINDERGARTEN (48 months - Kindergarten)

Four-year-olds develop **vocabulary** as they interact with their families, educators, peers and the **environment**. Children’s interactive experiences in all settings provide opportunities to practice using their new **vocabulary** and applying these new words in appropriate ways.

STANDARD 1.

Shows an understanding of words and their meanings (receptive)

BENCHMARK a.

Demonstrates understanding of age-appropriate **vocabulary** across many topic areas and demonstrates a wide variety of words and their meanings within each area (e.g., world knowledge, names of body parts and feelings)

Children may...

- Follow directions that use descriptive words (e.g., run fast, draw a big **circle**, eat slowly).
- Use appropriate labels to describe a classroom activity (e.g., cooking, art activity, pretending to be a veterinarian).
- Describe a feeling to a friend (e.g., “I was so angry that I felt like a volcano erupting!”).

Educators may...

- Provide and read to children a variety of concept-related books (e.g., farm animals, vegetables, the body. Include fiction and non-fiction).
- Define new words for children when reading aloud and encourage discussion of word meanings.
- Create category lists of words (e.g., zoo animals we saw on the field trip, tools we use in the classroom).

Families may...

- Enrich children’s **vocabulary** by giving a play-by-play of everything the family member is doing.
- Ask children to fill in words when reading together which supports children’s confidence and **vocabulary**.



IV. LANGUAGE AND LITERACY

C. VOCABULARY



4 YEARS – KINDERGARTEN (48 months - Kindergarten)

Four-year-olds develop **vocabulary** as they interact with their families, educators, peers and the **environment**. Children’s interactive experiences in all settings provide opportunities to practice using their new **vocabulary** and applying these new words in appropriate ways.

STANDARD 1.

Shows an understanding of words and their meanings (receptive)

BENCHMARK b.

Demonstrates understanding of **functional** and **organizational language** (e.g., same and different, in front of and behind, next to, opposite, below) in multiple **environments**

Children may...

- Follow the educator’s directions when listening to **music** (e.g., “Put the scarf over your head, then move it behind you.”).
- Understand directions given at **center** time to identify which items are the same and which are different.
- Retell what they heard or point to appropriate pictures.

Educators may...

- Provide directions to children using specific language for locations, sizes, shapes, and relationships (e.g., “Look for the big red teddy bear inside the cabinet.”).
- Play “Simon Says” and scavenger hunt games using specific location, action, and descriptor words (e.g., “Find two blocks that are the same and one that is different.”).
- Include language about position and descriptive characteristics of things and actions when interacting with children or commenting on their play (e.g., “Look at the ladybug on top of the leaf,” “Shawn is first in line.”).

Families may...

- Point out things in the home or during outside play that are the same or different, and discuss with children.
- Give children two-step directions (e.g., “Get your shoes from the closet and put them on.”).
- Provide opportunities to sort items or toys into categories (e.g., rocks that are smooth vs. those that are rough, toys that are heavy vs. toys that are light).



BENCHMARK c.

Understands or knows the meaning of many thousands of words including subject area words (e.g., science, social studies, math and literacy), many more than he or she routinely uses (receptive language)

Children may...

- Demonstrate an understanding of complex statements, questions and stories containing multiple phrases and ideas.
- Respond to requests for information or action.
- Follow more detailed multistep directions.

Educators may...

- Use new words intentionally in a variety of contexts during the day.
- Learn new words in child's family language and use them when introducing new concepts.
- Introduce new words and concepts by labeling what children are doing and experiencing.

Families may...

- Create an environment that is rich in both print and the spoken word.
- Change the language of daily routines (e.g., rather than say, "It's time to clean up" every day, introduce other rich words that help describe the routine, such as "organize," "collate" and "arrange.>").
- Talk to children about the adult's day (e.g., what the adult did, different people encountered, funny things that happened, etc.). Find ways to use memorable words in daily conversations.



IV. LANGUAGE AND LITERACY

C. VOCABULARY



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four year olds use more complex words in their language, particularly if they have been exposed to a rich **vocabulary**. They understand many more category labels than they use in speech, but they do include many category labels in their descriptions.

STANDARD 2.

Uses increased **vocabulary** to describe objects, actions and events (expressive)

BENCHMARK a.

Uses large speaking **vocabulary**, adding new words weekly (e.g., repeats words and uses them appropriately in context) (typically has a **vocabulary** of more than 1,500 words)

Children may...

- Use descriptive words (e.g., "My turtle crawls slowly," "That's a silly picture.").
- Try out new words when talking to their friends.
- Ask questions during story time to clarify concepts and build word knowledge.

Educators may...

- Provide multiple opportunities daily for children to talk with peers and adults in the classroom.
- Encourage children's verbal input during shared book reading (e.g., in response to questions or to relate the book to their own experiences).
- Develop child-friendly definitions of important words related to an upcoming lesson.
- Build your own background knowledge and expand **vocabulary** related to an upcoming thematic unit.
- Create a bulletin board or other spotlight area to highlight new words children discover during ongoing classroom experiences.

Families may...

- Visit the zoo or nearest museum and have children describe the various animals and exhibits that they see.
- Try acting out words such as having children move around while exploring the words "prance" or "prowl."





BENCHMARK b.

Uses a variety of word-meaning relationships (e.g., part-whole, object-function, object-location)

Children may...

- Name parts of a familiar object (e.g., parts of a car: hood, window, trunk).
- Answer questions about what a familiar object is used for (e.g., pencil is for writing, pot is for cooking).
- Sort play animals according to typical habitat (e.g., jungle animals vs. farm animals vs. house animals).

Educators may...

- Use the concepts of part-whole (e.g., identifying the tires, steering wheel, trunk of a vehicle).
- Before taking a field trip, hold a class discussion about what you might see and experience at the location (e.g., sheep, tractor, cows at a farm).
- After taking the field trip, hold a discussion about what the children saw at the location and compare with the earlier **prediction**.
- Discuss the necessary tools and their functions when **planning** a cooking experience (e.g., spoon for stirring, whisk for whipping, oven for baking).

Families may...

- Play games with children such as "I Spy" (e.g., "I spy something round on the wall that you use to tell the time.>").
- Enrich children's **vocabulary** by providing definitions for new words and using them in context (e.g., "This vehicle is riding on the highway. It is a car. A bus is another kind of vehicle. So are a train and an airplane.>").



IV. LANGUAGE AND LITERACY

C. VOCABULARY



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four year-olds use more complex words in their language, particularly if they have been exposed to a rich **vocabulary**. They understand many more category labels than they use in speech, but they do include many category labels in their descriptions.

STANDARD 2.

Uses increased **vocabulary** to describe objects, actions and events (expressive)

BENCHMARK c.

Identifies unfamiliar words asking for clarification

Children may...

- Demonstrate understanding of a variety of concepts, such as opposites, positions and comparisons.
- Use new **vocabulary** acquired through conversations, activities, or listening to texts read aloud.
- With prompting, ask and answer questions about unknown words in a text read aloud.
- Listen to stories or text read aloud and use new **vocabulary** words in follow-up conversations and activities.

Educators may...

- Engage children in frequent conversations about topics that interest them, and build on what they say with more complex language.
- Write children's words on their pictures and display the pictures in the classroom.
- Introduce new **vocabulary** when asking questions or describing situations or objects and relate the new words back to familiar words or ideas. Encourage children to use these words when talking about pictures or real objects. Use variations of the same word (e.g., magnify, magnifier, magnifying and magnified).

Families may...

- Take children along when running errands at the bank, grocery store or post office and see what new words children can discover.
- Keep a mental note of new words introduced to children and work to use the words again in conversations with children.



BENCHMARK d.

Uses words in multiple contexts, with the understanding that some words have multiple meanings

Children may...

- Use a large variety of words across settings and for different reasons (e.g., labeling, describing, identifying, relating).
- Ask for meanings of new words.
- Use language for different purposes (e.g., asking, expressing, answering, discussing, taking a role during play).

Educators may...

- While sitting at snack or lunch, choose a word and brainstorm with children as many meanings and uses for the word as you can think of.
- Use pictures and objects when discussing words with multiple meanings.
- Choose books and riddles to read that have words with more than one meaning.

Families may...

- While sitting at the dinner table, choose a word and brainstorm with children as many meanings and uses for the word as you can think of.
- Introduce new words:
 1. Provide a simple, kid-friendly definition for the new word: "‘Enormous’ means that something is really, really big."
 2. Provide a simple, kid-friendly example that makes sense within their daily life (e.g., "Remember that really big watermelon we got at the grocery store? That was an enormous watermelon!").
 3. Encourage children to develop their own example (e.g., "What enormous thing can you think of? Can you think of something really big that you saw today? That's right! The bulldozer near the park was enormous! Those tires were huge.").



IV. LANGUAGE AND LITERACY

D. SENTENCES AND STRUCTURE



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four-year-olds increase their use of sentences and varied sentence structures (e.g., greater length and complexity). Although errors may continue to occur (e.g., over-generalization of rules), they demonstrate understanding of many structure and **grammar** rules.

STANDARD 1.

Uses **age-appropriate grammar** in conversations and increasingly complex phrases and sentences

BENCHMARK a.

Typically uses complete sentences of five or more words, usually with subject, verb and object order

Children may...

- Tell a story about a family trip using long and **complex sentences**.
- Participate in a long conversation about pets with a friend.
- Ask questions and add ideas using complete sentences during a presentation by a special visitor.
- Share an experience (e.g., "We went to the park in my grandmother's car.>").

Educators may...

- Play a word substitution game that has each child repeat the sentence with a different ending (e.g., "I went to the store to buy a _____").
- Help children tell one sentence about their drawings or favorite objects (e.g., "My dinosaur sleeps with me." "Here's a picture of my family.>").
- Model how and encourage children to describe a familiar object that is hidden in a cloth bag in order to guess its identity (e.g., "I feel something soft. It has four legs. It has two ears.>").
- Reply and expand when a child responds with a simple phrase (e.g., when child says, "Here is a dinosaur," expand by saying, "Yes, that is a dinosaur called a Tyrannosaurus rex.>").

Families may...

- When out with children ask questions like, "What color is that car?" They will probably answer with a single word, "red." The adult then repeats the answer in a sentence and perhaps asks another question (e.g., "Yes, it's a red car. Do you like the color red?") When they answer yes or no, ask children why they like or do not like the color.
- Use photographs or pictures from magazines and ask children to describe what is happening in the picture or what they think has just happened or is about to happen.
- Ask children to describe where they live.



IV. LANGUAGE AND LITERACY

D. SENTENCES AND STRUCTURE



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four-year-olds increase their use of sentences and varied sentence structures (e.g., greater length and complexity). Although errors may continue to occur (e.g., over-generalization of rules), they demonstrate understanding of many structure and **grammar** rules.

STANDARD 1.

Uses **age-appropriate grammar** in conversations and increasingly complex phrases and sentences

BENCHMARK b.

Uses regular and irregular plurals, regular past tense, personal and possessive pronouns and subject-verb agreement

Children may...

- Use the correct tense when describing something they did the night before (e.g., "My family went to the ice cream store last night.>").
- Say "feet," although a younger classmate says "foots."
- Identify all the art objects that belong to them, using "my" and "mine," and those that belong to their friends, using "his" or "her."

Educators may...

- Model and help children describe pictures of multiple and single objects to practice the use of correct subject-verb agreement.
- Use picture prompts to encourage children to say phrases and sentences with irregular plurals (e.g., foot/feet, mouse/mice, ox/oxen, child/children).
- Demonstrate how to tell about one's own picture and about the next child's picture, beginning with the words "my picture," "his picture," or "her picture."
- When children say something with a grammatical error, respond using the correct terminology (e.g., child says, "I runned to the swings," respond with, "Yes, you ran to the swings," modeling the correct grammar).

Families may...

- When children say something with a grammatical error, respond using the correct terminology (e.g., child says "I runned to the swings," respond with, "Yes, you ran to the swings," modeling the correct grammar).
- Provide many opportunities for discussion with children (e.g., talk with children about the day's activities, books read together, television programs and videos watched together).
- Help children create their own "This Is Me" or "This Is Our Family" album with photographs or mementos and use for discussion.



IV. LANGUAGE AND LITERACY

D. SENTENCES AND STRUCTURE



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

As 4-year-olds explore their environments, they demonstrate their growing knowledge by sharing information in longer and more **complex sentences** that provide relevant details about a specific topic. Four-year-old children are generally understood by listeners and able to stay on topic.

STANDARD 2.

Connects words, phrases and sentences to build ideas

BENCHMARK a.

Uses sentences with more than one phrase

Children may...

- Talk with a friend as they play, using sentences with more than one phrase (e.g., "Let's build a road next to this building and put a bridge in it.>").
- Participate in a large-group discussion, adding information in multiple phrases (e.g., "Lizards like to crawl under things and change colors.>").
- Describe a family trip, combining phrases (e.g., "We went on a hike where we saw a waterfall.>").

Educators may...

- Have children work in pairs, with one child telling the first part of a sentence and the other child adding a real or silly phrase to it (e.g., "The dog jumped over the fence...to get the big bone.>").
- Provide opportunities for children to tell the group a simple story about a favorite personal experience (e.g., telling the class about a visit to a friend's house during "Show and Tell").
- Model and give children opportunities to ask and respond to questions using more than one phrase (e.g., "Where would you find a frying pan in a house? A frying pan is found in the kitchen.>").
- Provide opportunities at meal times for children to engage in conversations with adults and other children.

Families may...

- Listen patiently to children's questions and answer them just as patiently.
- Have children tell a story. Then ask them questions, explaining the need to understand better.
- When reading predictable books, ask children what they think will happen.
- Look through the whole picture book with children before reading. Ask them what they think the story is about. Tell the story together by talking about each page as each sees it.



IV. LANGUAGE AND LITERACY

D. SENTENCES AND STRUCTURE



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

As 4-year-olds explore their environments, they demonstrate their growing knowledge by sharing information in longer and more **complex sentences** that provide relevant details about a specific topic. Four-year-old children are generally understood by listeners and able to stay on topic.

STANDARD 2.

Connects words, phrases and sentences to build ideas

BENCHMARK b.

Combines more than one idea using **complex sentences** (e.g., sequences and cause/effect relationships)

Children may...

- Describe cause-and-effect (e.g., "My hands are dirty because I was playing in the dirt.").
- Predict what will happen next (e.g., "If I don't water the plants they may die.").
- Describe events in a logical time sequence (e.g., "This morning I got up, brushed my teeth, and came to school.").

Educators may...

- Provide simple science experiments (e.g., objects that sink and float) and encourage children to tell what happened (e.g., "The flower floated when it fell in the water," "I think the block will sink because it is heavy like a stone.").
- Help children use complex phrases when retelling familiar stories (e.g., "When the clock struck midnight, Cinderella ran away.").
- Encourage children to describe their art using **complex sentences** (e.g., "After I mixed blue and red paint, it turned purple.").
- Model how to combine two simple related phrases into one coherent sentence (e.g., "This is a pen. It writes in purple ink," becomes, "This is a pen that writes in purple ink.").

Families may...

- Provide opportunities for children to engage in open-ended outdoor play and observe and discuss cause-and-effect in nature (e.g., repeatedly pull down on a branch to watch it spring back).
- Encourage children to act out a story an adult has **read aloud**.
- Help children retell a story with a clear beginning, middle and end.



IV. LANGUAGE AND LITERACY

D. SENTENCES AND STRUCTURE



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

As 4-year-olds explore their environments, they demonstrate their growing knowledge by sharing information in longer and more **complex sentences** that provide relevant details about a specific topic. Four-year-old children are generally understood by listeners and able to stay on topic.

STANDARD 2.

Connects words, phrases and sentences to build ideas

BENCHMARK c.

Combines sentences that give lots of detail, stick to the topic and clearly communicate intended meaning

Children may...

- Describe a family event, combining sentences and giving lots of detail.
- Participate in a large-group discussion of birds and build on the information by talking with an adult as they watch birds outside later in the day.
- Ask many questions about fire engines when the firefighter is a special visitor at the school.
- Maintain the focus of the conversation in response to a listener's comment or question (e.g., Child says, "I played in the snow." The listener says, "There's no snow here!" Child says, "I was at my grandmother's house where there was snow.").

Educators may...

- Provide an interesting picture and relevant verbal prompts to help children describe what they see (e.g., "What is the large object in the middle of this picture?" "How did you know it was a ____?" "Tell us what is behind this ____.").
- Ask questions and make comments to guide children in describing a common routine within the classroom (e.g., "After I use the bathroom, I flush the toilet and wash my hands."). Use visual schedules for those who need prompts.
- Model and use guiding questions to help children tell about a personal event, organizing the details into an understandable sequence (e.g., "What did you do first?" "What did you do after that?" and "How did it end?").

Families may...

- Encourage children to explore, experiment and try new things.
- Talk about what is happening and encourage children to talk.
- Find out answers to questions together.
- Remind children of events that have happened before.
- Make suggestions about imaginary play, for example asking, "What would it be like to be small like a mouse?" or providing props to use for play.
- Share songs, stories and **rhymes**, both new ones and old favorites.







IV. LANGUAGE AND LITERACY

E. CONVERSATION



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Children learn to communicate from an **environment** rich in language. Children develop language through interactions with adults and other children, engagement with materials and instructional experiences.

STANDARD 1.

Uses verbal and non-verbal communication and language to express needs and feelings, share experiences and resolve problems

BENCHMARK a.

Engages in conversations with two to three back-and-forth turns using language, gestures, and expressions (e.g., words related to social conventions like “please” and “thank you”)

Children may...

- Participate in a conversation with an adult or special visitor, taking turns talking without interruption.
- Wait until a teacher finishes a conversation with a parent before requesting help with art supplies.
- Show excitement by using a raised voice when talking about a family trip.

Educators may...

- Provide numerous daily opportunities for children to talk with peers and adults in the classroom.
- Encourage children’s verbal input during shared book reading (e.g., in response to questions or to relate the book to their own experiences).
- Provide a talking stick for children to learn to take turns speaking (e.g., whoever has the talking stick is speaking).
- Encourage active listening by asking children to maintain eye contact, nod and ask questions to clarify understanding.

Families may...

- Read children’s favorite books repeatedly. Ask questions to encourage conversation about the story (e.g., “What do you think is going to happen?” “What happened to the old lady who swallowed the fly?” or “Why did Mama call the doctor and what did the doctor say?”).
- Join in pretend play with children, following their lead. Let them be the “mom” or “teacher.”



IV. LANGUAGE AND LITERACY

E. CONVERSATION



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Language development reflects children’s ability to understand increasingly complex language, children’s increasing proficiency when expressing ideas and children’s growing understanding of and ability to follow appropriate social and conversational rules.

STANDARD 2.

Asks questions, and responds to adults and peers in a variety of settings

BENCHMARK a.

Asks and responds to more complex statements and questions, follows another’s conversational lead, maintains multi-turn conversations, appropriately introduces new **content** and appropriately initiates or ends conversations

Children may...

- Join in appropriately during a conversation in progress in the **dramatic play** area.
- Tell about their pet bird after the educator asks, “Who has a pet?”
- Explain or elaborate and stay on topic when a listener asks a question or makes a comment.
- Respond to a friend appropriately (e.g., Jeremy says, “Let’s put the gorillas in the jungle next.” Addie responds, “Yeah, I think the gorillas should live in this part over here.”).

Educators may...

- Engage in daily conversations with children on themes and **content**-related topics or in social conversations where children take multiple turns listening and responding.
- Use puppets to model ways of initiating and continuing conversation.
- Use props and modeling to demonstrate and reinforce active listening (e.g., talking stick, giant ear prop).
- Ask children “who,” “what,” and “why” questions during shared reading.

Families may...

- Hold a family meeting before bedtime, talking about what happened that day and what will happen the next day.
- At dinner, ask everyone to share “news” about their day.
- Talk with children about the books read together.





IV. LANGUAGE AND LITERACY

E. CONVERSATION



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Children enjoy participating in conversations with the people around them. As their understanding of language increases, they become more active in participating in conversations by initiating interactions and responding to others.

STANDARD 3.

Demonstrates understanding of the social conventions of communication and language use

BENCHMARK a.

Demonstrates increased awareness of nonverbal conversational rules

Children may...

- Follow commonly accepted norms of communication in group settings with increasing independence (e.g., respond appropriately to the direction, "Only one child speaks at a time.").
- Stand at a comfortable distance from a friend as they talk and play.
- Demonstrate an understanding of nonverbal cues (e.g., eye contact, distance from partner and facial expressions) and the ability to use them.

Educators may...

- Read parts of a book using different facial expressions and discuss how this affects the story.
- Model and explain different non-verbal conversational rules (e.g., "When you look at me, it shows me you are listening.").
- Role-play conversations using appropriate non-verbal behaviors.
- Encourage active listening by asking children to maintain eye contact, nod and ask questions to clarify understanding.

Families may...

- Bend down and speak on children's level and maintain eye contact.
- Encourage active listening by asking children to maintain eye contact, nod and ask questions to clarify understanding.



BENCHMARK b.

Demonstrates knowledge of verbal conversational rules (e.g., appropriately takes turns, does not interrupt, uses appropriate verbal expressions and uses appropriate *intonation*)

Children may...

- Participate in a conversation with an adult, taking turns talking without interrupting.
- Wait until the educator finishes a conversation with a parent before requesting help with art supplies.
- Show excitement by using a raised voice when talking about a family trip.

Educators may...

- Model conversational etiquette during “Show and Tell” (e.g., “Susie is sharing now. Your turn is next.”).
- Model and explain when and how to use the phrase, “Excuse me,” when a child needs to interrupt an ongoing conversation.
- Provide a talking stick for children to learn to take turns speaking (e.g., whoever has the talking stick speaks).

Families may...

- Play board games to develop listening, turn-taking and following rules.
- Give children time to talk. As children are trying to express more complex ideas, they may need more time to respond to questions while they are getting their words sorted out before they speak.

BENCHMARK c.

Matches language to social and academic contexts (e.g., uses volume appropriate to context)

Children may...

- Ask relevant questions when friend is sharing during “Show and Tell.”
- Make context-appropriate statements (e.g., “I am the door-holder for-the week,” or “I am working in the science *center* today.”).
- Describe a feeling to a friend (e.g., “I was so angry that I felt like a volcano erupting!”).

Educators may...

- Model communication in different social situations (e.g., using different indoor and outdoor voices).
- Provide varying social situations for children to interact (e.g., tea parties, assemblies, field trips).
- Remind children in the *dramatic play* area to use a quiet voice when the dolls are napping.

Families may...

- Talk about and involve children in everyday situations such as shopping, cooking, and cleaning.
- Play board games to develop listening, turn-taking and following rules.



IV. LANGUAGE AND LITERACY

F. EMERGENT READING



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Literacy skills develop through experience. Actively listening to a book being read is a pleasurable experience and motivation for children. When children have access to books and other forms of print, and when families and educators are committed sharing reading and talking experiences, children develop motivation and appreciation for reading.

STANDARD 1.

Shows motivation for and appreciation of reading

BENCHMARK a.

Selects books for reading enjoyment and reading-related activities, including pretending to read to **self** or others

Children may...

- Select the reading **center** during free play, or listen attentively during a **read aloud**.
- Reenact a favorite story with felt board characters.
- "Read" a book to a doll during **dramatic play**.
- Use props such as menus and phone books in the **dramatic play** area.
- Look at cover picture and make **predictions** about characters or plot.
- Predict story detail based on the title.

Educators may...

- Use a variety of fiction and non-fiction books to supplement **center** and project activities (e.g., books on building and architecture in the block area, books on the class theme, menus in **dramatic play** and books on plants in the science **center**).
- Provide audiobooks that children can listen to while following along in the printed text.
- Create, use and refresh a classroom library that reflects gender, cultural, and linguistic **diversity** (e.g., story, alphabet, non-fiction, fiction, computer-based story books, big books, poetry, fairy tales and fables, plays, magazines, newspapers and class-created books).

Families may...

- Have a special time for reading each day.
- Gather old shirts, skirts, hats, etc., from friend or a thrift store. Encourage **dramatic play**—acting out stories, songs and scenes from books.
- When reading stories to children, let them make up the ending, or retell favorites stories with "silly" new endings that they make up.



BENCHMARK b.

Makes real-world connections between stories and real-life experiences

Children may...

- Relate events or situations from stories to their own lives.
- Talk about a dream after reading *Where the Wild Things Are*.
- Relate to feeling sad or angry after reading *Alexander and the Terrible, Horrible, No Good, Very Bad Day*.
- Choose a story based on experiences such as reading a story about spring after enjoying a nature walk.

Educators may...

- Encourage discussions about stories in the classroom, and provide opportunities to make connections to a child's life experiences.
- Read a story about a new baby because a child's mom is having a baby.
- Read stories that relate to cultural or physical differences between children in the classroom.

Families may...

- Talk about how stories relate to their own lives.
- Model asking questions or making **predictions** related to story events (e.g., "I wonder what Goldilocks was thinking when she ran away from the bear's house?").
- Select stories that relate to future family activities (e.g., getting a new pet, going on a vacation, etc.).



IV. LANGUAGE AND LITERACY

F. EMERGENT READING



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Literacy skills develop through experience. Actively listening to a book being read is a pleasurable experience and motivation for children. When children have access to books and other forms of print, and when families and educators are committed sharing reading and talking experiences, children develop motivation and appreciation for reading.

STANDARD 1.

Shows motivation for and appreciation of reading

BENCHMARK c.

Interacts appropriately with books and other materials in a print-rich **environment**

Children may...

- Pick a book from the shelf, pretending to read, and return it to the shelf when finished.
- Look at an e-reader, magazines and books in an orderly fashion, one page at a time, progressing from front to back.
- Select and play a specific audiobook from the MP3 player.
- Handle books correctly and know many key parts of a book or story (e.g., author and illustrator, beginning and end of story).

Educators may...

- Model appropriate book handling.
- Teach children to use technology-based text materials and provide opportunities for use.
- Demonstrate appropriate use of written materials (e.g., lists, menus, songs, signs and charts).
- Make materials accessible so children can explore and use them independently.
- Encourage children to experiment using **literacy materials** in novel ways (e.g., pretending to use a magazine as a cookbook in the **dramatic play center**; using stickers as stamps and note cards as envelopes to mail letters).

Families may...

- Create inviting and comfortable reading areas in the home.
- Encourage children to make suggestions and request books and other related materials about topics of interest, then provide them (e.g., check them out from the public library or download from the Internet).
- Listen and respond positively to children's comments, questions, and interest in written materials (e.g., asking follow-up questions, finding materials related to a topic, reading a book related to a topic, encouraging the child to re-read the book).



BENCHMARK d.

Asks to be read to, asks the meaning of written text or compares books/stories

Children may...

- Select a favorite book for an adult to read before rest time.
- Show the educator a note from home and ask what it says.
- Demonstrate interest in different kinds of literature, such as fiction and non-fiction books and poetry, on a range of topics.
- Bring book to educator and ask, "Can you read me this butterfly book?"
- Make a connection between a book they have read to other books: book about *The Very Hungry Caterpillar* to a science book about butterflies.

Educators may...

- Model getting meaning from text in books and other print in the classroom. (e.g., using think-aloud, comments and questions while reading).
- Discuss meanings of words and passages before and after reading (e.g., before reading *The Princess and the Pea* educator provides a definition of the word "mattress"; after reading the book, children and educator discuss and revisit the term "mattress.>").
- Encourage children to make suggestions and requests for books and other related materials about topics of interest, and make an effort to provide them (e.g., check them out from the public library or download from the Internet).

Families may...

- Listen and respond positively to children's comments, questions, and interest in written materials (e.g., asking follow-up questions, finding materials for the child related to the topic, reading a book related to the topic, encouraging the child to re-read the book.).
- Encourage children to make suggestions and requests for books and other related materials about topics of interest, then provide them (e.g., check them out from the public library or download from the internet).
- Instill in children the desire to read by modeling enjoyment of reading.



IV. LANGUAGE AND LITERACY

F. EMERGENT READING



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Literacy skills develop through experience. Actively listening to a book being read is a pleasurable experience and motivation for children. When children have access to books and other forms of print, and when families and educators are committed sharing reading and talking experiences, children develop motivation and appreciation for reading.

STANDARD 1.

Shows motivation for and appreciation of reading

BENCHMARK e.

Initiates and participates in conversations that demonstrate appreciation of printed materials

Children may...

- Listen to story and respond to questions about the story.
- Name pictures in a book prior to it being read.
- Listen to classmates in a large-group discussion about a story, and contribute thoughts or ideas about the book.
- Describe a family event that relates to a book.
- Use a book to tell a story to a peer.

Educators may...

- Provide and read to children a variety of concept-related books (e.g., farm animals, vegetables, the body, fiction and non-fiction).
- Define new words for children when reading aloud, and encourage discussion of word meanings.
- When creating a bulletin board or mural for a new theme, identify, label, and discuss the meaning and function of the pictures and objects.

Families may...

- Encourage children's discussion during shared book reading, respond to questions or relate the book to children's experiences.
- Engage children in conversation by asking open-ended questions, expanding on their comments and providing opportunities for children the lead conversation.



IV. LANGUAGE AND LITERACY

F. EMERGENT READING



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Young children are beginning to be able to hear and understand the different parts of spoken language, such as sounds and syllables. As they play with language through rhyming, singing songs, chanting and making up nonsense words, they begin to understand rhythm of language and the parts that make up words. This is not the same skill as phonics, which links a written symbol with a sound. Sounds comes much later in language development. A child's individual development of **phonological awareness** is closely tied to overall language and speech development, and is a strong predictor of reading success.

STANDARD 2.

Shows age-appropriate **phonological awareness**

BENCHMARK a.

Distinguishes individual words within spoken phrases or sentences

Children may...

- Place one block for each word the educator speaks.
- Take a step forward for each word heard in a familiar nursery **rhyme**.
- Participate in reciting poems and singing songs during large-group time.

Educators may...

- Make obvious pauses between words to emphasize the separation of words within phrases and help children differentiate each word.
- Model stomping feet, once for each word in a phrase or sentence.
- Play games that help children distinguish individual words within spoken phrases or sentences (e.g., clapping hands together once for each word).

Families may...

- Read and reread with children books that **rhyme**.
- Sing simple songs and lullabies, such as those with repeating initial sounds.
- Play with children by clapping, tapping, jumping or stomping one time for each **syllable** in a word, or one time for each word in a sentence or nursery rhyme.



IV. LANGUAGE AND LITERACY

F. EMERGENT READING



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Phonological awareness is an auditory skill. It is the ability to recognize and manipulate speech sounds within spoken language. Developing **phonological awareness** in preschool leads to success in reading and writing in the school years. Development of **phonological awareness** is enhanced with consistent and intentional instruction. Children are increasingly aware of and can differentiate between units of sounds within spoken words. A child's individual development of **phonological awareness** is closely tied to overall language and speech development, and is a strong predictor of reading success.

STANDARD 2.

Shows age-appropriate **phonological awareness**

BENCHMARK b.

Combines words to make a compound word (e.g., "foot" + "ball" = "football")

Children may...

- Demonstrate an awareness of words as separate units.
- Experiment with creating compound words.
- Use picture cards to create compound words.
- Create compound words by adding a second part to the first part the educator provides.

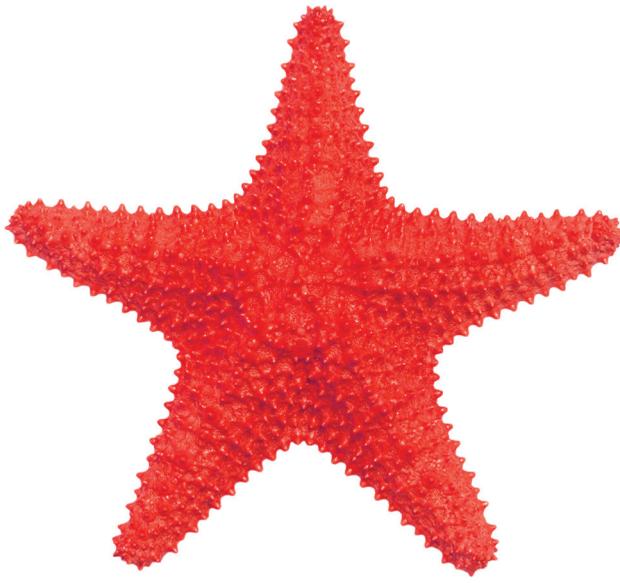
Educators may...

- Use rhythm techniques such as clapping, tapping and snapping to help children identify parts of a compound word.
- Provide and demonstrate using compound word puzzles and picture cards for children to use when practicing making compound words they say aloud.
- Provide pictures or oral examples of multisyllabic words that are and are not compound words, and ask children to identify compound words (e.g., show or say "doghouse," "catfish," "camel," "starfish," "horse." Ask child to identify the compound words.).

Families may...

- Play a word game, saying the first part of a compound word and asking children to provide a variety of second words that make real compound words (e.g., say "sun" and encourage responses like "flower," "shine" and "burn.>").
- Provide a variety of pictures that children may use when experimenting with creating compound words.





BENCHMARK c.

Deletes a word from a compound word (e.g., “starfish” – “star” = “fish”)

Children may...

- Experiment with separating compound words.
- Use picture cards to separate compound words.
- Break apart compound words by removing the second part from the compound word the educator provides.

Educators may...

- Provide and demonstrate using compound word puzzles and picture cards for children to use when practicing taking apart compound words they say aloud.
- Say compound words and then leave off the first part of the compound words (e.g., Educator says, “Say backpack”; child responds, “backpack”; educator says, “Now say backpack without back”; child says, “Pack.”).
- Provide additional practice opportunities, and appropriate corrective feedback if a child responds incorrectly. Provide the correct responses if necessary (e.g., “that’s not quite right,” “let’s try again,” “listen carefully,” that’s just right”).

Families may...

- Play a word game, saying the first part of a compound word and asking children to provide a variety of second words that make real compound words (e.g., say “sun” and encourage responses like “flower,” “shine” and “burn.”).
- Play a word game, saying a compound word and asking children to say the first or second part of the word (e.g., say “sunshine” and encourage responses of “sun” or “shine.”).



IV. LANGUAGE AND LITERACY

F. EMERGENT READING



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Phonological awareness is an auditory skill. It is the ability to recognize and manipulate speech sounds within spoken language. Developing **phonological awareness** in preschool leads to success in reading and writing in the school years. Development of **phonological awareness** is enhanced with consistent and intentional instruction. Children are increasingly aware of and can differentiate between units of sounds within spoken words. A child's individual development of **phonological awareness** is closely tied to overall language and speech development, and is a strong predictor of reading success.

STANDARD 2.

Shows age-appropriate **phonological awareness**

BENCHMARK d.

Combines **syllables** into words (e.g., "sis" + "ter" = "sister")

Children may...

- Provide the second **syllable** of familiar words when the educator says the first **syllable** (e.g., says "cil" when educator says "pen").
- Identify the number of syllables in familiar words and names by clapping or stomping.
- Hear a familiar word and identify whether it has one, two or three syllables.

Educators may...

- Play a clapping game, clapping once while saying each **syllable** in children's names, and encourage children to join in (e.g., Lin-da gets two claps, Pat gets one clap and Mar-ga-ret gets three claps.).
- Provide pictures of familiar two-**syllable** words cut into two pieces. First model, then encourage the children to practice putting the pictures together while saying the word aloud.
- Say the first **syllable** in a familiar two-**syllable** word and have children provide the second **syllable**.
- Provide pictures, objects and non-verbal gestures to support children's understanding and demonstration of the blending task.

Families may...

- Collect some small household items (pencil, block, cookie, toothpaste, cup, etc.) or pictures and place them in a box or small bag. The adult removes one item, says its name and asks children how many "claps" it has. Say the object name again, clapping as the adult says each **syllable**. Then it is the children's turn to take an item out of the box, say the name and clap the syllables.
- Play a word game, saying the first part of a compound word and asking children to provide a variety of second words that make real compound words (e.g., say "sun" and encourage responses like "flower," "shine" and "burn.").



BENCHMARK e.

Deletes a **syllable** from a word (e.g., “trumpet” – “trum” = “pet” or “candy” – “dy” = “can”)

Children may...

- Hear the sounds of two syllables and provide the remaining **syllable** when the educator asks what is left when the first **syllable** is removed (e.g., educator says “spoon; what do you hear if I take away /sp/?”).
- With prompting, with a picture cut in half, point to the portion of the picture that represents the remaining **syllable**.
- With prompting, with a spoken two-**syllable** word, say the first **syllable** (e.g., “pencil/pen, picture/pic, slipper/slip”).

Educators may...

- Play word games (e.g., say a child’s name, then say the name without the first **syllable** and encourage children to repeat with their own name and the names of their friends).
- Provide pictures of familiar three-**syllable** words cut into three pieces. First model, then encourage children to practice taking the pictures apart while saying the word aloud without the first or last **syllable**.
- In a small group, designate each child to represent the first or second **syllable** in a two-**syllable** word and then stand with their partner. Have children squat or hide to model being deleted from the word.
- To provide additional instructional support, say two-**syllable** words more slowly, with emphasis on each **syllable** and with deliberate and obvious pauses between syllables.
- Provide a basket with several real items that are two or three syllables. Ask child to select one item and move the item up and down to indicate the syllables. (e.g., “he” “li” “cop” “tor”; “trac” “tor”).

Families may...

- Play a word game with children, saying two-**syllable** words more slowly with emphasis on each **syllable** and with deliberate and obvious pauses between syllables. Ask children to clap or stop to indicate the syllables (e.g., “but” “ter” “fly”).
- Collect some small household items (e.g., pencil, block, cookie, toothpaste, cup, etc.) or pictures and place them in a box or small bag. Remove one item, say its name and ask children how many “claps” it has. Say the object name again, clapping as they say each **syllable**. Then ask children to take an item out of the box, say the name and clap the syllables.



IV. LANGUAGE AND LITERACY

F. EMERGENT READING



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Phonological awareness is an auditory skill. It is the ability to recognize and manipulate speech sounds within spoken language. Developing **phonological awareness** in preschool leads to success in reading and writing in the school years. Development of **phonological awareness** is enhanced with consistent and intentional instruction. Children are increasingly aware of and can differentiate between units of sounds within spoken words. A child's individual development of **phonological awareness** is closely tied to overall language and speech development, and is a strong predictor of reading success.

STANDARD 2.

Shows age-appropriate **phonological awareness**

BENCHMARK f.

Combines **onset** and **rime** to form a familiar one-**syllable** word with and without pictorial support (e.g., when shown several pictures and adult says "/c/" + "at," child can select the picture of the cat)

Children may...

- Say the name of familiar one-syllable words when the educator says the word with a pause between the onset (first sound) and the rime (vowel sound and rest of word).
- Pick up all the toys in the room that begin with the /b/ sound, like baby, blocks and books.
- Say their own names with a separation between the first sound and the rest of the sounds.
- Match picture cards with same beginning sound.

Educators may...

- Say familiar words with clear separation between the onset and the rime (e.g., say, "Let's read the b—ook." or "Go get the c—up.>").
- Provide pictures of familiar one-syllable words cut into two pieces for children to put together and separate while orally blending together and taking apart the words into onset/rime segments.
- Give children sets of four picture cards and help them to say the name of each picture aloud. Have the children find the card that does not start with the same sound as the other three.

Families may...

- Play games with words using pictures. Adults look at a picture and say the onset and children reply by saying the rime (e.g., picture of a dog: adults say sound of "d" and children reply with the sound of "og").
- At dinner, have each family member ask for food using the onset and the other family members guess which rime goes with the onset to complete the name of the food (e.g., child says, "Please pass the "b" (sound)," while another family member replies "eans" and they pass the beans).



IV. LANGUAGE AND LITERACY

F. EMERGENT READING



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Young children begin showing interest in letters, especially letters in their names. They are beginning to understand that letters represent a sound in language, and that they have meaning. Playful interactions with letters build awareness and recognition of letters that leads to reading in a print-rich **environment**.

STANDARD 3.

Shows alphabetic and print knowledge

BENCHMARK a.

Recognizes that print conveys meaning

Children may...

- Point to words in a story as they read together with an adult.
- Recognize their own printed name and those of their friends.
- Identify familiar words in books and the **environment**.

Educators may...

- Plan individual and small- and large-group activities to play with the sounds of words and print.
- Encourage children's discussion during shared book reading by responding to questions or helping children relate the book to their own experiences.
- Label **centers** and objects in the classroom with words and pictures.

Families may...

- Read children's favorite books again and again.
- Encourage children's discussion during shared book reading by responding to questions or helping children relate the book to their own experiences.



IV. LANGUAGE AND LITERACY

F. EMERGENT READING



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Young children begin showing interest in letters, especially letters in their names. They are beginning to understand that letters represent a sound in language, and that they have meaning. Playful interactions with letters build awareness and recognition of letters that leads to reading in a print-rich **environment**.

STANDARD 3.

Shows alphabetic and print knowledge

BENCHMARK b.

Recognizes almost all letters when named (e.g., when shown a group of letters, can accurately identify, verbally or nonverbally, the letter that is named)

Children may...

- Point to a letter, rather than an entire word, in print when asked to identify a letter.
- Point correctly to letters the educator says.
- Identify letters in their names.

Educators may...

- Ask children to point to a specific letter that is part of a poem, song, sign, book or other written text.
- Give children a **set** of three to five letters and ask them to find a target letter.
- Print letters in multiple fonts, cut them out, and help children sort them into same letter piles.
- Display children's names in multiple places within the classroom. Have children point to the letter their name begins with.
- Provide computer letter-naming games/activities that allow child to see the letter when the letter is named.

Families may...

- Sing the alphabet song with children while they are following along looking at the letters.
- Read alphabet books with children.
- Point out words that begin with the same letter as children's names (e.g., John and jump).



**BENCHMARK c.**

Names most letters (e.g., when shown an uppercase or lowercase letter, can accurately say its name)

Children may...

- Identify several of the letters in a foam board alphabet puzzle.
- Name letters on a sign in the classroom.
- Participate in group time alphabet identification games.

Educators may...

- Give children frequent opportunities to say aloud letters when shown on cards, posters or alphabet manipulatives.
- Have children match magnetic letters on a magnetic board and have them say each letter aloud as it is matched.
- Model appropriate use of uppercase and lowercase letters in classroom written materials.

Families may...

- Include print with uppercase and lowercase letters throughout children's rooms by labeling objects.
- Write letters on pieces of paper and put them in a paper bag. Children then reach into the bag, take out letters and name them.
- Provide opportunities for children to play with alphabet manipulatives (e.g., puzzles, magnetic letters).

BENCHMARK d.

Recognizes some letter sounds (e.g., when shown a group of letters, can accurately identify, verbally or nonverbally, the letter of the sound given)

Children may...

- Name the correct letter when an adult says the letter sound.
- Identify the correct letter associated with the first sound in familiar words.
- Name the correct letter when the teacher says the corresponding letter sounds.

Educators may...

- Use manipulatives to instruct children in matching letter sounds to the letter name and the printed letter.
- Play a game matching children to the large printed letter representing the first sound in each of their names.
- Provide a variety of familiar objects for children to sort into first-sound piles.
- Introduce the most common letter sound first (e.g., the sound "g" makes in "goat" rather than "giants," or the sound "c" makes in "cat" rather than "circle").

Families may...

- Provide opportunities for children to play with alphabet manipulatives (e.g., puzzles, magnetic letters).
- Point out words that begin with the same letter as your children's names (e.g., John and jump).
- Teach children to match the letters in their names with the sounds in their names.
- Use alphabet books and guessing games to give children practice in matching letters and sounds.



IV. LANGUAGE AND LITERACY

F. EMERGENT READING



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Children build understanding by linking new information to things they already know. Experiences help them understand more ideas and connect new words, phrases and concepts to their own lives. Children's attention spans grows through daily story time and meaningful experiences with books and other forms of literature. As children develop, they begin to respond appropriately by asking questions about the story, retelling stories, making **predictions** and making connections between stories and real-life experiences.

STANDARD 4.

Demonstrates **comprehension** of books read aloud

BENCHMARK a.

Retells or reenacts story with increasing accuracy and complexity after it is **read aloud**

Children may...

- Use puppets or flannel board pieces to retell a familiar story.
- Relate what happened to a character in a book to something similar that happened to them (e.g., saying, "One time, I got scared about going to school," after reading *Froggy Goes to School*).
- Recall information from a story and use the information in retellings and **dramatic play**.

Educators may...

- Provide **dramatic play** props for children to use when reenacting a fairy tale or familiar short story read aloud.
- Help children retell a story with a clear beginning, middle and end, sometimes using picture sequence cards.
- Provide flannel board materials or hand puppets for children to use when retelling a familiar story with peers.
- Provide an **environment** encouraging children's initiative to modify the **environment** to extend learning (e.g., child independently takes or creates props from the classroom to outside in order to turn the sandbox into a pirate ship).

Families may...

- Encourage children to act out a story an adult has **read aloud**.
- Ask children when reading, what might happen next.
- Use props or toys related to the book. Find or make some appropriate manipulatives.
- Let children hold the book and use the pictures as visual cues to retell the story.





BENCHMARK b.

Asks and answers appropriate questions about the story (e.g., “What just happened?” “What might happen next?” “What would happen if...” “What was so silly about...?” “How would you feel if you...?”).

Children may...

- Respond to open-ended questions about a story (e.g., “What do you think will happen next?” or “Why do you think he did that?”).
- Propose a new title or a new event to include in the story.
- Respond appropriately to a teacher’s question about a book.
- Relate an event in their own life to what happened in the story.
- Describe how they might respond to story events (e.g., “What would you say to the big bad wolf?”).

Educators may...

- Model asking questions or making **predictions** related to story events (e.g., “I wonder what Goldilocks was thinking when she ran away from the bear’s house?”).
- Activate and connect children’s background knowledge to stories.
- Provide experiences that relate to specific aspects of a story plot.
- Encourage children to make **predictions** by stopping at strategic points in a story and having children discuss or draw pictures.
- Help children create new endings to familiar stories using props, puppets and dictation.

Families may...

- Ask questions or encourage children to make **predictions** related to story events (e.g., “I wonder what Goldilocks was thinking when she ran away from the bear’s house?” “What do you think will happen next?”).
- Read favorite stories with children again and again.
- Play a game with children where children create a different ending to the story.



IV. LANGUAGE AND LITERACY

G. EMERGENT WRITING



4 YEARS - KINDERGARTEN (48 - 60 months)

Through experience, children realize that writing is a way to express thoughts and ideas to others. Children are often eager to share their experiences through writing. They begin writing using pictures, symbols and letters while developing the ***fine motor skills*** that support writing. They attempt to write by scribbling, drawing and creating pictographs and enjoy sharing these expressions with adults and peers.

STANDARD 1.

Begins to show motivation to engage in written expression and appropriate knowledge of forms and functions of written composition

BENCHMARK a.

Intentionally uses scribbles/writing to convey meaning (e.g., signing artwork, captioning, labeling, creating lists, making notes)

Children may...

- Attempt to write their own names and names of friends or family members.
- Write captions for their artwork.
- Write lists in the ***dramatic play*** area.

Educators may...

- Provide different types of writing tools and paper for children to use.
- Set up the ***dramatic play*** area to encourage writing, such as writing orders in a restaurant or writing and addressing letters in a post office.
- Encourage children to write notes to each other, to family and to their educators.

Families may...

- Have children write notes or sign cards for family members.
- Help children write a letter to someone and take them to the post office to mail it.
- Have lots of writing tools and paper for children to use at home.

BENCHMARK b.

Uses letter-like shapes or letters to write words or parts of words

Children may...

- Use scribbles, letter-like shapes or letters when writing.
- Write own name, not necessarily with correct spelling or correct letter formation.
- Attempt to copy ***environmental*** print.

Educators may...

- Provide materials and opportunities for children to write for a purpose, such as writing their names on paintings and drawings.
- Include writing materials in the ***dramatic play*** area for making lists, writing notes, taking messages.

Families may...

- Have writing materials like pencils, washable markers, crayons and paper available for children to use at home.
- Show children how to make lists or write notes.
- Write notes to their children and have their children "write" notes back.





BENCHMARK c.

Writes own name (e.g., first name, last name or nickname), not necessarily with full correct spelling or well-formed letters

Children may...

- Write their first names on their drawings.
- Sign their names on class sign-in sheets.
- Sign their names on class graphs/charts.

Educators may...

- Provide children with models of their names to encourage them to learn to write their names.
- Ask children to sign-in on a class sign-in sheet each day (provide support as needed).
- Post a question of the day chart with a question and picture symbols where children sign their names under their choice: "What cookie do you like best - chocolate chip or oatmeal?"

Families may...

- Help children make name labels to put on their art supplies or items at home.
- Give children playdough to shape letters to make their names.
- Put shaving cream or sand on a plastic tray or hard surface and encourage children to write their names in it with their fingers.



RELATED BOOKS

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by Emma Dodd



GLOSSARY

Age-appropriate grammar: oral formation of sentences with some errors, but an understanding of some grammatical rules (e.g., “She runned across the playground.”)

Alphabetic knowledge: the understanding that words are composed of letters; the understanding that letters and letter combinations represent individual **phonemes** in words and written language (e.g., a child says the letters in some words, a child tells a teacher or a friend the letters in his/her name)

Articulation: the correct pronunciation of one or more sounds within a word

Autonomy: independence

Blend: to combine sounds rapidly in order to accurately represent a word

Blends: combinations of two letter sounds to make one sound (e.g., /bl/ as in “blocks”; /st/ as in “street”)

Center: area within the classroom arranged so that children are able to participate in a variety of related learning experiences (e.g., art **center**, reading **center**, science **center**, block **center**, **dramatic play center**, writing **center**)

Circle: a round two-dimensional figure that resembles a ring

Complex sentences: sentences that include at least one independent clause and at least one dependent clause (a part of a sentence that has a subject and predicate but cannot stand on its own as a separate sentence). In the sentence, “After the children went out to the playground, the teacher put the snacks on the tables,” the first phrase is a dependent clause

Comprehension: understanding what one has heard or what one has read (e.g., a child is able to answer questions or make comments about a story that someone has read aloud to them)

Content: information contained in a story or lesson

Creativity: individuality expressed by creating something new or original (e.g., new way to paint a flower)

Culture: the customary beliefs, social forms and material traits of a racial, religious or social group

Curiosity: a strong interest in learning about something; children demonstrate **curiosity** when they ask questions about or show interest in activities within the classroom and the world around them (e.g., a child asks questions about new materials in the art **center** or a bug discovered on the playground)



GLOSSARY

Digraphs: two separate sounds joined together to create a new sound (e.g., /sh/ shoes; /ch/ chair)

Discovery: engaging students in deep learning that promotes *exploration, problem-solving, creativity*, and student engagement

Diversity: the inclusion of different people (as people of different races or cultures) in a group or organization

Dramatic play: expressive and spontaneous play

Emergent literacy: the range of a child's developmental *skills*, knowledge, and attitudes (beginning at birth), that combine with a variety of experiences related to written language. These experiences produce behaviors that change over time and result in conventional *literacy* during middle childhood

Emergent reading: reading-related experiences and actions that occur before a child reaches the conventional *literacy* stage in middle childhood (e.g., a child shows interest in being read to and told what written words mean and develops an understanding of how to use books and other printed materials appropriately)

Emergent writing: writing-related experiences and actions that occur before a child reaches the conventional *literacy* stage in middle childhood (e.g., a child draws pictures or symbols to represent words)

Environment: the circumstances, objects, or conditions by which one interacts with and is surrounded

Expansion question: question asked in order to extend the thought process of the student (e.g., "what do you think will happen next?")

Expressive language: the ability to communicate with words; refers to what a child says, not how it is said

Fine motor: abilities using the small muscles of the hands (e.g., grasping toys, picking up or holding food, connecting links, lacing, drawing, crushing paper, cutting with scissors, holding a writing utensil)

Functional language: vocabulary used to communicate the description of, use of, or directions pertaining to an item or task (e.g., same/different)

Initiate: to begin something, taking the first step

Intonation: the normal rise and fall in pitch that occurs as people speak. Changes in *intonation* typically occur when certain words are stressed or at the end of sentences (e.g., the upswing when a question is being asked, or the drop that marks the end of a complete sentence or thought)

Language of school: the *vocabulary*, sentence structure, and *content* of language that is a key part of the educational experience

Literacy: the ability to read and write

Manner words: words used to express appreciation, gratitude, or notice of an error (e.g., please, thank you, excuse me)

Music: sound in time that expresses ideas and emotions in significant forms through the elements of rhythm, melody, harmony

Onset: first sound(s) before the *rime* (vowel sound to the end of the word) (e.g., In the word dog, the *onset* is /d/ and the *rime* is "og".)

Oral language: spoken language

Organizational language: vocabulary used to communicate placement of an item and or provides direction towards an item (e.g., in front of, behind, next to, opposite, below)





GLOSSARY

Phonemes: the smallest units of speech distinguished by the speakers of a particular language

Phonological awareness: the awareness that language is composed of sounds and the understanding of the relationships among these sounds

Prediction: an idea (opinion) stated about what may happen in the future (e.g., a child may predict that the caterpillar will turn into a butterfly)

Read alouds: the teacher reading to the whole class, building on students' existing **skills** while introducing different types of literature and new concepts

Recall questions: questions asked of children to prompt them to recount the events of a story or occurrence

Receptive language: the understanding of language that is heard (e.g., a child understands when the teacher says, "It's time to line up.")

Reflection: the process of reviewing and critiquing one's own actions or one's own work (e.g., children share with an adult what they did during **center** time)

Rhyme: a match between the sounds of two or more words or word endings (e.g., spoon, moon)

Rime: the vowel and any sounds that come after the vowel in a one-**syllable** word (e.g., the **rime** of cat is /at/; the **rime** of cheese is /ez/)

Routines: customs or activities regularly practiced at home, in the classroom or in the community

Scaffolding: the provision of sufficient support to promote learning when concepts and **skills** are being first introduced to children (e.g., modeling, giving clues, asking questions and providing verbal prompts)

Skills: the ability to use knowledge effectively and readily in performance, the ability to transform knowledge into action

Syllable: a unit of spoken language consisting of a single uninterrupted sound formed by a vowel, diphthong, or syllabic consonant alone, or by any of these sounds preceded, followed or surrounded by one or more consonants

Vocabulary: all of the words of a language. There are two types of vocabulary: receptive and expressive.



V. MATHEMATICAL THINKING DOMAIN

Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years (24 - 36 months)	3 - 4 years (36 - 48 months)	4 years- Kindergarten (48 months - Kindergarten)
A. NUMBER SENSE					
1. Attends to objects in play, such as reaching or looking for more than one object	1. Attends to quantities when interacting with objects	1. Uses number words or sign language to identify small amounts referring to quantity	1. Subitizes (immediately recognizes without counting) up to two objects	1. Subitizes (immediately recognizes without counting) the number of objects in a set of four objects	1. Subitizes (immediately recognizes without counting) up to five objects
2. Observes songs and finger plays that involve numbers and quantity	2. Communicates using gestures or basic words to refer to change in the amount of objects such as asking for "more" or saying "all gone"	2. Begins to count groups of one and two objects in daily routine	2. Begins to count groups of 1 to 5 objects in daily routine	2. Counts and identifies the number sequence "1 to 10"	2. Counts and identifies the number sequence "1 to 31"
				3. Begins to demonstrate one-to-one correspondence up to 10 during daily routines	3. Demonstrates one-to-one correspondence when counting objects placed in a row (one to 15 and beyond)
				4. Identifies the last number spoken tells "how many" up to five (cardinality)	4. Identifies the last number spoken tells "how many" up to 10 (cardinality)
				5. Counts sets constructed by the teacher to five and beyond	5. Constructs and counts sets of objects (one to 10 and beyond)
				6. Constructs and counts sets of one to five and beyond	6. Uses counting and matching strategies to find which is more, less than or equal to 10
					7. Reads and writes some numerals one to 10 using appropriate activities





V. MATHEMATICAL THINKING DOMAIN					
Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years (24 - 36 months)	3 - 4 years (36 - 48 months)	4 years- Kindergarten (48 months - Kindergarten)
B. NUMBER AND OPERATIONS					
1. Explores objects in hands	1. Notices changes in quantity or missing objects (e.g., looks for a specific toy when noticing that one of three toys is missing)	1. Demonstrates an understanding that "adding to" increases the number of objects in the group	1. Changes size of a set of objects (up to three) by adding and subtracting with adult assistance	1. Explores quantities up to five using objects, fingers and dramatic play to solve real-world joining and separating problems	1. Explores quantities up to eight using objects, fingers and dramatic play to solve real-world joining and separating problems
				2. Changes size of a set of up to five objects by combining and taking away	2. Begins to demonstrate how to compose and decompose (build and take apart) sets up to eight using objects, fingers and acting out
C. PATTERNS					
1. Explores objects with different characteristics	1. Matches objects that have a singular attribute (e.g., color, shape, size)	1. Begins to recognize patterns in the environment (e.g., clap two times)	1. Recognizes patterns in the environment	1. Notices a pattern with a missing object and completes the pattern by filling in the missing object	1. Identifies and extends a simple AB repeating pattern
	2. Explores two objects by making direct comparisons	2. Begins to order three to five objects using one attribute through trial and error	2. Recognizes a simple AB pattern (e.g., clap/snap, clap/snap, clap/snap)	2. Begins to duplicate a pattern from a model	2. Duplicates a simple AB pattern using different objects
					3. Recognizes the unit of repeat of a more complex pattern and extends the pattern (e.g., ABB or ABC)

V. MATHEMATICAL THINKING DOMAIN

Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years (24 - 36 months)	3 - 4 years (36 - 48 months)	4 years- Kindergarten (48 months - Kindergarten)
D. GEOMETRY					
1. Begins to notice shapes in the environment	1. Notices shapes in the environment	1. Begins to match basic shapes	1. Matches basic shapes (circle, square) non-verbally	1. Recognizes and names typical shapes (circle, square, triangle)	1. Recognizes and names two-dimensional shapes (circle, square, triangle and rectangle) of different size and orientation
		2. Begins to sort familiar objects into two groups based on size		2. Matches a wider variety of shapes and orientations	2. Describes, sorts and classifies two and three-dimensional shapes using some attributes such as size, sides and other properties (e.g., vertices)
				3. Explores three-dimensional shapes in the environment through play	3. Creates two-dimensional shapes using other shapes (e.g., putting two squares together to make a rectangle)
					4. Constructs with three-dimensional shapes in the environment through play (e.g., building castles in the construction area)



V. MATHEMATICAL THINKING DOMAIN

Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years (24 - 36 months)	3 - 4 years (36 - 48 months)	4 years- Kindergarten (48 months - Kindergarten)
E. SPATIAL RELATIONS					
1. Explores the properties of objects and watches how they move	1. Begins to use body to demonstrate an understanding of basic spatial directions (up, down, in, out, around and under)	1. Uses body to demonstrate an understanding of basic spatial directions through songs, finger plays and games	1. Begins to demonstrate an understanding of basic spatial directions through songs, finger plays and games	1. Demonstrates an understanding of basic spatial directions through songs, finger plays and games	1. Describes relationships between objects and locations with words and gestures by constructing models to demonstrate an understanding of proximity (beside, next to, between, below, over and under)
2. Explores and experiments with objects and attends to events in the environment (e.g., shaking a rattle or ring of keys)	2. Explores objects with different shapes	2. Begins to manipulate objects by flipping, sliding and rotating to make them fit	2. Manipulates objects by flipping, sliding and rotating to make them fit	2. Demonstrates directionality, order and position of objects by following simple directions	2. Uses directions to move through space and find places in space



V. MATHEMATICAL THINKING DOMAIN

Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years (24 - 36 months)	3 - 4 years (36 - 48 months)	4 years- Kindergarten (48 months - Kindergarten)
F. MEASUREMENT AND DATA					
1. Explores objects in various ways	1. Explores and shows awareness of the size and weight of object with adult assistance	1. Uses appropriate size words or gestures (small, big) to describe objects accurately	1. Uses increasingly complex size words to accurately describe objects	1. Uses size words to label objects	1. Measures object attributes using a variety of standard and nonstandard tools
			2. Compares sets of objects by one attribute (e.g., sort by size)	2. Explores two objects by making direct comparisons in length, weight and size using a single attribute	2. Identifies measurable attributes such as length and weight and solves problems by making direct comparisons of objects
				3. Measures object attributes using a variety of standard and nonstandard tools with adult guidance	3. Seriates (<i>places objects in sequence</i>) up to six objects in order by height or length (e.g., cube towers or unit blocks)
				4. Participates in group sorting and data collection	4. Represents, analyzes and discusses data (e.g., charts, graphs and tallies)
					5. Begins to predict the results of data collection



V. MATHEMATICAL THINKING



Mathematics is everywhere, and it helps children make sense of their world. Children learn by **observing** and interacting with their **environment**, and are naturally curious about number and mathematical concepts. Children’s development of mathematical understanding begins in the very first months of life, and continues growing and expanding as they interact with others and with the world around them. For young children, math is about number knowledge, patterns, size, shape awareness and the relationship between objects and space. Children’s interest in and understanding of math is easily integrated with all areas of learning (e.g., art, **music, literacy**, science, social studies) and can be embedded in daily activities and **routines**. Both planned and incidental learning experiences and discussions support children as they learn about and share their understanding of mathematical concepts.

Here are a few examples of the mathematical thinking concepts from birth to kindergarten. Children may...

- Watch objects on mobiles and reach out to touch and make them move.
- Show preference for a certain toy during tummy time.
- Gather all the round crackers together then sign for “more” when the round ones are gone.
- Hold two fingers up when asked, “How old are you?”
- Comment, “My sister is a baby. She is small. I am big!”
- Sort trucks in the construction area according to size.
- Visit plants on the windowsill and say, “My plant is taller than yours.”
- Match the number of napkins needed to the number of children seated for snack.
- Notice the **pattern** on a leaf while on a nature walk.
- Look at a set and instantly respond, “That’s three.”
- Declare there are now more children since Beatrix and Mannie joined the group.





There are six components in which children demonstrate mathematical skills: number sense, number and operations, **patterns**, geometry, spatial relation, and measurement and data.

1. Number Sense

Number sense is the ability to recognize **quantity**, count and construct sets, identify relationships between numbers and understand how to use numbers in a variety of ways, such as measuring, comparing or estimating. Number sense is something that begins developing early and is an important concept for young children to know, because it provides a foundation for understanding our number system and the basic operations of arithmetic.

2. Number and operations

Number and operations is about exploring quantities and understanding that joining and separating changes the size of sets. It is the foundation for arithmetic, and develops an understanding for what addition, subtraction, multiplication and division mean. Children explore quantities using objects, fingers and **dramatic play** to solve real-world “adding and subtracting” problems. Children need to become comfortable with the idea that the **quantity** of six is not just a collection of ones, but can be thought of instead as a group of two and a group of four.

3. Patterns

Mathematics is the science and language of patterns. A **pattern** is an arrangement of things that are in order and repeated. The sun setting at the end of the day, going to Grandma’s house for dinner on Sunday, and knowing that snack comes after **center** time are a few of the ways children experience patterns in their daily lives. Babies learn patterns from a predictable caregiver: “When I cry, I am comforted and my needs are met.” Noticing and thinking about patterns help children make sense of mathematics. “...if children see patterns in their world and connect them to mathematics, they are better able to remember what they have learned and transfer the knowledge to new situations” (Copley, 2009 pg. 85).

4. Geometry

Geometry is a natural and intuitive part of mathematics. Children understand the spatial world by knowing shape, structure, location and transformation of objects in space (Copley, 2009 pg. 99). From birth, children learn to make sense of forms and shapes as they explore and learn about their world. Young children sort, match, and classify objects, often by shape. These **skills** help children become aware of the **characteristics** of shape, and how shapes are alike and different from one another. Children can recognize shapes, but they may not yet understand the qualities that make it THAT shape. Asking questions like, “What makes a **circle** a **circle**?” or “How is a **square** different from a **triangle**?” helps children learn the **attributes** of two-and three-dimensional shapes.





5. Spatial relations

Understanding spatial relations begins at birth. Infants are learning to reach for and then grasp objects that are dangled in front of them, tossed to the side or that have fallen down from a chair. Toddlers are crawling, cruising or walking to reach a toy, to negotiate a path through the daycare room to rush over to Daddy at pick-up time, or to retrieve a stuffed animal from under the table. By the time they are preschoolers, not only can children easily locate items or decide how best to get from here to there, they also have begun to represent space by describing relationships between objects and locations with words and gestures, and by drawing maps and constructing models (*Early Math Collaborative, 2014*).

Children develop spatial **vocabulary** as they hear position words when educators give directions or narrate and have children demonstrate the actions during play. For example, when on the playground say, “I see that Tonya is *at the top* of the slide. She is *above* us, we are *below* her!”

6. Measurement and Data

Measurement is a way to compare things and make judgments about the **characteristics** of an object. Children love exploring and making sense of the world through measurement. They learn to understand measurement by first recognizing that objects have measurable properties such as, “How long is my bead snake?” or “How heavy is the slide?” and then make comparisons using terms such as shorter than, longer than, higher than, etc. (Copley pg. 119). As children become more skilled at sorting based on **attributes** (e.g., type, color, shape) they are ready for experiences that help them learn ways to categorize information using charts and graphs. Over time with many opportunities and teacher support, they will begin making observations and using comparative **vocabulary** to describe differences between things.

ENVIRONMENTAL CONSIDERATIONS

4 YEARS - KINDERGARTEN

(48 months - Kindergarten)

- ▲ Provide many types of manipulatives children can use for counting and set-making (e.g., small toy animals in the block area, collage materials in the art area).
- ▲ Create an area in the classroom to display comparison charts and pictures.
- ▲ Display and use positional and ordinal words in the **environment**.
- ▲ Provide opportunities and materials for children to write or draw about their mathematical creations in the math **center**.
- ▲ Create opportunities for children to practice mathematical skills during transitions (e.g., ask each child to point to a shape in the classroom before moving to centers).



V. MATHEMATICAL THINKING

A. NUMBER SENSE



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Subitizing is the ability to instantly see **quantity** without counting. Children are born able to recognize quantities up to five without using any learned mathematical knowledge. Research suggests that children’s ability to subitize precedes their ability to count. Usually children are able to perceptually subitize quantities up to their age (e.g., a 4-year-old can subitize up to four objects). Children will demonstrate their ability to subitize when provided opportunities through teacher **planning** and guidance.

STANDARD 1.

Subitizes (immediately recognizes without counting) up to five objects

Children may...

- Notice that there are three children standing together on the playground.
- Instantly respond, “That’s three,” when shown a **set** of objects.
- Recognize a **set** of tallies on a data chart as four before counting them.
- Look at their snack and quickly respond, “I have five cookies on my napkin.”

Educators may...

- Point out that there are three names under January on the birthday chart.
- Create a game during small group using a **set** of objects and a cover cloth (e.g., display a **set** of objects in front of a child and quickly cover them, then ask, “How many are under the cloth?”).
- Ask the class to quickly tell how many children are gathered in front of the room as they prepare to act out a nursery rhyme (up to five).
- Ask a child to quickly tell you how many nuggets are on their plate during lunch (up to five).
- Provide materials such as dominoes, dice and ten-frames for children to use in centers.

Families may...

- At the store, ask children to find one orange, two apples and three bananas. As children bring them to the cart, have the children count out each item one by one. Take one of the items out and ask children how many are now left.
- Ask for children’s help in distributing items like snacks, or in laying napkins out on the dinner table (e.g., one napkin per plate).
- Play a game with children by displaying a **set** of three or four objects on the table. Tell the child to look, then cover objects with your hand or cloth and quickly ask, “How many are under the cloth?”



V. MATHEMATICAL THINKING

A. NUMBER SENSE



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

As they become more skilled at verbal/rote counting, 4-year-olds are beginning to understand that numbers represent **quantity**. Most 4-year-old children can count numbers orally up to 10. As 4-year-old children begin understanding the concept of a **pattern**, they can also begin recognizing patterns that occur in counting. Numbers from one to 12 must be memorized, since there is no **pattern**. Numbers thirteen through nineteen have a **pattern** (13=3 & 10, 14=4 & 10...), but it is opposite of the **pattern** used after 19 (20=2 & 10, 21=20 & 1...). Children begin understanding the **pattern** that can help them count larger quantities later, so counting through at least 31 shows they are beginning to understand the **pattern** of how numbers grow.

STANDARD 2.

Counts and identifies the number sequence "1 to 31"

Children may...

- Count aloud through at least 31, with educator support and multiple experiences over time.

Educators may...

- Count with children as they string objects (e.g., cereal beads) through a hole, counting through 31.
- Incorporate counting books (purchased or made along with children) into the classroom and classroom activities.
- During small group or **center** time, provide materials for children to count through 31, with educator support (e.g., large pegboards and a lot of pegs).

Families may...

- Play number games with children by rolling dice or use a number card, move that many spaces.
- Use numbers to make shopping lists together.





V. MATHEMATICAL THINKING

A. NUMBER SENSE



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four-year-olds can demonstrate their knowledge of **one-to-one correspondence** while counting and comparing objects. Children this age enjoy helping out in the classroom (e.g., handing out a napkin to each child at snack time or passing a rest mat out to each child), and these types of activities help them gain further understanding of **one-to-one correspondence**. They are learning that numerals represent a number of objects (e.g., the **numeral** three represents three cookies) and need practice with concrete materials to reinforce this skill. At the same time, they can count many objects using **one-to-one correspondence**, though they may still count an object more than once.

STANDARD 3.

Demonstrates **one-to-one correspondence** when counting objects placed in a row (one to 15 and beyond)

Children may...

- Say they will need more hangers while hanging a pile of shirts, given the number of shirts remaining in the pile.
- Count two groups of (e.g., children, coins, crayons) to determine if they are equal.

Educators may...

- Provide materials to use for one-to-one matching activities (e.g., pegs and peg boards, nuts and bolts).
- At snack time, assist children in counting napkins and snacks to see if the two sets are equal.
- In the **dramatic play center**, provide children with an equal number of doll dresses and dolls. Ask children if there are enough dresses to clothe the dolls.
- Model counting sets of concrete objects (e.g., blocks in a tower or bears in a row).

Families may...

- Provide many types of objects and toys that children can manipulate for counting.



V. MATHEMATICAL THINKING

A. NUMBER SENSE



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Children count in order to find out “how many” are in a collection of objects. As children participate in planned and meaningful counting opportunities they learn names and sequence of numbers and practice **one-to-one correspondence**. Through these authentic counting experiences, children will develop **cardinality** (i.e., they will know and understand that the last number counted represents the number of objects in the collection).

STANDARD 4.

Identifies the last number spoken tells “how many” up to 10 (**cardinality**)

Children may...

- Count the number of markers on the table and say, “We have five markers to use today.”
- Count the number of plants on the window sill and say, “We have eight plants growing in cups.”
- Count each girl on the rug and announce, “There are 10 girls here today.”

Educators may...

- Say, after counting tallies on a chart, “There are three tally marks that represent those who like green apples.”
- Say, after counting the children, “Five children raised their hand when I asked if you would like to play in the drama **center**.”
- Ask a child to count the number of boys on the rug, then ask, “How many boys are on the rug?”
- Ask a child to tell “how many” after counting the blue bugs in a game.
- Ask a child, “How do you know there are 10 girls on the rug?”

Families may...

- Find authentic reasons to count things around the house and outdoors. Remember to ask the question, “How many?” once the **counting sequence** is complete.
- Gather together a basket of small toys, shells, pebbles or buttons and count them with children. Sort them based on size, color or what they do (e.g., all the cars in one pile, all the animals in another).

Environmental considerations...

- Remember, it is not as important to have children rote count to 100 every day as it is to provide authentic reasons to count. Some children will need many, meaningful opportunities to count using number words, and practice the number sequence up to 10, before they will be able to demonstrate **one-to-one correspondence** and **cardinality**.



V. MATHEMATICAL THINKING

A. NUMBER SENSE



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Children demonstrate a good sense of numbers and understanding **quantity** by successfully using **one-to-one correspondence** and knowing that the last number named when counting represents the total number of objects (**cardinality**). Children demonstrate their understanding of **cardinality** by constructing sets (i.e., they are able to construct or put together a **set** of objects from a given number). For example, the teacher tells the snack helper the child needs six cups. The child counts out the cups and knows when there is a **set** of six. Therefore, the child “constructed,” or put together, a **set** of six.

STANDARD 5.

Constructs and counts sets of objects (one to 10 and beyond)

Children may...

- Decide that three boats are needed at the water table, then get them from the toy box.
- Throw a die during a board game and move the number displayed.
- Count the correct number of items for a serving during snack time (e.g., the teacher says, “Everyone may have five crackers for snack today.”).

Educators may...

- Play a board game during small group and demonstrate how to count the number on the die to determine the number of spaces to move.
- Tell the playground helper to get six balls from the equipment room.
- Ask a child to hop 10 times to the door when lining up.
- Ask a child to get eight blocks from the block shelf to complete a structure.

Families may...

- At the store, ask children to find one orange, two apples and three bananas. As children bring them to the cart, have the children count out each item one by one. Take one of the items out and ask children how many are now left.
- Ask for children’s help in distributing items like snacks, or in laying napkins out on the dinner table (e.g., one napkin per plate).

Environmental considerations...

- Constructing sets engages children in meaningful counting experiences using concrete objects found in the classroom or outdoors. Be sure to start with small numbers (up to five objects) when asking children to construct sets. Then, later in the year when children have a good understanding of the concept, use higher numbers up to 15.





V. MATHEMATICAL THINKING

A. NUMBER SENSE



4 YEARS - KINDERGARTEN *(48 months - Kindergarten)*

With the ability to count 10 objects, children can build on the concept by counting two different **sets** of objects and determining which **set** has more, which has fewer, or if the two **sets** are equal. Four-year-olds are just learning that the next number in the **counting sequence** is one more than the number just named, and continue to explore the meaning of “more” and “fewer.”

STANDARD 6.

Uses counting and matching strategies to find which is more, less than or equal to 10

Children may...

- Observe that one child has fewer popsicle sticks than another child.
- Recognize that one group of children has fewer than another.
- Say that there are more markers in one box than another.
- Recognize that one child has more cotton balls than another.

Educators may...

- During large-group time, include opportunities to compare two sets of objects for children to compare.
- Go on a nature walk with the children and collect small objects that can be used to create and compare two sets, and to determine if the sets are equal (e.g., acorns, pine cones, small sticks and rocks).

Families may...

- Gather together a basket of small toys, shells, pebbles or buttons and count them with children. Sort them based on size, color or what they do (e.g., all the cars in one pile, all the animals in another).



V. MATHEMATICAL THINKING

A. NUMBER SENSE



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

As 4-year-olds learn about counting objects, they begin assigning number words to numerals and sets. These number words add to the children's expanding **vocabulary** with daily exposure to counting sets and objects through meaningful experiences.

STANDARD 7.

Reads and writes some numerals one to 10 using appropriate activities

Children may...

- Count each object in a group of objects on a flannel board to determine the total number of objects and then place the correct **numeral** (written) next to the group.
- Point to each block in a tower and assign a number to each block to determine the total number of blocks.
- Write some numbers on a pad while playing store in the **dramatic play center**.

Educators may...

- Incorporate counting into everyday activities (e.g., counting the number of boys and the number of girls and then identifying which **numeral** [written] represents that amount).
- Model counting and using the appropriate number names [spoken] for the children during everyday activities (e.g., counting napkins for each during snack time).
- Provide writing/drawing materials in the **dramatic play center** where children may write numerals when playing store.

Families may...

- Gather together a basket of small toys, shells, pebbles or buttons and count them with children. Sort them into groups of 10 or fewer based on size, color or what they do (e.g., all the cars in one pile, all the animals in another).





V. MATHEMATICAL THINKING

B. NUMBER AND OPERATIONS



4 YEARS OLD - KINDERGARTEN (48 months - Kindergarten)

Once children have had opportunities to count meaningfully and accurately, as well as explore and discuss more, less than and equal to, they will begin noticing that sets are changed when joining (adding) objects together or separating (subtracting) objects from sets. Their understanding of counting will help them determine how many more or how many fewer objects are in the **set**.

STANDARD 1.

Explores quantities up to eight using objects, fingers and **dramatic play** to solve real-world joining and separating problems

Children may...

- Notice that they have only three crackers on their snack plate after eating two.
- Declare that there are now more crayon tubs since the teacher added two new tubs to the art area.
- State that there are now eight animals on the farm after a friend adds four horses to the pen.
- Comment that there are fewer babies since Marsha took two.
- Retell the "Five Green and Speckled Frogs" rhyme using flannel pieces in the library **center**, and notice there are fewer frogs on the log each time on jumps in the pond.

Educators may...

- Involve children in acting out the "Gingerbread Man" story, demonstrating that as each character joined the chase, the number chasing the gingerbread man grew. As each character left the chase, the number chasing him became smaller.
- Assist children in the **dramatic play center** in joining and separating (e.g., "What happens to the set of three bowls when we add two more bowls?" or, "What happens when Marsha takes two babies from the six babies in the cradle?").
- Teach songs and finger plays that demonstrate characters leaving or joining a **set** (e.g., "Five Green and Speckled Frogs," "Five Little Monkeys Sitting in a Tree," etc.).

Families may...

- Sing and act out games that demonstrate how sets increase and decrease. Adding and subtracting will evolve and be stronger if children have many opportunities to play and explore quantities.

Environmental considerations:

- There are many literature books that can be used to support mathematical thinking concepts. When choosing a book to demonstrate a math concept, be sure to read the story many times so the children are familiar with the story before focusing on math concepts.



V. MATHEMATICAL THINKING

B. NUMBER AND OPERATIONS



4 YEARS OLD - KINDERGARTEN (48 months - Kindergarten)

Any whole number can be represented in parts (e.g., the **quantity** of six is not just a collection of ones, but can be thought of as a group of two and a group of four or a group of three and three, or one and five, etc.). Educators need to provide planned opportunities that help children recognize part-whole relationships. These experiences create a strong foundation for children when tackling more advanced addition and subtraction problems.

STANDARD 2.

Begins to demonstrate how to compose and decompose (build and take apart) sets up to eight using objects, fingers and acting out

Children may...

- Use their fingers to show how many frogs are on the log, and how many jumped in the pool.
- Draw several pictures that show a different number of frogs on the log and in the pond.
- Declare after playing the chip game, "There are always six chips!"

Educators may...

- Point out that there are four girls and four boys at school today, making eight children altogether.
- After repeating the "Five Green and Speckled Frogs" song many times, create a book asking each child to draw a picture of frogs on the log and in the pool, demonstrating multiple combinations of the number five.
- Play the chip game during small group by using two-sided chips and a cup. Children toss six chips out of the cup, then place them in two groups according to the colors displayed. Teacher asks, "How many chips do you have in each group? How many all together?" Children toss the chips from the cup multiple times while the teacher asks the same questions. The learning goal is for children to notice that no matter how many times the chips are tossed and the different combinations are displayed, there are still six chips all together.

Families may...

- Take a walk with children, providing opportunities to compare (which stone is bigger?), assess (how many acorns did we find?), note similarities and differences (does the duck have fur like the bunny?) and categorize (see if you can find some red leaves). Families can also talk about size (by taking big and little steps), estimate distance (is the park close to our house or far away?) and practice counting (let's count how many steps until we get to the corner).



V. MATHEMATICAL THINKING

C. PATTERNS



4 YEARS OLD - KINDERGARTEN (48 months - Kindergarten)

Patterns are all around us and they introduce children to order in the world. Thinking about patterns help children see relationships between objects. Patterns are predictable sequences governed by a rule. The rule is the unit of repeat (e.g., for this AB repeating **pattern**: clap/snap, clap/snap, clap/snap the unit of repeat is “clap/snap”). Educators support children in understanding patterns by providing a simple AB repeating **pattern** and asking children to identify and extend the **pattern**. It is important for the model **pattern** to contain at least three units of repeat (e.g., clap/wave, clap/wave, clap/wave...) in order for the **pattern** to be identifiable.

STANDARD 1.

Identifies and extends a simple AB repeating **pattern**

Children may...

- Identify a repeating **pattern** and say, “A boy goes next,” as the class lines up boy/girl, boy/girl, boy/girl...
- Identify and repeat a **pattern** seen on a friend’s shirt: “Sam has red/green; red/green; red/green stripes on his shirt.”
- Extend an AB clapping **pattern** before going to a **center**.
- Copy and extend a simple AB **pattern** displayed at the math **center**.

Educators may...

- Point out repeating patterns around the room (e.g., “Tanisha has black/white, black/white, black/white stripes on her dress today. See how it keeps going?”).
- Demonstrate a simple AB **pattern** (e.g., clap/wave; clap/wave; clap/wave; ...) and ask each child to keep the **pattern** going as they transition to a **center**.
- Model a sound **pattern** with musical instruments and ask children to repeat the **pattern** with their instruments, and keep it going.
- Display a simple AB **pattern** during small group, and ask children to copy and extend the **pattern**.

Families may...

- Have children collect items like rocks and leaves on a walk. Arrange them in a **pattern** such as one rock, two leaves, one rock, two leaves. Then mix them up and ask children to recreate the **pattern**. Can they remember the order? Have children take a turn making a simple **pattern** for the adult to remember.
- Prepare a **pattern** during playtime using a muffin tin or an empty egg carton. Look for things that can fit inside each hole, like pen caps. Make a **pattern**, like one red cap in a hole, then two blue caps in another, then another red cap. Then give the caps to children. Can they match the **pattern**?

Environmental considerations...

- Note the use of “AB” to describe a simple repeating **pattern** is for educators’ use only. Children are just beginning to learn about letters and sounds and it would be confusing for children if actual letters “AB” were used to represent a **pattern**.



V. MATHEMATICAL THINKING

C. PATTERNS



4 YEARS OLD - KINDERGARTEN (48 months - Kindergarten)

As children become comfortable with extending a simple AB **pattern**, the next step is to help them see the structure of the **pattern** (i.e., how the objects are arranged, names the **pattern**). Once they identify the structure (AB) they are able to duplicate it using different objects (e.g., an educator may display a simple AB **pattern** then ask the children, “Can you make this **pattern** another way?” Children recognize the unit of repeat [e.g., tall/short, tall/short, tall/short. . .] then duplicates the structure [AB] using different objects [e.g., bug/spider, bug/spider, bug/spider. . .]).

STANDARD 2.

Duplicates a simple AB **pattern** using different objects

Children may...

- Duplicate an AB **pattern** displayed in the math area, using different objects.
- Listen to a clapping **pattern** and repeat the **pattern** with stomps.
- Notice a **pattern** on a shirt then make the **pattern** another way (e.g., shirt **pattern** is stripes, child makes a circle/star **pattern**).

Educators may...

- Display an AB **pattern** during small groups and ask, “Can you make this **pattern** another way?” (be sure to include a variety of material).
- Model a clapping **pattern** (clap one time, clap two times. . .), then ask a child to duplicate the **pattern** another way (e.g., stomping, nodding, snapping, tapping nose, etc.).
- Create a “people **pattern**” with children (e.g., boy/girl, boy/girl, boy/girl) in front of the rug and ask someone to make the **pattern** another way (e.g., long hair/short hair; dress/shorts; etc.).

Families may...

- Have children collect items like rocks and leaves on a walk. Arrange them in a **pattern** such as one rock, two leaves, one rock, two leaves. Then mix them up and ask children to recreate the **pattern**. Can they remember the order? Have children take a turn making a simple **pattern** for the adult to remember.
- Prepare a **pattern** during playtime using a muffin tin or an empty egg carton. Look for things that can fit inside each hole, like pen caps. Make a **pattern**, like one red cap in a hole, then two blue caps in another, then another red cap. Then give the caps to the children. Can they match the **pattern**?

Environmental considerations...

- When **planning** activities for duplicating patterns using different objects, use concrete materials that children can manipulate (not worksheets). Also, keep in mind the color, size and shape of the materials. It may be confusing at first for children to recognize a **pattern** that has more than one attribute.



V. MATHEMATICAL THINKING

C. PATTERNS



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

After children have many opportunities to identify, copy, reproduce and extend simple AB patterns, they are ready to explore more complex patterns (e.g., ABB or ABC). Children who are able to notice the rule (i.e., unit of repeat), and “read” the **pattern** by saying, “I know the **square** comes next because...” are becoming efficient **pattern** detectives. Children who are never asked to identify the rule of patterns will have difficulty extending patterns, especially as they become more complex. Extending complex patterns will emerge towards the end of the preschool year.

STANDARD 3.

Recognizes the unit of repeat of a more complex pattern and extends the **pattern** (e.g., ABB or ABC)

Children may...

- Recognize an ABB **pattern** model displayed in the math area, and extend the **pattern**.
- Extend an auditory ABC pattern, then transition to a **center** (e.g., clap/snap/pat, clap/snap/pat, clap/snap/pat, clap/snap/pat).
- Read a **pattern** displayed on the flannel board and extend the **pattern** (e.g., banana/apple/orange; banana/apple/orange; banana/apple/orange).

Educators may...

- Provide an ABB **pattern** and ask children to extend it.
- Play auditory games beginning with two-part patterns, then increasing complexity (e.g., clap/snap/pat, clap/snap/pat, clap/snap/pat [ABC]).
- Display a **pattern** and challenge children to recognize the unit of repeat and extend the **pattern**.
- Design a “people **pattern**,” having the children line up boy/girl/girl, boy/girl/girl, boy/girl/girl (ABB), and ask a child to extend the **pattern**.

Families may...

- Have children collect items like rocks and leaves on a walk. Arrange them in a **pattern** such as one rock, two leaves, one rock, two leaves. Then mix them up and ask children to recreate the **pattern**. Can they remember the order? Have children take a turn making a simple **pattern** for the adult to remember.
- Prepare a **pattern** during playtime using a muffin tin or an empty egg carton. Look for things that can fit inside each hole, like pen caps. Make a **pattern**, like one red cap in a hole, then two blue caps in another, another red cap. Then give the caps to children. Can they match the **pattern**?



V. MATHEMATICAL THINKING

D. GEOMETRY



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four-year-olds can sort and name shapes by recognizing and exploring them through daily life experiences, both at home and in school. As children become more familiar with shapes, they begin analyzing details (e.g., how many sides each shape has), and can construct shapes. With educator guidance, children will understand that a shape always remains the same, regardless of how it is positioned.

STANDARD 1.

Recognizes and names two-dimensional shapes (**circle**, **square**, **triangle** and **rectangle**) of different size and orientation.

Children may...

- Place the correct shape in its container.
- Sort cutout shapes into groups, and describe the way they have sorted the shapes (e.g., by color, shape, number of sides, texture).
- Put blocks away by size and shape.
- Make shapes using popsicle sticks.
- Notice the shape is a **triangle** when turned in different ways.

Educators may...

- Create a large **circle**, **square** and **triangle** on the floor out of string or masking tape; instruct children to find examples of those shapes and place them inside the appropriate large shape on the floor.
- Provide clay and other materials (e.g., popsicle sticks, clay, toothpicks, straws, etc.) with which children can create shapes.
- Create a class shape book using photos of children making shapes on the floor.
- Demonstrate flipping, sliding and rotating a shape, stating that it remains the same shape no matter which way it is flipped.

Families may...

- Provide clay and other materials (e.g., popsicle sticks, clay, toothpicks, straws, etc.) with which children can explore and create shapes.
- When setting the table for a meal, encourage children to think of different ways to fold napkins or paper towels to make different shapes and sizes by saying, "What shapes can you make? What does this shape look like? What would happen if you kept folding the corners down?"

Environmental considerations...

- A shape always remains the same shape and keeps the same name regardless of how it is positioned, unlike letters (b, d) and numerals (6, 9).



V. MATHEMATICAL THINKING

D. GEOMETRY



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four-year-olds can sort and name two-and three-dimensional shapes through their daily life experiences, and rich hands-on play, especially in the block area. Intentional educators plan a variety of materials and activities for children to describe (e.g., “That’s a **triangle** because it has three sides and three angles.”), sort and classify (e.g., “I put all of the rectangles together.) shapes during small groups, in centers and outside.

STANDARD 2.

Describes, sorts and classifies two-and three-dimensional shapes using some **attributes** such as size, sides and other properties (e.g., vertices)

Children may...

- Use two-dimensional cut-outs to make a shape picture and say, “My house is a **square** and the roof is a **triangle**.”
- Notice the wheel on the tricycle and say, “That is round like a **circle**.”
- Sort objects in the shape area and say, “This is a **cube** and it has squares on. It will go in the crate.”

Educators may...

- Introduce children to three-dimensional shapes through everyday experiences by asking them to bring in boxes, cans, etc., for the grocery store **center**.
- Label three-dimensional shapes in the classroom, and describe how they are the same and different.
- Play the shape game; collect a variety of two-dimensional shapes, and place them in the bag for children to feel and describe before pulling them.
- Create a “3-D museum” where children bring in a variety of three-dimensional shapes to display.

Families may...

- Provide children opportunities to play with wooden blocks, plastic interlocking blocks, empty boxes, milk cartons, etc. Stacking and manipulating these toys helps children learn about shapes, and the relationships between them.

Environmental considerations...

- Be sure all objects children may provide for the 3-D museum are safe for children to play with. Some may be too small or have sharp edges. Provide rules for the **center** and monitor the area.



V. MATHEMATICAL THINKING

D. GEOMETRY



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

As children explore shapes and learn the names of two-dimensional shapes, they will begin noticing that some shapes are made of other shapes (e.g., when looking at a diamond [**rhombus**], a child may notice that it can be made from two triangles). When children have multiple opportunities to explore shapes, they begin to understand the **characteristics** that make shapes.

STANDARD 3.

Creates two-dimensional shapes using other shapes (e.g., putting two squares together to make a **rectangle**)

Children may...

- Notice during snack that two, **triangle**-shaped crackers can go together to make a diamond.
- Explore with tangrams and tell a peer, "Two of my squares can fit into your **rectangle**."
- Trace around a shape in different orientations in the shape journal to make a different shape (e.g., octagon, **trapezoid** or **rhombus**).

Educators may...

- Create a shape journal for each child to use as they learn.
- Cut out a variety of two-dimensional shapes (e.g., circles, squares, triangles, rectangles, etc.) from construction paper. During small group, discuss the **attributes** of each shape while children make shape pictures.
- Provide shapes (e.g., tangrams or parquetry blocks) in the math **center**, and encourage children to explore fitting shapes inside other shapes.
- Include tangram puzzles as children begin discovering how shapes fit into shapes.
- Make a class quilt using small shapes to make a bigger shape.

Families may...

- Cut a cereal box into different shapes. Children can put them together in different ways to make different things, or sort shapes by how many sides they have.

Environmental considerations...

- Include an abundance and variety of shape cut-outs for children to make shape pictures. Provide plenty of time for children to create, and remember to display, shape pictures.





V. MATHEMATICAL THINKING

D. GEOMETRY



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

The block **center** provides many opportunities for children to explore three-dimensional shapes. Manipulating geometric solids helps children learn geometric concepts. The flat faces of three-dimensional shapes are also two-dimensional shapes. Children enjoy exploring and making simple structures, then progressing to make representations of actual structures, such as towers, houses, roads and bridges, etc.

STANDARD 4.

Constructs with three-dimensional shapes in the **environment** through play (e.g., building castles in the construction area)

Children may...

- Build a structure using a variety of blocks, then ask the teacher to take a picture.
- Construct a city in the sandbox using the large, outside blocks.
- Draw the structure he created in a shape journal.

Educators may...

- Encourage children to build structures using a variety of blocks (e.g., castles, train station, big city, etc.) which can be left in place over time.
- Provide a variety of **recycled** materials (e.g., plastic containers, boxes, cans, paper towel rolls, etc.) for children to create shape monsters.
- Provide a variety of architectural type pictures and books for children to explore in the construction area.

Families may...

- Give children opportunities to play with wooden blocks, plastic interlocking blocks, empty boxes, milk cartons, etc. Stacking and manipulating these toys helps children learn about shapes and the relationships between them.

Environmental considerations...

- Add a variety of materials such as straws, pipe cleaners, scarves, textured paper, stickers, feathers, glue and tape to the construction area for children to use as they create a structure. It is important that children have plenty of room and plenty of time to create, as well as sufficient time for displaying their creations.



V. MATHEMATICAL THINKING

E. SPATIAL RELATIONS



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Spatial awareness is the ability to be aware of oneself in space in relationship to something else. Understanding relationships between objects and locations is crucial for a 4 year-old's ability to communicate and understand others. Concepts of **spatial sense** and **vocabulary** development are closely connected. As 4-year-olds continue developing a sense of their position in relation to objects and people around them, they are increasingly able to describe their position using language. They can understand "in front of," "behind," "under," and "above," and are beginning to use these and other positional words in conversations with peers and adults.

STANDARD 1.

Describes relationships between objects and locations with words and gestures by constructing models to demonstrate an understanding of proximity (e.g., beside, next to, between, below, over and under)

Children may...

- Identify a friend's location when asked by the teacher.
- Use positional words to ask for something (e.g., "May I get the blocks that are on top of the shelf?").
- Accurately tell friends where to place objects, using positional words (e.g., "Put the blocks beside the linking cubes.").
- Build enclosed block structures then put animal figures "inside the zoo cages."

Educators may...

- Ask children where a specific object is, and prompt them to use positional words in their answers.
- Arrange doll furniture in a doll house and describe what they are doing (e.g., "I am putting the bed next to the rocking chair.").
- Encourage children to use positional words when giving directions to each other (e.g., "Walk behind me.").

Families may...

- Play games directing children to jump forward and back, to run far from you or stay nearby.
- Use songs with corresponding movements to teach concepts like in and out, up and down and round and round.



V. MATHEMATICAL THINKING

E. SPATIAL RELATIONS



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

As 4-year-olds continue developing a sense of their position in relation to objects and people around them, they are increasingly able to describe their position using language. They will understand directional words and phrases (e.g., Patti, please put your coat on the bottom hook."). Many planned opportunities support 4-year-olds in being able to understand and use directional language.

STANDARD 2.

Uses directions to move through space and find places in space

Children may...

- Tell a friend that they hid the treasure behind the wagon.
- Explain that they are below the slide and their friend is at the top.
- Use directional words to tell a new classmate how to get to the playground.

Educators may...

- Create obstacle courses inside and outside that involve moving in different locations and directions.
- Play directional games that require children to find places in space (e.g., put the block on the top shelf) or "Doggie, Doggie, where's the bone?"
- Read *Rosie's Walk* by Pat Hutchins and have children draw pictures or act out the story (e.g., Rosie walked through the barnyard, over the haystack, etc.).

Families may...

- Create an obstacle course inside or outside that involves children moving in different locations and directions.



V. MATHEMATICAL THINKING

F. MEASUREMENT AND DATA



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Measurement is an important area of investigation for young children. They actively participate in measuring things, and often wonder how far away something may be, or how much longer or taller as they make comparisons with their friends. We hear children declare, “I am taller than Mary,” “This table is longer than the one in the library corner” or “Hiam needs a bigger container for his rocks.” Children love using rulers, large tape measures and balance scales, but they can also use their hands, string or a shoe to measure. Both child-initiated and adult-led experiences support the *exploration* of measurement.

STANDARD 1.

Measures object *attributes* using variety of standard and nonstandard tools

Children may...

- Measure the height of a table and a book using linking cubes to see how tall each is and note which is taller or shorter;
- Use measuring cups and spoons in the sand box to count how many scoops it takes to fill a bowl.
- Measure the length of the rug using blocks, and say the rug is, “14 blocks long!”
- Cut a piece of string and find items around the room that are the length of the string.
- Experiment with the balance scale to decide which is heavier—the rocks or the acorns.

Educators may...

- Plan activities for children to use nonstandard tools to measure items around the room (e. g., linking cubes, paper clips, shoe, yarn, blocks).
- Plan activities outside for children to measure the distance between objects (e.g., walking heel to toe from the sidewalk to the slide, or counting the number of hops between the swing and slide).
- Measure children’s height on a wall chart monthly and talk about how much each child grows from month to month.
- Provide a variety of standard measuring tools for children to use as they explore measurement (e.g., rulers, yard sticks, balance scale, measuring cups and spoons, etc.).

Families may...

- Use nonstandard measuring tools, including paper strips, straws, pieces of yarn and plastic spoons and cups.
- When outside, start a fun game with children by giving them a place to stand and have them guess how many steps they are from you. When they walk back, have them count their steps aloud. Try different distances.



V. MATHEMATICAL THINKING

F. MEASUREMENT AND DATA



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Children build their understanding of measurable **attributes** by looking at, touching or directly comparing objects (e.g., a child may look around and declare that Mary is the tallest in the room). Educators support children in recognizing measurable **attributes** through conversations. “How do you know Mary is the tallest?” or, “How can we find out if Mary is the tallest?” These thinking questions pose situations for children to explore and solve. Young children build their knowledge about measurement as they describe objects, compare them and order them by different **attributes**.

STANDARD 2.

Identifies measurable **attributes** such as length and weight and solves problems by making direct comparisons of objects

Children may...

- Accurately use measurement **vocabulary** (e.g., length, height, weight) and comparative terminology, such as biggest, smallest, shortest, heaviest.
- Measure a friend’s height and the height of a tricycle using paper chain links and say, “You are 16 links and the tricycle is 11 links tall. You are taller than the tricycle.”
- Eagerly discuss ways to find out if the new table will fit into the art area.

Educators may...

- Use open ended questions when discussing measurement (e.g., “I wonder how many blocks we need to stack to make our tower as tall as the bookshelf?”).
- Encourage two boys to make a comparison when one declares, “I am the tallest between me and Aron!”
- Provide a balance scale and items for children to weigh and use measurement **vocabulary** to describe which is heavier or lighter.
- Explain that they are getting a new table for the art area, and pose the question: “How will we know if it will fit?”

Families may...

- If near water (e.g., a pond, river or the sea), skip rocks into the water, talking back and forth about how differences in the shapes and sizes of the rocks affect how they skip. If near a big puddle, families can do a similar experiment with rocks, sticks or leaves.

Environmental considerations...

- Young children construct measurement concepts over an extended period, so it is important for adults to slow down the process, allowing time for children to explore, experiment and discover their world through measurement.



V. MATHEMATICAL THINKING

F. MEASUREMENT AND DATA



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Seriation is the ability to arrange objects in a logical sequence or order according to size. Simple **seriation** involves arranging concrete objects like blocks from shortest to longest. **Seriation** skills are related to more complex math concepts such as ordination or placing numbers in the correct order (e.g., 1, 2, 3). Well-developed **seriation skills** help children learn higher order thinking and **problem-solving skills**. Children need many planned opportunities to sort, compare and order objects.

STANDARD 3

Seriates (places objects in sequence) up to six objects in order by height or length (e.g., **cube** towers or **unit** blocks)

Children may...

- Place bowls in the kitchen **center** in increasing order according to size (e.g., small, medium, large).
- Retell the story of *Goldilocks and the Three Bears* as the bears, bowls, chairs and beds are placed in order on the flannel board.
- Sort, compare and order objects according to **attributes** of size (e.g., tall, taller, tallest).
- Verbalize why objects were placed in order (e.g., "This one goes first because it is the smallest, then this one because it is a little bit bigger, etc.").

Educators may...

- Guide children to find objects indoors and outdoors to place in increasing order according to size (e.g., shoes, blocks, plastic bottle tops, books, cars, leaves and shells).
- Read *Goldilocks and the Three Bears* and use the **seriation vocabulary** – small, medium and large, to match baby bear, mama bear and papa bear.
- Model appropriate math language as objects are placed in increasing order (e.g., tall, taller; short, shorter, shortest; small, medium, large).
- Use **seriation** language as children are placed in order by their height (e.g., "Joshua is taller than Tyron, so he will go after Tyron in line.").

Families may...

- Provide fun experiences at home by asking children to sequence containers of food, such as cereal boxes or canned goods, found in the kitchen cabinets. Begin with three-four items and increase up to six items as children are able to order the items and describe the arrangements they have made according to size.



V. MATHEMATICAL THINKING

F. MEASUREMENT AND DATA



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

As children become more skilled at sorting based on **attributes** (e.g., type, color, shape), they are ready for experiences that help them learn ways to categorize information (e.g., charts and graphs). Data analysis includes collecting of information and then organizing and representing the information in some way that makes comparison and generalization possible. The purpose of collecting data is to answer questions when answers are not immediately obvious (e.g., a class project may begin with the question, “What blocks do we want to buy for our block corner?” Children first collect and sort the blocks to determine how many-different shaped blocks they have and then represent the information on a graph. Through class discussions they can **analyze** the data to decide which blocks they want to buy).

STANDARD 4.

Represents, analyzes and discusses data (e.g., charts, graphs and tallies)

Children may...

- Collect and sort toy cars by size, then draw a simple picture graph to represent the toy cars.
- Conduct a class survey by using simple marks or tallies to record who likes red apples and who likes green apples, and display the survey in the science corner.
- Recognize, with teacher support, by “reading” the chart that they have the least number of **square** blocks.

Educators may...

- Work with a small group of children to sort blocks by color, then create a bar graph to show the number of blocks of each color.
- Take children on a walk to collect nature items (e.g., leaves, pine needles, acorns and pine cones), sort then count them. Record the information on a chart placed in the math area.
- Provide experiences with different types of graphs (e.g., vertical and horizontal bar graphs) and charts by charting and graphing regularly (e.g., favorite foods, voting on a class pet’s name, how I get to school).

Families may...

- Take surveys and use tally marks to answer such questions as, “What do you want for dinner?” or “Where do you want to go for a special family outing?”

Environmental considerations...

- Use child-produced art, clip art or photographs on the graph to help children “read” it. Display the charts, graphs and surveys and allow plenty of time for discussion.



V. MATHEMATICAL THINKING

F. MEASUREMENT AND DATA



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Children enjoy collecting and discussing data. Their interest will be stimulated by choosing things to chart that are meaningful to them. Predicting (estimating) is an important skill that results from having many planned experiences with teacher support, whole class and in small groups. Children will begin making **predictions** about data recorded on a chart or graph as educators ask open-ended questions (e.g., “Are there more boys or more girls at school today? How do you know?”). With increasing independence, children will plan and conduct investigations and make **predictions** about data (information/ objects) they collect, and will be able to **analyze** results, draw conclusions and communicate results.

STANDARD 5.

Begins to predict the results of data collection

Children may...

- Predict that they collected fewer red leaves than gold leaves before counting each color collected on a nature walk.
- Predict that they have more friends whose favorite is red before counting each color recorded on a chart.
- Say to a friend, “I think the Gators will have the most votes,” before the class makes a graph of their favorite football team.
- Predict which items will sink or float in water, and place items on an object graph, then complete the experiment and check their **predictions**.

Educators may...

- Encourage children to make **predictions** by asking open-ended questions about a chart or graph prior to counting the results.
- After a nature walk, ask children to predict which color of leaves they found the most of prior to creating an object graph.
- Create a pictograph using sticky notes on which children have recorded their favorite color. Discuss which color the children think is the favorite color/ least favorite color prior to counting.
- Have children predict which items will sink or float in water, then chart actual results in two columns, “sink” and “float.”

Families may...

- When family members disagree about where to have dinner one night, collect data, make **predictions**, record the choices or data, and **analyze** to determine where to go.
- Make a chart where children can place a sticker each time it rains, or each time it is sunny. At the end of a week, you can estimate together which column has more or fewer stickers, and count how many to be sure.







RELATED BOOKS

PRESCHOOLERS

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by Donald Crews

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Cubes, Cones, Cylinders & Spheres

by Tana Hoban

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My First Book of Patterns

by Bobby & June George, Boyoun Kim

National Geographic Kids Look and Learn: Patterns

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Rooster's Off to See the World

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Rosie's Walk

by Pat Hutchins

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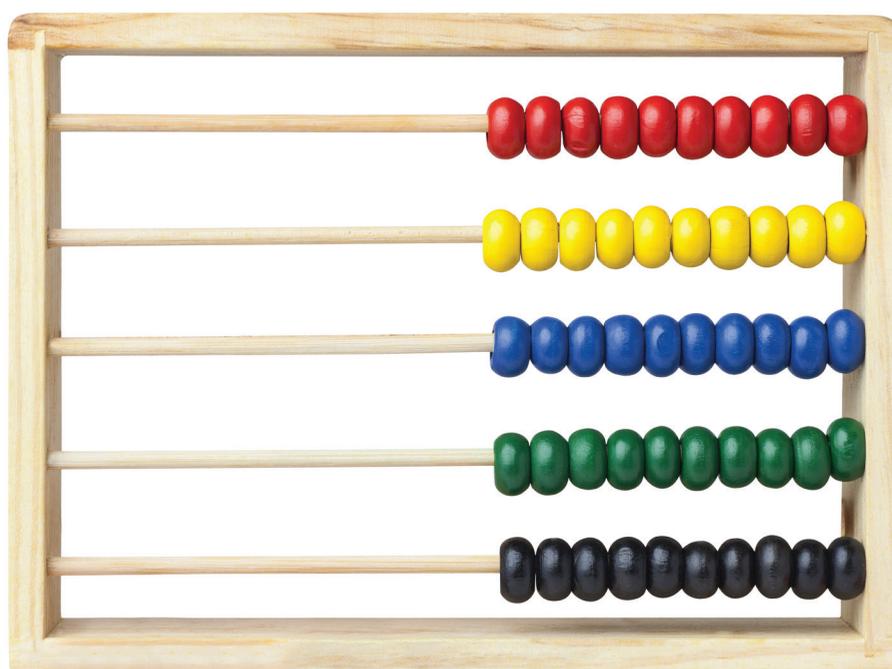
by Barbara Barbieri McGrath

Ten Red Apples

by Pat Hutchins

The Doorbell Rang

by Pat Hutchins



GLOSSARY

Analyze: to study and think of solutions for mathematical problems (e.g., The teacher asks a child to tell how many bears there are all together. The child counts the three green bears and the two red bears and discovers there are five bears.)

Attributes: *characteristics* of an object (size, shape, color, etc.)

Cardinality: knowing that the last number named when counting represents the total number of objects

Circle: a round two-dimensional figure that resembles a ring

Cube: a three-dimensional solid figure with six equal *square* faces and right angles

Cylinder: a solid with circular ends and straight sides

Counting Sequence: saying the number words, “one, two, three, four, five, six...” when counting.

Investigation: systemic examination

Numeral: a symbol or **set** of symbols used to represent a number (e.g., the number five is represented by the symbol or numeral 5)

Octagon: a two-dimensional eight-sided shape

One-to-one correspondence: pairing or matching objects in a one-to-one relationship (e.g., giving one apple to each child at snack time)

Pattern: a repeating series of units

Quantity: the number of objects in a **set** (amount)

Rectangle: a two-dimensional figure with two sets of parallel lines and four right angles

Rhombus: a four-sided shape where all sides have equal length, opposite sides are parallel, opposite acute angles are equal, and opposite obtuse angles are equal

Routines: customs or activities regularly practiced at home, in the classroom or in the community

Seriation: arrangement in rows or a series by an attribute

Set: a group of objects

Spatial awareness: the ability to be aware of oneself in space in relationship to something else

Spatial sense: the ability to build and manipulate mental representations of two- and three-dimensional objects and ideas

Spheres: three-dimensional figures with a round body (e.g., a ball, marble, or globe)

Subitizing: immediately recognizing and naming a **set** of objects without counting

Square: a two-dimensional figure with four equal sides and four right angles

Trapezoid: a four-sided shape with one pair of opposite sides parallel

Triangle: a two-dimensional figure with three sides and three angles

Unit: what something is measured by (e.g., centimeter [cm], foot [ft], inch [in], yard [yd])





VI. SCIENTIFIC INQUIRY DOMAIN					
Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years (24 - 36 months)	3 - 4 years (36 - 48 months)	4 years- Kindergarten (48 months - Kindergarten)
A. SCIENTIFIC INQUIRY THROUGH EXPLORATION AND DISCOVERY					
1. Uses senses to explore and understand their social and physical environment					
Benchmark a: Responds to information received through the senses	Benchmark a: Uses senses and a variety of actions to explore people and objects in the world around them (e.g., mouthing, touching, shaking and dropping)	Benchmark a: Begins to identify some sense organs	Benchmark a: Identifies sense organs (e.g., nose, mouth, eyes, ears and hands)	Benchmark a: Begins to identify each of the five senses and how they relate to the sense organs	Benchmark a: Identifies each of the five senses and their relationship to each of the sense organs
Benchmark b: Begins to use senses and a variety of actions to explore people and objects in the world around them (e.g., mouthing, touching, shaking, dropping)		Benchmark b: Explores the nature of sensory materials and experiences (e.g., different textures, sounds, tastes and wind)	Benchmark b: Begins to use senses to observe and experience the environment	Benchmark b: Uses senses to observe and experience objects and environment	Benchmark b: Begins to identify and make observations about what can be learned about the world using each of the five senses
			Benchmark c: Begins to identify objects and features of the world (e.g., bird call, thunder, wind and fire truck)		Benchmark c: Begins to understand that individuals may experience sensory events differently from each other (e.g., may like sound of loud noises or feel of fuzzy fabric)
2. Uses tools in scientific inquiry					
Benchmark a: Responds to people and objects in simple ways	Benchmark a: Responds in varied ways to people and objects and manipulates objects in a purposeful way (e.g., uses a toy to make sounds on a xylophone)	Benchmark a: Recognizes and uses simple tools as props through play (e.g., spoons or brushes)	Benchmark a: Begins to use simple tools to explore and observe (e.g., magnifiers, spoons)	Benchmark a: Demonstrates the use of simple tools and equipment for observing and investigating (e.g., droppers, blocks, bug catchers)	Benchmark a: Uses tools and various technologies to support exploration and inquiry (e.g., digital cameras, scales)



VI. SCIENTIFIC INQUIRY DOMAIN

Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years (24 - 36 months)	3 - 4 years (36 - 48 months)	4 years- Kindergarten (48 months - Kindergarten)
A. SCIENTIFIC INQUIRY THROUGH EXPLORATION AND DISCOVERY					
3. Uses understanding of causal relationships to act on social and physical environments					
Benchmark a: Begins to explore/ notice cause-and- effect (e.g., crying to get needs met)	Benchmark a: Explores cause-and- effect by engaging in purposeful actions to cause things to happen (e.g., splashes in water)	Benchmark a: Begins to combine simple actions to cause things to happen or change how they interact with objects and people	Benchmark a: Combines simple actions to cause things to happen or change how they interact with objects and people	Benchmark a: Makes simple predictions and reflects on what caused something to happen	Benchmark a: Makes predictions and tests their predictions through experimentation and investigation
			Benchmark b: Recognizes and begins to respond to results of own actions	Benchmark b: Participates in and discusses simple experiments	Benchmark b: Collects and records data through drawing, writing, dictation and taking photographs (e.g., using tables, charts, drawings, tallies and graphs)
				Benchmark c: Represents ideas and observations through drawings or using other forms of representation (e.g., manipulatives or different objects)	Benchmark c: Begins to form conclusions and construct explanations (e.g., What do the results mean?)
					Benchmark d: Shares findings and outcomes of experiments



VI. SCIENTIFIC INQUIRY DOMAIN

Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years <i>(24 - 36 months)</i>	3 - 4 years <i>(36 - 48 months)</i>	4 years- Kindergarten <i>(48 months - Kindergarten)</i>
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B. LIFE SCIENCE

1. Demonstrates knowledge related to living things and their environments

<p>Benchmark a: Shows curiosity about own body structure (e.g., two legs, fingers for grasping)</p>	<p>Benchmark a: Begins to explore, interact with and identify some plants and animals (e.g., interaction through real-world, literacy and videos)</p>	<p>Benchmark a: Explores, interacts with and identifies some plants and animals</p>	<p>Benchmark a: Explores, interacts with and identifies a growing number and variety of plants and animals</p>	<p>Benchmark a: Observes and explores a variety of plants and animals and their environments (e.g., rabbits, birds, ladybugs, hermit crabs, eggs, butterflies and bugs in the garden)</p>	<p>Benchmark a: Identifies characteristics of a variety of plants and animals including physical attributes and behaviors (e.g., camouflage, body covering, eye color, other adaptations, types of trees and where they grow)</p>
			<p>Benchmark b: Begins to explore how plants and animals grow and change (e.g., baby chicks grow to be chickens and puppies grow to be dogs)</p>	<p>Benchmark b: Begins to notice the similarities and differences among various living things</p>	<p>Benchmark b: Notices the similarities and differences among various living things</p>
				<p>Benchmark c: Explores basic life cycles (e.g., plants grow from seeds and hatching eggs)</p>	<p>Benchmark c: Understands that all living things grow, change and go through life cycles</p>
				<p>Benchmark d: Explores the differences between living and non-living things</p>	<p>Benchmark d: Begins to distinguish between living and non-living things</p>
				<p>Benchmark e: Explores the needs of living things (e.g., plants need water to grow and kids need food to grow)</p>	<p>Benchmark e: Observes that living things differ with regard to their needs and habitats</p>



VI. SCIENTIFIC INQUIRY DOMAIN					
Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years (24 - 36 months)	3 - 4 years (36 - 48 months)	4 years- Kindergarten (48 months - Kindergarten)
C. PHYSICAL SCIENCE					
1. Demonstrates knowledge related to physical science					
Benchmark a: Displays interest in movement of objects	Benchmark a: Demonstrates ability to move objects	Benchmark a: Demonstrates ability to push and pull objects	Benchmark a: Begins to explore a greater variety of motions with objects (e.g., rotate, spin, twist)	Benchmark a: Explores and investigates objects that require positioning and movement through play (e.g., gears, marble chutes, screws in a toy workbench)	Benchmark a: Discusses what makes objects move the way they do and how the movement can be controlled
Benchmark b: Recognizes when a moving object has stopped (e.g., mobile)	Benchmark b: Begins to observe that objects move at different speeds (e.g., wind-up toys, swings)	Benchmark b: Observes objects that move at different speeds (e.g., wind-up toys, swings)	Benchmark b: Uses basic words for speed of motion (e.g., fast and slow)	Benchmark b: Explores and investigates how to change the speed with which an object will move (e.g., pedaling a tricycle, rolling a ball)	Benchmark b: Makes predictions about how to change the speed of an object, tests predictions through experiments and describes what happens
Benchmark c: Uses senses to gain knowledge about objects	Benchmark c: Begins to manipulate, explore and play with objects to gain knowledge about them (e.g., moving, filling, dumping, smelling)	Benchmark c: Manipulates, explores and plays with objects to gain knowledge about them (e.g., moving, stacking)	Benchmark c: Begins to describe, compare, sort and classify objects based on observable physical characteristics (e.g., color, sound, weight)	Benchmark c: Explores and investigates the properties of toys and objects (e.g., relationship between size and weight of blocks, what makes balls bounce)	Benchmark c: Distinguishes between the properties of an object and the properties of which the material is made (e.g., water and ice)
Benchmark d: Displays interest in various types of materials (e.g., water, soft fabric, textured carpet)	Benchmark d: Begins to explore solids and liquids to gain knowledge about them (e.g., soap and water in the bathtub)	Benchmark d: Explores solids and liquids to gain knowledge about them (e.g., food, water play, finger-painting)	Benchmark d: Begins to use words to describe basic physical properties and states of matter of objects (e.g., wet/dry, hard/soft, warm/cold, firm/squishy)	Benchmark d: Explores and begins to identify physical properties and state of matter of objects or materials (e.g., playing with sand and water, mixing paints, freezing and cooking, sinking/floating objects)	Benchmark d: Investigates and describes changing states of matter — liquid, solid and gas
					Benchmark e: Explores the relationship of objects to light (e.g., light and shadows)



VI. SCIENTIFIC INQUIRY DOMAIN

Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years (24 - 36 months)	3 - 4 years (36 - 48 months)	4 years- Kindergarten (48 months - Kindergarten)
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D. EARTH AND SPACE SCIENCE

1. Demonstrates knowledge related to the dynamic properties of earth and sky

Benchmark a: Touches water (e.g., plastic cups, sponge and wet washcloth)	Benchmark a: Explores water (e.g., plastic cups or containers in the bathtub)	Benchmark a: Engages in structured play with water	Benchmark a: Begins to explore and investigate the properties of water	Benchmark a: Investigates and asks questions about the properties of water using adult and child-directed activities	Benchmark a: Describes properties of water including changes in the states of water liquid, solid and gas (e.g., buoyancy, movement, displacement and flow)
Benchmark b: Touches sand, soil and mud	Benchmark b: Explores sand, soil and mud	Benchmark b: Engages in structured play with sand, soil and mud activities	Benchmark b: Begins to explore and investigate the properties of sand, soil and mud	Benchmark b: Investigates and asks questions about the properties of rocks, soil, sand and mud using adult and child-directed activities	Benchmark b: Discovers, explores, sorts, compares, and contrasts objects that are naturally found in the environment, including rocks, soil, sand and mud, and recognizes relationships among the objects (e.g., nature walks with hand lenses, collection bag) (e.g., rocks, twigs, leaves and sea shells)
Benchmark c: Begins to exhibit curiosity about objects in the sky and environment	Benchmark c: Begins to observe the sun, clouds and transition from day to night	Benchmark c: Identifies the objects in the sky (e.g., clouds, sun, moon and stars)	Benchmark c: Describes the objects in the sky (e.g., clouds, sun, moon and stars)	Benchmark c: Asks questions and shows curiosity about objects in the sky (e.g., clouds, sun, moon and stars)	Benchmark c: Begins to explore and discuss simple observations of characteristics and movements of the clouds, sun, moon and stars
Benchmark d: Responds to changes in temperature and weather (e.g., cries when too warm or too cold)	Benchmark d: Begins to identify day and night	Benchmark d: Uses basic vocabulary to describe day and night	Benchmark d: Describes daytime and nighttime through drawing, naming or pretend play	Benchmark d: Describes typical daytime and nighttime activities for people and other animals through drawing, naming or pretend play	Benchmark d: Compares the daytime and nighttime cycle
		Benchmark e: Uses emerging vocabulary to describe basic weather	Benchmark e: Observes and discusses weather	Benchmark e: Observes and discusses weather changes day to day	Benchmark e: Uses appropriate vocabulary to discuss climate and changes in the weather and the impact it has on their daily lives (e.g., types of clothing for different environments)



VI. SCIENTIFIC INQUIRY DOMAIN

Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years (24 - 36 months)	3 - 4 years (36 - 48 months)	4 years- Kindergarten (48 months - Kindergarten)
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E. ENVIRONMENT

1. Demonstrates awareness of relationship to people, objects and living/non-living things in their environment

Benchmark a: Recognizes familiar people and objects in the immediate environment	Benchmark a: Begins to identify familiar people and objects in the environment	Benchmark a: Identifies familiar people and objects in the environment	Benchmark a: Begins to describe familiar people and objects in the environment	Benchmark a: Describes familiar people and objects in the environment	Benchmark a: Demonstrates how people use objects and natural resources in the environment
			Benchmark b: Begins to participate in activities to protect the environment	Benchmark b: Participates in activities to protect the environment	Benchmark b: Participates in daily routines demonstrating basic conservation strategies (e.g., conserving water when washing hands or brushing teeth)
					Benchmark c: Identifies examples of organized efforts to protect the environment (e.g., recycling materials in the classroom)



VI. SCIENTIFIC INQUIRY DOMAIN

Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years <i>(24 - 36 months)</i>	3 - 4 years <i>(36 - 48 months)</i>	4 years- Kindergarten <i>(48 months - Kindergarten)</i>
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F. ENGINEERING AND TECHNOLOGY

1. Shows interest and understanding of how simple tools and machines assist with solving problems or creating objects and structures

<i>Not yet typically observed</i>	Benchmark a: Attempts to use objects as tools	Benchmark a: Uses simple tools to explore	Benchmark a: Uses props to represent simple tools through play	Benchmark a: Begins to identify problems and tries to solve them by designing or using tools (e.g., uses a stick or bat to reach and pull a ball back inside the fence)	Benchmark a: Identifies problems and tries to solve them by designing or using tools (e.g., makes a simple tent with a chair and cloth for protection from the sun)
		Benchmark b: Explores simple machines through play (e.g., riding toys or push toys)	Benchmark b: Uses simple machines in play (e.g., riding toys, push mower or tricycle)	Benchmark b: Explores and identifies simple machines through play (e.g., ramps, gears, wheels, pulleys and levers)	Benchmark b: Explains why a simple machine is appropriate for a particular task (e.g., moving something heavy, moving water from one location to another)
			Benchmark c: Begins to explore materials and construct simple objects and structures and begins to explore motion and stability (e.g., block building, ramps, pathways, sand, playdough and knocking over a block tower)	Benchmark c: Explores and constructs simple objects and structures with appropriate materials and explores concept of stability of structures (e.g., block building, ramps, pathways, sand, playdough and knocking over a block tower)	Benchmark c: Uses appropriate tools and materials with greater flexibility to create or solve problems
					Benchmark d: Invents and constructs simple objects or more complex structures and investigates concepts of motion and stability of structures (e.g., ramps, pathways, structure, Legos, block building and play)



VI. SCIENTIFIC INQUIRY

Scientific **inquiry** addresses children exploring the world around them. Children are natural investigators and their levels of understanding deepen over time with varied experiences. **Exploration** and **discovery** are ways that young children learn about their worlds by first using their senses and reflexes. Infant's initial spontaneous responses become more purposeful as they gain mobility. Toddler's expanding physical and motor capacities enable them to engage in ever-widening **explorations**, which can promote new brain connections.

Children should be encouraged to explore, investigate, observe and record changes in the **environment**. Activities such as noting changes in weather, caring for plants and animals and exploring simple machines encourage development of scientific thinking. Educators should capitalize on children's **curiosity** during play, and encourage discussion and expression of their ideas as they examine scientific activities (e.g., rolling a ball or car, water table explorations, engineering and building during block play, and small-group cooking activities). During early childhood years, science provides opportunities for rich **vocabulary** learning and collaboration with peers, while fostering a sense of **curiosity** and motivation to learn.

SCIENTIFIC INQUIRY is composed of six components: including scientific **inquiry** through **exploration** and **discovery**, **life science**, physical science, earth and space science, **environment** and engineering and technology.

SCIENTIFIC INQUIRY THROUGH EXPLORATION AND DISCOVERY is demonstrated when children use their senses to observe and collect information from the world around them. Young children learn to use observational tools to extend their senses and to observe the natural world up close. When adults respond to children's questions, it fosters inquisitiveness and scientific thinking. Older children they become better at making **predictions** and trying to solve problems.

LIFE SCIENCE involves children demonstrating knowledge related to exploring the growth and change of living things and their environments. Children observe, show **curiosity** about and interact with plants and animals.

PHYSICAL SCIENCE is an interest in characteristics and movement of objects. Children manipulate, explore and play with objects to gain knowledge. Children show interest in various types of materials, observe the different speeds of wind-up toys and swings, play with blocks by moving and stacking them and play with sand and water.



EARTH AND SPACE focuses on demonstrating knowledge related to the dynamic properties of earth and sky. Young children investigate and play with materials such as rocks, soil, sand and water. Children show **curiosity** and observe events and patterns such as night, day, the movement of objects in the sky and weather.

ENVIRONMENTAL AWARENESS focuses on children demonstrating awareness of their own relationship to people, objects and living/non-living things in their **environment**. Young children can recognize, identify and describe familiar people and objects in their **environment**. Preschoolers begin participating in activities to protect the **environment**, such as conserving water when washing hands or brushing teeth.

ENGINEERING AND TECHNOLOGY encourages children to think, explore, problem-solve and create. Engineering takes form through play and material **exploration**. It is designing, problem-solving and building. Preschool children develop concepts in engineering as they design, build and test solutions through their play constructing sand castles and building cities out of blocks. They also begin understanding that tools help people do things better or more easily, or do some things that could otherwise not be done at all. Technologies developed through engineering include systems that provide our houses with water and heat; roads, bridges, tunnels, and cars; airplanes and spacecraft; cellular telephones; televisions and computers; many of today's children's toys; and systems that create special effects in movies.

Florida's Early Learning and Developmental Standards

ENVIRONMENTAL CONSIDERATIONS

4 YEARS - KINDERGARTEN

(48 months - Kindergarten)

- Include a variety of tools for supervised use and **exploration** indoors and outdoors (e.g., magnifiers, thermometers, scales, pulleys and wheels, flashlights, workshop tools, kitchen tools, prisms, telescopes, kaleidoscopes and metal mirrors).
- Provide a variety of books about nature and science.
- Provide a variety of everyday natural and **recycled** materials to help children learn about the properties of items in their **environment**.
- Expose children to a variety of materials illustrating how living things change over time, including books, poetry, pictures, plants and animals.
- Provide a variety of objects within the classroom that will allow children to explore their five senses.
- Include a weather chart in the classroom to record the weather each day.



VI. SCIENTIFIC INQUIRY



A. SCIENTIFIC INQUIRY THROUGH EXPLORATION AND DISCOVERY

4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Children enjoy learning through hands-on experiences that involve their senses. Through engaging opportunities, children begin identifying their five senses (e.g., sight, taste, touch, hearing, smell) and which sense(s) are used for different tasks.

STANDARD 1.

Uses senses to explore and understand their social and physical **environment**

BENCHMARK a.

Identifies each of the five senses and their relationship to each of the sense organs

Children may...

- Taste a piece of orange and lemon and talk about sweet and sour, understanding that the tongue is the organ involved in taste.
- With eyes closed, smell different items to experience the sense of smell (e.g., cinnamon, fresh-cut grass, oranges, lotions, peppermint).
- Discuss textures felt through touch (e.g., using playdough, marbles in water, glue, felt, feathers, sandpaper).
- Make various sounds (e.g., bells, chimes, symbols, blocks, door closing, stomping, whistle) and hearing to distinguish differences.

Educators may...

- Challenge children to use their senses to complete specific tasks (e.g., use sight to locate something pink in the classroom; use smell to show where the scented candle is; use taste to determine your favorite food at lunch; use hearing to know when to clean-up; use touch to find a specific toy without looking).
- Provide a **discovery** box of various materials that allow children to explore their five senses (e.g., smelling jars, blindfolds, touch boxes, Braille books).

Families may...

- Play mystery sock. Put a common household item in a sock. Tie off the top of the sock. Have your child feel the sock and guess what is inside. Take turns guessing what is inside.
- Provide opportunities for children to identify how different foods taste (e.g., sweet, sour).
- Provide opportunities to use sense of touch to experience how things feel (e.g., warm, cold).



BENCHMARK b.

Begins to identify and make observations about what can be learned about the world using each of the five senses

Children may...

- Take things apart and use the parts to invent new structures.
- Use their senses to explore the **environment**.
- Use magnetic animals together to make a new type of animal, and tell the educator about it.

Educators may...

- Provide materials that can promote creative-thinking (e.g., Legos, blocks, pipe cleaners and straws).
- Provide a variety of objects within the classroom that will allow children to explore their five senses.
- Involve grandparents in the classroom by having them come in and share their favorite food or hobby (e.g., knitting). Ask the children to tell which senses would be used to complete the different tasks.

Families may...

- Challenge children to use their senses to complete specific tasks (e.g., use sight to locate something pink in the classroom; use smell to show where the scented candle is; use taste to determine your favorite food at lunch; use hearing to know when to clean-up; use touch to find a specific toy without looking).

BENCHMARK c.

Begins to understand that individuals may experience **sensory** events differently from each other (e.g., may like sound of loud noises or the feel of fuzzy fabric)

Children may...

- Identify preferences and how these preferences are the same or different from those of other people.
- Discuss favorite colors or foods.
- Experiment with different materials to see what happens (e.g., painting with a dry brush, wet brush, stick or fingers).

Educators may...

- Make a chart that graphs who likes to swim and who does not and ask children to explain why.
- Provide messy activities like finger-painting, clay-building, sand and water play and ask children about how it feels.
- Ask open-ended questions to stimulate children's imaginations about using materials (e.g., "What happens when you mix two colors of playdough?").

Families may...

- Take children to the store, to a restaurant or the library. Explore lots of new places. Talk about similarities and differences in people.
- Play a matching game. Make two sets of 10 or more pictures. You can use copies of the same magazine or a deck of playing cards. Lay the pictures face up and ask your child to find two that are the same. Start with two picture sets and gradually add more.
- Listen for sounds inside and outside. Find a cozy spot and sit with children. Listen and identify all of the sounds that you hear.



VI. SCIENTIFIC INQUIRY



A. SCIENTIFIC INQUIRY THROUGH EXPLORATION AND DISCOVERY

4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Children demonstrate using of simple tools and equipment for **observing** and **investigating**. Four year-old children can use simple tools in their explorations. Magnifying glasses, balance scales, rulers and tweezers help children investigate objects more closely. When these tools are available in various areas of the classroom, children incorporate them naturally into their play.

STANDARD 2.

Uses tools in scientific **inquiry**

BENCHMARK a.

Uses tools and various technologies to support **exploration** and **inquiry** (e.g., digital cameras, scales)

Children may...

- Seek out a pair of binoculars to look at a bird on the playground.
- Use a magnifying glass to look at differences in rocks or leaves.
- Use a dropper to drop water on a paper towel and observe how it absorbs the water.
- Use a magnet to find which objects have magnetic attraction.
- Use a funnel in a water bottle to pour water from a cup into a bottle.
- Use a balance scale to compare weights of various objects.
- Experiment with tubes and funnels at the sand and water tables.

Educators may...

- Provide opportunities to examine how tools work (e.g., pulleys).
- Provide safe woodworking tools in **discovery** areas, allowing children supervised opportunities to work with the tools.
- Choose interesting science-related experiments that use tools during small-group instruction (e.g., tie-dye butterflies using coffee filters, colored water and droppers; provide magnifying glasses to look closely at things collected from a nature walk, such as leaves, rocks, sticks or a caterpillar).

Families may...

- Encourage children to help prepare a recipe by measuring ingredients with a kitchen scale.
- Take nature walks and give children binoculars to observe birds.
- Set up a space in the house with blocks for the child to build.
- Give the child a magnifying glass to observe leaves in the yard.

VI. SCIENTIFIC INQUIRY

A. SCIENTIFIC INQUIRY THROUGH EXPLORATION AND DISCOVERY



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four-year-olds can predict outcomes of simple experiments based on past experience, then test their theories by performing simple experiments.

STANDARD 3.

Uses understanding of causal relationships to act on social and physical environments

BENCHMARK a.

Makes **predictions** and tests their **predictions** through experimentation and **investigation**

Children may...

- Predict, describe and test what will happen to the ice when it is moved from the freezer to a tray in the classroom.
- Place items on a ramp and conclude that round objects roll and flat objects slide.
- Predict the outcome of mixing red and blue paint.
- Observe “sink and float” activity and say, “This will float because it’s plastic.”

Educators may...

- Encourage children to make **predictions** by asking questions about an experiment chart or graph made.
- Play the “guess what will happen” game to encourage children’s **problem-solving** and thinking **skills** (e.g., “What would happen if I stacked the blocks to the top of the ceiling?”).
- Ask open-ended questions to help children predict the outcome of a project/experiment (e.g., “What do you think would happen if...?”).

Families may...

- Help children make **predictions** about daily **routines** (e.g., “What would happen if we don’t brush our teeth?”).
- Encourage children to predict the weight of toys and use a balance scale to check prediction.
- Ask open-ended questions such as, “I wonder what would happen if...?” Give children the opportunity to explain their ideas.
- Provide a variety of science books appropriate for the child’s developmental age.



VI. SCIENTIFIC INQUIRY



A. SCIENTIFIC INQUIRY THROUGH EXPLORATION AND DISCOVERY

4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four-year-olds can create mental representations of what they experience in **investigating** the everyday world. They share this information with educators through writing, drawings and learned **vocabulary**.

STANDARD 3.

Uses understanding of causal relationships to act on social and physical environments

BENCHMARK b.

Collects and records data through drawing, writing, dictation and taking photographs (e.g., using tables, charts, drawings, tallies and graphs)

Children may...

- Use a journal to record drawings and write words that describe their findings after the weekly nature walk.
- Make leaf rubbings and label their drawings with parts of the leaf, such as stem and veins.
- Observe and describe weather as the educator writes observation, on the morning message board.
- Record observations through dictating to an adult and drawing pictures, or using other forms of writing.

Educators may...

- Provide word cards such as "leaves" and "trees" that can be copied into the journal after the weekly nature walk.
- Prepare for special visitors or field trips by generating questions beforehand and charting answers after the event.
- During a sink/float experiment, allow children to sort items into categories and explain findings by modeling words such as heavy, light, sink, float.
- Place an outdoor thermometer where it can be easily seen, and record the daily temperature, making a graph over time.

Families may...

- Encourage children to draw the events of a trip to the zoo, or from a story read together. Take children's dictation about the drawings.
- On a rainy day, collect rainwater in a cup and measure how much rain was collected.
- Start an herb garden in pots to compare how the leaves look, smell, feel and taste.

VI. SCIENTIFIC INQUIRY

A. SCIENTIFIC INQUIRY THROUGH EXPLORATION AND DISCOVERY



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four-year-olds can create mental representations of what they experience in **investigating** the everyday world. They share this information with educators through writing, drawings and learned **vocabulary**. They can explain why events happen, and draw conclusions from their observations. They are learning that cause-and-effect can be a basis for **prediction**.

STANDARD 3.

Uses understanding of causal relationships to act on social and physical environments

BENCHMARK c.

Begins to form conclusions and construct explanations (e.g., What do the results mean?)

Children may...

- Place items on a ramp and conclude that round objects roll and flat objects slide.
- Participate in a “write your name” graph asking whether grass seed will sprout when placed on wet newsprint, damp soil or a damp sponge; observe the experiment to investigate the outcome.
- Remark, “I said it would work to use the tongs to get it out, and it did!”
- Observe weather and say, “It’s rainy—we can’t go outside today.”

Educators may...

- Use classroom experiences like reading books and poetry to allow children to communicate their understanding of how living things grow and change.
- Provide opportunities for children to explore and focus on a few specific living things so they can note changes that occur (e.g., bring in baby pictures/compare with current pictures; record children’s height and weight and compare to when they were babies; keep mealworms, caterpillars or other living things in the classroom and observe changes over time; visit a farm to see baby and adult animals).

Families may...

- Let children help with simple cooking tasks such as mashing potatoes, making cheese sandwiches and fixing a bowl of cereal. Afterward, see if they can tell you the order followed to prepare the items. Supervise carefully when children are near a hot stove.
- Encourage children to investigate and compare a variety of living things to determine their needs and how they change over time.
- Engage in conversation about changes children observe as caterpillars grow, change into chrysalises and emerge as butterflies.



VI. SCIENTIFIC INQUIRY



A. SCIENTIFIC INQUIRY THROUGH EXPLORATION AND DISCOVERY

4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four-year-olds can create mental representations of what they experience in **investigating** the everyday world. They share this information with educators through writing, drawings and learned **vocabulary**. They can explain why events happen, and draw conclusions from their observations. They are learning that cause-and-effect can be a basis for **prediction**.

STANDARD 3.

Uses understanding of causal relationships to act on social and physical environments

BENCHMARK d.

Shares findings and outcomes of experiments

Children may...

- Give long explanations about actions leading up to an event.
- Explain how they made a long chain to reach from one side of the table to the other (e.g., "First we hooked the blue ones together, but they wasn't long enough, so then Amy said to use the red ones and we did and they reached.").
- Answer "why" questions in some detail.
- Begin basing their actions on an expected outcome (e.g., "I am walking carefully so I don't spill my milk.").

Educators may...

- Guide children, with careful questioning, to think about and discuss outcomes.
- Cook in the classroom and talk about what happens combining foods or applying heat.
- Conduct experiments that use solids, liquids and gas (e.g., melting an ice cube and refreezing it, or adding powdered drink mix to a glass of water).
- Use appropriate scientific **vocabulary** (e.g., experiment, **hypothesis**, predict, etc.).

Families may...

- Model **problem-solving** by offering children opportunities to help solve problems. Talk through the activity by saying, "The yard gate is locked. What should we do?"
- Ask open-ended questions that encourage children to predict what will happen (e.g., as you hand Lizzie the bottle of liquid soap, ask, "What do you think will happen if you squirt just a little bit of soap into the water?").
- Encourage children to make **predictions** by asking "What would happen if..." questions.





VI. SCIENTIFIC INQUIRY

B. LIFE SCIENCE

4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Young children depend on adults to provide experiences that help children make connections. As children become more independent, their play becomes more intentional, and they begin noticing **characteristics** of living things. They are drawn to nature and nature play. Children gain knowledge about living things (e.g., what they are, how they survive, their **life cycles**, how they change) through daily interactions and experiences. Through repeated opportunities to explore nature, children begin making connections between real items and pictures (symbolic representation). Multiple opportunities to explore and interact with real plants and animals lay the foundation for further learning and abstract concepts.

STANDARD 1.

Demonstrates knowledge related to living things and their environments

BENCHMARK d.

Begins to distinguish between living and non-living things

Children may...

- Categorize small items gathered during outside time into living and non-living items, with educator support.
- Observe living and non-living things in their **environment**.
- Collect objects during a nature walk.
- Point out objects of interest in the **environment**.

Educators may...

- Provide accessories for children to collect nature items (e.g., magnifying glasses, bug jars, baskets).
- Create a large chart categorizing things that are living and things that are non-living, and label them.
- Provide children with small paper bags to search outside in groups for items to fill their bags. Upon return, support children in emptying their bags and sorting by living and non-living items.

Families may...

- Ask your child to explain the difference between a toy bird at home and a real bird in nature.
- Give children responsibility for providing care for living things in the house (e.g., feed the fish, go with you to walk the dog, water the plants).





BENCHMARK e.

Observes that living things differ with regard to their needs and habitats

Children may...

- Take responsibility for caring for living things (e.g., water plants, feed pets, put food out for birds).
- State that living things need food and water to survive.
- Participate in discussions about animals that live in various places, and their needs.
- Match animals to a water or land habitat.

Educators may...

- Provide indoor and outdoor experiences that include safe interaction with animals, plants and other people.
- Read books depicting basic needs of plants and animals.
- Ask questions such as, "Where does the egg come from," "Where did you get the truck?" to encourage discussion about the origin of items.

Families may...

- Talk to children about the scientific aspects of your pet (e.g., its body, how it grows, its habitat and what it needs to live).
- Talk with children about the weather today (e.g., sunny, cloudy, rainy) and ask what they think they should wear to go outside.



VI. SCIENTIFIC INQUIRY

C. PHYSICAL SCIENCE



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Children engage in science by exploring the world around them. They are naturally curious about things and trying to see how they work. As they **observe** and experiment, they begin using simple tools to help investigate movement and **characteristics** of objects.

STANDARD 1.

Demonstrates knowledge related to physical science

BENCHMARK a.

Discusses what makes objects move the way they do and how the movement can be controlled

Children may...

- Repeatedly roll marbles down a chute.
- Ask, "Why does this ball roll faster than that one?"
- Say, "I want the car to go faster!"
- Move the ramp to make a toy car go different speeds.
- Try to throw a ball at a target.

Educators may...

- Model asking questions about objects/materials, and encourage children to find answers (e.g., asking, "I wonder how we can make the cars go down the ramp faster? How do you think we can find out?").
- Provide children with enough time and space to work with objects and materials and pursue their own inquiries (e.g., constructing with blocks).
- Supply a variety of materials for children to experiment with (e.g., to see what sinks or floats at the water table; to see how far objects such as feathers or pieces of paper go when they blow at them through straws; to use a pulley to move).

Families may...

- Read both fiction and non-fiction books about the physical world.
- Provide objects that roll (e.g., balls, toy cars) and materials to make ramps (e.g., cardboard tubes, flat pieces of cardboard or boards, blocks).
- Provide an assortment of lightweight objects (e.g., feathers, scarves, paper, tissues) and heavier ones (e.g., popsicle sticks, buttons, juice bottle lids). With children, experiment with the objects to see which ones fall to the ground fastest when dropped. Have children blow at the objects through a straw to see which ones move.
- When children make an observation, say, "What makes you say that?" or, "How do you know?"
- Draw a big **circle** with chalk on a basement or outdoor wall. Take turns throwing a ball at the target.



BENCHMARK b.

Makes **predictions** about how to change the speed of an object, tests **predictions** through experiments and describes what happens

Children may...

- Guess which ramp the car will go down faster.
- Move the ramp to make a toy car or ball go different speeds.
- Records observations through dictating to an adult and drawing pictures, or using other forms of writing.
- Experiment with objects and materials to gather information and observe reactions.
- Predict whether round objects or flat objects will move down the ramp at the same speed.
- Experiment with tubes and funnels at the sand and water tables.
- Make **predictions** about an outcome. (e.g., "What might happen to a kite when the wind blows or slows down?").

Educators may...

- Engage children in predicting what will happen as they experiment.
- Provide opportunities for children to test **predictions**.
- Model asking questions about objects/materials, and encourage children to find answers (e.g., "I wonder how we can make cars go down the ramp faster? How do you think we can find out?").
- Support children when they are experimenting with cars or balls on ramps. Use paper and markers to document which cars or balls go faster down the ramps.

Families may...

- Help children create ramps by propping up one end of a flat board or heavy cardboard with a small box. Challenge children to find objects that will roll down the ramp. Look for ramps in playgrounds or other places. Talk about how ramps make life easier for people riding in wheelchairs or on bicycles.
- Help children talk about their observations when they experiment with objects. Record the dictation in a special science notebook, and have children draw pictures.
- Ask probing questions. When children make an observation (e.g., "What makes you say that?" or, "How do you know?").



VI. SCIENTIFIC INQUIRY

C. PHYSICAL SCIENCE



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Children engage in science by exploring the world around them. They are naturally curious about things and trying to see how they work. As they **observe** and experiment, they begin using simple tools to help investigate movement and **characteristics** of objects.

STANDARD 1.

Demonstrates knowledge related to physical science

BENCHMARK c.

Distinguishes between the properties of an object and the properties of which the material is made (e.g., water and ice)

Children may...

- Comment on changes when substances are mixed, shaken or cooked (e.g., mixing paint, making butter from cream, making playdough).
- Comment on changes in the physical world (e.g., "We made playdough out of salt, flour and water.").
- Describe what happens to the ice when it is moved from the freezer to a tray in the classroom.

Educators may...

- Involve children in activities that involve transformation of materials (e.g., cooking, painting).
- Make books about the physical world available to children in the **literacy** area, and in other interest areas (e.g., block area, **sensory** area).
- Ask open-ended questions to promote children's awareness of the physical world (e.g., "What do you think happened to the ice cube we left on the table?").
- Provide a variety of everyday natural and **recycled** materials to help children learn about the properties of items in their **environment**.

Families may...

- Combine equal parts water (dyed with blue food coloring) and vegetable oil (died yellow) in a plastic bottle and have children shake the bottle to see the colors blend to create green, then slowly move apart.
- Experiment with cooking the same foods in different ways. Compare fried, scrambled and hard-boiled eggs, or mashed, baked and French-fried potatoes. Explore how the same substance can look and feel different.
- Offer objects such as craft sticks, styrofoam blocks, aluminum trays and egg cartons for children to use in building boats and rafts. Have children put small plastic animals on board and launch the fleet into a tub of water, with supervision.



BENCHMARK d.

Investigates and describes changing states of **matter**—liquid, solid and gas

Children may...

- Make gelatin to show that **matter** changes from a liquid to a solid.
- Melt ice to show how solids change to a liquid.
- Make a prediction about the results of an experiment.

Educators may...

- Conduct experiments that use solids, liquids and gas (e.g., melting an ice cube and re-freezing it, adding powdered drink mix to water).
- Ask for **predictions** about what might happen when one substance is combined with another.
- Provide various types of **matter** to explore in science area or **sensory** table.
- Encourage drawing or writing observations in journals.

Families may...

- Have children top a graham cracker with a marshmallow, and do the same yourself. Put the crackers in a warm oven until the marshmallows melt. Ask children how heat affected the marshmallows. Let the crackers cool, and enjoy the treats.
- Fill small paper cups with various white, dry substances (e.g., flour, baking soda, baking powder, powdered sugar, granulated sugar, salt) and clear liquids (e.g., vinegar, water, oil, corn syrup) from the kitchen. Let children examine them, under supervision, and mix them to see what happens.
- Ask probing questions when children make an observation (e.g., “What makes you say that?” or “How do you know?”).

BENCHMARK e.

Explores the relationship of objects to light (e.g., light and shadows)

Children may...

- Record how shadows change during the course of a day or over time by drawing pictures.
- Use a flashlight or lamp light to make shadows indoors.
- Explore shadows indoors by making animal shapes with hands, using a flashlight or lamp light.
- Observe how shadows change when objects are moved.

Educators may...

- Facilitate children’s investigations of light.
- Provide children with opportunities to explore their own shadow, and ask open-ended questions (e.g., “If you jump up and down, what will your shadow do? What will happen if you wriggle your body? What will your shadow do if you throw a ball to it?”).
- Read shadow-themed books (e.g., *Moonbear’s Shadow* by Frank Asch and *Nothing Sticks Like a Shadow* by Lynn Munsinger).

Families may...

- Place a table lamp so it will cast shadows against a blank wall. Turn off other lights and play a variety of **music**, encouraging children to make shadows on the wall as they dance.
- Take children outside at three or four different times on a sunny day. Using either chalk or markers and paper, help children work in pairs to trace their shadows. Make sure each child stands in the same place and measure the shadows each time. Talk about the movement of the sun and how shadows move.



VI. SCIENTIFIC INQUIRY

D. EARTH AND SPACE SCIENCE



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Children notice changes in the outdoor **environment**. They learn language and new **vocabulary** as they explore and discuss objects and **characteristics** related to earth and sky. They explore and investigate properties of water, sand, soil and mud. As children develop, they see and think about objects in the sky.

STANDARD 1.

Demonstrates knowledge related to the dynamic properties of earth and sky

BENCHMARK a.

Describes properties of water including changes in the states of water – liquid, solid and gas (e.g., buoyancy, movement, displacement and flow)

Children may...

- Make gelatin to show that **matter** changes from liquid to solid.
- Melt ice to show how solids change to a liquid.
- Collect rainwater in a cup, and measure how much was collected.
- Use senses and simple tools to explore water.
- Use simple **vocabulary** to label water (e.g., wet, sink, float, warm, cold).

Educators may...

- Provide opportunities for children to safely investigate weather.
- Provide a water-filled tub with toys for children to engage in supervised play, and ask open-ended questions (e.g., “Do you think that one will sink when you put it in? What do you think will happen with that toy?”).
- Provide simple tools for **exploration** of water (e.g., cups, spoons, funnels, basters, bowl, tubes).
- Talk about water and introduce new **vocabulary**.
- Read books about water and its uses.

Families may...

- Provide opportunities for children to investigate what solids from the pantry will dissolve in water (e.g., flour, noodles, oatmeal, colored sprinkles, sugar, brown sugar, cornmeal).
- Read books about water and its uses.
- Visit the local library or children’s museum for hands-on interactive experiences involving water.



BENCHMARK b.

Discovers, explores, sorts, compares and contrasts objects that are naturally found in the **environment**, including rocks, soil, sand and mud, and recognizes relationships among the objects (e.g., nature walks with hand lenses, collection bag) (e.g., rocks, twigs, leaves and sea shells)

Children may...

- Go on a rock hunt and compare sizes, shapes and weights of rocks as they describe the rock's physical properties (e.g., size, shape, color, texture).
- Sort objects, such as rocks, twigs, leaves and shells, by category.
- Explore practical, creative and real-life ways that objects from nature (e.g., rocks, sticks, leaves, acorns, pine cones, sand, shells) can be used in daily classroom life (e.g., constructing sand castles or making shelters/houses out of twigs).
- Add water to sand and discuss how the physical properties change.

Educators may...

- Provide tools for **exploration** of earth materials (e.g., magnifying glasses, child-sized shovels, sifters).
- During a nature walk, work with the class to collect natural things in the **environment** (e.g., leaves, rocks, dirt, pine cones, shells).
- Ask children to compare natural items (e.g., leaves, rocks, dirt, pine cones, shells), and describe how the objects look and feel.
- Hide natural objects in a sandbox or sand table, and have children find, then sort them by specified categories (e.g., smooth/rough, hard/soft, light/dark).

Families may...

- Model **curiosity** by talking with children about rocks, soil, and sand they have in their yards or local parks (e.g., "I wonder why this rock stays in place, but sand moves when the wind is blowing hard?" or, "Let's see what happens when we pour water on the sand and on the soil.>").
- Take children on nature hikes, and allow children to make leaf/rock/shell collections.
- Visit local parks for nature/hiking trails.





VI. SCIENTIFIC INQUIRY

D. EARTH AND SPACE SCIENCE



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Children notice changes in the outdoor **environment**. They learn language and new **vocabulary** as they explore and discuss objects and **characteristics** related to earth and sky. They explore and investigate properties of water, sand, soil and mud. As children develop, they see and think about objects in the sky.

STANDARD 1.

Demonstrates knowledge related to the dynamic properties of earth and sky

BENCHMARK c.

Begins to explore and discuss simple observations of **characteristics** and movements of the clouds, sun, moon and stars

Children may...

- Participate in simple investigations about objects in the sky and predict day and night activities including **characteristics**, movement and seasonal changes (e.g., when it is dusk, nighttime is approaching; as the sun comes up in the sky; it will be daytime, the moon changes shapes as it cycles around the Earth; the seasons change as the Earth rotates around the sun; the effects of each season on daily life).

Educators may...

- Go outside with children and look for clouds in the sky. Talk about different shapes clouds have and how some clouds look like familiar animals or objects.
- Read books about the clouds, sun, moon and stars.
- Take children outside to look at the sky, have them draw pictures of the way the sky looks, and discuss their pictures.

Families may...

- Draw attention to weather and time of day by engaging children in conversations that include back-and-forth exchanges about what they see, hear and feel.
- Take children outside each night for a month to look at the sky and talk about the shape of the moon and how it changes during the month.
- Go outside with children and look for clouds. Talk about different shapes clouds have and how some clouds look like familiar animals or objects.



BENCHMARK d.

Compares the daytime and nighttime cycle

Children may...

- Participate in simple investigations about the objects in the sky, and predict day and night activities, including **characteristics** and movement (e.g., when it is dusk, nighttime is approaching; as the sun comes up in the sky, it will be daytime; the moon changes shapes as it cycles around the Earth).
- Sort simple pictures of daytime and nighttime activities.

Educators may...

- Read non-fiction books about the clouds, sun, moon and stars to children.
- Talk about things in the sky during walks or outside play.
- Provide opportunities for children to draw or paint pictures of the daytime or nighttime sky. Compare and discuss.

Families may...

- Take children outside to look at the sky in the day and at night. Have children draw pictures of the way the sky looks in the day and at night, and compare.
- Take children outside each night for a month to look at the sky and talk about the shape of the moon, and how it changes during the month.
- Read books to children about day and night.
- Go outside with children and look for clouds. Talk about the different shapes clouds have, and how some clouds look like familiar animals or objects.





VI. SCIENTIFIC INQUIRY

D. EARTH AND SPACE SCIENCE

4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Children notice changes in the outdoor **environment**. They learn language and new **vocabulary** as they explore and discuss objects and **characteristics** related to earth and sky. They explore and investigate properties of water, sand, soil and mud. As children develop, they see and think about objects in the sky.

STANDARD 1.

Demonstrates knowledge related to the dynamic properties of earth and sky

BENCHMARK e.

Uses appropriate **vocabulary** to discuss **climate** and changes in the weather and the impact it has on their daily lives (e.g., types of clothing for different environments)

Children may...

- **Observe patterns** of weather and climate changes by collecting information (e.g., collect rainwater in a cup and measure how much rain was collected).
- Illustrate various weather conditions while educator takes dictation describing children's illustrations.
- **Observe** cloud formations and draw what they see.
- Compare a variety of weather conditions (e.g., windy, rainy, cloudy, sunny), and say, "We can't go outside to play today because it is raining."
- Chart the temperature for several days and guess (predict) the current temperature and appropriate clothing for different temperatures.

Educators may...

- Post a weather chart to record the weather each day (e.g., hot, cold, sunny, rainy, windy, foggy), using children as helpers to fill in the chart.
- On a rainy day, collect rainwater in a cup and help children measure how much rain was collected.
- Place an outdoor thermometer where it can be easily seen. Record the daily temperature, making a graph over time.
- Provide opportunities for children to explore natural **energy** of sunlight and its connection with living and non-living things (e.g., heat is generated by sunlight. Plants need sunlight and heat to live. Shadows can affect living things.).

Families may...

- Discuss with children different kinds of weather and the apparel needed for different types of weather.
- Talk about weather daily.





VI. SCIENTIFIC INQUIRY

E. ENVIRONMENT

4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Noticing the world around them, their home, their place of learning and their community helps children recognize the connection between people and the **environment**. Children are interested in their **environment** and often notice that things change. Adults can support this beginning understanding of how people change and protect the **environment** around them by engaging children in conversation, stories and activities that demonstrate care for the **environment**.

STANDARD 1.

Demonstrates awareness of relationship to people, objects and living/non-living things in their **environment**

BENCHMARK a.

Demonstrates how people use objects and natural resources in the **environment**

Children may...

- Use **technology tools** (e.g., magnifying glasses, digital camera, light table) to **observe** and describe objects in their **environment**.
- Say, "People came to chop up our old tree so we can use it in our fireplace."
- Put bird seed in birdfeeder on playground.

Educators may...

- Provide opportunities for children to investigate plants, animals and people in their **environment**.
- Provide opportunities for children to explore and use a variety of gardening tools (e.g., gardening, **sensory table**, **dramatic play**).
- Safely display worm farms, bird feeders and ant hills for observation.
- Read books about plants and animals and their **characteristics**.

Families may...

- Read books about plants and animals and their **characteristics**.
- Provide opportunities for children to investigate plants, animals and people in their **environment**.



BENCHMARK b.

Participates in daily **routines** demonstrating basic conservation strategies (e.g., conserving water when washing hands or brushing teeth)

Children may...

- Put trash in the garbage rather than throwing it on the ground.
- Help keep the playground clean as a way to take care of their personal **environment**.
- Turn off water after washing hands.

Educators may...

- Discuss conserving **energy** and water, and encourage children to turn off water while brushing their teeth and after washing hands, and to turn off lights when leaving the classroom.
- Model disposing waste in appropriate trash receptacles.

Families may...

- Be role models for children by turning off lights when leaving rooms, turning off water while brushing teeth and after washing hands, and recycling items that can be **recycled**.
- Ask children to recycle toys that they no longer use by donating them to non-profit agencies.

BENCHMARK c.

Identifies examples of organized efforts to protect the **environment** (e.g., recycling materials in the classroom)

Children may...

- Show an interest in environmental projects like recycling.
- Place left-over food from a snack or meal in a container to take to the classroom compost site.
- Help keep the playground clean as a way to take care of their personal **environment**.
- Participate in discussions about appropriate waste disposal.
- Attempt to sort waste into things that can be **recycled** and those that cannot.

Educators may...

- Explore environmental issues in own area or school.
- Create environmental projects that may include recycling and gardening.
- Discuss where garbage goes after it is discarded, and invite guest speakers or go on field trips to learn more about recycling and waste management. Discuss how items are **recycled** at home.
- If food is served for snack or meals, help create a compost area and allow children to place the appropriate food in a container to take to the compost site. Use the composted soil for the garden or plants in the classroom.

Families may...

- Show children how to put items in a recycling bin.
- Have children help pick up trash from their yards or in parks.
- Be role models for children by turning off lights when leaving rooms, turning off water while brushing teeth and after washing hands and recycling items that can be **recycled**.



VI. SCIENTIFIC INQUIRY

F. ENGINEERING AND TECHNOLOGY



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Young children are naturally curious. They wonder what things are called, how they work and why things happen. Opportunities for hands-on play with different materials allow children to learn and extend their knowledge and creative-thinking **skills**. Children can begin developing concepts in **engineering** and technology as they design, build and test solutions through play, as they construct sand castles and build cities out of blocks. They also begin understanding that tools help people do things better or more easily.

STANDARD 1.

Shows interest and understanding of how simple tools and machines assist with solving problems or creating objects and structures

BENCHMARK a.

Identifies problems and tries to solve them by designing or using tools (e.g., makes a simple tent with a chair and cloth for protection from the sun)

Children may...

- Play with various kinds of blocks (e.g., foam, cardboard, wood, hollow, waffle, building panels) to make constructions of various sizes.
- Use string to measure plant growth.

Educators may...

- Talk with children about their activities using open-ended questions (e.g., "How did you do that? Tell me more.").

Families may...

- Provide areas inside where children can build with blocks, Legos, Lincoln Logs, playdough, empty boxes and other building materials.
- Provide materials and space where children can make race tracks and obstacle courses for their toy trucks, cars and machines.

VI. SCIENTIFIC INQUIRY

F. ENGINEERING AND TECHNOLOGY



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Young children are naturally curious. They wonder what things are called, how they work and why things happen. Opportunities for hands-on play with different materials allow children to learn and extend their knowledge and creative-thinking **skills**. Children can begin developing concepts in **engineering** and technology as they design, build and test solutions through play, as they construct sand castles and build cities out of blocks. They also begin understanding that tools help people do things better or more easily.

STANDARD 1.

Shows interest and understanding of how simple tools and machines assist with solving problems or creating objects and structures

BENCHMARK b.

Explains why a simple machine is appropriate for a particular task (e.g., moving something heavy, moving water from one location to another)

Children may...

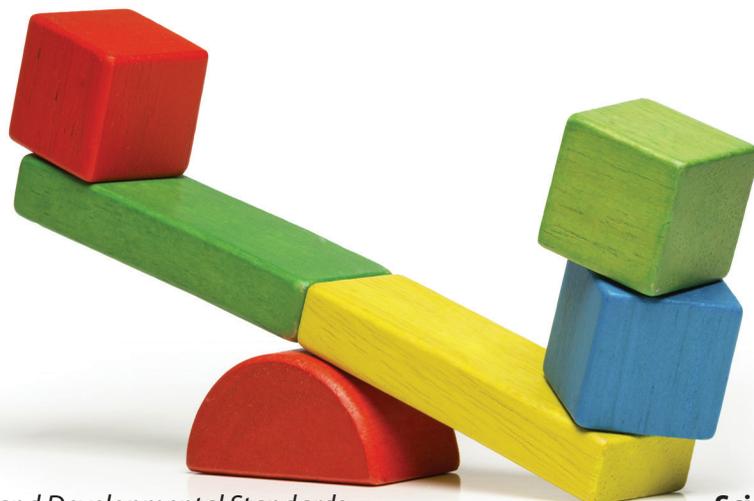
- Use a wagon on wheels to move a large toy to another area of the room, and explain why using the wagon was easier than carrying the toy.
- Make a lever with a marker lid and popsicle sticks, with support from an adult. Investigate how different positions of the marker lid (fulcrum) affect how far a pom pom will move.

Educators may...

- Talk with children about their activities using open-ended questions (e.g., "How did you do that? Tell me more.").
- Read the book *And Everyone Shouted Pull* by Claire Llewellyn and discuss the concepts of pushing and pulling with children.

Families may...

- Have an area outside with a sand box, or a dirt area and types of sand toys where children can create sand castles, dirt mounds or caves and structures.
- Visit a local children's museum for hands-on interactive experiences with simple machines and tools for building and problem-solving.





VI. SCIENTIFIC INQUIRY

F. ENGINEERING AND TECHNOLOGY



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Young children are naturally curious. They wonder what things are called, how they work and why things happen. Opportunities for hands-on play with different materials allow children to learn and extend their knowledge and creative-thinking **skills**. Children can begin developing concepts in **engineering** and technology as they design, build and test solutions through play, as they construct sand castles and build cities out of blocks. They also begin understanding that tools help people do things better or more easily.

STANDARD 1.

Shows interest and understanding of how simple tools and machines assist with solving problems or creating objects and structures

BENCHMARK c.

Uses appropriate tools and materials with greater flexibility to create or solve problems

Children may...

- Construct structures with various materials to determine which do/do not work to achieve the desired purpose (e.g., glue, tape, paper, cardboard, foam, plastic, wood, straws, spools).
- Invent and construct simple objects or structures using common tools and materials in a safe manner (e.g., wood, glue, scissors, rulers, pencils, sandpaper).
- Say, "I want to build a taller tower," and find additional blocks to create a taller tower.

Educators may...

- Read about why and how beavers build dams, then provide sticks, mud and other materials at the water table for children to build dams.
- Provide a variety of building materials for children to use in problem-solving (e.g., glue, tape, paper, cardboard, foam, plastic, wood, straws, spools).
- Take pictures or videos of children's structures and post them in the construction area.

Families may...

- Have an area outside with a sand box, or a dirt area and types of sand toys where children can create sand castles, dirt mounds or caves and structures.



VI. SCIENTIFIC INQUIRY

F. ENGINEERING AND TECHNOLOGY

4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Young children are naturally curious. They wonder what things are called, how they work and why things happen. Opportunities for hands-on play with different materials allow children to learn and extend their knowledge and creative-thinking **skills**. Children can begin developing concepts in **engineering** and technology as they design, build and test solutions through play, as they construct sand castles and build cities out of blocks. They also begin understanding that tools help people do things better or more easily.

STANDARD 1.

Shows interest and understanding of how simple tools and machines assist with solving problems or creating objects and structures

BENCHMARK d.

Invents and constructs simple objects or more complex structures and investigates concepts of motion and stability of structures (e.g., ramps, pathways, structure, Legos, block building and play)

Children may...

- Play with ramps and vehicles in the block area, and pulleys at the sand table.
- Play with manipulative toys that use gears.
- Construct something that meets their needs (e.g., use building panels to construct a fort to sit in, a parking garage for vehicles out of blocks).
- Create different inclines with blocks to explore the speed of toy cars and guess which ramp the car will go down faster.

Educators may...

- Provide a variety of building materials for children to use in problem solving.
- Talk with children about their activities using open-ended questions (e.g., "How did you do that? Tell me more.").
- Support children as they modify actions based on new information and experiences (e.g., changes block structure when the tower continues to fall).

Families may...

- Encourage children to be problem solvers (e.g., when cleaning the play area at bedtime ask children, "How can we make our work easier?"). Try their ideas and ask why it worked or did not work.

RELATED BOOKS

PRESCHOOLERS

All About Matter

by Mari Schuh

A Look at Magnets

by Barbara Alpert

Animals Should Definitely NOT Wear Clothing

by Judy and Ronald Barrett

Dig, Wait, Listen

by April Pulley Sayre

Floating and Sinking

by Karen Bryant-Mole

Guess Whose Shadow?

by Stephen R. Swinburne

Hot and Cold

by Sian Smith

I Love Bugs

by Philemon Sturges

My Five Senses

by Alike

Raccoon on His Own

by Jim Arnosky

Up, Down and Around

by Katherine Ayres





GLOSSARY

Adaptation: special, inherited *characteristics* that help an organism survive in its environment and which are developed over time

Attributes: characteristics of an object (size, shape, color, etc.)

Center: area within the classroom arranged so that children are able to participate in a variety of related learning experiences (e.g., art center, reading center, science center, block center, *dramatic play* center, writing center)

Characteristics: features or qualities belonging typically to a person, place or thing that serve to identify it

Circle: a round two-dimensional figure that resembles a ring

Climate: the weather conditions prevailing in an area in general or over a long period

Cubes: three-dimensional solid figures with six equal square faces and right angles

Creativity: individuality expressed by creating something new or original (e.g., creating a new representation of a flower)

Curiosity: a strong interest in learning about something; children demonstrate curiosity when they ask questions about or show interest in activities within the classroom and the world around them (e.g., child asks questions about new materials in the art center or a bug discovered on the playground)

Discovery: engaging children in deep learning that promotes *exploration, problem-solving, creativity* and children engagement

Dramatic play: expressive and spontaneous play

Energy: the ability to do work

Engineering: the study of how things are built and why; through play, engineering for preschoolers looks like building challenges, blocks, marble runs and sandcastles

Environment: the circumstances, objects or conditions by which one interacts with and is surrounded

Exploration: the act of studying something new to better understand it

Hypothesis: an idea or explanation to test through study and experimentation

Initiate: to begin something, taking the first step

Investigating: *observing* or inquiring in detail

Investigation: systematic examination

Inquiry: processes of science (e.g., observe, sort, classify, describe and communicate)

Life cycles: the stages a living thing goes through during its life (e.g., egg to caterpillar to chrysalis/cocoon to butterfly)

Life science: the study of living organisms

Literacy: the ability to read and write

Matter: anything that takes up space and has weight

Music: sound in time that expresses ideas and emotions in significant forms through the elements of rhythm, melody, harmony

Observing: regarding attentively or watching





GLOSSARY

Pattern: a repeating series of units

Predictions: ideas (opinions) stated about what may happen in the future (e.g., child may predict that the caterpillar will turn into a butterfly)

Problem-solving: process followed to find ways to address a situation

Recycled: materials such as glass, aluminum, paper and plastic made into new products

Rhymes: matches between the sounds of two or more words or word endings (e.g., spoon, moon)

Routines: customs or activities regularly practiced at home, in the classroom or in the community

Self: the idea an individual has about own *characteristics* and abilities

Sensory: process of discovering through the senses

Skills: the ability to use knowledge effectively and readily in performance; the ability to transform knowledge into actions

Square: a two-dimensional figure with four equal sides and four right angles

Technology Tools: technology-based devices and other instruments used to carry out or facilitate a task

Vocabulary: all of the words of a language. There are two types of vocabulary: receptive and expressive





VII. SOCIAL STUDIES DOMAIN					
Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years (24 - 36 months)	3 - 4 years (36 - 48 months)	4 years- Kindergarten (48 months - Kindergarten)
A. CULTURE					
1. Experiences own family practices (traditions, celebrations, songs, food or language)	1. Begins to participate in own family practices (traditions, celebrations, songs, food or language)	1. Participates in own family practices (traditions, celebrations, songs, food or language)	1. Identifies family practices (traditions, celebrations, songs, food or language)	1. Begins to identify self as a member of a culture	1. Identifies self as a member of a culture
				2. Begins to understand everyone belongs to a culture	2. Understands everyone belongs to a culture
				3. Explores culture of peers and families (classroom)	3. Explores culture of peers and families in the classroom and community
					4. Explores cultural attributes by comparing and contrasting different characteristics (e.g., language, literature, music, arts, artifacts, foods, architecture and celebrations)
B. INDIVIDUAL DEVELOPMENT AND IDENTITY					
1. Begins to explore characteristics of self (eyes, nose and hair)	1. Begins to recognize characteristics of self (eyes, nose and hair)	1. Recognizes characteristics of self (eyes, nose and hair)	1. Begins to recognize characteristics of self as an individual	1. Recognizes characteristics of self as an individual	1. Identifies characteristics of self as an individual
	2. Begins to recognize ability to impact surroundings	2. Recognizes ability to impact surroundings	2. Begins to recognize the ways self is similar to and different from peers and others	2. Recognizes the ways self is similar to and different from peers and others	2. Identifies the ways self is similar to and different from peers and others
					3. Recognizes individual responsibility as a member of a group (e.g., classroom or family)



VII. SOCIAL STUDIES DOMAIN

Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years (24 - 36 months)	3 - 4 years (36 - 48 months)	4 years- Kindergarten (48 months - Kindergarten)
C. INDIVIDUALS AND GROUPS					
1. Begins to recognize family members	1. Identifies family members	1. Begins to recognize self as separate from others	1. Recognizes self as separate from others	1. Identifies self and others as part of a group	1. Identifies differences and similarities of self and others as part of a group
		2. Begins to respond to the needs of others (e.g., peers and family members)	2. Responds to the needs of others (e.g., peers and family members)	2. Identifies groups within a community	2. Explains the role of groups within a community
		3. Begins to participate in routines (e.g., family, classroom, school and community)	3. Begins to follow routines (e.g., family, classroom, school and community)	3. Begins to demonstrate awareness of group rules (e.g., family, classroom, school and community)	3. Demonstrates awareness of group rules (e.g., family, classroom, school or community)
				4. Exhibits emerging leadership skills and roles (e.g., line leader and door holder)	4. Exhibits leadership skills and roles (e.g., line leader and door holder)





VII. SOCIAL STUDIES DOMAIN					
Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years (24 - 36 months)	3 - 4 years (36 - 48 months)	4 years- Kindergarten (48 months - Kindergarten)
D. SPACES, PLACES AND ENVIRONMENTS					
1. Responds to people and objects	1. Responds in varying ways to people and objects	1. Begins to recognize own personal space	1. Begins to identify own personal space	1. Recognizes the relationship of personal space to surroundings	1. Identifies the relationship of personal space to surroundings
			2. Explores own environment	2. Identifies own environment and other locations	2. Identifies differences and similarities between own environment and other locations
			3. Recognizes basic physical characteristics (e.g., landmarks or land features)	3. Identifies basic physical characteristics (e.g., landmarks or land features)	3. Identifies differences and similarities of basic physical characteristics (e.g., landmarks or land features)
			4. Uses words to describe objects in a familiar space	4. Begins to use spatial words (e.g., far/close, over/under and up/down)	4. Uses spatial words (e.g., far/close, over/under and up/down)
				5. Begins to recognize some geographic tools and resources (e.g., maps, globes or GPS)	5. Recognizes some geographic tools and resources (e.g., maps, globes or GPS)
					6. Begins to identify the relationship between human decisions and the impact on the environment (e.g., recycling and water conservation)



VII. SOCIAL STUDIES DOMAIN					
Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years <i>(24 - 36 months)</i>	3 - 4 years <i>(36 - 48 months)</i>	4 years-Kindergarten <i>(48 months - Kindergarten)</i>
E. TIME, CONTINUITY AND CHANGE					
1. Begins to respond to schedules	1. Responds to schedules	1. Recognizes and responds to schedules (e.g., time to eat when hungry)	1. Begins to sequence events	1. Recognizes sequence of events to establish a sense of order and time	1. Identifies changes within a sequence of events to establish a sense of order and time
			2. Begins to recognize time events and routines	2. Explores changes that take place over time in the immediate environment	2. Observes and recognizes changes that take place over time in the immediate environment
F. GOVERNANCE, CIVIC IDEALS AND PRACTICES					
1. Responds to people and objects	1. Responds to simple requests	1. Begins to follow simple requests	1. Begins to recognize expectations in varied settings	1. Begins to recognize and follow rules and expectations in varied settings	1. Recognizes and follows rules and expectations in varied settings
2. Uses senses to solve problems	2. Begins to recognize cause-and-effect of actions	2. Responds to problems in the environment	2. Demonstrates emerging problem-solving and decision-making skills	2. Begins to participate in problem-solving and decision-making	2. Participates in problem-solving and decision-making
3. Recognizes familiar people and objects	3. Responds in varied ways to people and objects	3. Shows more complex responses to people and objects	3. Begins to recognize common symbols in the environment	3. Begins to recognize national patriotic symbols (e.g., flag and eagle)	3. Begins to explore basic principles of democracy (e.g., deciding rules in a classroom, respecting opinions of others, voting on classroom activities or civic responsibilities)



VII. SOCIAL STUDIES DOMAIN					
Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years (24 - 36 months)	3 - 4 years (36 - 48 months)	4 years- Kindergarten (48 months - Kindergarten)
G. ECONOMICS AND RESOURCES					
1. Begins to actively seek out responses	1. Begins to communicate wants and needs	1. Communicates wants and needs to others	1. Initiates more complex interactions to get wants and needs met	1. Begins to recognize the difference between wants and needs	1. Recognizes the difference between wants and needs
			2. Shows awareness of occupations	2. Recognizes familiar people who perform different occupations	2. Begins to recognize that people work to earn money to buy things they need or want
H. TECHNOLOGY AND OUR WORLD					
1. Responds to people and objects	1. Responds in varied ways to people and objects	1. Begins to recognize there are tools and machines (e.g., spoon for eating, cups and containers used in play, or wagon or cart used in the play area)	1. Explores technology tools and interactive media (e.g., writing utensils, electronic toys, DVD and music players)	1. Uses technology as a tool when appropriate (e.g., writing utensils, electronic toys, DVD, music players, digital cameras, computers or tablets)	1. Uses and shows awareness of technology and its impact on how people live (e.g., computers, tablets, mobile devices, cameras or music players)



VII. SOCIAL STUDIES



As early as 1916, the National Education Association (NEA) saw social studies as “the subject matter related directly to the organization and development of human society, and to individuals as members of social groups.” In the earliest years, social studies concepts simply involve children exploring their world and trying to make sense of the social and physical environments. Social interactions form the basis of social studies; therefore, in the early childhood arena, each child’s basic social understanding begins with **self** and family then expands to early education. A sensitive, respectful approach sets the tone for a child’s social learning.

Research indicates that the youngest citizens—infants and toddlers—learn through self-development in a nurturing, respectful environment enhanced with toys and materials to foster inquisitiveness. Preschool children are usually in classrooms with a more theme-based structure.

Therefore, social studies in these earliest years of birth to 4 will:

- Assist children in social/emotional growth.
- Emphasize holidays that have community meaning.
- Collaborate with families.
- Foster development of integrity in individuals and groups.
- Seek an anti-bias approach to values (Mindes & Donovan 2001).

The social studies domain is integral to a quality early childhood curriculum as children build on what they know and develop higher order **skills**. Social studies standards include the following components:

A. Culture: children participate in family practices and identifies **self** as a member of a **culture**.

B. Individual development and identity: children recognize **characteristics** of **self** as an individual and recognize the ways they are similar to and different from peers and others.

C. Individuals and groups: children begin to respond to the needs of others and to follow family, classroom, school and community **routines**.

D. Spaces, places and environments: children begin to identify their own **personal space** and its relationship to the child’s surroundings. Children identify similarities and differences between own **environment** and other locations.

E. Time, continuity and change: children begin to recognize time, events and **routines** and recognize changes that take place over time.

F. Governance, civic ideals and practices: children begin to recognize and follow rules in varied settings with varying expectations.

G. Economics and resources: children begin to recognize the difference between wants and needs.

H. Technology and our world: children explore, show awareness of and use technology as a tool when appropriate (e.g., writing utensils, electronic toys, computers or tablets).



ENVIRONMENTAL CONSIDERATIONS

4 YEARS - KINDERGARTEN (48 months - Kindergarten)

- Provide access to clocks, timers and stop watches.
- Include a **dramatic play** area with many props and authentic materials that allow children to create and reenact family roles, relationships, **routines**, and rituals.
- Label objects and **environment** areas with symbols and words.
- Provide a play cash register, receipt books, restaurant menus, sticker price tags, play money, etc. in the **dramatic play** area.
- Post expectations and flow of the day with words and pictures.





VII. SOCIAL STUDIES

A. CULTURE



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Families and early learning environments are two of the first experiences of community for young children. Four-year-olds are becoming more aware of similarities and differences among people; they focus mostly on how people are different or the same as themselves.

STANDARD 1.

Identifies **self** as a member of a **culture**

Children may...

- Talk about family traditions during story time.
- Discuss with peers about different types of family structures.

Educators may...

- Hang examples of artwork from around the world that use different types of media at children's eye level throughout the classroom.
- Read fiction and non-fiction books about different cultures.
- Provide opportunities for children to tell stories about their family's special occasions (e.g., a birthday celebration for grandma) or a special holiday.

Families may...

- Teach children family traditions and make those traditions an important part of their lives.
- Share some pictures of family practices and make a simple book for children to take to the classroom.

STANDARD 2.

Understands everyone belongs to a **culture**

Children may...

- Dress in clothing from different cultures in the dress-up area after reading a story about that **culture**.
- Show an interest in stories about children who live in different kinds of houses or eat different types of food.

Educators may...

- Incorporate cultural and ethnic activities and materials (e.g., books, clothes, paint, crayons, **music**, food, papers and micro-play figures of different cultures and ethnicities) into the curriculum on a daily basis.
- Identify the strengths of **cultures** represented in the classroom, as well as understand that each child is unique and practices their **cultural** traditions in their own way.

Families may...

- Introduce children to foods from other countries and talk about how they are different than the foods their families eat.
- Read books with children to encourage an interest about children who live in different kinds of houses, go to school using different kinds of transportation, and play various kinds of games. Point out ways in which children are the same.



STANDARD 3.

Explores **culture** of peers and families in the classroom and community

Children may...

- Talk to peers about different types of family structures.
- Play games from other countries, sing songs in a different language from own or learn a nursery rhyme or fable from another **culture**.

Educators may...

- Explain customs or traditional celebrations within their home, classroom or community after listening to the educator read a story about the celebration.
- Display photographs of the children and their families as well as children and families from other cultural groups around the world.
- Learn the makeup of each child's family while understanding the concept of "family" may look different for each child.

Families may...

- When speaking with children about differences in cultures other than their own, help them learn how to talk about those differences with sensitivity and respect.
- Read books, watch documentaries and look at pictures with children to encourage an interest about children who live in different kinds of cultures.

STANDARD 4.

Explores **cultural attributes** by comparing and contrasting different **characteristics** (e.g., language, literature, **music**, arts, artifacts, foods, architecture and celebrations)

Children may...

- Show an interest in stories about children who live in different kinds of houses or eat different types of food.
- Play instruments from different countries while listening to related **music**.

Educators may...

- Hang representations of different architectural designs, art work or artifacts at eye level in the classroom and discuss them with students during whole group or free choice time.
- During morning meeting, circle time or whole group, share different styles of **music** and dance for the children to enjoy, being sure to include the styles that your families enjoy.
- Grow different and unfamiliar flowers and vegetables in the classroom, by the playground or in a school garden.

Families may...

- Encourage children to listen to classmates' experiences and stories, share their own and find similarities.
- Speak with children in their home language to encourage family communication and support home **culture**.



VII. SOCIAL STUDIES



B. INDIVIDUAL DEVELOPMENT AND IDENTITY

4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Families and early learning environments are two of the first experiences of community for young children. Four-year-olds are becoming more aware of similarities and differences among people. They focus mostly on how people are different or the same as themselves.

STANDARD 1.

Identifies **characteristics** of **self** as an individual

Children may...

- Create an "All About Me" book representing **characteristics** of themselves or things they like.
- Choose playdough or paint that matches own skin color.
- Recognize what they are good at (e.g., learning how to skip down the sidewalk or holding a pencil like the teacher).

Educators may...

- Have children discuss different **attributes** that make them individuals.
- Provide opportunities for children to experience a sense of contribution to the class unique to themselves.
- Provide paint and playdough in colors that represent the different skin tones found among peoples of the world.

Families may...

- Provide honest feedback specific to a task children have completed (e.g., "You worked so hard on that puzzle! It took a really long time, and you didn't give up.").
- Encourage children to draw a picture of their house, family or friends.
- Make a simple map together with children of the neighborhood and label the different places that are important to the children and family, such as school, grocery store and the park.



VII. SOCIAL STUDIES



B. INDIVIDUAL DEVELOPMENT AND IDENTITY



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Families and early learning environments are two of the first experiences of community for young children. Four-year-olds are becoming more aware of similarities and differences among people. They focus mostly on how people are different or the same as themselves.

STANDARD 2.

Identifies the ways **self** is similar to and different from peers and others

Children may...

- Notice a child using a walker or wheelchair and ask why it is needed.
- Talk to peers about different types of family structures.
- Show respect for similarities and differences among peers and others.
- Bring a family picture to school and talk about own family during group activities.

Educators may...

- Teach children words in other languages (e.g., “thank you” in Spanish is “gracias”).
- Read fiction and non-fiction stories about cultures and have children share ways they are the same or different from the characters in the stories.
- Ensure classroom materials (e.g., books, craft materials, pictures, banners, artifacts) are representative of all children.

Families may...

- Answer children’s questions about the similarities and differences in other people when out in the community (e.g., hair styles, clothing, physical disabilities).
- Celebrate and recognize different cultures within own circle of friends.



VII. SOCIAL STUDIES



B. INDIVIDUAL DEVELOPMENT AND IDENTITY

4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four-year-olds continue to enjoy playing out family roles. They are exploring each person's role and how they live, the jobs family members have within the family and how to get along. Children are encountering **diversity** when they learn about different **characteristics** of families and family structures. Children this age are interested in people and how they live. As their life experiences grow and they meet a greater variety of people in their community, they develop a better understanding of jobs and social roles. They learn what it takes to perform certain jobs, what tools are needed and how jobs are done. Four-year-olds explore jobs (e.g., cooks, storekeepers, crossing guards, office workers and others) through **dramatic play** and stories.

STANDARD 3.

Recognizes individual responsibility as a member of a group (e.g., classroom or family)

Children may...

- Assign family roles to themselves and friends, and say, for example, "I am the daddy and you are the granddaddy and we are taking the baby to the store."
- Bring a family picture to school and talk about own family during a small group activity with an adult.
- Take pride in successfully completing a classroom job.

Educators may...

- Include a **dramatic play** area with many props and authentic materials that allow children to create and reenact family roles, relationships, **routines** and rituals.
- Invite a member of the family to share a song, story or special snack with the class.
- Read stories about different families and their homes, clothing and jobs.
- Invite family members to share information and materials from their jobs.

Families may...

- Talk about the adult's job with children sharing what the occupation is, tasks for the job and how the job helps others.
- Look through family photos and ask children to name the family members and what their role is in the family.
- Discuss individual and shared responsibilities in the family (e.g., "I go to work, and you go to school." "I will put the plates away. You sort the spoons and forks.").

VII. SOCIAL STUDIES

C. INDIVIDUALS AND GROUPS



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Because they are observant and naturally curious about people, children become aware of similarities and differences among themselves and others on their own. They depend on adults to develop a sensitivity in responding to differences they encounter. Children begin to accept and appreciate the differences in themselves and others as normal and positive.

STANDARD 1.

Identifies differences and similarities of **self** and others as part of a group

Children may...

- Make observations about peers and others at school or in their community.
- Describe how they are different than a peer (e.g., "I like to do puzzles, and Jose likes to build houses with the blocks.").

Educators may...

- Model respect for others by listening and accepting all children's ideas and feelings.
- Treat everyone equally and fairly at all times, including children, families and colleagues.
- Comment on specific **attributes** and accomplishments without labeling one as better than another. Offer an observation, such as "Sophia has blonde, curly hair, and Ryleigh has long brown hair."

Families may...

- Model for children how to treat people as individuals.
- Offer observations on specific **attributes** without labeling one as better than another.
- Explain to children that differences make us unique. Some friends wear glasses, move using a wheelchair, are different sizes, skin color and wear different clothing. There are also many ways we are the same. Give examples.



VII. SOCIAL STUDIES

C. INDIVIDUALS AND GROUPS



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Children this age are interested in people and how they live. As their life experiences grow and they encounter a greater variety of people in their community, they develop a better understanding of jobs and social roles. They learn what it takes to perform certain jobs, what tools are needed and how jobs are done. Four-year-olds explore jobs (e.g., cooks, storekeepers, crossing guards, office workers, police officers, firefighters) through **dramatic play**, role-play and stories.

STANDARD 2.

Explains the role of groups within a community

Children may...

- Better understand the feelings of others and talk about how people feel doing certain kinds of work (e.g., the fire fighter may feel nervous but glad to help. The nurse may feel sad if patient is sick.).
- Name different jobs and the kinds of work they do.
- Show interest in books about different community jobs and act them out on the playground.

Educators may...

- Ensure there are books available, pictures posted and artifacts and tools to use in play that are related to community jobs.
- Discuss how each job contributes to the community (e.g., police officers work to keep us safe, nurses keep us healthy, servers and cooks feed us).
- Draw outline of child while lying down. Have child fill in the details of the picture of a job they are interested in (e.g., draw the face, hair, hands and add a tie, a fire hose, a computer to illustrate the job).

Families may...

- Point out different community workers when out running errands or taking a walk and discuss their jobs and responsibilities (e.g., people who are driving trash and recycling trucks, fixing cars at a garage, doctor's office, police and fire stations.).
- Check out fiction or non-fiction books at the library that describe different types of community workers and discuss how their job is important to the child's community.
- When at the park or playground, act out different roles of community workers with children. Use different objects found nearby and your child's imagination as props.

VII. SOCIAL STUDIES

C. INDIVIDUALS AND GROUPS



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Young children are very familiar with the roles performed in their own families and eventually into roles in their community. Adults are needed to help 4-year-olds see how and why rules and expectations apply to them.

STANDARD 3

Demonstrates awareness of group rules (e.g., family, classroom, school or community)

Children may...

- Create rules for games they invent.
- Ask for permission when appropriate (e.g., leaving the room, performing a job).
- Listen to others and joining in conversations at appropriate times.
- Take a fair share of snack when allowed to self-serve.

Educators may...

- Discuss why rules are important and what would happen if we had no rules (e.g., looking both ways before crossing the street, not running inside, sharing with others).
- Provide frequent reminders of rules and expectations (e.g., verbal, pictorial, role-play).
- Keep rules simple and easy to remember and continually model appropriate use of rules. Suggest class rules during a group discussion and help children understand why the rules are important.

Families may...

- Encourage children to invent a game and create their own rules. Have children teach the game to someone.
- Discuss appropriate rules for different places in your child's community (park, playground, library, place of worship, stores, transportation, etc.).



VII. SOCIAL STUDIES

C. INDIVIDUALS AND GROUPS



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

When children are given the chance to lead, they see themselves as capable and in control. At this age, they are just beginning to understand the qualities of a leader and need many opportunities to practice their budding leadership **skills**.

STANDARD 4.

Exhibits leadership **skills** and roles (e.g., line leader and door holder)

Children may...

- Understand the feelings and views of classmates.
- Enjoy assuming classroom responsibilities, such as message carrier, trash collector, door holder or weather reporter.
- Help classmates with small tasks, such as fastening shoes, getting materials for an activity or putting on smocks for art.

Educators may...

- Model good leadership **skills** for children by allowing them to see what classroom roles (e.g., line leader, morning meeting leader, snack helper) look like; hear the language used to guide children on what should happen next.
- Encourage persistence. Young children may need assistance, guidance and coaching when tasks may become a little challenging.
- Help children understand different viewpoints to work out problems with classmates.

Families may...

- Play games that require a leader, such as “Red light, Green light” or “Hide and seek;” or play games that have rules that should be followed (e.g., taking turns, waiting in line).
- Enroll child in extracurricular activities to learn and experience teamwork skills.
- Talk with children about a friend’s feelings and points of view.



VII. SOCIAL STUDIES

D. SPACES, PLACES AND ENVIRONMENTS



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four-year-olds have a strong understanding of their body and space. They walk, run and jump with confidence and are gaining better hand-eye coordination. They learn through using their senses and begin to learn directions and other spatial concepts through moving their bodies.

STANDARD 1.

Identifies the relationship of *personal space* to surroundings

Children may...

- Recognize where they are while traveling in familiar areas.
- Match objects to their usual geographic location (e.g., a stove belongs in the kitchen, your bed is in your bedroom and not on the playground).
- Recognize that roads have names and signs and that houses have numbers to identify locations.

Educators may...

- Make maps of classrooms, playgrounds and neighborhood stores and features.
- Provide children with stickers, flags or other symbols they can use to mark places on the maps.
- Display a large map of the classroom or neighborhood near the block **center** and encourage children to use it to work together to recreate the classroom or neighborhood using blocks and props (e.g., as people, cars, animals and signs).
- Encourage children to move in various ways (e.g., climbing, jumping and rolling) to experience their position in space.

Families may...

- While taking a walk around the neighborhood, point out road signs and house numbers and discuss their purpose.
- When driving to the store, ask children to point out recognizable landmarks (e.g., a bridge, railroad tracks, McDonald's, etc.).

VII. SOCIAL STUDIES

D. SPACES, PLACES AND ENVIRONMENTS



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Children’s understanding of location and symbols that represent places they like to visit, for example a symbol of a book for the library, a logo for a favorite restaurant, or even a park that means they are close to their grandparents’ house. They notice differences in landmarks, the buildings around them, and other geographic **characteristics** that pinpoint a specific place.

STANDARD 2.

Identifies differences and similarities between own **environment** and other locations

Children may...

- Develop an awareness of **characteristics** of own geographic region (e.g., “It rains a lot here.”).
- After a virtual field trip, identify ways their **environment** and the visited one are the same or different.

Educators may...

- Read fiction and non-fiction books about environments different than the one they live in and compare/contrast the environments using pictures, drawings and simple words.
- Provide children the opportunity for “virtual” field trips to “visit” different environments.

Families may...

- During family vacations or travels away from home, ask children what objects or landmarks they see that are the same and different than what they would see at home.

STANDARD 3

Identifies differences and similarities of basic physical **characteristics** (e.g., landmarks or land features)

Children may...

- Notice landmarks within the context of the neighborhood (e.g., noticing that school is close to train tracks while on a nature walk through the neighborhood).
- Create representations of locations and space during play (e.g., at the sand table or at the block center).

Educators may...

- Take walking trips around the **center** and encourage children to note geographic features and landmarks.
- Make maps of classrooms, playgrounds and neighborhood stores and features.
- Take digital photographs of landmarks (natural and man-made) from around the school and neighborhood to use in classroom activities (e.g., storytelling, bookmaking, props for the block area).

Families may...

- Take walking trips around the neighborhood and note geographic features and landmarks. Ask your child how they are the same or different than other features in your neighborhood.
- When watching movies or TV shows with children, discuss how the location of the show or movie is the same or different as your neighborhood or **environment**.



VII. SOCIAL STUDIES

D. SPACES, PLACES AND ENVIRONMENTS



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

While 4- and 5-year-olds may not yet understand how to use a map, they are able to understand it is a tool to help someone know where they are and where they are going. Using directions, left/right, and other spatial terms (e.g., near/far, high/deep) will help them to build vocabulary and understand location, space, and the tools we use to navigate them.

STANDARD 4.

Uses spatial words (e.g., far/close, over/under and up/down)

Children may...

- Play games that give practice in directionality such as “Candy Land” or “Chutes and Ladders” (e.g., up, down, forward, back).
- Comment on the diagram of how mats or cots are arranged during nap time, saying “See, I knew Kendra napped next to me.”

Educators may...

- Model using spatial words during daily conversation to describe where you are in the classroom or on the playground.
- Use blocks and **dramatic play** items to create representations of neighborhood features and discuss their vicinity to each other using spatial words.

Families may...

- Use spatial words, when traveling to describe where you are going (e.g., “We will turn left at the next street.”).
- Talk about what children are doing at the playground (e.g., going up and down a slide, crawling across a bridge, standing under a tree or sitting on a bench).

STANDARD 5.

Recognizes some geographic tools and resources (e.g., maps, globes or GPS)

Children may...

- Look at simple maps and diagrams (e.g., a picture map of the classroom) and discuss why a map/globe is helpful in finding locations.
- Help the teacher create an emergency evacuation plan for the classroom.

Educators may...

- Demonstrate the use of maps (including topographical) and globes. Provide concrete representations of both and allow students to touch and explore each one.
- Provide a map of classroom centers, at eye level, to assist children in **planning** for free choice **center** time.
- Engage children in a scavenger hunt or pirates’ treasure hunt that uses simple maps.

Families may...

- Draw a simple map of the family’s house. Ask children where they might find an object or place where the family does things together. Create and follow a pathway through the house to get there.
- Using the GPS function on a phone, take a walking trip through the neighborhood and allow children to observe their “real time” movement along the path on the phone screen.

VII. SOCIAL STUDIES

D. SPACES, PLACES AND ENVIRONMENTS



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four-year-olds can understand and explain how to care for the **environment**. They are beginning to understand that people have an impact on the **environment**. Children can describe how to keep the **environment** clean and how they can help in this process.

STANDARD 6.

Begins to identify the relationship between human decisions and the impact on the **environment** (e.g., recycling and water conservation)

Children may...

- Take on a meaningful role in taking care of the settings where they play and interact during the day.
- Put bird seed in a bird feeder on the playground.
- Recognize that litter does not belong in the **environment**.
- Use **recycled** materials to create props for different centers.
- Use found objects, **recycled** materials and scrap paper at the art **center** so that children can see that one material has multiple uses.

Educators may...

- Help children become aware of and appreciate nature (e.g., feel the sun and wind on your face, examine native plants and animals, hang a bird feeder).
- Encourage children to take care of their indoor and outdoor environments (e.g., placing caps on markers so they do not dry up and being careful to not tear the dress up clothes).

Families may...

- Involve children in helping to sort bottles, cans and paper into proper recycling containers and bring the containers to the street so that they can be picked up.
- Engage children in conversations regarding why it is important to recycle or pick up trash off the roads.





VII. SOCIAL STUDIES

E. TIME, CONTINUITY AND CHANGE



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four year-old children's understanding of history is closely tied to their ideas about time. A personal connection is typically made by first associating events in their daily lives. There is an understanding that time can move forward, children can look backward and that past and present can affect their future (e.g., using materials today that were bought yesterday). They are able to note changes to objects in their **environment**, from a caterpillar changing to a butterfly or a building being constructed from the cement beginning to the finished product.

STANDARD 1.

Identifies change within a **sequence of events** to establish a sense of order and time

Children may...

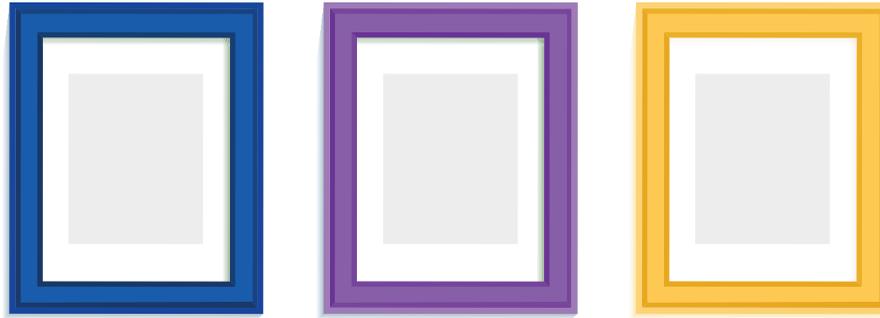
- Describe the daily routine (e.g., what happens first, before lunch, after lunch and at the end of the day).
- Show anticipation for regularly scheduled events.
- Use words to describe time (e.g., yesterday, today, tomorrow, o'clock).

Educators may...

- Provide a consistent daily schedule so that children become familiar of the sequence of daily events.
- Play sequencing games at circle time or small group (e.g., First touch your toes, then tap your nose.).
- Consistently encourage children to use a growing **vocabulary** of time and sequencing words.
- Tell what is happening during the day and into the week.

Families may...

- Take photos of or draw pictures of children completing the steps of their morning routine. Hang these photos or drawings on a ring or wall and discuss why some events happen before or after another.
- Provide opportunities to encourage children to think sequentially (e.g., In the car, ask, "Which way will I turn at the stop sign?" At home ask, "Now, what will I do with these dirty dishes?" "Tell me what happened at school today," or "Before you go outside in the cold, what do you need to do?").



STANDARD 2.

Observes and recognizes changes that take place over time in the immediate *environment*

Children may...

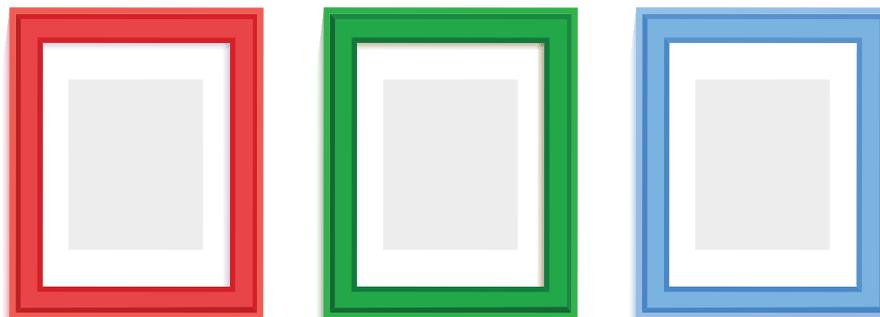
- Recall information from the immediate past (e.g., sequencing photos of themselves from birth to present).
- Describe the daily routine (e.g., what happens before lunch, after lunch and at the end of the day).
- Uses words to describe time (e.g., yesterday, tomorrow, o'clock).

Educators may...

- Use concrete representations such as artwork, books and *music* to make children aware of distant past and far future.
- Use *vocabulary* to label events and *routines* (e.g., today, tomorrow, yesterday, next, later, long ago).

Families may...

- Ask children to recall events that happened last night or yesterday.
- Establish and maintain consistent *routines* for children.
- Visit a neighborhood house being built. Discuss changes you see daily and weekly.





VII. SOCIAL STUDIES



F. GOVERNANCE, CIVIC IDEALS AND PRACTICES

4 YEARS-KINDERGARTEN (48 months- Kindergarten)

Children begin to understand that participating in a democratic society and in a democratic classroom requires similar **skills**, such as solving problems, making decisions, managing emotions, taking the perspectives of others and pursuing and achieving goals.

STANDARD 3.

Begins to explore basic principles of democracy (e.g., deciding rules in a classroom, respecting opinions of others, voting on classroom activities or civic responsibilities)

Children may...

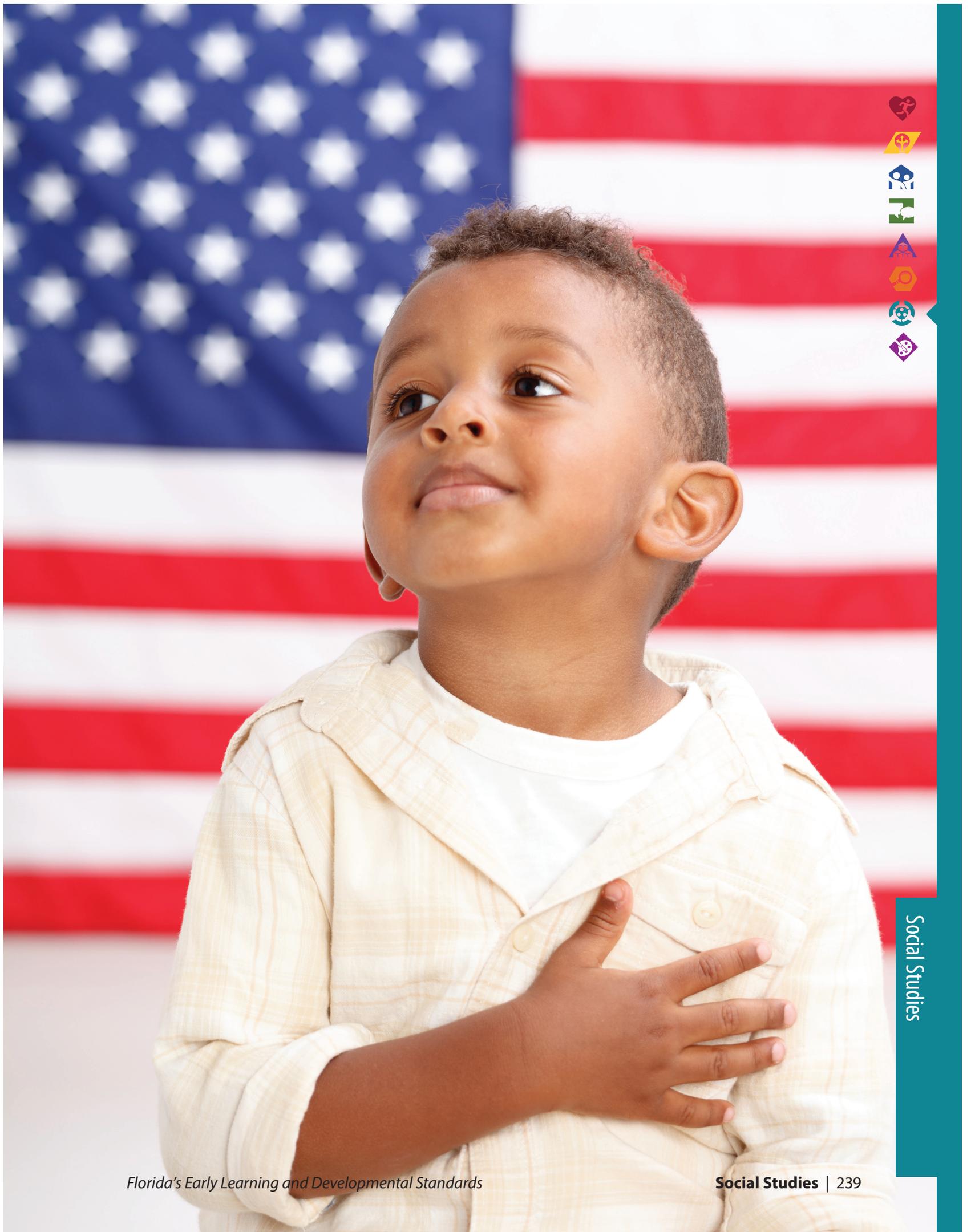
- Create rules for games they invent.
- Participate in voting activities in the classroom (e.g., favorite snack, color or activity) that may include the educator guiding graphing the results.
- Take turns on play equipment during outside play.

Educators may...

- Model respect for others by the way you listen to and accept children's ideas and feelings.
- During small group time or a class meeting, describe a problem that affects everyone and invite children to suggest one or more rules to solve it.
- Build children's **skills** of perspective-taking and taking turns by reminding children to listen before they add their ideas to the discussion.

Families may...

- Ask children to consider alternative ways to reach a goal (e.g., "What do you think would happen if...?" or "Can you think of another way to do that?").
- Describe a problem that affects the family and invite children to participate in a family discussion suggesting one or more rules to solve it.





VII. SOCIAL STUDIES

G: ECONOMICS AND RESOURCES



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Preschool children are able to understand when resources run out and the need to replenish them, (e.g., the food they eat, the craft supplies they use). They begin to understand that parents work to get money for food and clothes. Children at this age are interested in many jobs within the community. Providing exposure to various jobs, especially “helpers” gives children experiences understanding the types of work community members do.

STANDARD 1.

Recognizes the difference between **wants and needs**

Children may...

- Be interested in making purchases with their “own” money.
- Understand that it may be necessary to wait to eat a special treat (e.g., they food they want) until after dinner and the healthy food they need have been served.
- Notice when classroom resources have run out or broken, such as paint, favorite toys, or other materials.

Educators may...

- Set up a store in the classroom for children to practice exchanging pretend money for goods and provide writing utensils and note pads for “shopping lists or receipts”.
- Discuss the kinds of resources used in the classroom, where they come from, and how they can be conserved (e.g., not being wasteful with paper, putting tops on paint pens and markers, etc.).
- Help children understand the basic needs people have (food, clothing, shelter), the different ways people around the world meet those needs (e.g., jackets and hats in cold areas, shorts and t-shirts in warmer climates, homes with fireplaces and those without).

Families may...

- Allow children to help make the weekly shopping list, discussing why somethings are added and others are not (e.g., fruit, meat, toilet paper versus limited amounts of cookies, sodas, chips).
- Discuss natural resources and why we want to protect the environment (e.g., the value of trees and water, the need to keep our environment clean, **recycle** and reuse).
- Acknowledge children’s requests for things that are not a current need or priority such as (e.g., “I know you really want to go to the park, but we do not have time to stop right now because we need to go to the grocery story.” or “I can see you really want to buy that book. Let’s go to the library next week and see if we can borrow it instead of buying it.”).



STANDARD 2.

Begins to recognize that people work to earn money to buy things they need or want

Children may...

- Talk about what they want to be when they grow up.
- Play store or restaurant with pretend or real money, receipts, credit cards and phone.
- Engage in conversations about transactions after being read books about people who buy and sell things.
- Recognize that adults work to earn money.

Educators may...

- Provide play opportunities for children to purchase things in **dramatic play** (e.g., grocery store, post office and shoe store).
- Provide items such as pretend money, cash register, receipt book and other examples of real materials related to working and earning money.
- Discuss that people do many different kinds of jobs to earn money.

Families may...

- Engage in conversations when children talk about what they want to be when they grow up.
- Share stories about the parents' or family members' **occupations** with children's classes through pictures, field trips and classroom props.
- Give children an opportunity to earn "points" or "money" to purchase a treat, toy or book they want.





VII. SOCIAL STUDIES

H. TECHNOLOGY AND OUR WORLD



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

While technology is defined as tools that make life easier, many view “technology” as just TVs, computers, and tablets. Preschoolers seem to innately understand how to turn on tablets, change TV channels to favorite programs, or play games on phones. It is important for parents and caregivers to understand the impact of modern technologies on children while also providing real-world experiences so children may continue to understand the world around them and how tools and technologies are used to solve a problem or make things easier.

STANDARD 1.

Uses and shows awareness of technology and its impact on how people live (e.g., computers, tablets, mobile devices, cameras or *music* players)

Children may...

- Record sounds into a tape recorder in the *music* area and then listen when the recording is played back.
- Explore simple drawing programs on a class or home computer.
- Use a digital camera to take pictures of things they are interested in (e.g., of friends, nature, the classroom).
- Understand how community services impact their daily lives (e.g., “How does food get to the grocery store?” “How is mail delivered?” “Where does trash go after it leaves your home?”).

Educators may...

- Provide *technology tools* (e.g., computers, small appliances), and books about technology and *dramatic play* props representing technology.
- Introduce new technologies (e.g., computer programs) to one or two children at a time to ensure safe and proper use.
- Discuss advantages and disadvantages of technology in everyday lives (stairs versus escalator or elevator, walking versus driving, candles versus electricity, etc.).

Families may...

- Actively participate with your child when watching television or using the computer, and limit daily screen time, especially before bedtime.
- Monitor children’s screen time for quality and appropriate content.
- Discuss how tools and technology assist our daily lives (e.g., electricity, plumbing, cars, computers, etc.).





RELATED BOOKS

INFANTS/TODDLERS

Bedtime

by Elizabeth Verdick

Global Babies

by The Global Fund for Children

Little Blue Truck Leads the Way

by Alice Schertle

No Hitting!

by Karen Katz

I'm a Big Sister

by Joanna Cole

Quiet and Loud

by Leslie Patricelli

Sharing Time

by Elizabeth Verdick

Ten Tiny Toes

by Caroline Jayne Church

The Okay Book

by Todd Parr

Trucks

by Byron Barton

Waiting for Baby

by Rachel Fuller

Wheels on the Bus

by Raffi and Sylvie Wickstrom

PRESCHOOLERS

Building a House

by Byron Barton

Follow That Map! A First Book of Mapping Skills

by Scot Ritchie

Good Night Beach

by Mark Jasper

Good Night Florida

by Adam Gamble, Mark Jasper and Joe Veno

Houses and Homes

by Ann Morris

I'm Not Ready!

by Jonathan Allen

Me on the Map

by Joan Sweeney

My Mom Loves Me More Than Sushi

by Filomena Gomes

Peter's Chair

by Ezra Jack Keats

Police Officers on Patrol

by Kerstin Hamilton and R.W. Alley

School Bus

by Donald Crews

The Colors of Us

by Karen Katz

The Family Book

by Todd Parr

The Wheels on the Bus

by Paul O. Zelinsky

What I Like About Me!

by Allia Zobel Nolan

Who's in My Family?

by Robie H. Harris

Why Should I Listen?

by Claire Llewellyn

Windows

by Julia Denos





GLOSSARY

Culture: the learned and shared knowledge that specific groups use to generate their behavior and interpret their experience of the world

Common symbols: objects and artifacts used with a variety of purposes such as civic ideals, values, locations, community rules, and others

Diversity: the inclusion of different people (as people of different races or cultures) in a group or organization

Empathy: ability to recognize the emotions and feelings experienced by peers and adults

Environment: the circumstances, objects or conditions by which one interacts with and is surrounded (e.g., the indoor and outdoor area or setting where the child lives and interacts including home, neighborhood, classroom, etc.)

Investigating: observing or inquiring in detail

Occupations: refers to the different jobs and the roles people have in the community

Personal space: the area surrounding an individual, which that person considers their own

Problem-solving: process followed to find ways to address a situation

Prosocial: ability to engage in behaviors and actions in response to the needs of others

Routines: customs or activities regularly practiced at home, in the classroom or in the community

Self: the idea an individual has about own *characteristics* and abilities

Sequence of events: ability to recognize the order of actions taking place during an experience, routine or activity

Social expectations: describe the social behaviors considered appropriate according to the setting

Technology tools: technology-based devices and other instruments used to carry out or facilitate a task

Wants and needs: needs are what is necessary to address basic needs (such as food, shelter, etc) while wants are those things one may desire but that are not indispensable, while needs are what is necessary to address basic needs (e.g., food, shelter, etc.)

VIII. CREATIVE EXPRESSION THROUGH THE ARTS DOMAIN					
Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years (24 - 36 months)	3 - 4 years (36 - 48 months)	4 years- Kindergarten (48 months - Kindergarten)
A. SENSORY ART EXPERIENCE					
1. Begins to experience the sensory qualities of a wide variety of open-ended, diverse and process-oriented sensory materials	1. Chooses from a wide variety of open-ended, diverse and process-oriented sensory materials to engage in the art experience	1. Combines a variety of open-ended, process-oriented and diverse art materials to explore technique with intention	1. Uses imagination and creativity to express self through open-ended, diverse and process-oriented art experiences with intention	1. Uses imagination and creativity to express self with intention using a variety of open-ended, process-oriented and diverse art materials	1. Combines with intention a variety of open-ended, process-oriented and diverse art materials
B. MUSIC					
1. Responds to music in a variety of ways	1. Begins to discover and engage in creative music experiences	1. Discovers and engages in creative music experiences	1. Begins to engage in a variety of individual and group musical activities	1. Engages in a variety of individual and group musical activities with more coordinated intention	1. Actively participates in a variety of individual and group musical activities
				2. Begins to express and represent thought, observations, imagination, feelings, experiences and knowledge in individual and group music activities (e.g., singing, trying musical instruments or marching)	2. Expresses and represents thought, observations, imagination, feelings, experiences and knowledge in individual and group music activities
C. CREATIVE MOVEMENT					
1. Uses movement to show increasing body awareness in response to own environment	1. Begins to use movement to express feelings or communicate an idea	1. Uses movement to express feelings or communicate an idea	1. Begins to engage in individual and group movement activities to express and represent thoughts, observations, imagination, feelings, experiences and knowledge	1. Engages in individual and group movement activities to express and represent thoughts, observations, imagination, feelings, experiences and knowledge	1. Continues to engage in individual and group movement activities to express and represent thoughts, observations, imagination, feelings, experiences and knowledge
	2. Spontaneously responds and moves in creative ways while listening to music or sounds, stories or verbal cues	2. Responds and moves in creative ways while listening to music, stories or verbal cues			



VIII. CREATIVE EXPRESSION THROUGH THE ARTS DOMAIN

Birth - 8 months	8 - 18 Months	18 - 24 months	2 - 3 years (24 - 36 months)	3 - 4 years (36 - 48 months)	4 years- Kindergarten (48 months - Kindergarten)
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D. IMAGINATIVE AND CREATIVE PLAY

1. Imitates familiar experiences in own life	1. Imitates and initiates familiar experiences in own life using a variety of objects in the environment	1. Purposefully begins to engage in and explore imaginative and creative play with a variety of objects in the environment	1. Purposefully explores, engages and persists in ongoing real and or imaginative experiences through creative play	1. Expresses and represents thoughts, observations, imagination, feelings, experiences and knowledge, verbally or non-verbally, using a variety of objects in own environment	1. Expresses and represents thoughts, observations, imagination, feelings, experiences and knowledge, verbally and non-verbally, with others using a variety of objects in own environment
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E. APPRECIATION OF THE ARTS

1. Responds spontaneously to different forms of art in the environment	1. Shows curiosity in different forms of artistic expressions (e.g., music, art and dance)	1. Begins to respond to own art and to a variety of artistic expressions of others	1. Responds to own art and to a variety of artistic expressions of others	1. Responds to and expresses opinions and feelings about own art form as well as a variety of artistic expressions of others	1. Uses appropriate art vocabulary to describe own art creations and those of others
		2. Begins to show preferences for various art forms	2. Shows preferences for various art forms		2. Compares own art to similar art forms
					3. Begins to recognize that instruments and art forms represent cultural perspectives of the home and the community, now and in the past



VIII. CREATIVE EXPRESSION THROUGH THE ARTS



Creative expression through the arts provides children with opportunities to express ideas and feelings, use words, manipulate tools and media and solve problems in five areas: **sensory** art experience, **music**, **creative movement**, imaginative and creative play and appreciation of the arts. Through the arts, children learn to express what they know, pursue their own interests and abilities and appreciate others contributions. They begin to understand that others can be creative in different ways, and show appreciation for these differences by asking questions and commenting.

Sensory art experience involves children using their imagination and **creativity** to express themselves using a variety of **diverse** materials. Children share their understanding and knowledge through visual art media (e.g., paint, clay, markers on paper, watercolor painting, photography).

Music is demonstrated by recognizing and creating patterns through a variety of individual and group musical activities. Singing, chanting and rhyming enhances **vocabulary** and **oral language** development.

Imaginative and creative play focuses on experiences that help children develop fluency of language, movement, originality, elaborations of ideas, **vocabulary**, imitation and self-expression.

Appreciation of the arts involves children responding to their own art and to a variety of artistic expressions of others. Children develop their own sense of appreciation for the arts, including their favorite colors, art materials and types of pictures and art they like to look at. While developing an appreciation for the arts, children begin recognizing that instruments and art forms represent cultural perspectives of the home and the community, now and in the past.

Creative movement involves children enjoying dancing and exploring the different ways they can move. This is especially effective as they are refining **gross motor skills** and can do more and more each day. Children begin engaging in individual and group movement activities to express and represent thoughts, observations, imagination, feelings, experiences and knowledge.



ENVIRONMENTAL CONSIDERATIONS

4 YEARS - KINDERGARTEN (48 months - Kindergarten)

- ◆ Include a variety of art materials and supplies (e.g., nature items, commercial products, household objects), as well as adequate space for displaying pictures, clay creations, and block structures.
- ◆ Provide a variety of materials in the classroom for children to use to create a product to communicate an idea (e.g., paint, brushes, different sized boxes, rollers, collage materials).
- ◆ Include sufficient space indoors and outdoors for dance, drama and movement activities, as well as a variety of **music** with different tempos and styles, along with creative props (e.g., scarves, costumes).



VIII. CREATIVE EXPRESSION THROUGH THE ARTS DOMAIN



A. SENSORY ART EXPERIENCE

4 YEARS – KINDERGARTEN (48 months - Kindergarten)

As their attention span grows, 4-year-olds can stay involved in creative art activities for longer periods of time. Four-year-olds experiment enthusiastically with art materials, and investigate their ideas through drawing, painting, sculpture and design. They exhibit a sense of joy and excitement as they make and share their artwork with others.

STANDARD 1.

Combines with intention a variety of open-ended, **process-oriented** and **diverse** art materials

Children may...

- Create a three-dimensional collage using one or a variety of materials.
- Respond to books with engaging illustrations by creating art.
- Create a collection and develop a display.
- Create a collaborative art work that illustrates a learned experience.

Educators may...

- Discuss process as children work.
- Help children plan their project.
- Coach **self-regulation** and **problem-solving** as children work through projects.
- Ask “why” and “how” questions to understand children’s choices and decisions.
- Incorporate books into the lesson plans that use collage.
- Help children create a guidebook for their collections.

Families may...

- Visit children’s classroom to enjoy a gallery of the children’s art work.
- Visit children’s museums or art museums.
- Take and share photos of children during the design and production stages of their work.



VIII. CREATIVE EXPRESSION THROUGH THE ARTS DOMAIN



B. MUSIC

4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Music can set the tone for all activities, and enrich children’s learning experiences. Making and responding to **music** contributes to learning across many domains. Four-year-olds can recognize and create patterns through **music**. Singing, chanting, and rhyming enhances **vocabulary** and **oral language** development. **Music** can be soothing or stimulating, and can be used in group experiences, as well as independent explorations.

STANDARD 1.

Actively participates in a variety of individual and group musical activities

Children may...

- Play various instruments and discover different types of sounds that each instrument can make.
- Use the voice as an instrument.
- Discover different types of sounds that found objects make.
- Distinguish the difference between loud, soft, high-pitched and low-pitched sounds.
- Make sounds at different rates of speed (tempo) (e.g., fast, slow).

Educators may...

- Introduce many types of **music** (e.g., jazz, hip-hop, folk, classical, reggae) through recordings, instruments and special visitors.
- Include a variety of musical instruments, recordings and **music** props in the classroom.
- Introduce **music** as a way to portray characters within a story, play or movie. (e.g., assign a different sound to each character).
- Take a nature walk outside the classroom to find possible objects to use as instruments (e.g., scrap wood, heavy sticks, broken branch with leaves, gourds, large seed pods, pebbles, stones).
- Invite local musicians, perhaps parents, to share their music and instruments with children.
- Invite a child with a hearing impairment to put a hand on the audio speaker to feel the music’s beat.

Families may...

- Play **music** CDs or audiotapes in the car or at home to inspire children to listen, move, dance and sing along.
- Fit songs into the daily routine, before and during mealtimes and at bedtime.
- Identify common household items that children could use as musical instruments (e.g., wooden spoons and plastic bowls to “drum”).



VIII. CREATIVE EXPRESSION THROUGH THE ARTS DOMAIN



B. MUSIC

4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Through experiences with **music**, children become better able to talk about various elements of **music** (e.g., styles [genres] of **music**, types of instruments, voice). They become familiar with various styles of **music**, including their favorites. Children become more experienced at expressing how particular **music** makes them feel, including **music** by famous artists, themselves, classmates or others from the local community.

STANDARD 2.

Expresses and represents thought, observations, imagination, feelings, experiences and knowledge in individual and group music activities

Children may...

- Listen and respond to **music** from another **culture** during a large-group activity.
- Discuss own favorite instrument and why they like it.
- Compare and contrast different instruments and songs.
- Describe background songs they hear in a cartoon or movie, and how it makes them feel or what it adds to the story.

Educators may...

- Encourage discussion about musical experience (e.g., animal sounds, sounds in nature, songs children know).
- After watching a short, appropriate movie, discuss with children their favorite character in the story and important musical elements (e.g., "How did you know, through the **music**, that a character was entering the story?" or, "How did you know, from listening to the **music**, if the end was going to be good or bad for the characters?").
- Encourage children to talk about and describe instruments they made from objects found during a nature walk, and what types of sound each can make (e.g., soft, loud, rattling, sharp).
- Give children crayons and paper and invite them to draw what they hear as **music** plays.

Families may...

- Play **music** CDs or audiotapes in the car or at home to inspire children to listen, move, dance and sing along.
- Identify common household items that children could use as musical instruments (e.g., wooden spoons and plastic bowls to "drum").
- Fit songs into the daily routine, before and during mealtimes and at bedtime.



VIII. CREATIVE EXPRESSION THROUGH THE ARTS DOMAIN

C. CREATIVE MOVEMENT



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Using their bodies to express themselves and respond to **music** is satisfying and engaging for 4-year-olds. They enjoy dancing and exploring different ways they can move. This is especially effective as they refine **gross motor skills** and can do more and more each day.

STANDARD 1.

Continues to engage in individual and group movement activities to express and represent thoughts, observations, imagination, feelings, experiences and knowledge

Children may...

- Imitate animal movements.
- Gallop, twirl and perform imaginative movements in response to **music**.
- Dance and move in front of a mirror; dance to different kinds of **music** (e.g., jazz, rock, blues, reggae, country, classical, folk).
- Explore and demonstrate different postures.

Educators may...

- Show children how they can make big movements, like arm circles, or small movements, like shoulder shrugs.
- Demonstrate to children that they can move at different levels in space (e.g., low to the ground, up high as if they are reaching for the sky, or in the middle).
- Have children isolate movements to a specific body part (e.g., make **circles** with their wrists, move their heads slowly from side to side, move just their hips), and get creative, thinking about other body parts (e.g., opening and closing their mouths, flexing or pointing their feet, or wiggling their fingers).
- Help children listen for the beat of the **music** and count out different movements.
- Have children move to different areas in the room using specific ways to travel (e.g., hop to the door, crawl to the group-time rug, skip to the gate).

Families may...

- Provide time for outdoor play together.
- Play some interesting **music** and offer props (e.g., sheer scarves, balloons, paper fans and feathers), asking, "How does this object make you want to move?"



VIII. CREATIVE EXPRESSION THROUGH THE ARTS DOMAIN

D. IMAGINATIVE AND CREATIVE PLAY



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

Four-year-olds explore **dramatic play** and theater, indoors and outdoors, in engaging environments. **Dramatic play** and Theater can include story enactment, imagination journeys and theater games. For children beginning to explore, a variety of child-size props (e.g., costumes), puppets and micro-play toys (e.g., cars, people and animals from the block area) are needed. The emphasis in **dramatic play** is on process rather than product.

STANDARD 1.

Expresses and represents thoughts, observations, imagination, feelings, experiences and knowledge, verbally and non-verbally, with others using a variety of objects in own **environment**

Children may...

- Use words and sentences to plan roles in a cooperative way. (e.g., "John is the dad, I am the mom, and we are taking Seth, our baby, to the doctor." They then proceed to negotiate the steps of taking a baby to the doctor.).
- Use objects beyond what they were meant for. A broom could be used as a pretend horse, a bandana could be used as a blanket for a picnic.
- **Pantomime** to tell a story.
- Persist in an activity for at least 10 minutes with others.

Educators may...

- Provide plenty of time to allow imaginative play to develop for individual and group of children at the same time.
- Provide a variety of culturally-**diverse** objects in the imaginative and creative play area.
- Encourage and respect the expression of feelings during play.
- Encourage the use of language to engage other children and adults.

Families may...

- Provide a variety of imaginative experiences at home (e.g., having pretend clothes, mops, food, etc.).
- Read books to children that inspire children to act out parts.



VIII. CREATIVE EXPRESSION THROUGH THE ARTS DOMAIN

E. APPRECIATION OF THE ARTS



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

As 4-year-olds gain more experience working in the **visual arts**, they can discuss artworks with friends and educators. This may include works by famous artists or classmates, or art in the local community. The child becomes better able to express in words how an artwork feels, the design qualities, or type of artwork. When children view others' work, they are also learning to appreciate and respect differences in **culture** and viewpoint.

STANDARD 1.

Uses appropriate art **vocabulary** to describe own art creations and those of others

Children may...

- Talk about their work with their classmates.
- Respond to educator's prompts and questions.
- Talk about another child's art product in a positive manner, and ask questions about how the child made it.
- Discuss how working with art materials makes them feel.

Educators may...

- Provide display space to introduce and examine artistic creations and events, including children's creations.
- Ask children questions about what they see in an artwork or picture.
- Show and discuss with children a picture of an object, a model of an object and the actual object to help them relate pictures and photographs to real places and things.
- Showcase children's artwork in a manner that reinforces the context in which it was created (e.g., if they drew pictures of characters in a book, also display the book).
- Have children write or dictate what is happening in their artwork (e.g., describe the action, mood, image or idea).

Families may...

- Visit an art museum or a children's museum and encourage critical thinking by asking, "What do you think the artist was thinking about when he painted this picture?"
- Read wordless picture books (e.g., *Pancakes for Breakfast* by Tomie DePaola and *Rosie's Walk* by Pat Hutchins) and allow children to examine the pictures and come to their own conclusion about the story being told.



VIII. CREATIVE EXPRESSION THROUGH THE ARTS DOMAIN

E. APPRECIATION OF THE ARTS



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

As 4-year-olds gain more experience working in the **visual arts**, they are able to discuss artworks with friends and educators. This may include works by famous artists or classmates, or art in the local community. The child becomes better able to express in words how an artwork feels, the design qualities, or type of artwork. Creative expression influences children's growing competence as creative problem solvers and provides insight about the world around them.

STANDARD 2.

Compares own art to similar art forms

Children may...

- Talk about their work with their classmates.
- Respond to educator's prompts and questions.
- Talk about another child's art product in a positive manner, and ask questions about how they made it.
- Discuss how working with art materials makes them feel.

Educators may...

- Provide display space to introduce and examine artistic creations and events, including children's creations.
- Ask children questions about what they see in an artwork or picture.
- Show and discuss with children a picture of an object, a model of an object and the actual object to help them relate pictures and photographs to real places and things.
- Showcase children's artwork in a manner that reinforces the context in which it was created (e.g., if they drew pictures of characters in a book, also display the book).
- Have children write or dictate what is happening in their artwork (e.g., describe the action, mood, image or idea).

Families may...

- Visit an art museum or a children's museum and encourage critical thinking by asking, "What do you think the artist was thinking about when he painted this picture?"
- Read wordless picture books (e.g., *Pancakes for Breakfast* by Tomie DePaola and *Rosie's Walk* by Pat Hutchins) and allow children to examine the pictures and come to their own conclusion about the story being told.



VIII. CREATIVE EXPRESSION THROUGH THE ARTS DOMAIN

E. APPRECIATION OF THE ARTS



4 YEARS - KINDERGARTEN (48 months - Kindergarten)

The arts encourage observing and describing, two very important skills for 4-year-olds. Appreciation of the arts introduces children to different cultures, past and present, so that children can learn about their own backgrounds and those of others.

STANDARD 3.

Begins to recognize that instruments and art forms represent cultural perspectives of the home and the community, now and in the past

Children may...

- Bring instruments from home to share with friends.
- Make instruments from different cultures (e.g., drums, shakers).
- Listen and dance to music used at home and around the world.
- Create art representing different styles and cultures (pointillism using fingers to print, cut and paste, string art, abstract art etc.).
- View and then discuss visual arts from the past as well as modern art examining style, color, shapes, etc.

Educators may...

- Make available different types of instruments from different cultures.
- Explain how certain musical instruments are used in certain celebrations around the world.
- Provide clothing from different cultures in the dress up area.
- Make available art supplies and materials to encourage children to explore many mediums.
- Hang posters of art work from the past (e.g., Picasso, Monet) as well local modern artists.
- Have an international dinner where families can bring their favorite dish, dress in traditional clothes and bring some sort of art from home to share with others as they all listen to music from around the world.

Families may...

- Bring instruments or music they have at home to share in the classroom.
- Take children to art museums and theaters.
- Discuss with their children how proud they are of their heritage yet respectful of others.



RELATED BOOKS

PRESCHOOLERS

Bea at Ballet
by Rachel Isadora

Ben's Trumpet
by Rachel Isadora

Caps for Sale
By Esphyr Slobodkina

David's Drawings
by Cathryn Falwell

Dreaming Up: A Celebration of Building
by Christy Hale

How a House is Built
by Gail Gibbons

Artist Who Painted a Blue Horse
by Eric Carle

Zin! Zin! Zin! A Violin
by Lloyd Moss





GLOSSARY

Diverse: showing a great deal of variety, including cultural representations

Dramatic play: expressive and spontaneous play

Environment: the circumstances, objects or conditions with which one interacts and is surrounded

Exploration: the act of studying something new to better understand it

Music: sound in time that expresses ideas and emotions in significant forms through the elements of rhythm, melody, harmony

Observing: regarding attentively or watching

Oral language: spoken language

Pantomime: using gestures and facial expressions to tell a story, or role-play without speaking (e.g., pouting, smiling, or pretending to fly)

Planning: the process of mental preparation and **problem-solving** in order to accomplish an act (e.g., a child tells the teacher what he/she will do during **center** time)

Process-oriented: art experiences where the focus is on the process of **exploration**, not the result

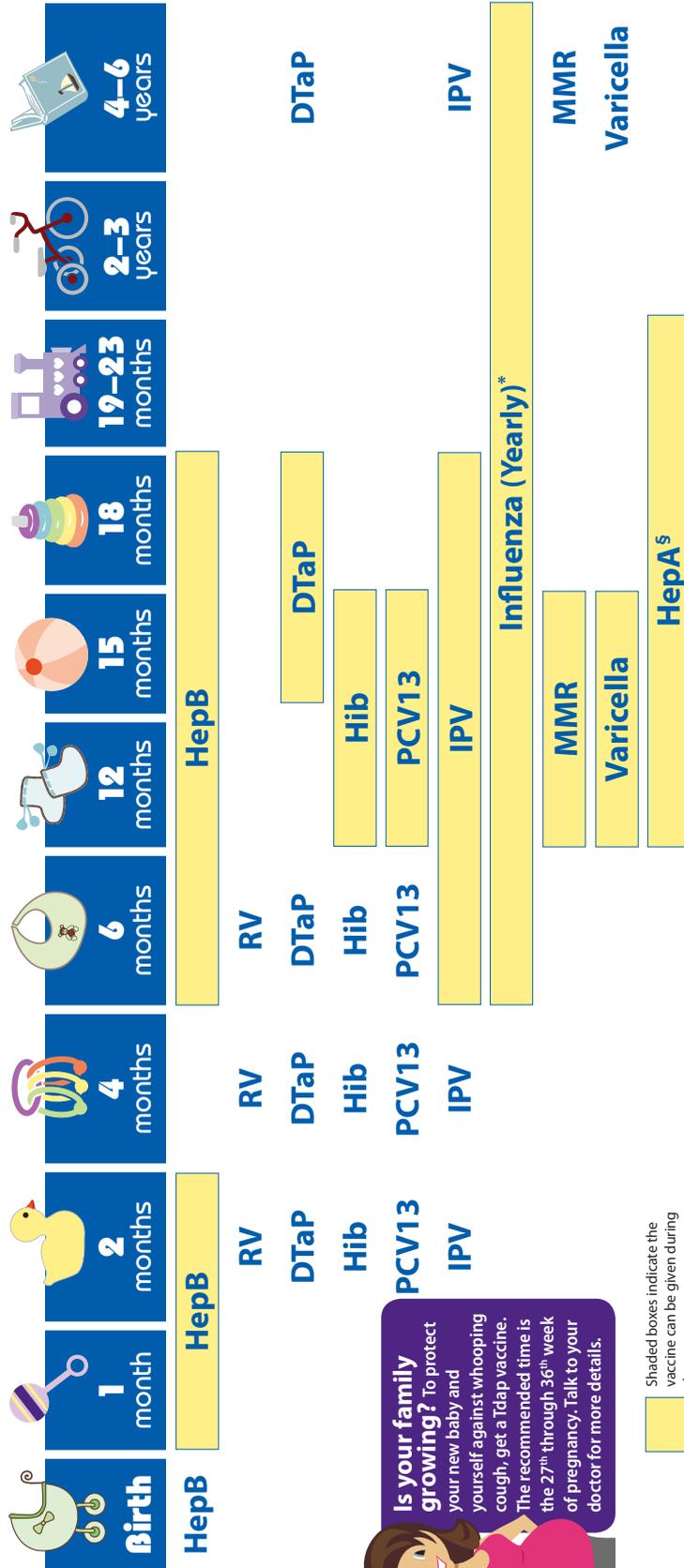
Rhymes: matches between the sounds of two or more words or word endings (e.g., spoon, moon)

Sensory: process of discovering through the senses

Visual arts: artwork, such as painting, photography or sculpture



2018 Recommended Immunizations for Children from Birth Through 6 Years Old



Is your family growing? To protect your new baby and yourself against whooping cough, get a Tdap vaccine. The recommended time is the 27th through 36th week of pregnancy. Talk to your doctor for more details.

Shaded boxes indicate the vaccine can be given during shown age range.

NOTE: If your child misses a shot, you don't need to start over, just go back to your child's doctor for the next shot. Talk with your child's doctor if you have questions about vaccines.

FOOTNOTES:
 * Two doses given at least four weeks apart are recommended for children aged 6 months through 8 years of age who are getting an influenza (flu) vaccine for the first time and for some other children in this age group.
 † Two doses of HepA vaccine are needed for lasting protection. The first dose of HepA vaccine should be given between 12 months and 23 months of age. The second dose should be given 6 to 18 months later. HepA vaccination may be given to any child 12 months and older to protect against HepA. Children and adolescents who did not receive the HepA vaccine and are at high-risk, should be vaccinated against HepA.
 ‡ If your child has any medical conditions that put him at risk for infection or is traveling outside the United States, talk to your child's doctor about additional vaccines that he may need.

SEE BACK PAGE FOR MORE INFORMATION ON VACCINE-PREVENTABLE DISEASES AND THE VACCINES THAT PREVENT THEM.

For more information, call toll free
1-800-CDC-INFO (1-800-232-4636)
 or visit
www.cdc.gov/vaccines/parents



U.S. Department of Health and Human Services
 Centers for Disease Control and Prevention

AMERICAN ACADEMY OF FAMILY PHYSICIANS
 STRONG MEDICINE FOR AMERICA

American Academy of Pediatrics
 DEDICATED TO THE HEALTH OF ALL CHILDREN™





Recommendations for Preventive Pediatric Health Care

Bright Futures/American Academy of Pediatrics



Each child and family is unique; therefore, these Recommendations for Preventive Pediatric Health Care are designed for the care of children who are receiving competent parenting, have no manifestations of any important health problems, and are growing and developing in a satisfactory fashion. Developmental, psychosocial, and chronic disease issues for children and adolescents may require frequent counseling and treatment visits separate from preventive care visits. Additional visits also may become necessary if circumstances suggest variations from normal.

These recommendations represent a consensus by the American Academy of Pediatrics (AAP) and Bright Futures. The AAP continues to emphasize the great importance of continuity of care in comprehensive health supervision and the need to avoid fragmentation of care. Refer to the specific guidance by age as listed in the *Bright Futures Guidelines* (Hagan, JF, Shaw, JS, Duncan, PM, eds. *Bright Futures Guidelines for Health Supervision of Infants, Children, and Adolescents*. 4th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2017).

The recommendations in this statement do not indicate an exclusive course of treatment or standard of medical care. Variations, taking into account individual circumstances, may be appropriate. Copyright © 2017 by the American Academy of Pediatrics, updated February 2017. No part of this statement may be reproduced in any form or by any means without prior written permission from the American Academy of Pediatrics except for one copy for personal use.

AGE	INFANCY		EARLY CHILDHOOD							MIDDLE CHILDHOOD							ADOLESCENCE															
	Prenatal ¹	Newborn ¹ 3-5 d ¹	By 1 mo	2 mo	4 mo	6 mo	9 mo	12 mo	15 mo	18 mo	24 mo	30 mo	3 y	4 y	5 y	6 y	7 y	8 y	10 y	11 y	12 y	13 y	14 y	15 y	16 y	17 y	18 y	19 y	20 y	21 y		
HISTORY																																
Initial interval	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
MEASUREMENTS																																
Length/Height and Weight	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Head Circumference	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Weight for Length	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Body Mass Index ⁴	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Blood Pressure ⁵	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
SENSORY SCREENING																																
Vision ⁷	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Hearing	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
DEVELOPMENTAL/BEHAVIORAL HEALTH																																
Developmental Screening ¹																																
Autism Spectrum Disorder Screening ²																																
Developmental Surveillance	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Psychosocial/Behavioral Assessment ³	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Tobacco, Alcohol, or Drug Use Assessment ⁴	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Depression Screening ⁵	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Maternal Depression Screening ⁶	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
PHYSICAL EXAMINATION⁸																																
PROCEDURES⁹																																
Newborn Blood																																
Newborn Bilirubin ¹⁰																																
Critical Congenital Heart Defect ¹¹																																
Immunization ¹²																																
Aemia ¹³																																
Lead ¹⁴																																
Tuberculosis ¹⁵																																
Dyslipidemia ¹⁶																																
Sexually Transmitted Infections ¹⁷																																
HIV ¹⁸																																
Cervical Dysplasia ¹⁹																																
ORAL HEALTH²⁰																																
Fluoride Varnish ²¹																																
ANTICIPATORY GUIDANCE																																
Fluoride Supplementation ²²																																

- If a child comes under care for the first time at any point on the schedule, or if any items are not accomplished at the suggested age, the schedule should be brought up-to-date at the earliest possible time.
- A prenatal visit is recommended for parents who are at high risk for first-time parents, and for those who request a conference. The prenatal visit should include anticipatory guidance, pertinent medical history, and a discussion of benefits of breastfeeding and planned method of feeding, per "The Prenatal Visit" (<http://pediatrics.aappublications.org/content/124/4/1227.full>).
- Newborns should have an evaluation after birth, and breastfeeding should be encouraged (and instruction and support should be offered).
- Newborns should have an evaluation within 3 to 5 days of birth and within 48 to 72 hours after discharge from the hospital to include evaluation for feeding and jaundice. Breastfeeding newborns should receive formal breastfeeding evaluation, and their mothers should receive encouragement and instruction, as recommended in "Breastfeeding and the Use of Human Milk" (<http://pediatrics.aappublications.org/content/129/2/e827.full>). Newborns discharged less than 48 hours after delivery must be examined within 48 hours of discharge, per "Hospital Stay for Healthy Term Newborns" (<http://pediatrics.aappublications.org/content/125/2/405.full>).
- Screen, per "Expert Committee Recommendations Regarding the Prevention, Assessment, and Treatment of Child and Adolescent Overweight and Obesity: Summary Report" (http://pediatrics.aappublications.org/content/120/Supplement_4/5164.full).

- Blood pressure measurement in infants and children with specific risk conditions should be performed at visits before age 3 years.
- A visual acuity screen is recommended at ages 4 and 5 years, as well as in cooperative 3-year-olds. Instrument-based screening may be used to assess risk at ages 12 and 24 months, in addition to the well visits at 3 through 5 years of age. See "Visual System Assessment in Infants, Children, and Young Adults by Pediatricians" (<http://pediatrics.aappublications.org/content/137/11/1620/135590>) and "Procedures for the Evaluation of the Visual System by Pediatricians" (<http://pediatrics.aappublications.org/content/137/11/1620/135597>).
- Confirm initial screen was completed, verify results, and follow up, as appropriate. Newborns should be screened, per "Year 2007 Position Statement: Principles and Guidelines for Early Hearing Detection and Intervention Programs" (<http://pediatrics.aappublications.org/content/120/4/898.full>).
- Verify results as soon as possible, and follow up, as appropriate.
- Screen with audiotape in children 6,000 to 6,000 Hz high frequencies once between 11 and 14 years of age between 15 and 17 years of age. See "Screening of Adolescent Hearing: A Systematic Review" (<http://www.ahajournals.org/doi/10.1161/01.HRT.000.046.3.f611a3>). Improves by adding High Frequencies" (<http://www.ahajournals.org/doi/10.1161/01.HRT.000.046.3.f611a3>).
- See "Identifying Infants and Young Children With Developmental Disorders in the Medical Home: An Algorithm for Developmental Surveillance and Screening" (<http://pediatrics.aappublications.org/content/118/7/1045.full>).

- Screening should occur per "Identification and Evaluation of Children With Autism Spectrum Disorders" (<http://pediatrics.aappublications.org/content/120/5/1183.full>).
- This assessment should be family centered and may include an assessment of child social-emotional health, caregiver depression, and social determinants of health. See "Promoting Optimal Development: Screening for Behavioral and Emotional Problems" (<http://pediatrics.aappublications.org/content/135/2/384>) and "Poverty and Child Health in the United States" (<http://pediatrics.aappublications.org/content/137/4/620/166339>).
- A recommended assessment tool is available at <http://www.ceasr-boston.org/CRAFT/index.php>.
- Screening should occur per "Incorporating Recognition and Management of Perinatal and Postpartum Depression Into Pediatric Practice" (<http://pediatrics.aappublications.org/content/126/5/1029>).
- At each visit, age-appropriate physical examination is essential, with infant totally unclothed and older children undressed and suitably draped. See "Use of Chaperones During the Physical Examination of the Pediatric Patient" (<http://pediatrics.aappublications.org/content/127/5/991.full>).
- These may be modified, depending on entry point into schedule and individual need.

KEY: ● = to be performed ★ = risk assessment to be performed with appropriate action to follow, if positive → = range during which a service may be provided

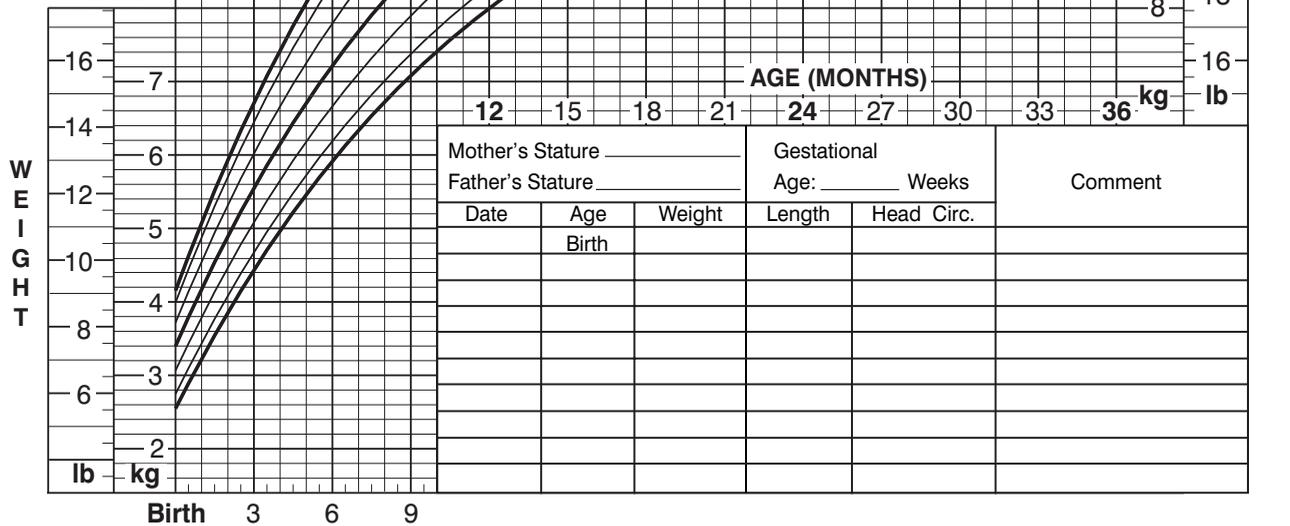
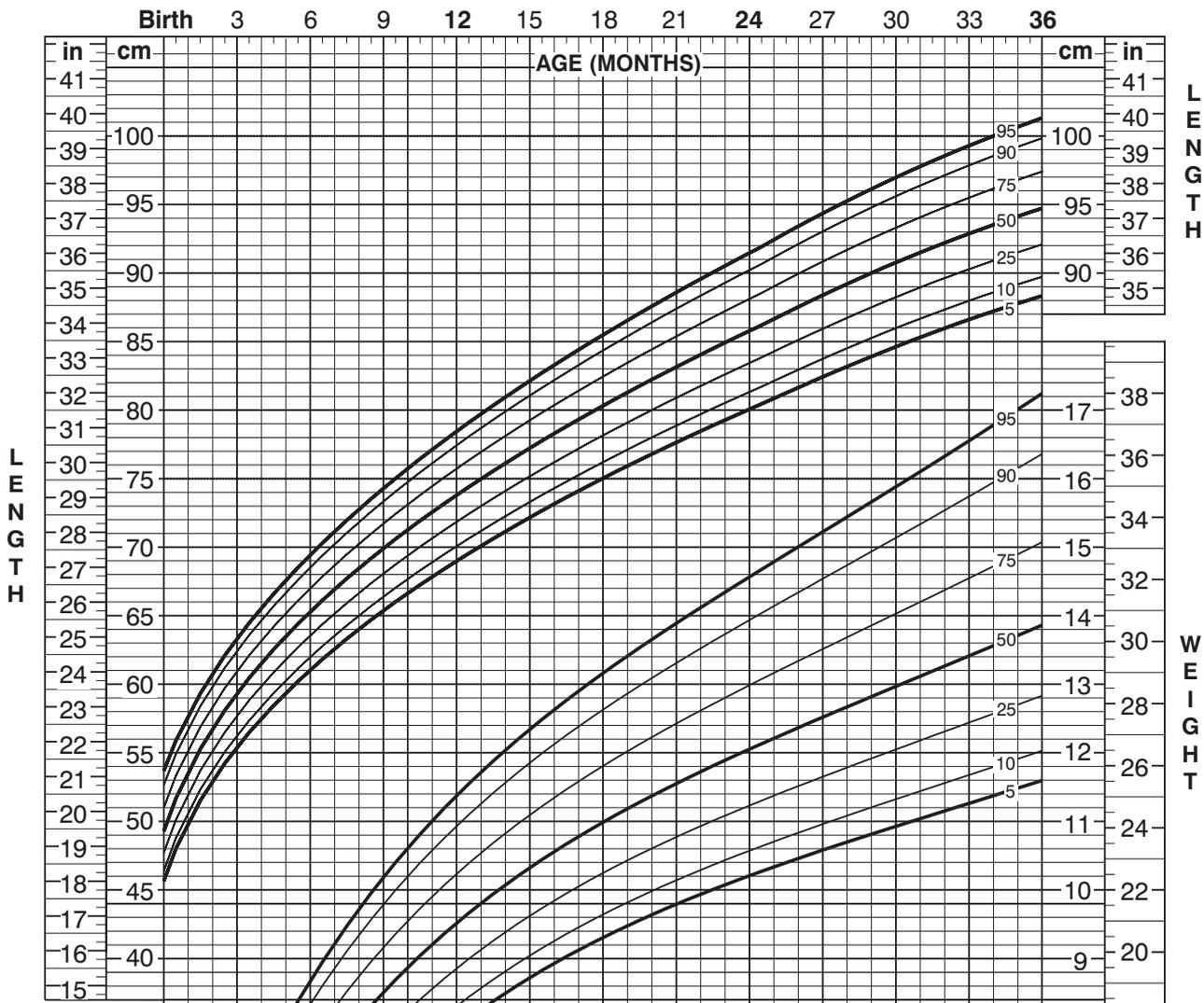
(continued)



Birth to 36 months: Girls Length-for-age and Weight-for-age percentiles

NAME _____

RECORD # _____



Mother's Stature _____			Gestational Age: _____ Weeks		Comment
Father's Stature _____			Length	Head Circ.	
Date	Age Birth	Weight			



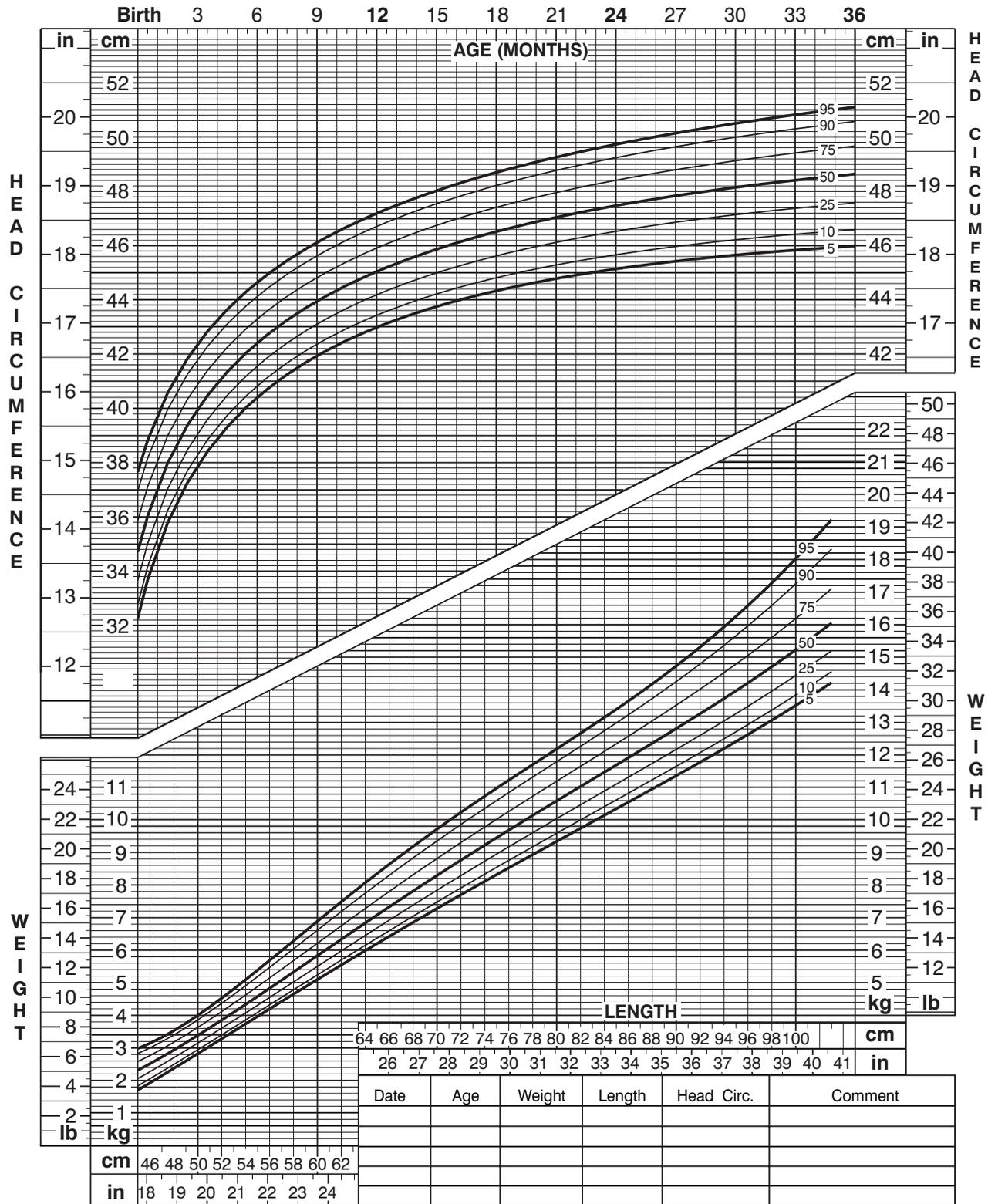
Published May 30, 2000 (modified 4/20/01).
 SOURCE: Developed by the National Center for Health Statistics in collaboration with the National Center for Chronic Disease Prevention and Health Promotion (2000).
<http://www.cdc.gov/growthcharts>



Birth to 36 months: Girls
Head circumference-for-age and
Weight-for-length percentiles

NAME _____

RECORD # _____



Published May 30, 2000 (modified 10/16/00).
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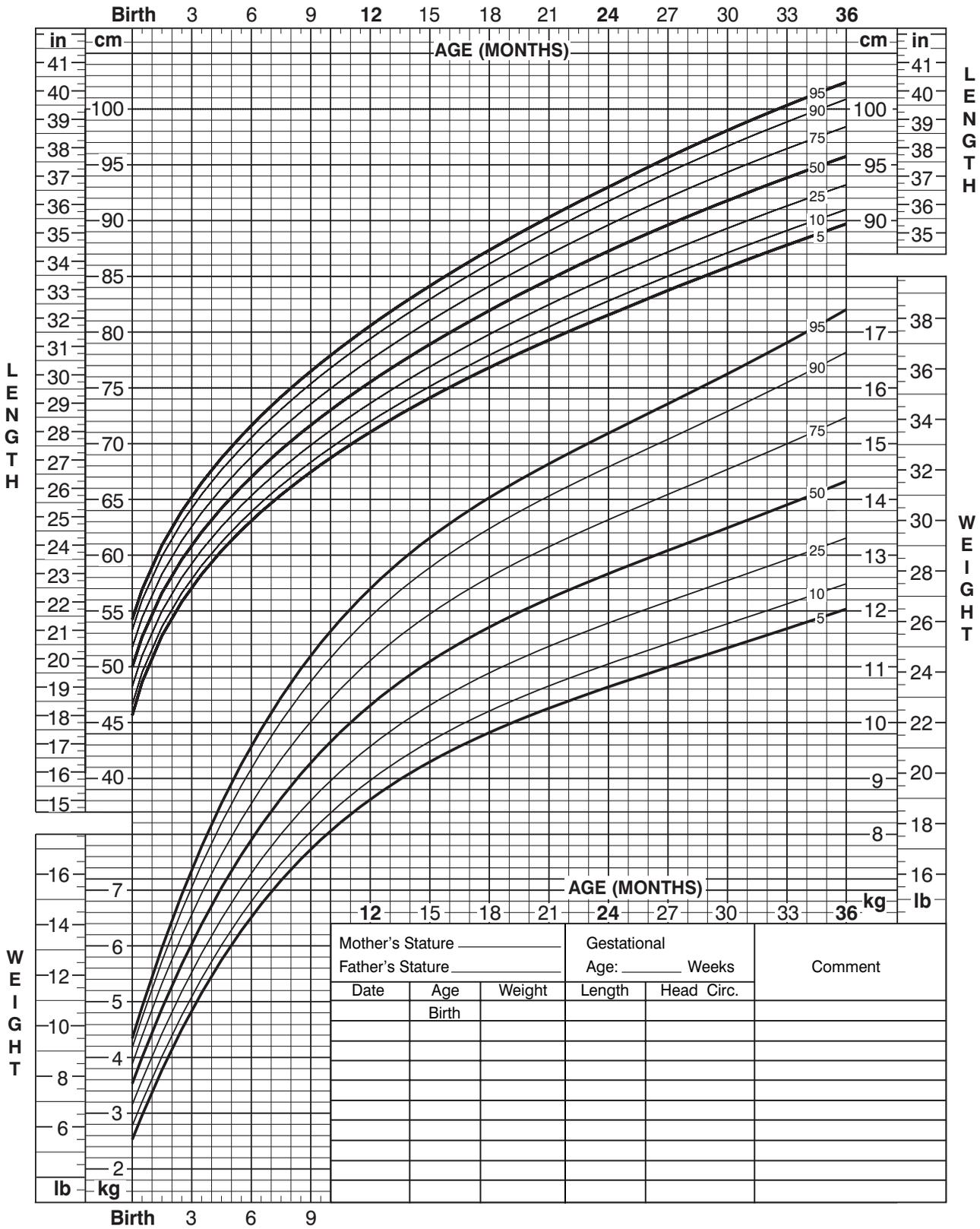
SAFER • HEALTHIER • PEOPLE™



Birth to 36 months: Boys
Length-for-age and Weight-for-age percentiles

NAME _____

RECORD # _____



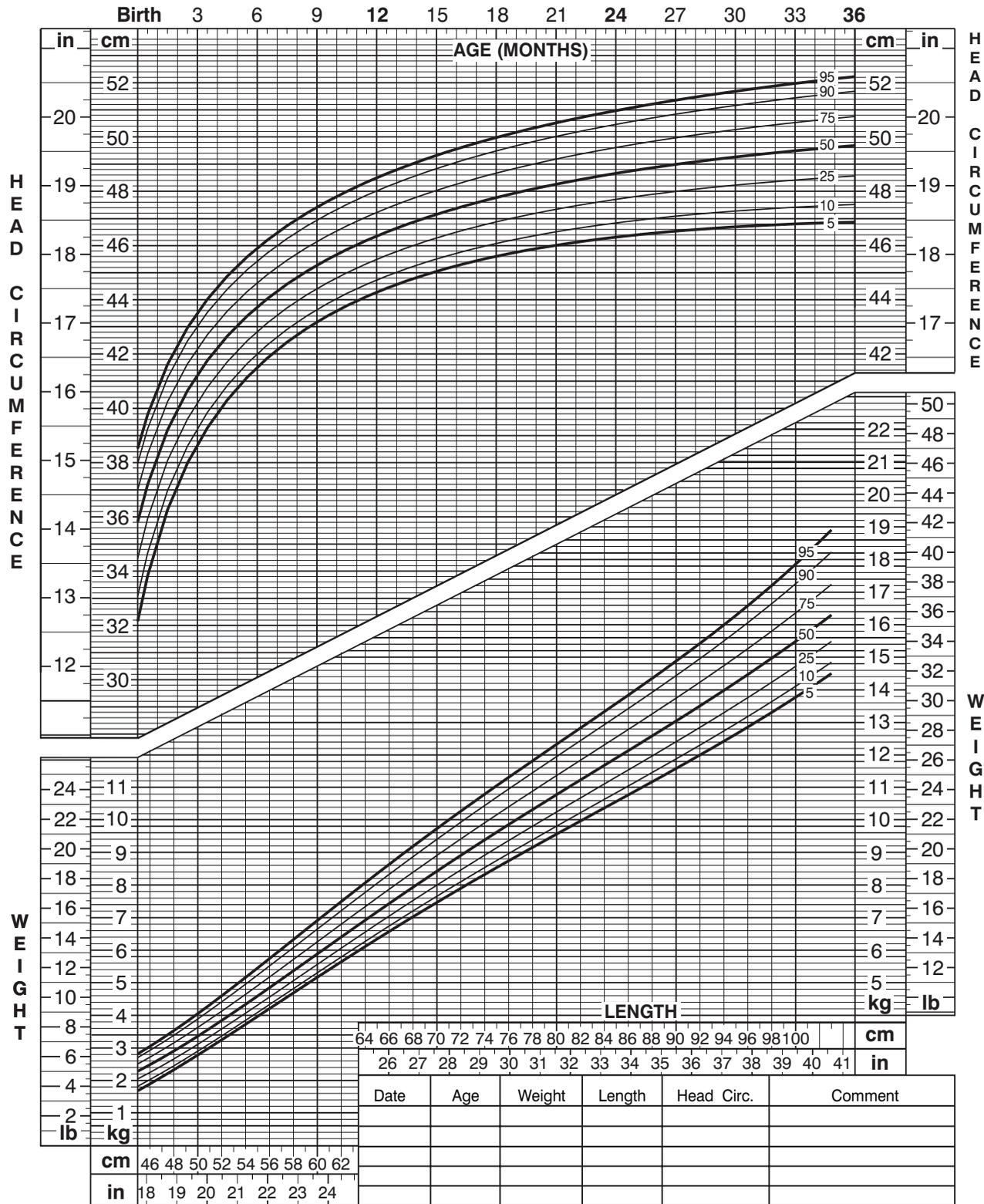
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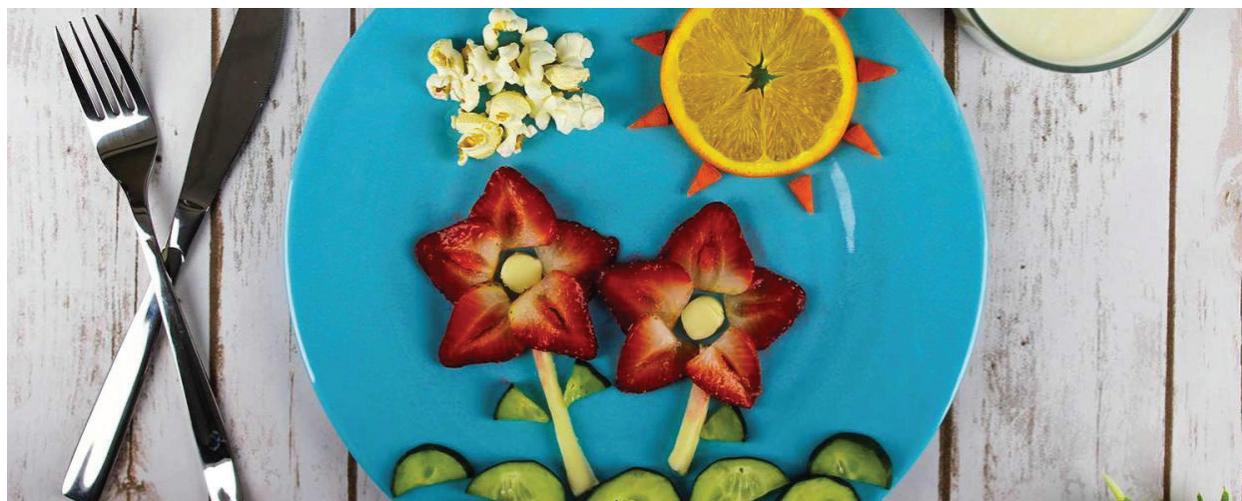


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U.S. DEPARTMENT OF AGRICULTURE (USDA Food Plate)

www.choosemyplate.gov/



The website features practical information and tips to help Americans build healthier diets. It also features selected messages to help consumers focus on key behaviors.

Selected messages include the following:

- Enjoy your food, but eat less.
- Avoid oversized portions.
- Make half your plate fruits and vegetables.
- Switch to fat-free or low-fat (1%) milk.
- Make at least half your grains whole grains.
- Compare sodium in foods like soup, bread, and frozen meals—and choose foods with lower numbers.
- Drink water instead of sugary drinks.



GLOSSARY

Age-appropriate grammar: oral formation of sentences with some errors, but an understanding of some grammatical rules (e.g., “She runned across the playground.”)

Alphabetic knowledge: the understanding that words are composed of letters; the understanding that letters and letter combinations represent individual **phonemes** in words and written language (e.g., a child says the letters in some words, a child tells a teacher or a friend the letters in his/her name)

Analyze: to study and think of solutions for mathematical problems (e.g., The teacher asks a child to tell how many bears there are all together. The child counts the three green bears and the two red bears and discovers there are five bears.)

Articulation: the correct pronunciation of one or more sounds within a word

Attributes: **characteristics** of an object (size, shape, color, etc.)

Autonomy: independence

Blend: to combine sounds rapidly in order to accurately represent a word

Blends: combinations of two letter sounds to make one sound (e.g., /bl/ as in “blocks”; /st/ as in “street”)

Bully: child who repeatedly commits negative acts with a conscious intent to hurt another child

Bullying: repeated negative act(s) committed by one or more children with a conscious intent to hurt another child. These negative acts can be verbal (e.g., making threats, name-calling), psychological (e.g., excluding children, spreading rumors), or physical (e.g., hitting, pushing, taking a child’s possessions).

Bystander: anyone, other than the **bully** and victim, who is present during a **bullying** incident

Cardinal number: a number used to express quantity but not order

Cardinality: knowing that the last number named when counting represents the total number of objects

Center: area within the classroom arranged so that children are able to participate in a variety of related learning experiences (e.g., art center, reading center, science center, block center, **dramatic play** center, writing center)

Circle: a round two-dimensional figure that resembles a ring

Common symbols: objects and artifacts used with a variety of purposes such as civic ideals, values, locations, community rules, and others

Complex sentence: a sentence that includes at least one independent clause and at least one dependent clause (a part of a sentence that has a subject and predicate but cannot stand on its own as a separate sentence). In the sentence, “After the children went out to the playground, the teacher put the snacks on the tables, “the first phrase is a dependent clause.

Comprehension: understanding what one has heard or what one has read (e.g., child is able to answer questions or make comments about a story that someone has read aloud to them)

Cone: a solid figure or body having a circular base and tapering to a point

Content: information contained in a story or lesson

Counting sequence: saying the number words, “one, two, three, four, five, six...” when counting

Creative movement: moving in a new or unusual way that isn’t directed by the teacher (e.g., a child dances to **music** played by the teacher)





GLOSSARY

Creativity: individuality expressed by creating something new or original (e.g., creating a new representation of a flower)

Cubes: three-dimensional solid figures with six equal *square* faces and right angles

Culture: the learned and shared knowledge that specific groups use to generate their behavior and interpret their experience of the world

Curiosity: a strong interest in learning about something; children demonstrate curiosity when they ask questions about or show interest in activities within the classroom and the world around them (e.g., child asks questions about new materials in the art *center* or a bug discovered on the playground)

Cylinder: a solid with circular ends and straight sides

Digraphs: two separate sounds joined together to create a new sound (e.g., /sh/ shoes; /ch/ chair)

Discovery: engaging children in deep learning that promotes *exploration, problem-solving, creativity*, and children engagement

Diverse: showing a great deal of variety including cultural representations

Diversity: the inclusion of different people (as people of different races or cultures) in a group or organization

Dramatic play: expressive and spontaneous play

Eagerness: energy and excitement about learning; wanting to learn (e.g., child desires to participate in an activity)

Emergent literacy: the range of a child's developmental *skills*, knowledge, and attitudes (beginning at birth), that combine with a variety of experiences related to written language. These experiences produce behaviors that change over time and result in conventional *literacy* during middle childhood.

Emergent reading: reading-related experiences and actions that occur before a child reaches the conventional *literacy* stage in middle childhood (e.g., a child shows interest in being read to and told what written words mean and develops an understanding of how to use books and other printed materials appropriately)

Emergent writing: writing-related experiences and actions that occur before a child reaches the conventional *literacy* stage in middle childhood (e.g., child draws pictures or symbols to represent words)

Emerging: initial stages of a developing skill

Emotional readiness: the ability to understand and express one's own feelings, understand the feelings of others, cooperate with peers/adults and resolve conflicts

Empathy: ability to recognize the emotions and feelings experienced by peers and adults

Engineering: the study of how things are built and why. Through play, engineering for preschoolers looks like building challenges, blocks, marble runs and sandcastles.

Environment: the circumstances, objects or conditions by which one interacts with and is surrounded (e.g., the indoor and outdoor area or setting where the child lives and interacts including home, neighborhood, classroom, etc.)

Expansion questions: questions asked in order to extend the thought process of the child (e.g., "What do you think will happen next?")

Exploration: the act of studying something new to better understand it

Expressive language: the ability to communicate with words; refers to what a child says, not how it is said

GLOSSARY

Fine motor skills: abilities using the small muscles of the hands. Activities using these skills include grasping toys, picking up or holding food, connecting links, lacing, drawing, crushing paper and cutting to complete a task.

Functional language: *vocabulary* used to communicate the description of, use of, or directions pertaining to an item or task (e.g., same/different)

Gross motor: abilities using large muscles of the arms, legs and torso. Activities using these *skills* include crawling, pulling up, walking, running, jumping, pedaling, throwing and dancing.

Hand-eye coordination: the ability to coordinate movements between the eye and hand to complete a task (e.g., hitting a softball or catching a bean bag)

Health: term that encompasses young children’s physical, dental, auditory, visual and nutritional development and well-being

Initiate: to begin something, taking the first step

Initiation skills: socially acceptable ways to enter a group that is already engaged, such as mentioning a common interest (e.g., “I like cars too. Can I play race track with you?”).

Inquiry: processes of science (e.g., observe, sort, classify, describe, and communicate)

Interpersonal skills: the ability to get along with others

Intonation: the normal rise and fall in pitch that occurs as people speak. Changes in intonation typically occur when certain words are stressed or at the end of sentences (e.g., the upswing when a question is being asked, or the drop that marks the end of a complete sentence or thought).

Investigating: *observing* or inquiring in detail

Investigation: systematic examination

Language of school: the *vocabulary*, sentence structure, and content of language that is a key part of the educational experience

Life adaptive: age-appropriate skills and behaviors necessary for children to move comfortably in a variety of social settings and to function safely and appropriately in daily life

Life science: the study of living organisms

Literacy: the ability to read and write

Manner words: words used to express appreciation, gratitude, or notice of an error (e.g., please, thank you, excuse me)

Milestones: significant points in development

Music: sound in time that expresses ideas and emotions in significant forms through the elements of rhythm, melody, harmony

Numeral: a symbol or *set* of symbols used to represent a number (e.g., the number five is represented by the symbol or numeral 5)

Nutrition: the process of absorbing nutrients from food and processing them in the body to stay healthy or to grow

Nutritious: containing the nutrients that are necessary for life and growth (e.g., raw fruits and vegetables are nutritious foods)





GLOSSARY

Observing: regarding attentively or watching

Occupation: refers to the different jobs and the roles people have in the community

Octagon: a two-dimensional, eight-sided shape

One-to-one correspondence: pairing or matching objects in a one-to-one relationship (e.g., giving one apple to each child at snack time)

Onset: first sound(s) before the rime (vowel sound to the end of the word) (e.g., In the word dog, the onset is /d/ and the rime is “og”.)

Oral health: overall health of mouth, free of disease, defect, or pain. This translates to much healthier teeth.

Oral hygiene: keeping the mouth, tongue, teeth, and gums clean (e.g., brushing and flossing daily)

Oral language: spoken language

Orientation: the position of a shape or figure (e.g., on top of, below, behind, in front of).
oval - a two-dimensional egg-shaped figure; an elongated ring

Organizational language: *vocabulary* used to communicate placement of an item and or provides direction towards an item (e.g., in front of, behind, next to, opposite, below)

Pantomime: using gestures and facial expressions to tell a story, or role-play without speaking (e.g., pouting, smiling, or pretending to fly)

Pattern: a repeating series of units

Persistence: the patience and endurance to finish a task (e.g., child works at completing a puzzle until all the pieces are correctly placed)

Personal space: the area surrounding an individual, which that person considers their own

Phoneme: the smallest unit of speech distinguished by the speakers of a particular language

Phonological awareness: the awareness that language is composed of sounds and the understanding of the relationships among these sounds

Physical development: the growth of young children’s gross and *fine motor* and *self-help skills*, as well as their physical, dental and nutritional growth

Physical science: science of non-living things in the physical world around us

Pincer grasp: take hold of something using the finger and thumb

Planning: the process of mental preparation and *problem-solving* to accomplish an act (e.g., child tells the teacher what they will do during *center* time)

Prediction: an idea (opinion) stated about what may happen in the future (e.g., child may predict that the caterpillar will turn into a butterfly)

Problem-solving: process followed to find ways to address a situation

Process-oriented: art experiences where the focus is on the process of *exploration*, not the result

Prosocial: ability to engage in behaviors and actions in response to the needs of others

Quantity: the number of objects in a *set* (amount)

GLOSSARY

Read alouds: the teacher reading to the whole class, building on children’s existing **skills** while introducing different types of literature and new concepts

Recall questions: questions asked of children to prompt them to recount the events of a story or occurrence

Receptive language: the understanding of language that is heard (e.g., child understands when the teacher says, “It’s time to line up.”)

Rectangle: a two-dimensional figure with two sets of parallel lines and four right angles

Reflection: the process of reviewing and critiquing one’s own actions or one’s own work (e.g., child shares with the teacher what he/she did during **center** time)

Reporting: trying to help keep a child or children out of danger because they may get hurt or they are being hurt (e.g., target/victim of a bully)

Rhombus: a four-sided shape where all sides have equal length, opposite sides are parallel, opposite acute angles are equal and opposite obtuse angles are equal

Rhymes: matches between the sounds of two or more words or word endings (e.g., spoon, moon)

Rime: the vowel and any sounds that come after the vowel in a one-**syllable** word (e.g., the rime of cat is /at/; the rime of cheese is /ez/)

Routines: customs or activities regularly practiced at home, in the classroom or in the community

Scaffold: to model and provide appropriate support to help a child acquire a skill or knowledge (e.g., giving clues, asking questions, and providing verbal prompts)

Scaffolding: the provision of sufficient support to promote learning when concepts and skills are being first introduced to children (e.g., modeling, giving clues, asking questions and providing verbal prompts)

Self: the idea an individual has about own **characteristics** and abilities

Self-care: the capacity to take care of personal needs (e.g., drinking from a cup, getting dressed, washing hands, making choices, toileting independently)

Self-help: a child’s ability to accomplish health and self-care **routines**, such as dressing, washing hands and toileting, with or without help from an adult

Self-regulation: a child’s ability to gain control of bodily functions, manage powerful emotions, and maintain focus and attention

Sensory: process of discovering through the senses

Sequence of events: ability to recognize the order of actions taking place during an experience, routine or activity

Seriation: arrangement in rows or a series by an attribute

Set: a group of objects

Skills: the ability to use knowledge effectively and readily in performance, the ability to transform knowledge into action





GLOSSARY

Social expectations: describe the social behaviors considered appropriate according to the setting

Social and emotional development: the growth of young children’s capacity to form and maintain positive and productive relationships with others, and to understand and value their own abilities and uniqueness

Spatial awareness: the ability to be aware of oneself in space in relationship to something else

Spatial sense: the ability to build and manipulate mental representations of two- and three-dimensional objects and ideas

Spheres: three-dimensional figures with a round body (e.g., a ball, marble, or globe)

Squares: two-dimensional figures with four equal sides and four right angles

Subitizing: immediately recognizing and naming a **set** of objects without counting

Syllable: a unit of spoken language consisting of a single uninterrupted sound formed by a vowel, diphthong, or syllabic consonant alone, or by any of these sounds preceded, followed or surrounded by one or more consonants

Tactile: relating to the sense of touch

Target: the victim or focus of a **bully**

Technology tools: technology-based devices and other instruments used to carry out or facilitate a task

Temperament: a person’s **characteristic** style of approaching and responding to people and situations, including activity level, adaptability, regularity, approach-withdrawal, sensitivity, distractibility, intensity, quality of mood and attention span

Trapezoid: a four-sided shape with one pair of opposite sides parallel

Triangle: a two-dimensional figure with three sides and three angles

Unit: what something is measured by (e.g., centimeter [cm], foot [ft], inch [in], yard [yd])

Vision screening: evaluation conducted to determine how well a child can see

Visual arts: artwork, such as painting, photography or sculpture

Vocabulary: all of the words of a language. There are two types of vocabulary: receptive and expressive

Wants and needs: wants are those things one may desire but that are not indispensable, while needs are what is necessary to address basic needs (such as food, shelter, etc.)

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