



## Alabama's Standards *for* Early Learning and Development

# APPENDICES



*Publications or audiovisual media must include the following disclaimer: "The Alabama Standards for Early Learning and Development was made possible by grant number 90TP0065-01-00. Its contents are solely the responsibility of the authors and do not necessarily represent the official view of the United States Department of Health and Human Services, Administration for Children and Families." [HHS Grants Policy Statement, page II-31].*



[children.alabama.gov](http://children.alabama.gov)

## Contents

---

<b>APPENDIX ONE</b>	The Wonder of Play . . . . .	259
<b>APPENDIX TWO</b>	Stages of Development and Learning . . . . .	265
<b>APPENDIX THREE</b>	Inclusion in Early Learning Programs . . . . .	270
<b>APPENDIX FOUR</b>	Supporting Dual Language Learners in Early Learning Programs. . . . .	283
<b>APPENDIX FIVE</b>	Physical Activity: Good Health through Movement . . . . .	296
<b>APPENDIX SIX</b>	Technology in Early Learning Programs . . . . .	302
<b>APPENDIX SEVEN</b>	Glossary . . . . .	309
<b>APPENDIX EIGHT</b>	Resources. . . . .	321
<b>APPENDIX NINE</b>	Acronyms . . . . .	330

## APPENDIX ONE

### The Wonder of Play

Play is a vital part of children's development and learning. Play helps young children learn about their own abilities and interests, how to get along with others and to appreciate others' differences. Play provides opportunities for children to take on roles and act out familiar situations to give them a window on the world.

It builds children's vocabulary and encourages their creativity and curiosity. Children problem solve when they try new ways of doing things like ride a bike or put together a puzzle, and active play grows children's muscles, strength and stamina. In fact, play enables children to experience the four key ingredients for successful learning: children who are mentally active; engaged not distracted; socially interactive; and connecting to their world learn best. (Hirsh-Pasek, 2015)

*Play provides opportunities for children to take on roles and act out familiar situations to give them a window on the world.*

#### Two Types of Play

Two types of play contribute to children's engagement and learning. The first, free play, is child-directed without adult involvement and unstructured. This play is spontaneous and occurs naturally, encouraging children's curiosity and creativity. Pretend play or playground play are examples. Guided play, the second type, builds on free play through adult interaction. Adults keep children's learning goals in mind and scaffold or guide their play. Children still lead or direct the play while adults engage with them, suggesting additional materials and asking questions to encourage deeper thinking or exploration. Professionals who join children in the block corner or who make play dough shapes with them guide their play through the questions they ask. "What do you think might happen if you put that big block on the tower?" or "Mary wants to play with us, how can we find her some play dough?" When adults participate in play, children typically continue their play for longer periods of time and research indicates that academic outcomes improve when children are exposed to guided play.



## Stages of Play

Children progress through stages of social play. As early as 1932, an educational pioneer Mildred Parten identified six stages of play, beginning at birth.

Stage	What it typically looks like	Age it typically happens
<b>Unoccupied Play</b>	Babies explore materials and objects around them as they learn about the world around them.	Birth to 3 months
<b>Solitary</b>	Children play alone, typically without noticing others. They use this type of play to explore new ideas and to master basic skills.	Birth to two years
<b>Onlooker</b>	Children watch others play and may ask them questions but they do not join in. They are learning about social roles and rules through observation.	Two to three years
<b>Parallel</b>	Children play next to each other or side by side without interacting together. They are paying attention to each other but they are not engaged in social exchange.	Two and a half years to three years
<b>Associative</b>	Children show interest in what others are doing and may have the same goals for play. They ask questions and communicate with each other but their play has no set rules.	Three to four years
<b>Cooperative (or Social)</b>	Children may play in a group and follow or establish rules for play. They share ideas and toys and may even adopt goals or guidelines for their play.	Four to six years



## Many Kinds of Play

Play activities come in different forms and in different ways, each of which may have its own unique connection to children's learning. Can you recognize these kinds of play?

- Symbolic play: children use objects or actions to represent other objects
- Rough and tumble play: children engage in active play that gauges physical strength
- Socio-dramatic play: children act out experiences
- Social play: children are involved in interactive play where everyone follows rules
- Creative play: children use their imaginations and try new things
- Communication play: children use words or gestures during play such as charades or joke-telling
- Dramatic play: children are assigned roles to act out
- Locomotor play: children use movement like hide and seek, tag or races
- Deep play: children try new experiences to conquer fear, such as climbing on a play structure
- Exploratory play: children use their senses to discover things around them
- Fantasy play: children make believe; they act out things that are unlikely to happen
- Imaginative play; children use unconventional rules during play such as pretending to fly
- Mastery play; children control the physical environment like digging holes
- Object play: children use eye-hand coordination such as painting
- Role play: children explore ways of being like using a laptop or cell phone
- Recapitulative play: children explore history, stories, rhymes

*Bob Hughes: A Playworker's Taxonomy of Play Types, London, Playlink, UK.*

## Supportive Environments

Children's play can be supported and enhanced when the environment is purposefully designed to consider varied play experiences and where the materials and equipment promote the different types and forms of play.

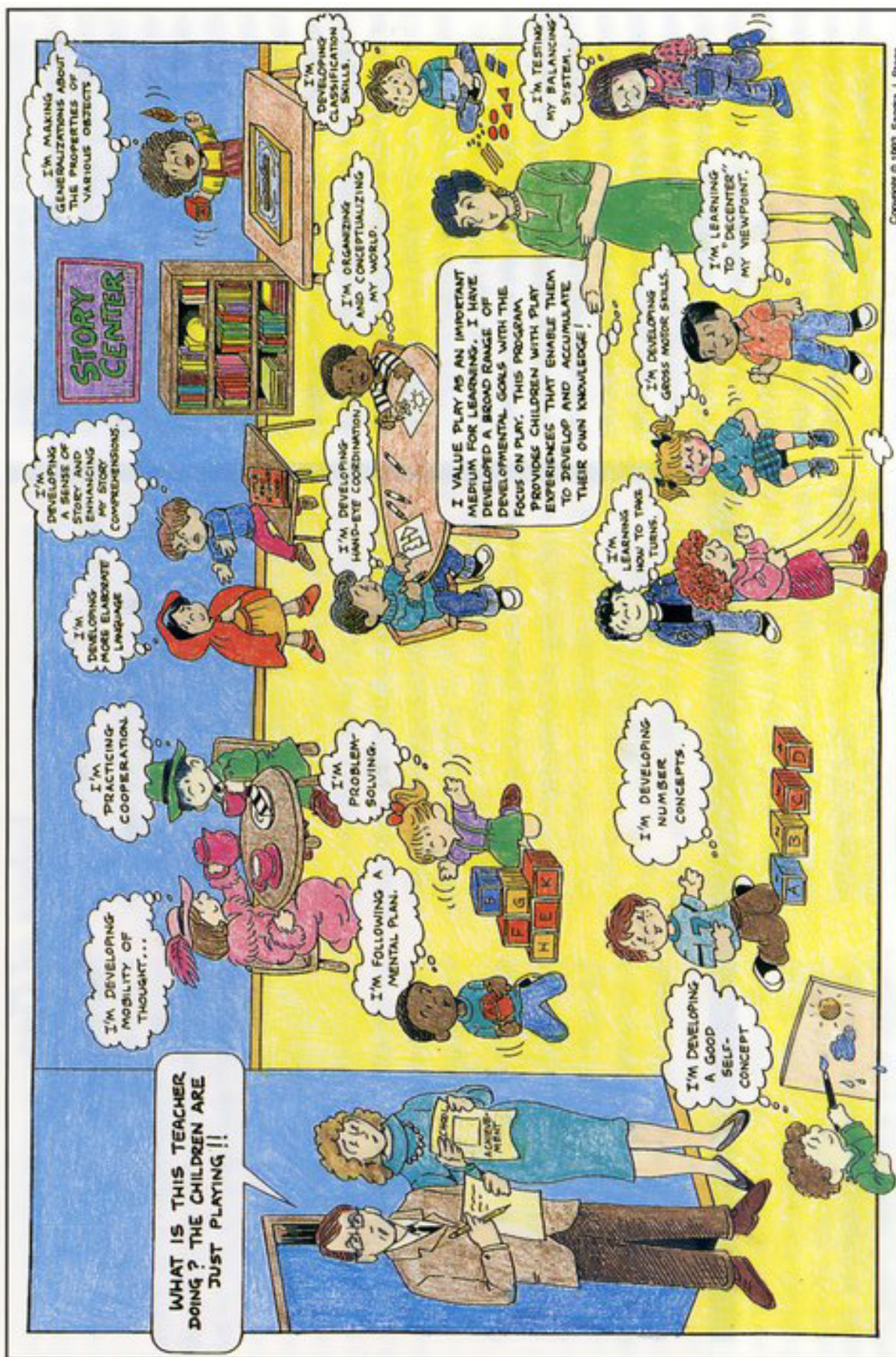
## Materials and Equipment to Support Children's Play and Learning

	Include these materials for Infants	Add these materials for Young Toddlers	Add these materials for Older Toddlers	Add these materials for Preschoolers
<b>SENSORY MATERIALS</b>	<ul style="list-style-type: none"> <li>• Sucking toys</li> <li>• Rattles</li> <li>• Unbreakable mirrors</li> <li>• Patterned crib sheets</li> <li>• Mobiles</li> </ul>	<ul style="list-style-type: none"> <li>• Music boxes</li> <li>• Busy boxes</li> <li>• Large bells and drums</li> <li>• Non-toxic finger paint and play dough</li> <li>• Water play with cups and spoons</li> </ul>	<ul style="list-style-type: none"> <li>• Sand play with household objects</li> <li>• Scarves for dancing</li> <li>• Listening games</li> <li>• Texture boards</li> <li>• Musical instruments</li> </ul>	<ul style="list-style-type: none"> <li>• More toys for sand and water play</li> <li>• Rhythm instruments</li> <li>• Prisms</li> <li>• Feely boxes</li> </ul>
<b>ACTIVE PLAY</b>	<ul style="list-style-type: none"> <li>• Foam climbing ramps and wedges</li> <li>• Large brightly colored balls</li> <li>• Bouncy toys</li> </ul>	<ul style="list-style-type: none"> <li>• Crawling tunnel</li> <li>• Riding toys</li> <li>• Cardboard boxes</li> <li>• Balls</li> <li>• Push and pull toys</li> </ul>	<ul style="list-style-type: none"> <li>• Low climber and slide</li> <li>• Wagon</li> <li>• Sandbox and toys</li> <li>• No-pedal bikes and riding toys</li> <li>• Bouncy balls</li> <li>• Mini trampoline</li> </ul>	<ul style="list-style-type: none"> <li>• Low balance beam</li> <li>• Low basketball hoop and balls</li> <li>• Tricycles</li> <li>• Parachute</li> <li>• Bean bags</li> <li>• Jump ropes</li> </ul>
<b>CONSTRUCTION OR BLOCK AREA</b>	<ul style="list-style-type: none"> <li>• Soft blocks</li> <li>• Nesting toys</li> </ul>	<ul style="list-style-type: none"> <li>• Cardboard blocks</li> <li>• Stacking toys</li> <li>• Pounding bench</li> <li>• Foam blocks</li> <li>• Large duplo blocks</li> <li>• Wire mazes</li> </ul>	<ul style="list-style-type: none"> <li>• Wood unit blocks</li> <li>• Little people</li> <li>• Wood or plastic animals</li> <li>• Cars and trucks</li> <li>• Train and tracks</li> <li>• Toy construction tools</li> <li>• Alphabet blocks</li> </ul>	<ul style="list-style-type: none"> <li>• Full set of wood unit blocks</li> <li>• Wood signs and accessories for roadways</li> <li>• Small carpet with roadways</li> <li>• Woodworking bench and materials</li> <li>• Lincoln logs and tinker toys</li> <li>• Scale and weights</li> </ul>
<b>MANIPULATIVES</b>	<ul style="list-style-type: none"> <li>• Large rings</li> <li>• Squeeze toys</li> <li>• Textured balls</li> <li>• Large measuring spoons</li> </ul>	<ul style="list-style-type: none"> <li>• 2-6 piece puzzles with knobs</li> <li>• Nesting toys</li> <li>• Large pegboards</li> <li>• Snap together toys with large pieces</li> <li>• Shape sorters</li> </ul>	<ul style="list-style-type: none"> <li>• 4-6 piece puzzles</li> <li>• Large beads for stringing</li> <li>• Stacking toys</li> <li>• Scissors and cards for cutting</li> </ul>	<ul style="list-style-type: none"> <li>• 12-20 piece puzzles and pegboards</li> <li>• Stringing and lacing toys and cards</li> <li>• Pattern blocks</li> <li>• Dressing boards</li> <li>• Measuring tapes and rulers</li> <li>• Sorting trays and objects</li> </ul>

	Include these materials for Infants	Add these materials for Young Toddlers	Add these materials for Older Toddlers	Add these materials for Preschoolers
<b>DRAMATIC PLAY</b>	<ul style="list-style-type: none"> <li>• Soft dolls</li> <li>• Peek-a-boo games</li> <li>• Finger plays and songs</li> </ul>	<ul style="list-style-type: none"> <li>• Blankets to wrap dolls</li> <li>• Dishes, pans, spoons,</li> <li>• Brooms, dust pan</li> <li>• Unbreakable mirrors</li> <li>• Shopping cart</li> <li>• Purses</li> <li>• Telephones</li> <li>• Pretend food</li> <li>• Stuffed animals</li> </ul>	<ul style="list-style-type: none"> <li>• Doll bed and carriages</li> <li>• Doll clothes</li> <li>• Realistic dolls</li> <li>• Table and chairs</li> <li>• Toy appliances – stove, refrigerator, etc.</li> <li>• Simple dress-up clothes</li> <li>• Puppets</li> </ul>	<ul style="list-style-type: none"> <li>• Theme-based collections of dress-ups and realistic accessories (hair salon, pet store, doctor office, etc.)</li> <li>• Dollhouse and furniture</li> </ul>
<b>READING AND LISTENING AREA</b>	<ul style="list-style-type: none"> <li>• Recordings of songs, voices and sounds</li> <li>• Sturdy cloth or cardboard books</li> <li>• Lap books with large pictures of faces, objects, shapes</li> </ul>	<ul style="list-style-type: none"> <li>• Books with simple stories</li> <li>• Finger plays and songs</li> <li>• Posted pictures at eye level</li> <li>• Puppets</li> </ul>	<ul style="list-style-type: none"> <li>• Books with stories about familiar things</li> <li>• Flannel board and pieces</li> </ul>	<ul style="list-style-type: none"> <li>• Books from different genres (non-fiction, poetry, fiction)</li> </ul>
<b>WRITING AREA</b>		<ul style="list-style-type: none"> <li>• Large paper</li> <li>• Fat crayons</li> <li>• Bingo markers</li> </ul>	<ul style="list-style-type: none"> <li>• Fat pencils</li> <li>• Different types of paper</li> <li>• Stampers</li> <li>• Feely letters</li> <li>• Magnetic letters</li> <li>• Chalkboards and chalk</li> </ul>	<ul style="list-style-type: none"> <li>• Colored pencils</li> <li>• Posted alphabet</li> <li>• Simple words (cat, boy)</li> <li>• Stencils</li> <li>• Journals</li> <li>• Alphabet cards</li> <li>• Dry erase boards and markers</li> </ul>
<b>ART AREA</b>	<ul style="list-style-type: none"> <li>• Textured objects</li> <li>• Brightly colored toys</li> <li>• Edible finger paint (baby food)</li> </ul>	<ul style="list-style-type: none"> <li>• Finger paint</li> <li>• Non-toxic, washable markers</li> <li>• Chalk</li> <li>• Fat, unwrapped crayons</li> <li>• Large paper</li> </ul>	<ul style="list-style-type: none"> <li>• Water-based paint and large brushes</li> <li>• Scissors and things to cut</li> <li>• Play dough</li> <li>• Large paper of different textures and colors</li> <li>• Stickers and paper</li> </ul>	<ul style="list-style-type: none"> <li>• Water colors</li> <li>• Hole punchers</li> <li>• Glue, paste and thing to paste</li> <li>• Magazines to cut up</li> <li>• Crayons and markers</li> <li>• Natural materials like leaves or pine cones</li> <li>• Collage materials</li> </ul>
<b>TECHNOLOGY</b>		<ul style="list-style-type: none"> <li>• Play phones</li> <li>• Play cameras</li> <li>• Simple musical instruments</li> </ul>	<ul style="list-style-type: none"> <li>• Keyboard and mouse</li> <li>• Digital books to listen with adults</li> <li>• Play laptops or tablets</li> <li>• Take apart toys and materials</li> </ul>	<ul style="list-style-type: none"> <li>• Boom boxes, CD players and head sets</li> <li>• Digital cameras</li> <li>• Laptops or tablets</li> <li>• Coding and robotics games and toys</li> </ul>

Adapted, with permission, from *Bright from the Start*, Georgia Department of Early Department of Early care and Learning





Copyright © 1992 Sandra J. Stone



## APPENDIX TWO

### Stages of Development and Learning

Children's development typically progresses through stages, each stage building on the one before. While young children's growth is often uneven, with mastery of some skills earlier than others, the steps that children go through remain the same. This document describes early childhood theorists' identified stages in the areas of: psychosocial (or developmental) development; dual language learning; play; writing; and art.

#### Stages of Psychosocial Development (Erik Erikson)

Erikson, a psychologist, developed a theory on the stages of children's development. He believed that children go through a series of eight stages that are influenced by their relationships and social interactions. They experience basic conflicts between their own feelings and needs and those of the world around them and develop virtues or positive characteristics that enable them to handle conflicts or crises. Adults who create positive, nurturing environments and experiences for children impact the results of each stage, affecting children's social and emotional development, and ultimately the way in which they view the world and life. Each stage builds on the one(s) before them and the early stages that children, birth through age 5, experience may be reflected in their behaviors and attitudes that are exhibited in early learning programs.

**Stage 1: Mistrust vs. Trust** occurs from birth through 18 months. Children develop a sense of trust, confidence and security if they are well cared for and nurtured. If their needs are not met, they develop mistrust or a sense of worthlessness and insecurity. Infants develop the basic virtue of **hope** during this stage.

**Stage 2: Autonomy vs. Shame** generally occurs between 18 months and three years old. Well-cared for children develop a strong sense of independence, confidence and self-esteem and begin to learn right from wrong. Children without strong adult relationships experience feelings of worthlessness and shame and may even have difficulty learning. The basic virtue children develop is **will**.

**Stage 3: Initiative vs. Guilt** impacts preschoolers, age 3-5. Confident and well-adjusted children begin to develop social roles during this stage. They may copy or imitate adults, engage in dramatic play to understand the world and build strong familiar relationships. Mal-adjusted preschoolers are easily frustrated and experience guilt. Children develop a sense of **purpose** at this stage.

**Stage 4: Industry vs. Inferiority** develops in children between 5 and 12 years old. Children who are encouraged to be creative and innovative become competent and confident in their ability to reach their goals. The virtue they develop is **competence**. Children may feel inferior if they are restricted in their attempts to try or master new things.

*Learn more about Erikson's stages of psychosocial development that continue until adulthood at <https://www.simplypsychology.org/Erik-Erikson.html>.*

## Stages of Dual Language Learners' English Acquisition

<b>STAGE ONE</b> <b>Home Language Use</b>	<p>The child uses his home language with other children and adults. This may last for days or months until the child realizes that others cannot understand him.</p>
<b>STAGE TWO</b> <b>Nonverbal Period</b>	<p>The child limits the use of his home language, and primarily uses nonverbal ways of communication. He uses this time to observe, listen to, and learn the features, sounds, and words of the new language. This important stage may last a few months to a year.</p>
<b>STAGE THREE</b> <b>Telegraphic and Formulaic Speech</b>	<p>The child repeats familiar one- and two- word phrases in English to name objects and respond to situations. He may not understand the meaning of the words he is using or use them appropriately all of the time, but he notices that the words get the response he needs. (For example, the child may use the phrase "Lookit" to get other children's attention while playing.)</p>
<b>STAGE FOUR</b> <b>Productive Language Use</b>	<p>The child produces simple sentences in meaningful contexts. As his experiences broaden, his sentences become increasingly longer and more complex. Errors are common as he tries out new vocabulary and language rules during this stage. He will also frequently use linguistic features of his home language(s) to maximize understanding and communication in English.</p>

Taken from: WIDA, the Early Years: Planning for Dual Language Development and Learning. WCER | University of Wisconsin–Madison | [www.wida.us](http://www.wida.us)










## Stages of Play

Children progress through stages of social play. As early as 1932, an educational pioneer, Mildred Parten, identified six stages of play, beginning at birth.

Stage	What it typically looks like	Age it typically happens
<b>Unoccupied Play</b>	Babies explore materials and objects around them as they learn about the world around them.	Birth to 3 months
<b>Solitary</b>	Children play alone, typically without noticing others. They use this type of play to explore new ideas and to master basic skills.	Birth to two years
<b>Onlooker</b>	Children watch others play and may ask them questions but they do not join in. They are learning about social roles and rules through observation.	Two to three years
<b>Parallel</b>	Children play next to each other or side by side without interacting together. They are paying attention to each other but they are not engaged in social exchange.	Two and a half years to three years
<b>Associative</b>	Children show interest in what others are doing and may have the same goals for play. They ask questions and communicate with each other but their play has no set rules.	Three to four years
<b>Cooperative (or Social)</b>	Children may play in a group and follow or establish rules for play. They share ideas and toys and may even adopt goals or guidelines for their play.	Four to six years



## Stages of Writing\*

Stages of Emergent Writing		
Stage	Description	Example
<b>Drawing</b>	Drawings that represent writing	
<b>Scribbling</b>	Marks or scribbles the child intends to be writing	
<b>Wavy scribbles or mock handwriting</b>	Wavy scribbles that imitate cursive writing and have a left-to-right progression; child pretends to write words	
<b>Letter-like forms or mock letters</b>	Letters and marks that resemble letter-like shapes	
<b>Letter strings</b>	Strings of letters that do not create words, written left to right, including uppercase and lowercase letters	
<b>Transitional writing</b>	Letters with spaces in between to resemble words; letters/words copied from environmental print; letters often reversed	
<b>Invented or phonetic spelling</b>	Different ways to represent the sounds in words; the first letter of the word or beginning and ending sounds represent the entire word	
<b>Beginning word and phrase writing</b>	Words with beginning, middle, and ending letter sounds; short phrases	
<b>Conventional spelling and sentence writing</b>	Correct spelling of words, generally the child's name and words such as mom and dad; sentences with punctuation and correct use of uppercase and lowercase letters	

Promoting Children's Emergent Writing/Young Children/November 2017

## Stages of Drawing

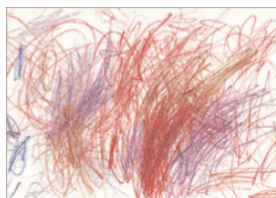
### Stage One: Scribbling

Children use their hands and fingers with some control as they develop eye-hand coordination. Color is less important than the lines they are making. Provide unwrapped crayons, chalk, tempera paint, large paper, clay, wide bristle brushes, collage materials and materials that encourage children to experiment with colors and tools. Set up a specified area for art and a place to display children's creations.

#### Disordered or Random Scribbling

##### (18 months to 3 years)

These scribbles are usually children's first markings. Children are exploring with different tools and may hold them upside down or sideways. There are no definite pictures, just marks as they learn to coordinate their hands with the markings they're making.



#### Controlled Scribbling

##### (2-3 years)

This stage begins about 6 months after scribbling begins. Children learn that they can control the marks they are making and begin to make shapes like circles, crosses or squares as well as wavy lines, putting them in the chosen direction.



#### Named Scribbling

##### (3 to 5 years)

Children begin to name and describe the marks they have made even though they may be unrecognizable. They may respond to adults' questions about their artwork.



### Preschematic Stage (between 4 and 7 years old)

Children begin to draw objects that are recognizable but usually unrealistic. They typically begin by drawing pictures of themselves or family members and may add more body parts as they begin more aware of their own body. Children often use colors that don't represent the object (blue apples, green body) and positioning may be all over the page. They use shapes and lines to create their depictions.



### Schematic Stage (between 5 and 8 years old)

Children are developing their own ideas about how to represent objects or figures (schema) and repeatedly use the same symbol or design for these objects. For example, they may draw a person with large lips and flowing pants or a house with windows but no doors. Drawings show a difference between sky and ground, become more complex, including more detail using the same schema (or representations). Children may make up stories to go along with their artwork.



## APPENDIX THREE

### Inclusion in Early Learning Programs

---

(Adapted from: *Delaware Guide to Promoting Inclusion in Early Care and Education*<sup>1</sup>; *A Place For Me: Including Children With Special Needs in Early Care and Education Settings* by Phyllis A. Chandler<sup>2</sup>; and *Preparing Young Children for the Inclusion of Children with Disabilities into the Classroom* by Marla Lohmann<sup>3</sup>)

*“Inclusive early education is not just about placement in a program, but is more about active participation in social interactions and the development of children’s abilities and skills. Children at a range of developmental levels, including children identified with special needs, should be welcomed as valued members of the community by supporting active participation in all early childhood settings.”*

(UNDERWOOD ET AL., 2012)

Inclusive early childhood programs are in the best interests of all young children, with and without disabilities, and result in greater empathy and acceptance of differences among all children, as well as in improved academic, social, and behavioral outcomes for children with disabilities. Like all children, it is critical for children with disabilities to be exposed to a variety of rich experiences where they can learn in the context of play and everyday interactions and engage with their peers. High-quality early childhood programs can facilitate experiences that foster learning for all children (U.S. Department of Health and Human Services and U.S. Department of Education, 2015).

Young children with and without disabilities play and learn together in a variety of settings: homes, daycare centers, Head Start centers, as well as private, state, and federally supported early childhood programs. Promoting development and a sense of belonging for every child are widely held values among early education and intervention professionals and in society.

#### **Inclusive early care and education is:**

- Children of all abilities and backgrounds living, learning, and playing together in the same classroom;
- Children of all abilities and backgrounds fully participating in daily activities because the activities and routines are planned to meet the needs of each child;
- Caregivers and teachers holding high expectations for every child; and
- Valuing each child’s individual strengths and needs.



### Protections for students with disabilities:

Protections for young children with disabilities are provided through long-standing federal laws such as the Individuals with Disabilities Education Act (IDEA). In the findings to the IDEA (2004), Congress states, “Almost 30 years of research and experience has demonstrated that the education of children with disabilities can be made more effective by ... having high expectations for such children and ensuring their access to the general education curriculum in the regular classroom program, to the maximum extent possible in order to ...meet developmental goals and ... the challenging expectations that have been established for all children...” This principle applies equally to the participation of young children with disabilities in inclusive early childhood programs. Although more broadly based than the IDEA, the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973 safeguard children with disabilities’ access to programs and services provided by entities that receive any federal funding. These laws prohibit discrimination based on service availability, accessibility (e.g., ramps), and delivery. Under both the ADA and Section 504, programs cannot deny a child with a disability the opportunity to participate in or benefit from a program’s services solely based on the disability. (Illinois Early Learning Project, 2015).



### What does inclusive early care and education look like?

- Children with different abilities, interests, and backgrounds playing and learning together in the same classroom;
- Every child involved in all daily activities;
- Any specialized services needed by individual students are embedded within the routines and curriculum of the regular early childhood setting;
- Materials or activities adapted to meet the different needs of each child;
- Full participation of every child intentionally encouraged;
- Needs of the children are the basis for the daily plans and schedules; and
- Teachers encouraging and modeling attitudes of acceptance, high expectations, and facilitated learning at all times.

## Who benefits from inclusion and inclusive early care and education?

### *The early childhood professional:*

- Inclusion improves teachers – teachers experience increased growth and learning to benefit all children.
- Inclusion allows for more interaction with colleagues – regular and special education teachers, along with service providers, work together to meet the unique learning needs of all students.
- Inclusion is rewarding - all children will learn and grow together.

### *Other children in your care:*

- Inclusion helps children discover that all children are more alike than different.
- Inclusion builds children's self-esteem.
- Inclusion allows children to learn from each other.
- Inclusion helps children see the strengths and abilities of each unique friend.

### *Children with a disability:*

- Inclusion increases children's opportunities to play and talk together.
- Inclusion creates opportunities for friendships among children.
- Inclusion builds children's self-esteem and independence.

### *Families:*

- Inclusion connects families to other families and resources in their community.
- Inclusion increases families' participation in the classroom, school, and community.

### *Community:*

- Inclusion increases the sharing of resources among various agencies, benefiting all children.
- Inclusive early care and education sends a message to the community that all children are valued and welcomed equally.



## Successfully including children with special needs in early childhood programs with typically developing children depends on:

- **teachers who believe that all children have the potential to learn.** A positive attitude towards helping all children grow and develop is important.
- **teachers who know and understand child development.** Understanding that children learn skills in a particular order will help the early care and education provider and educator set realistic expectations for a child's skill development. As an example, a child needs to practice standing before the child can practice walking. A child with special needs may need to have a skill divided into smaller steps before the skill can be mastered.
- **teachers who realize that the child with special needs is more like other children than different.** While there are some exceptions, many two-year-old children with special needs have the same challenges of being two that all children face. Where and when possible, setting similar expectations for all children will help them to be accepted by peers.
- **teachers who encourage a child to be independent.** Children like to do things on their own. There is a tendency to "over" help children with special needs. However, it is better for the development of all children to encourage them to do whatever they can for themselves.
- **having a physical environment that meets the needs of the child.** In most cases, the environment may not need to be changed at all. Adapt your space to the needs of the child.
- **planning activities that all children can do.** It is possible to plan activities, snacks, meals, and programs that are appropriate for all children.
- **a willingness of the teachers to work with the family and other professionals who may be providing support services to the child.** While in an early care and education program, a child with special needs may receive additional services from a specialist. Communication with those providing support helps improve the experience of the child.

### An inclusive early care and education program plans activities and routines so that all children can participate.

Some activities may need to be adapted or changed for children of different abilities or stages of development. When you observe children being successful, repeat the activity or plan similar activities to let children practice their skills. Success builds on success. Adjust routines to meet the needs of all children with special needs, as well as for all children in the program.





## How can you make your program more inclusive and help all students be successful?

- Be sure that your classroom is physically accessible for all students. Remove any barriers that might prevent a child getting from one place to another.
- Position children with disabilities in the midst of their peers. Do not place a child with a disability at the edge of the group or away from his peers.
- Encourage children without disabilities to interact with children with disabilities.
- Promote authentic friendships—children without physical impairments sometimes take on a “parent” role in interactions with their peers with disabilities.
- Help children find common ground and ways to interact with one another as friends.
- Give all children tools for interactions and conversations. Provide them with toys or objects to initiate discussion (an example might include a popular book).
- Provide children who struggle with communication with alternate ways to express themselves. This could be pointing or using pictures and using picture schedules.
- Pair children with and without disabilities to work and play together.
- Use a variety of methods for instruction—talk to the children, illustrate with pictures, model, and provide the opportunity for hands-on learning whenever possible.
- Provide a detailed and changeable visual classroom picture schedule so that all children know the plan for the day.
- Explain a child’s disability to other children in an age-appropriate way. Allow them to ask questions about differences.
- Provide developmentally appropriate activities in the early childhood setting that meet the learning, behavioral, and social needs of all children.
- Assist children with self-help skills, but expect them to help themselves whenever possible. Foster independence in all children.
- Communicate frequently with parents and other early childhood professionals.
- Treat all children in your classroom with love and respect.
- Have high expectations for all children, regardless of their abilities.
- Seek out resources for learning more about teaching all types of learners, for example, the Early Childhood Technical Assistance Center (<http://ectacenter.org/>) and the Technical Assistance Center on Social Emotional Intervention for Young Children (<http://challengingbehavior.fmhi.usf.edu/>)

## Suggestions for activities to support children's needs

### *To support children with speech and language delays:*

- Talk while you are doing activities – use simple words:
  - Talk to yourself, describing what you are doing.
  - As a child is doing a task, talk about the steps the child is using to complete a task.
- Repeat what the child says, modeling correct grammar and forms of words (ex.: verb forms, word endings, etc.) and adding any omitted words.
- Take advantage of opportunities or events that naturally occur during the day to talk.
- Talk with children while going through tasks during the day using as much descriptive language as possible.
- Create situations where a child needs to communicate (for example, forget silverware for a meal; place objects out of reach and ask the children to get or ask for objects).
- Create situations that would encourage a child to interact and talk (for example, offer a new toy, a popular book, a new learning center, or a new visual).
- Count a set of objects together, out loud, and name the objects.
- Use visual supports to help children express themselves (pointing, using pictures, individual picture schedules, first-then boards, etc.).
- Give simple directions.
  - Start with one step at a time.
  - Repeat directions if necessary, using simplified wording.

### *Activity ideas to help children to develop speech and language skills:*

- Sing.
- Read to a child or to the group.
- Use rhymes, pausing before saying a word to let the child/children shout it out.
- Repeat sounds in a game-like fashion, imitating each other.
- Play “What’s this?” with pictures.
- Use picture cards: “feed the dog” by pretending to feed a stuffed animal picture cards of the alphabet, numbers, colors, and/or pictures of common objects.
- Do simple puzzles – supply words for colors, shapes, and directions.
- Plan time each day for each child to talk with you and with other children.
- Plan for “show and tell” – at first, a child may just nod “yes” or “no” to statements you provide about their item. As a child feels more comfortable, they will start to add words.
- Let other children ask questions about the “show and tell” item.

### *To support children with developmental delays:*

- Follow routines.
- Be consistent, follow the same routine every day.
- Give the child one direction at a time.
- Plan new activities for a short amount of time and gradually increase the time spent on the activity each day.
- Practice skills over and over again.
- Limit number of choices given to avoid confusion.
- Give information in a variety of ways – speech, gestures, and/or pictures.
- Use activities that involve the interests of the children (for example, dinosaurs, cars, and/or sports).

### *Activity ideas to help children develop their skills:*

- Develop an obstacle course to encourage crawling, pedaling, etc.
- Scavenger hunt for items with characteristics (for example, use plastic eggs to hunt for colors or objects to hunt for shapes).
- Give food in small pieces like cereal to pick up with fingers.
- Sort and make patterns with colored blocks, beads, etc.
- Prepare food or snacks – naming food items; counting and measuring; physically mixing, rolling, and stirring during the food preparation.
- Create areas for children to use pretend play such as a grocery store, doctor's office, restaurant, beach, or farm. These theme areas allow children to interact at all different levels.

### *To support children with hearing loss:*

- Speak or gesture directly to the child.
- Position the child near to the front of the classroom and/or the speaker.
- Wait for children to watch you. This indicates they are ready to pay attention.
- Eliminate background noises that may be distracting.
- Help children use simple signs that the entire group can practice at circle time.



*Activity ideas to help children who have hearing loss:*

- Use simple music activities – shaking rattles to music or rhythm.
- Play matching games – taking time to identify the picture and look at it.
- Exercise with picture directions or video.
- Cook with picture cards.
- Sing songs with actions such as “If You’re Happy” and “Hokey Pokey”.
- Have all children learn simple signs to use at mealtime or snack time.
- Have children use picture cards to express what they want.

*To support children with visual impairment:*

- Be aware of lighting – make sure the rooms are well lit.
- Arrange furniture to have clear, uncluttered pathways.
- Talk, describing what everyone is doing during an activity.
- Use many descriptive words rather than vague words.
- Use more words to replace gestures or body language.
- Use clear visual images – dark solid lines for cutting.

*Activity ideas to help children who have visual impairments:*

- Play games involving the senses of touch, smell, and taste.
- Velcro® laminated body parts, animals, etc. on board or mat.
- Toss balls.
- Put shapes into a shape box.
- Make up stories during circle time; use their imagination – each child adds a sentence.
- Play “Copy Cat” – stacking blocks in different patterns.

*To support children with physical disabilities:*

- Ensure walkways are wide enough for all children to move freely around the room.
- Position children with disabilities in the midst of their peers.
- Make sure the furniture arrangement can be adjusted for special equipment.
- Adapt activities so that all children can participate.
- Use larger crayons or special scissors as needed.

*Activity ideas to help children who have physical disabilities:*

- Blow bubbles.
- Use puzzles with knobs on them.
- Put shapes into shape boxes.
- Animal walk.
- Scarf dance to music.
- Play “Hot Potato” – sitting or standing.
- Play “I Spy”.
- Use group exercises.
- Use a “Follow the Leader” approach. Consider playing “Follow the Leader” in different positions (lying, standing, sitting, etc.) so that all can participate.
- Toss bean bags.
- Prepare food – Consider cooking at a table rather than standing at a counter.
- Play obstacle course – Set up the course in a way that all children can participate, perhaps having children crawl on the floor or use “wheeled” transportation.
- Do art projects – Create group murals or collages while laying on the floor or sitting at a table.
- Lace cardboard cards.
- Use Velcro® wall boards that children can access either standing or sitting.
- Bowl with plastic water bottles as pins.

*To support children with social and/or behavior issues:*

- Follow routines.
- Be consistent, follow the same routine every day.
- Use a lot of structure to offer comfort and predictability.
- Promote positive behavior; model appropriate behavior.
- Use activities appropriate for age or ability.
- Provide a safe, risk-free environment for children to try new activities without feeling that they might fail. Focus on their willingness to try something new.
- Watch for frustration, talk through possible ways to solve problems.
- Do new activities or teach a new skill when children are rested and relaxed.

- Balance physically demanding activities with less active or quiet activities (for example, plan a quiet activity before nap time).
- Remember that some children may need to “watch” before participating.
- Provide a quiet place in case a student needs to “cool down”.

#### *Activity ideas to help children with social and/or behavioral issues:*

- Have a “Show and Tell” during circle time.
- Use play dough.
- Make individual or group collage.
- Have a music center – Play marching band with simple homemade instruments.
- Follow the leader through an course using a variety of movements such as crawling, slithering, or walking.
- Play a game of “Red Light/Green Light” or “Go/Stop”.

### **Final Thoughts: Inclusion Benefits Everyone**

A child with a disability is a child first. His disability does not define him. Children with disabilities are as different as all children are - treat them as individuals. All children can develop friendships with peers, learn how to play and interact with one another, and learn new skills by observing and imitating peers through participating in an inclusive early childhood environment. The experiences that children with and without disabilities have with teachers in their earliest years can set the tone for their interactions with teachers in later grades and are crucial to promoting positive attitudes about school and learning (National Center on Quality Teaching and Learning, 2013).

### **If you are concerned that your child may have a disability:**

For children 0 through 2 years:

Early Intervention Child Find - 1-800-543-3098 (or TTY 800-499-1816)

For children 3 through 21 years:

Contact your local school system’s Special Education department.

1 Adapted from the *Guide to Promoting Inclusion in Early Care and Education: A Section of the User’s Guide to the Growing Together Portfolio*, Delaware Health and Social Services Birth to Three Early Intervention System (<https://www.dhss.delaware.gov/dms/epqc/birth3/files/growingtogether.pdf>).

2 Adapted from *A Place For Me: Including Children With Special Needs in Early Care and Education Settings* by Phyllis A. Chandler: National Association for the Education of Young Children, Washington, D.C., 1994.

3 Adapted from *Preparing Young Children for the Inclusion of Children with Disabilities into the Classroom* by Marla Lohmann: National Association for the Education of Young Children (NAEYC) Blog. (2017). (<https://www.naeyc.org/resources/blog/preparing-young-children-inclusion>).

### **Additional References:**

DEC/NAEYC. (2009). *Early childhood inclusion: A joint position statement of the Division for Early Childhood (DEC) and the National Association for the Education of Young Children (NAEYC)*. Chapel Hill: The University of North Carolina, FPG Child Development Institute. Illinois Early Learning Project. *Inclusion in Preschool Classrooms*. (2015). Retrieved from <https://illinoisearlylearning.org/tipsheets/inclusion/>.

Individuals with Disabilities Education Act, 20 U.S.C. § 1400 (2004).  
National Center on Quality Teaching and Learning. (2013). *Improving Teacher-Child Interactions: Using the CLASS in Head Start Preschool Programs*. Retrieved from <https://eclkc.ohs.acf.hhs.gov/publication/improving-teacher-child-interactions-using-class-head-start-preschool-programs>.

Underwood, K., Valeo, A., & Wood, R. (2012). Understanding Inclusive Early Childhood Education: A Capability Approach. *Contemporary Issues in Early Childhood*, 13(4), 290-299. Retrieved from <https://journals.sagepub.com/doi/abs/10.2304/ciec.2012.13.4.290>.

U.S. Department of Health and Human Services and U.S. Department of Education. (2015). *Policy statement on inclusion of children with disabilities in early childhood programs*. Retrieved from <https://sites.ed.gov/idea/files/joint-statement-full-text.pdf/>.

### **Resources in Alabama:**

<http://www.rehab.alabama.gov/individuals-and-families/early-intervention>

This site is Alabama's Early Intervention System, which contains information for families and service providers of children ages 0 through age 2 with suspected or diagnosed disabilities. If concerned about your child's development please call Child Find to make a referral – 1-800-543-3098.

<https://www.alsde.edu/sec/ses/Pages/home.aspx>

This site is the Alabama State Department of Education, Special Education Services, which contains information for families and service providers children ages 3 through 21 with suspected or diagnosed disabilities.

<https://helpmegrowalabama.org/>

This site is Help Me Grow Alabama, which links children birth to age 8 and their families to community-based developmental and behavioral services and support.

### **Additional Resources on Inclusion for Families and Professionals:**

<http://www.circleofinclusion.org/>

This site offers demonstrations of and information for children from birth through age eight on inclusive programs, methods, and practices with interactive lessons, forms, and other materials that can be downloaded.



<http://www.kidshealth.org>

This site provides doctor-approved health information about children, including information on growth and development, behavior, and positive parenting.

<http://www.zerotothree.org>

This site provides early childhood professionals information and resources about child development from birth through age three.

<http://www.edu.gov.on.ca/childcare/underwood.pdf>

This site contains an article, “Everyone Is Welcome: Inclusive Early Childhood Education and Care” by Dr. Kathryn Underwood, Ryerson University, Ontario, Canada.

<https://cainclusion.org/camap/>

This site is the California MAP to Inclusion & Belonging: Making Access Possible, providing supports, resources, and training for early care providers and families around inclusion.

[https://www.cde.state.co.us/resultsmatter/RMVideoSeries\\_PracticesHereAndThere](https://www.cde.state.co.us/resultsmatter/RMVideoSeries_PracticesHereAndThere)

This site is part of the Colorado Dept. of Education, Results Matter Video Library which contains videos on several early childhood topics, including inclusion, to be used in professional development activities.

<https://www.acf.hhs.gov/ecd/child-health-development/watch-me-thrive>

This site is Birth to 5: Watch Me Thrive!, a coordinated federal effort to encourage healthy child development, universal developmental and behavioral screening for children, and support for the families and providers who care for them.

<https://ccids.umaine.edu/resources/ec-growingideas/inclusionres/>

This site is from the University of Maine, Center for Community Inclusion and Disability Studies. The page on Inclusive Early Childhood Education – Selected Resources includes numerous resources, articles, books, and tools on inclusion for families and professionals.

<http://www.practicalautismresources.com/printables>

This site contains a list of over 100 pages of free printable items, as well as games and activities, designed for creating tasks including associations, task boxes, vocabulary, picture cards, math materials, blank templates, behavioral supports, and data forms.

<http://www.supportforfamilies.org>

This site offers general information on inclusion, tips, and links to other resources.

<https://www.pacer.org/ec/>

This site, PACER’s Early Childhood Family Information and Resources Project, gives parents of children ages birth through 5 years tools to help their children obtain education, health care, and other services.

<https://www.fmptic.org/resources/early-intervention-early-childhood>

This site is Family Matters Parent Training & Information Center Early Intervention/Early Childhood, which contains resources for parents, including a library of articles and videos.

<https://ectacenter.org/topics/inclusion/>

This site is part of the Early Childhood Technical Assistance Center. The Inclusion page contains indicators of high-quality inclusion, federal requirements, research and studies on inclusion, and tools on inclusion for early childhood programs.

### **Books for Children on Disability-Related Topics:**

<https://www.notimeforflashcards.com/2018/03/picture-books-promote-diversity-inclusion.html>

This site is part of No Time for Flashcards. The Picture Books that Promote Diversity and Inclusion list focuses on building community through inclusion and the strength that comes from a diverse community.

<https://chipublib.bibliocommons.com/list/share/72113334/75171110>

This site is part of the Chicago Public Library. This topic guide, Children's Picture Books About Disabilities, contains a list of positive books about disability or that feature characters with disabilities.

<https://iris.peabody.vanderbilt.edu/resources/books/>

This site is part of the IRIS Center at Vanderbilt University. The page of Children's Books: Portrayals of People with Disabilities contains information and synopses of children's and young adult literature about or having to do with people with disabilities.

## APPENDIX FOUR

# Dual Language Learners in Alabama's Early Learning Programs

---

(adapted from *Minnesota Practice Brief #3, Dual Language Learners*)

### Introduction

The term dual language learners (DLL) refers to children, age birth to five, who are learning two or more languages at the same time or learning a second language while continuing to develop their first language. Children who are DLLs come from homes where a language other than English is spoken. For some, both a language other than English and English may be spoken at home. (*U.S. Department of Health and Human Services and U.S. Department of Education, 2016*)

DLLs may master two or more languages in different ways. Some may begin learning them at the same time or simultaneously, right from the beginning – at birth. Others may learn them sequentially, learning their home language first and adding English as they begin to participate in schools or early learning programs. The timing and exposure and opportunity to use both languages impacts the rate of development. Also important to DLLs' language mastery are community attitudes towards their learning and use of multiple languages, as well as each child's own personality, motivation and ability. (*WIDA, 2014*)

Children exposed to two languages early in life develop two separate, but inter-related language systems. Learning more than one language at the same time does not confuse young children; rather, the human brain is capable of learning multiple languages at very young ages. In fact, this learning is often easiest at young ages, under the right conditions. (*Espinosa 2013*)

We know that language learning occurs through relationships and is a primary task in young children's development. As infants interact with their family members and primary caregivers, they hear the sounds of the language that surrounds them. In addition to sounds, children learn vocabulary and meaning from daily interactions that are concrete and related to their experiences. For example, the word "apple" conveys the concept of a round fruit that may be red, yellow, or green; that is ready to eat in the fall; that can be eaten raw or cooked, etc. Just one word carries a great deal of meaning.

"During the first five years of life, children's brains develop rapidly, highly influenced by the experiences they share with the adults and peers in their lives. Exposure to language is a unique experience because it is continuous and constant. Children are surrounded by language during many of their waking hours. Constant exposure makes language highly consequential for brain development and learning." (*U.S. Department of Health and Human Services and U.S. Department of Education 2016*)

The capability for infants to learn multiple languages is now well-recognized in the field of neuroscience. Through exposure to the home language, children's language learning narrows and becomes focused on the interactions with their loved ones. Beginning as early as nine months of age, the brain starts to do away with language synapses that are no longer necessary for understanding the child's home language (Kluger 2013). Throughout their early years, children's ability to learn multiple languages is more acute than in the adult years as this pruning continues. Therefore, it is important for families and early childhood professionals to make the most of these remarkable capabilities and consider the benefits of learning multiple languages.

"The weight of current research indicates that becoming proficient in two languages is both possible for and beneficial to young children. Reports also show that a strong home- language base makes it easier to learn English, and that young children can learn two languages as naturally as learning one. (August & Shanahan 2006; Genesee 2010; Castro, Ayankoya, & Kasprzak 2011; Magruder, et al 2013)

"There is a scientific consensus that children have the capacity to learn two languages from birth and that this early dual language exposure does not confuse children or delay development in either language. In fact, dual language learning provides children with many cognitive and linguistic benefits. DLL children should be provided with high quality language experiences and support to master both of their languages." (Sandhofer & Uchikoshi, 2013).

The growing number of children who speak two or more languages often presents challenges in a society that is primarily English-speaking. As professionals in early childhood programs and educational systems implement use Alabama's Standards for Early Learning and Development and work toward high quality services to improve child outcomes, they must consider strategies for using the ASELs effectively with all children including dual language learners.

The number of DLLs in early care and education programs and public schools in the United States has continued to rise during the past 20 years, with some states experiencing over a 200% rate of growth. (Espinosa, 2013)

The US Census Bureau projects that by the 2030s, children whose home language is other than English will increase from roughly 22 percent to 40 percent of the school-age population. The numbers are growing even more rapidly for the preschool years due to increasing immigration and birth rates (Center for Public Education 2012). (Magruder, Hayslip, Espinosa, and Matera 2013)

## **Stages of Dual Language Learners' Development**

Preschoolers who learn English as a second language after they have begun learning a home language will typically progress through several stages (Tabors, 2008). The variability of how and when these stages happen can be even greater for DLLs than for children learning a single language, depending on how well-developed their first language may be and how well their first language transfers to their second. (Sandhoffer & Uchikoshi, 2013)



Children's second-language learning can be dependent on the similarity of the two languages, and the child's exposure to the second language. Their exposure to their home language also impacts learning since they are dependent on this information to build new knowledge. While it may take longer to learn some aspects of language that differ between the two of them, those differences are typically normal and do not indicate a delay or disorder. (Espinosa, 2013)

- In **stage one**, children keep using their home language at school but may begin to say less or even stop talking if the school environment does not support it.
- In **stage two**, children observe interactions and develop receptive language, but may not yet be willing to express the language they have learned. At stage two, a child may go right to his seat at the table when he hears the teacher announce lunch time, but is not ready to reply when asked what kind of sandwich he wants.
- In **stage three**, children understand the rhythms and intonations of English and begin to use some key phrases. You may hear “telegraphic speech” – for example, “Up!” can mean “Look up at the bird!” while “Up?” can mean “Will you reach up and get me that toy?” Children also employ “formulaic speech” – using memorized phrases that serve a function when a gesture or word is added. For example, “I want \_\_\_\_” plus pointing might mean “I want an apple.”
- In **stage four**, children have informal fluency in the new language, including the ability to speak in full sentences and hold conversations. Even when they have progressed to the fourth stage, young DLLs still think and understand many things in their first language and will continue to need support and experiences in that language while continuing to develop their English. (Nemeth, 2016)

Alabama's Standards for Early Learning and Development support professionals' identification of children's language development stages and the design of strategies to support their learning.



### Benefits of Multilingualism

Children who understand and speak multiple languages experience unique benefits and advantages. In fact, new studies show that a “multilingual brain is nimbler, quicker, better able to deal with ambiguities, resolve conflicts and even resist Alzheimer's disease and other forms of dementia longer.” (Kluger 2013)

Researchers have found differences in brain structure and development between bilingual children and their monolingual peers. Individuals who have continuous, high-quality exposure to more

than one language from a young age have greater grey matter density and more efficient synaptic connectivity in regions of the brain associated with language processing, as well as memory, attention and other executive functions. The extent of these differences, some studies have found, is greatest among individuals who were exposed to two languages before the age of five, and is dependent on how proficient the individual is in his or her second language, and at what age exposure to a second language began. (*U.S. Department of Health and Human Services and U.S. Department of Education, 2016*)

The Center on the Developing Child at Harvard University reminds us that executive function and self-regulation skills are those mental processes that enable us to plan, focus attention, remember instructions, and juggle multiple tasks successfully. Dual language learners use executive function to figure out the differences and similarities in words they hear in all languages they are exposed to. They are able to switch between languages, ignore irrelevant information, and transfer knowledge.

*Dual language learners demonstrate cognitive flexibility or are better able to task switch, inhibit impulses and solve problems.*

Dual language learners, compared to their non-bilingual peers, have been found to have an easier time understanding math concepts and solving word problems; developing strong thinking skills; using logic; focusing, remembering and making decisions; thinking about language; and learning other languages. They demonstrate cognitive flexibility or are better able to task switch, inhibit impulses and solve problems.

Children's social emotional skill-building or their developing identity is also positive impacted as they become bilingual. DLLs show stronger ties to their family, culture and community. They are able to make new friends and establish strong relationships. (*Zelasko and Antunez, 2000*). And, recent research has also found that children raised in bilingual households show better self-control (*Kovács and Mehler, 2009*), which is a key indicator of school success.

The benefits for dual language learners continue into adulthood. "One-half to two-thirds of adults around the world speak at least two languages. In today's global society, they have many advantages. Globally, bilingual and biliterate adults have more job opportunities than monolingual adults. Bilingual and biliterate individuals have the opportunity to participate in the global community in more ways, get information from more places, and learn more about people from other cultures." (*Too Small to Fail*)

With so many benefits identified, it is clear that young children who are dual language learners have many strengths. Yet, historically, their academic achievement has lagged behind native English- speakers (Magruder, et al 2013). It is essential that early childhood professionals build on the many strengths identified and engage in thoughtful and intentional practices that address the needs of DLLs in all varieties of programs and services for children and families.

## Addressing Gaps in Dual Language Learners' Achievement

Research tells us that children who are dual language learners enter kindergarten behind their peers in language, literacy and math, and these disparities grow as children progress through their school years. This is particularly true for children from lower incomes. This may be a result of early childhood systems lack of preparedness and failure to recognize children's cultures and languages as assets.

"Unless teachers and families make an effort to support both the home language and English, young DLLs can easily lose the ability to speak and understand their home language, or lose the balance between the two languages (*Puig 2010; Castro, Ayankoya, & Kasprzak 2011*).

If young children lose the language of their home, they will never experience the many advantages of becoming fully bilingual. They might find communicating with elder family members difficult and feel less connected to their family traditions and heritage. This disconnect can lead to emotional and self-esteem concerns as DLLs approach adolescence. (*Wong Fillmore, 19 1991*), (*Magruder, et al 2013*)

These gaps can be impacted when professionals provide early childhood programs and services for children and families that attend to the social and cultural context in which children are being raised and recognize and celebrate the diversity of families, languages, and cultures in their programs and communities.

Recent policy statements and recommendations emphasize the importance of honoring children's diversity. The Division for Early Childhood tells us: "For optimal development and learning of all children, individuals who work with children must respect, value, and support the culture, values, beliefs, and languages of each home and promote the meaningful, relevant, and active participation of families." (*Division for Early Childhood 2010*)

The U.S. Departments of Health and Human Services and Education states: Early childhood programs should be prepared to optimize the early experiences of these young children by holding high expectations, capitalizing on their strengths- including cultural and linguistic strengths - and providing them with the individualized developmental and learning supports necessary to succeed in school." (*DHHS and DOE 2016*)

WIDA, an organization that provides language development resources to those who support the academic success of multilingual learners has developed Early English Language (E-ELD) and Early Spanish Language (E-SLD) Development Standards to provide guidance to early childhood professionals. The key message is that children who are dual language learners need listening, speaking, and meaning-making skills (e.g. gestures and facial expressions) to make sense of and to contribute to the world of the classroom, home, and community. (See *Standards for Dual Language Learners in ASEL's Language and Literacy domain*.)

## Establishing a Classroom Language Model

Early childhood programs have opportunities to work with children and families at the time in children's lives when language development in multiple languages has its most potential. Recommendations focus on a strength-based approach that recognizes the many benefits of bi- and multilingualism for children. Administrators and teachers and providers can identify a "language plan" for their program. (Passe 2013). They can approach language learning with children who are dual language learners by identifying and implementing a Classroom Language Model (CLM). (DHHS and DOE 2016).

"Taken together, research on language use in early childhood programs, and on the aforementioned benefits of supporting home language development, including fostering bilingualism, maintaining cultural connections and communication with family members, and the transferability of home language skills to English language acquisition, suggests that systematic and deliberate exposure to English, paired with supporting home language development within high quality early childhood settings, can result in strong, positive outcomes for children who are DLLs, as well as positive outcomes for native English speakers. (DHHS and DOE 2016, 12)"

There are different classroom language models (CLM) that can be adopted to ensure children's exposure and use of language are intentionally planned and implemented. These plans will identify strategies that promote children's optimal language and literacy development. Early childhood programs should carefully choose their CLM, based on the composition of the home language/s of the children in their program and their learning needs, and the language proficiencies of their lead teachers and providers, informed by input from families.

While four models are identified, the first three have the greatest impact for young dual language learners. And benefits are seen, for not only dual language learners, but for monolingual English-speaking children as well.

- **Dual immersion.** This approach provides instruction in both English and a second language at alternating times of the day, on alternating days, or on alternating weeks.
- **Home language instruction with English support.** Under this model, instruction is primarily provided in children's home language, but there is support for English language acquisition, through intentional exposure to English, the availability of learning materials in English, and the display of English words. This approach can be appropriate for infants and toddlers who are DLLs.
- **English language instruction with home language support.** In this approach, instruction is primarily provided in English, but there is support for the home language through intentional exposure to- and some instruction in- the home language, the availability of learning materials in the home language, and the display of multicultural pictures and words in the home language. This approach can be appropriate for preschool children who are DLLs whether or not the program also serves monolingual-English-speaking children.



- **Use of English-only.** In this model, instruction and all activities are carried out in English only, without home language or cultural support. Not supporting development of the home language means that DLLs who speak that language are less likely to receive the benefits discussed above, including developing bilingualism, maintaining cultural connections and communication with family members, and the transferability of home language skills.

## Supporting Dual Language Learners

Unless you believe “in your bones” that having a second language in addition to English is a gift, and not a disadvantage, and diversity is a resource, not a problem to be solved, you are likely to respond to DLL children in ways that discourage the continued use of their home language—especially if you are not fluent in the child’s home language. (Espinosa and Magruder, 2015)

Minnesota’s Practice Brief for Dual Language Learners identifies six primary strategies for supporting Dual Language Learners in their programs that build on children’s strengths and scaffold opportunities to support the development of each child towards their full potential.

1. Celebrate the cultural and linguistic diversity of children and their families.
2. Support children’s fluency in their home language or honoring home languages if staff are not proficient in that language.
3. Use best practices to teach English.
4. Establish a culturally responsive learning environment across domains.
5. Support children’s language development through play (in English and in-home languages).
6. Talk, read, and sing together every day in English and in-home languages.

### 1. *Celebrating Cultural and Linguistic Diversity*

Developmentally appropriate practices include addressing the social and cultural context in which a child is being raised. This context is a complex whole of language, knowledge, beliefs, art, morals, laws, customs, and ways of living. When early childhood educators are intentional in creating a climate that celebrates cultural and linguistic diversity, they establish strong partnerships with families built on trust and acceptance.

“Early childhood leaders should intentionally promote a climate and values that are respectful of each and every child and their family, welcoming and inclusive to all, and assumes that every child has strengths that can be built on to help them meet their potential. Leaders should communicate that bilingualism is an asset, not only for DLLs, but for all children. Learning two or more languages is not a risk factor; it is a strength

that should be fostered. Families, regardless of their English proficiency, should be seen as capable partners in promoting children’s learning and development and should be provided language assistance services to ensure they can act as the most important advocates in their children’s educational experience. ((In some cases, language assistance services may be required to be provided.) The program should not only demonstrate respect for peoples of all cultures; it should embrace and celebrate their diversity. “(DHHS and DOE 2016, 20-21)

Alabama’s professionals are encouraged to adopt the ASELs in conjunction with curriculum and assessment in their programs. They must recognize the appropriateness of the developmental expectations in the standards for all children, while also taking into consideration the social, cultural, and linguistic context in which the children in their program are being raised. They communicate with families in a reciprocal, two-way manner so that their knowledge of family values, beliefs, and child-rearing practices helps them to consider the ways children are demonstrating their accomplishment of specific indicators of progress. They view the ASELs through the lenses of the cultures of the families in their program community.

## *2. Supporting Children’s Fluency in Their Home Language and Honoring Home Languages*

It is important that professionals support and honor children’s continued use of their home languages and recognize their developmental capabilities and accomplishments in the languages of their families rather than in English alone. Research has found that dual language learners who receive instruction in their home language make greater gains than those who received little or no home-language support. In one study of Spanish speakers across 11 states, results found that DLLs showed greater gains in math and reading when they received instruction in their home language.

Children whose home language is supported within their early learning program are more likely to develop a strong cultural identity and feel more confident in communicating with family members.

Monolingual English educators have the responsibility to honor the children’s home languages, even if they do not know those languages. They can make use of language specialists, family members, and volunteers to assist them in learning key words and phrases, finding resources in various languages to bring into the classroom, and interacting with the children in their home languages.

“DLLs come to early childhood programs with richly varied backgrounds, sets of skills, and cultural ways of knowing: they need teachers who welcome them and recognize their unique abilities, what they know, and what they need to learn. Teachers of young DLLs understand that children communicate their knowledge using the safest method possible, and this may mean the use of their home language, English, or a mixture of both.” (Magruder, et al 2013)

### 3. *Using Best Practices to Teach English*

English is the dominant language in the United States and Alabama. There is agreement that all young children need exposure and instruction to learn English. There are multiple ways to approach teaching English and more and more research to guide English-language learning experiences for children whose home language is not English.

“Multiple bodies of literature – including developmental and cognitive psychology, education research, and neuroscience – point to the benefits of supporting the home language of young children who are DLLs, alongside their English language development, in early childhood settings.” (DHHS and DOE 2016)

### 4. *Establish a Culturally Responsive Learning Environment*

To be culturally and linguistically responsive, the learning environment needs to reflect the children and families in the early childhood program. Professionals intentionally plan for an environment that is organized into established learning areas appropriate for the age and developmental capabilities of the children in the program. They consider materials and experiences that will encourage interaction among children and adults so that oral language is nurtured and supported. They offer materials in multiple languages so that they are reflecting children’s home languages as well as English. Print-rich environments include labeling of shelves and areas and providing books and posters in multiple languages.

Here are additional recommendations for establishing a culturally responsive learning environment for DLLs:

1. Find out what languages will be spoken by children in your class and focus your classroom setup on what will most effectively support children who speak those languages.
2. Stock bookshelves with bilingual and monolingual books in each of the languages needed. Look for storybooks and nonfiction books that come with CDs or books available as apps with sound to help you learn to pronounce words in each child’s language. Wordless books are also great for multilingual classes.
3. Ask families to send in photos of things that are meaningful to each child, such as foods, celebrations, and family activities. Ask them to help you label the images with words in both English and the home language to give you lots to talk about with the children. Use the pictures to make personalized posters, displays, and class books that children can relate to.
4. Add labels that reflect the represented languages. Ask families or volunteers to help with the proper and the phonetic spelling. Labels don’t build language and literacy unless you and the children really use them.
5. Play music from different countries and in different languages. Ask families to send in their favorites to build that home-school connection.

6. Learn to say 10 to 20 key words in each child's home language to help them feel welcome, safe, and comfortable starting from their first day. Use an online translation app like Google Translate or ask parents to record words for you to learn. Try hello, my name is, eat, drink, hurt, bathroom, your parents will be here soon, wash your hands, help, yes, and no to start.
7. Make a picture communication board to help all children communicate their needs and feelings. Post photos of the children looking sad and happy, helping each other, cleaning up toys, going outside, solving a conflict, and participating in daily routines. (Nemeth 2016, 5)

### *5. Supporting Children's Language Development through Play*

The most effective curricular approaches in early childhood are based on young children as active learners emphasizing play, exploration, and constructive learning more so than didactic, teacher- led, passive learning experiences. The Alabama Standards for Early Learning and Development emphasize play, exploration, and active learning for children from birth through kindergarten entry.

Play provides multiple opportunities for professionals to address children's language development. Books, toys, art, science, building materials, and dramatic play props can generate rich language interactions that reinforce vocabulary, concepts and language usage in all areas of the classroom. Adults interact with children as they play, narrating what they are doing, asking questions, and engaging children in non-verbal and verbal conversations. If early educators speak the children's language, they can have a conversation in that language. If they do not speak the child's language, early educators must use clear and precise English, with the addition of demonstrations, gestures, and facial expressions.

Play facilitation can be conducted in a child's home language or in English. Professionals can pair children in ways to encourage cross-language communication. Early educators must be aware of the amount of talking that children do. Classrooms with dual language learners tend to be quieter than classrooms with monolingual speakers, as children have less language to use with each other. Professionals do not want to miss the great meaning play has for children and the rich possibilities for both receptive and expressive language development it provides.

### *6. Talk, Read and Sing Together Every Day*

One of the most common recommendations to support dual language learners involves talking, reading, and singing together every day with children as they learn both English and their home languages.

"The more interesting and interactive the conversations are that children take part in, the more language they learn. Reading books, singing, playing word games, and simply talking to and with children builds their vocabulary while providing increased

opportunities to develop listening skills. Children learn by engaging in daily interactions and experiences with peers and skilled adults.” (Magruder, et al 2013)

Daily conversations, exposure to books, and engagement in songs and chants are common happenings in early childhood programs. When professionals plan intentionally to engage with children in these ways, they are supporting the language development of all children. Conversations within the context of a warm and caring relationship provide a safe place in which to take risks with self-expression. Dual language learners may attempt to interact with a trusted professional in their second language because they know they will be supported. They feel confident to interact in the new language when adults encourage them in a calm and matter of fact manner. That happens best at play or reading time, one-on-one and in small groups.

Professionals recognize that learning language is important and are intentional in supporting such learning. They know that exposure to books in many languages builds on children’s enjoyment of stories and connections to print and the sounds of languages. And that songs and chants provide opportunities for repetition, vocabulary, rhythm, and word play. In addition, for preschoolers, they plan for opportunities to support their emergent writing skills in multiple languages.

## Partnering with Families

Alabama’s Standards for Early Learning and Development stress the importance of family engagement in early childhood programs. Partnering with the families of dual language learners is an essential step in supporting their development. Professionals should:

- Create a respectful, welcoming, and inclusive climate.
- Perceive dual language learning as a strength and benefit.
- Learn about children’s language backgrounds and families’ preferred language for ongoing communication with the program.
- Engage with families in establishing a culturally responsive learning environment.
- Inform families of how the ECIPs are used with dual language learners and with all children.
- Emphasize the importance of oral language as the foundation for literacy.
- Support families as children transition between programs and systems.
- Reassure families that their children will learn English to be successful in school.

Policies and procedures in early childhood programs should include attention to the needs of dual language learners and their families and provide information to families about the benefits of bilingualism, the importance of home language development, and families’ central role in home language development and tips on providing a high-quality language environment in the home language, at home and in the community. (DHHS and DOE 2016)



## Conclusion

Children who are dual language learners are attending early childhood programs in growing numbers. The benefits of bi- and multilingualism for both children and adults are well-documented. The Alabama Standards for Early Learning and Development are designed to support high quality services to improve child outcomes. Early childhood professionals must take steps to use the ASELs effectively with ALL children including children who are dual language learners.

“...Everyone brings valuable resources to the education community. Children and youth who are linguistically and culturally diverse, in particular, bring a unique set of assets that have the potential to enrich the experiences of all learners and educators. Educators can draw on these assets for the benefit of both the learners themselves and for everyone in the community. By focusing on what language learners can do, we send a powerful message that children and youth from diverse linguistic and cultural backgrounds contribute to the vibrancy of our early childhood programs and K–12 schools.” (WIDA)

*For additional resources to support children who are Dual Language Learners, view the Family and Community Engagement domain of the ASELs as well as each of the Adaptations and Accommodations pages for each domain.*

## Resources

Baker, Megina and Mariela Pérez. 2018. The Language of the Classroom: Dual Language Learners in Head Start, Public Pre-K, and Private Preschool Programs. Washington, DC: Migration Policy Institute. Retrieved from: <https://www.migrationpolicy.org/research/language-classroom-dual-language-learners-head-start-public-pre-k-and-private-preschool>

Castro, D. C., Paez, M. M., Dickinson, D. K. & Frede, E. (2011). Promoting language and literacy in young dual language learners: Research, practice, and policy. *Child Development Perspectives*, 5(1), 15-21.

Connecticut Office of Early Childhood. 2017. Supporting All Children Using the Connecticut Early Learning and Development Standards: Dual Language Learners. Retrieved from [https://www.ct.gov/oec/lib/oec/DualLanguageLearnersFinalMar17\\_2016.pdf](https://www.ct.gov/oec/lib/oec/DualLanguageLearnersFinalMar17_2016.pdf)

The Division for Early Childhood (DEC). 2010. Position Statement: Responsiveness to ALL Children, Families, and Professionals: Integrating Cultural and Linguistic Diversity into Policy and Practice. Missoula, MT: Division for Early Childhood.

Espinosa and Magruder. 2015. “Practical and Proven Strategies for Teaching Young Dual Language Learners,” in *Getting It Right for Young Children from Diverse Backgrounds: Applying Research to Improve Practice with a Focus on Dual Language Learners*, ed. Retrieved from <https://www.earlychildhoodwebinars.com/wp-content/uploads/2016/01/Chapter-4-Practical-and-Proven-Strategies-for-Teaching-Young-Dual-Language-Learners.pdf>

Espinosa, Linda. 2018. Encouraging the Development and Achievement of Dual Language Learners in Early Childhood. Retrieved from <https://www.aft.org/ae/fall2018/espinosa>.

Kluger, Jeffrey. 2013. "How the Brain Benefits From Being Bilingual." Retrieved from <http://science.time.com/2013/07/18/how-the-brain-benefits-from-being-bilingual/>

Magruder, Elizabeth S. Whitcomb W. Hayslip, Linda M. Espinosa, and Carola Matera. 2013. "Many Languages, One Teacher: Supporting Language and Literacy Development for Dual Language Learners." *Young Children* 68 (1): 8-15. Washington, D.C.: NAEYC.

Nemeth, Karen. 2016. "Welcoming Dual Language Learners." *Teaching Young Children* 9 (5): 5. Washington, D.C.: NAEYC.

Nemeth, Karen, 2016. "Dual Language Learners in the Classroom" in *Extensions Curriculum Newsletter from High Scope*. Volume 30, No.1. Retrieved from <https://highscope.org/wp-content/uploads/2018/08/170.pdf>

Passe, Angèle Sancho. 2013. *Dual Language Learners, Birth to Grade 3- Strategies for Teaching English*. Saint Paul, MN: Redleaf Press.

Too Small to Fail. Talk, Read and Sing Together Every Day! The Benefits of Being Bilingual – A Review for Teachers and Other Early Education Program Providers. Retrieved from <http://toosmall.org/community/body/Benefits-of-Being-Bilingual.pdf>

U.S. Department of Health and Human Services and U.S. Department of Education. 2016. Policy Statement on Supporting the Development of Children Who Are Dual Language Learners in Early Childhood Programs. Retrieved from [https://www.acf.hhs.gov/sites/default/files/ecd/dll\\_policy\\_statement\\_final.pdf](https://www.acf.hhs.gov/sites/default/files/ecd/dll_policy_statement_final.pdf)

WIDA. Focus on the Early Years, Dual Language Learners. Retrieved from <https://wida.wisc.edu/sites/default/files/resource/FocusOn-EY-Dual-Language-Learners.pdf>

## Physical Activity: Good Health through Movement

### Introduction

Research shows that there is a relationship between cognitive (or learning) readiness and physical skill mastery. As children demonstrate balance, coordination, and strength, they are showing that they have the necessary skills to do things such as sit still and pay attention, balance in a chair, hold a pencil, track their eyes on a line – all necessary skills for learning. Children initially develop these skills through the typical sequence of skill mastery and then further develop them through play. The Center for Disease Control (CDC) tells us that “regular physical activity can help children and adolescents improve cardiorespiratory fitness, build strong bones and muscles, control weight, reduce symptoms of anxiety and depression, and reduce the risk of development health conditions such as heart disease.”

### How Much Physical Activity is Enough?

Shape America, or the Society of Health and Physical Education, has produced a set of guidelines for young children in its document *Active Start: A Statement of Physical Activity Guidelines for Children, Birth to Age 5*, 2<sup>nd</sup> edition. It specifies the amount and type of activity children should experience. Similar guidance is provided by Nemours Healthy Start, Standard 3.1.3 (Physical Activity and Screen Time) in *Caring for Our Children*, and the American Heart Association.



#### *Guidelines for Infants*

**Guideline 1** Infants should interact with caregivers in daily physical activities that are dedicated to exploring movement and the environment.

**Guideline 2** Caregivers should place infants in settings that encourage and stimulate movement experiences and active play for short periods of time several times a day.

**Guideline 3** Infants’ physical activity should promote skill development in movement.

**Guideline 4** Infants should be placed in an environment that meets or exceeds recommended safety standards for performing large-muscle activities.

**Guideline 5** Those in charge of infants’ well-being are responsible for understanding the importance of physical activity and should promote movement skills by providing opportunities for structured and unstructured physical activity.



### *Guidelines for Toddlers*

**Guideline 1** Toddlers should engage in a total of at least 30 minutes of structured physical activity each day.

**Guideline 2** Toddlers should engage in at least 60 minutes -- and up to several hours -- per day of unstructured physical activity and should not be sedentary for more than 60 minutes at a time, except when sleeping.

**Guideline 3** Toddlers should be given ample opportunities to develop movement skills that will serve as the building blocks for future motor skillfulness and physical activity.

**Guideline 4** Toddlers should have access to indoor and outdoor areas that meet or exceed recommended safety standards for performing large-muscle activities.

**Guideline 5** Those in charge of toddlers' well-being are responsible for understanding the importance of physical activity and promoting movement skills by providing opportunities for structured and unstructured physical activity and movement experiences.



### *Guidelines for Preschoolers*

**Guideline 1** Preschoolers should accumulate at least 60 minutes of structured physical activity each day.

**Guideline 2** Preschoolers should engage in at least 60 minutes -- and up to several hours -- of unstructured physical activity each day, and should not be sedentary for more than 60 minutes at a time, except when sleeping.

**Guideline 3** Preschoolers should be encouraged to develop competence in fundamental motor skills that will serve as the building blocks for future motor skillfulness and physical activity.

**Guideline 4** Preschoolers should have access to indoor and outdoor areas that meet or exceed recommended safety standards for performing large-muscle activities.

**Guideline 5** Caregivers and parents in charge of preschoolers' health and well-being are responsible for understanding the importance of physical activity and for promoting movement skills by providing opportunities for structured and unstructured physical activity.

## Daily Play Recommendations

	MINIMUM TIME FOR			Additional Recommendations
	Teacher-led Play	Unstructured Play	Outdoor Play	
<b>Infants</b>	Build up to 30 minutes		2-3 times	Limit time to be in pre-made equipment
<b>Toddlers</b>	30 minutes	60 minutes	60-90 minutes	Limit inactivity to no more than one hour at a time except when sleeping
<b>Preschoolers</b>	60 minutes	120 minutes	60-90 minutes	Include light, moderate, and vigorous play

## Physical Activity for Infants

It's never too early to encourage children's exercise for good health. Infants need opportunities for physical activity to develop their muscles, their bones and to practice their gross and fine motor skills. Babies' earliest movements and exploration help them make those brain connections that develop into healthy behaviors as they grow older, protect against obesity and support better sleep habits. Infants need opportunities to explore, move their bodies, and to experience the results of movement and action. Infants' physical activity begins with tummy time. When babies are laid on their tummies, they are acquiring the brain connections that link to motor development. They can use their limbs to reach, push, pull, kick, and twist. They strengthen their neck muscles and ready themselves for crawling and walking. Very young babies should be given 3-5 minutes of tummy time at a time, building up to about 30 minutes.

Infants' routines offer opportunities for physical activity. Professionals can move babies' legs and arms as they are change diapers and get them dressed. They can wiggle fingers and toes as they sing movement songs like "This Little Piggy". Self-feeding, as well as toys that children can shake, bang, stack or grasp build eye-hand coordination.

Infants' movement must be supervised and should not be restricted. As babies begin to roll, sit, crawl, and walk, they need plenty of space and opportunities to safely practice those skills. Infant equipment such as swings, bouncy seats or molded seats should be limited and used for short periods.



## Physical Activity for Toddlers

Toddlers need opportunities to stay healthy and develop motor skills through physical activity. Just like infants, they are building those important brain connections that link physical activity with skills. Toddlers need experiences that help them associate the joy of physical activity and movement with good attitudes and habits. They need to learn the skills that later make exercise easier and enjoyable.

Active play materials and equipment should assist toddlers' use and practice of basic movements. For example, delays in climbing mastery may occur if children aren't given opportunities to climb steps or eye-hand coordination may lag if they don't have access to balls to roll, throw and catch.

Toddlers' vigorous play typically occurs in short spurts that last for about 5-10 minutes, and then are followed by quieter activities. Professionals should provide both structured and unstructured play experiences that consider toddlers' short attention spans. Examples of structured play include dancing to music or a parade. Unstructured play allows children to move about freely and can include climbing or riding toys, running or walking.

Toddlers enjoy walking, jumping, running, marching and moving to music. They like riding toys and using toys that move like cars or trucks. Provide obstacle courses or opportunities to climb over, crawl through or climb over build muscles; and encourage their fun with rolling or throwing balls.

## Physical Activity for Preschoolers

The U.S. Department for Health and Human Services recommends that pre-school children aged 3-5 should be physically active throughout the day with a minimum of three hours of a combination of light, moderate, and vigorous activity (2018). While the goal of three hours may seem daunting, physical activity can be integrated during the daily schedule and be used to support children's learning. Purposefully-designed physical activity can be used for transitions, and active play time like blocks or dress-up, and moving to music count toward the three hour goal.

Research also shows that when professionals design structured physical activities or games, children's physical activity levels are greater. Professionals should consider ways to design short, structured activities such as relay races or parachute play to promote physical activity.

The National Association for Sport and Physical Education describe three elements of exercise: endurance, strength, and flexibility. Aerobic activities such as running or hopping where children are active for periods of time, increase the heart rate, develop endurance. Climbing activities or exercise develop strength; and activities like stretching or bending that improve children's range of motion help to develop children's flexibility.

Preschoolers like to hop, skip and jump. They enjoy balancing, catching and kicking balls, and practicing gymnastic skills like tumbling. Preschoolers have fun with bike-riding, dancing or using playground equipment.

## **Integrate Physical Activity throughout the Day**

Early childhood professionals can incorporate physical activity experiences throughout the day. They can intentionally build motor skill development and movement as they teach math, literacy or social-emotional concepts or through the design of their environment.

Children can:

- Move and act out stories (language and literacy)
- Walk or move like animals (science)
- Exercise to music (creativity)
- Use rhythm sticks, scarves or clapping games (mathematics)
- Count while they hop or jump from one object to another (mathematics)
- Participate in obstacle courses where they are learning over, under, up, down, etc. (language and literacy and mathematics)
- Dance or move with others (social)
- Act out different feelings such as stomp when mad (emotional)
- Follow directions during movement games, like stop or go, fast and slow (approaches to learning and language and literacy)
- Make the shape of letters or numbers with their bodies or hands (mathematics and language and literacy)

Transitions may be more controlled when professionals build movement into them. Children can hop to the door, crawl to the table, or dance from one activity to another. As they walk outside, they can gently tap their heads or tummies, or walk on a tape line to balance. Prepare children for quiet or listening activities with a movement exercise. Do a series of exercises before story time; play Head Shoulders Knees and Toes before preparing for lunch.

## **Outdoor Play Leads to Good Health**

Outdoor play must be a vital part of children's daily experiences. They need to breathe the fresh air, release pent-up energy, and engage in the exploratory, active play that being outside promotes. The Harvard School of Medicine, in their Health Publishing Blog describes 6 Reasons Children Need to Play Outside and how they support children's good health. They tell us outside play provides: 1) sunshine; 2) exercise; 3) executive functioning (unstructured time to make up games and rules, to explore on their own and figure things out; 4) risk-taking; 5) socialization; and 6) appreciation of nature.

Head Start, in *Going Outside Improves Health*, lists numerous benefits from outdoor play.

Outdoor time:

- strengthens the heart and muscles
- strengthens children's immune systems
- reduces the number of viruses they may acquire and it provides access to vitamin D that improves bones and teeth.
- Positively impacts children's sleep patterns
- Reduces the likelihood of near-sightedness
- Produces milder symptoms of ADHD
- Helps develop a general sense of well-being
- Exposes children to a specific type of bacteria in dirt that may reduce anxiety and improve the ability to learn new tasks

### Infants and Outdoor Play

There are wonderful experiences for infants outside! Through their senses, they can explore nature, enjoying its smells, sights, and sounds. Babies can enjoy the touch of tree bark, the smell of flowers, or the sounds of birds as they tweet from trees. Infants can be laid on their bellies on a blanket or a safe area of grass to watch others' actions or to feel the grass through their fingers. They can also practice pushing-up, crawling, climbing or early toddling in the grass or on outside surfaces.

### Toddlers and Outdoor Play

Toddlers learn about their bodies when they play on outdoor equipment. As they climb up the ladder of a slide or crawl through a tunnel on a climbing structure, they are learning about taking risks, developing confidence and understanding about their body in space. Toddlers love to dig; sandboxes or dirt piles present exciting opportunities for learning.

### Preschoolers and Outdoor Play

Outdoor play for preschoolers offers children opportunities to master skills like running, hopping and jumping and skipping. They can practice climbing, learn how to pedal riding toys, and use soil, sand and water to learn concepts. Nature walks expose them to the environment, building stronger attitudes and behaviors about nature and its need for protection. Preschoolers continue to develop the confidence and information about their own bodies in space and relish experiences that encourage independent exploration as well as social play with others.



### Technology in Early Learning Programs

---

*“A computer can help you learn to spell H-U-G, but it can never know the risk or the joy of actually giving or receiving one.”*

FRED ROGERS

Technology and interactive media are a part of young children’s lives. They have access to digital books, games and videos, tablets and laptops, online chats and downloadable apps. The challenge is to determine how much exposure is appropriate, what types of technology are best, and what content should be viewed or used. Fred Rogers told us, “No matter how helpful computers are as tools in the classroom (and of course, they can be very helpful tools), they don’t begin to compare in significance to the relationship between the teacher and the child that is human and mutual.” It is those relationships that must guide adults’ decision-making around technology use for young children.

Technology and interactive media play many roles in early childhood programs, for programs, professionals and children.



Programs use interactive media to promote their program and to communicate with families. Social media has enabled programs to keep families informed. Program staff can send newsletters by email, post policies and upcoming events, provide links to child-friendly websites and postings, and share information about community events.

Professionals who work directly with children use technology and interactive media as learning devices and to document and share children’s experiences. They can take photos or videos of children’s work for documentation and assessment. They can send daily updates or photos to families; use whiteboards, laptops or other videos to help children learn a concept; and they can use adaptive technology for children with special needs.

Children watch TV, use smart, tablets or laptops to play games, watch videos, or learn new information. They use video chats to communicate with others and enhance fine motor skills through the use of a mouse or cursor.

The prevalence of interactive technology has triggered research and policy recommendations to guide programs' and families' appropriate use for children, birth to five. The U.S. Departments of Education and Health and Human Services have written a policy brief; the Fred Rogers Center and National Association for the Education of Young Children have issued a joint position statement, and the American Academy of Pediatrics has published recommendations, all of which offer support for professionals' incorporation of technology into their programs.

## Technology and Interactive Media Defined

"We define technology broadly to mean anything human-made that is used to solve a problem or fulfill a desire. Technology can be an object, a system, or a process that results in the modification of the natural world to meet human needs and wants. From our perspective, technology in the classroom, in informal learning environments, and at home includes both analog tools such as a pencil or a wooden block, and digital tools, including tablets and digital cameras, microscopes, tangible technology, and simple robotics. In the digital age, the focus has become new screen-based technologies and interactive media. However, in the context of STEM, educators need to consider all the ways they use technology as a tool for learning and the affordances of new digital tools that make it possible for a child to move from media consumer to media creator." (*Chip Donahue in Early STEM Matters: Providing High-Quality STEM Experiences for All Young Learners*)

Technology tools are defined by the joint position statement *"Technology and Interactive Media as Tools in Early Childhood Programs Serving Children from Birth through Age 8"* "...encompasses a broad range of digital devices such as computers, tablets, multitouch screens, interactive whiteboards, mobile devices, cameras, DVD and music players, audio recorders, electronic toys, games, e-book readers, and older analog devices still being used such as tape recorders, VCRs, VHS tapes, record and cassette players, light tables, projectors, and microscopes. "

The position statement further defines interactive media, "... refers to digital and analog materials, including soft-ware programs, applications (apps), broadcast and streaming media, some children's television programming, e-books, the Internet, and other forms of content designed to facilitate active and creative use by young children and to encourage social engagement with other children and adults."

These technology tools and interactive media, when used with purpose and care can provide children with access to new ideas and information and new ways of learning.



## Research Findings

The amount of research that has been compiled on the impact of interactive media use with young children continues to grow. The findings, to date, agree on both its positive and negative influences. Frequent use of media reduces the amount of time children spend in creative play and interacting with others. Passive use of interactive media may negatively influence children's health by encouraging obesity and poor sleep patterns. Children may show language delays and have trouble paying attention in school. They may exhibit aggressive behavior and read less.

*Frequent use of media reduces the amount of time children spend in creative play and interacting with others.*

.....

Children can benefit from the use of technology and interactive media when used appropriately. When usage is hands-on and engaging, children can extend their learning and skill development. They can research new information, explore new kinds of materials and tools, use technology tools to problem solve, expand vocabulary development and build long-distance relationships through digital media.

## Appropriate Use of Technology

Technology and media tools should not replace other materials such as writing, art or building materials, but instead be used in conjunction with them to support children's successful learning and attainment of their learning goals. Adults who use co-viewing or shared media viewing techniques can expand children's learning while staying activity engaged with them.

Lisa Guernsey, author of *Screen Time: How Electronic Media—From Baby Videos to Educational Software—Affects Your Young Child*, suggests that both families and professionals apply the “Three Cs” when selecting and using technology. Adults should ask themselves:

- **Content**—How does this help children learn, engage, express, imagine, or explore?
- **Context**—What kinds of social interactions (such as conversations with parents or peers) are happening before, during, and after the use of the technology? Does it complement, and not interrupt, children's learning experiences and natural play patterns?
- The individual **child**—What does this child need right now to enhance his or her growth and development? Is this technology an appropriate match with this child's needs, abilities, interests, and development stage?



## Use of Technology and Interactive Media with Infants and Toddlers

Very young children learn by exploring their environment. They need opportunities to learn about their world through the use of their senses: touching, smelling, seeing or looking, hearing and tasting. Technology usage may reduce children's direct interactions with materials and people and should be limited for children under 2. In fact, it is not recommended at all for children under 15-18 months.

The American Academy of Pediatrics explains, "Children younger than 2 years need hands-on exploration and social interaction with trusted caregivers to develop their cognitive, language, motor, and social-emotional skills. Because of their immature symbolic, memory, and attentional skills, infants and toddlers cannot learn from traditional digital media as they do from interactions with caregivers and they have difficulty transferring that knowledge to their 3-dimensional experience. The chief factor that facilitates toddlers' learning from commercial media (starting around 15 months of age) is parents watching with them and reteaching the content."

In other words, appropriate use of technology and interactive media for toddlers must be combined with individualized adult engagement. It is best used in a family or home environment and is discouraged in more formal early learning programs. Professionals and families, alike, can make decisions about media use by considering the 4 Pillars of Learning: Engaging, Actively Involved, Meaningful and Social. (*Zero to Three. What the Research Says about The Impact of Media on Children Aged 0-3 Years Old, p.15*)

- 1 **Look for content that both actively involves children while also helping them stay focused.** Features that give children control over their experience can help keep children in minds-on mode.
- 2 **Look for content with familiar settings, strong storylines, and characters that your child can relate to.** These features focus children's engagement on the learning goal. Avoid content with many "bells and whistles" that may distract children from the educational content or from understanding the story.
- 3 **Use repetition wisely.** Repetition can be useful when the content is well-chosen. Just as children like to choose the same book many times, they also enjoy viewing other media content repeatedly. When interacting with media on repeated occasions, adults can point out different aspects of the touchscreen activity or TV show. For example, if the show is focused on counting fruits, focus on naming and describing the fruits during one viewing and on counting the next time you watch. Be cautious of auto-play options on streaming services.
- 4 **Look for content that encourages social interaction.** This can take many forms, like programs or apps that encourage children's interactions with people in their own home.

Zero to Three offers additional strategies for family-sharing interactive media with very young children:

- Adults should point out and name things children are seeing on the screen
- Engage children in activity while they are using media, such as dancing to music
- Connect what children see on TV to what's happening in their lives
- Answer and ask questions about what children are seeing on the screen to help them understand
- Avoid using media to help children fall asleep

### **Technology and Interactive Media for Preschoolers (Children 2 to 5 years old)**

Researchers tell us, "Appropriate technology and media use balances and enhances the use of essential materials, activities, and interactions in the early childhood setting, becoming part of the daily routine. (Anderson 2000; Van Scoter, Ellis, & Railsback 2001; Copple & Bredekamp 2009; NAEYC 2009a).

Technology and media should not replace activities such as creative play, real-life exploration, physical activity, outdoor experiences, conversation, and social interactions that are important for children's development. Technology and media should be used to support learning, not an isolated activity, and to expand young children's access to new content (Guernsey 2010a, 2011b).

Furthermore, the American Academy of Pediatrics tell us, "It is important to emphasize to parents that the higher-order thinking skills and executive functions essential for school success, such as task persistence, impulse control, emotion regulation, and creative, flexible thinking, are best taught through unstructured and social (not digital) play, as well as responsive parent-child interactions."

In the Early Learning Technology Brief, (2016) writes provide four guiding principles for use of interactive technology and media.

*Technology and media  
should not replace  
activities such as creative  
play, real-life exploration,  
physical activity, outdoor  
experiences, conversation,  
and social interactions  
that are important for  
children's development*

.....

**Guiding Principle #1:** Technology—when used appropriately—can be a tool for learning. Children can use technology to solve problems and role play. They can explore new information and ideas, and engage in fun learning activities.

**Guiding Principle #2:** Technology should be used to increase access to learning opportunities for all children. It can introduce children to new ideas or cultures, expand access to books or research, and allow them to seek answers to questions or problems beyond familiar adults.

**Guiding Principle #3:** Technology may be used to strengthen relationships among parents, families, early educators, and young children. Programs can use technology to create digital portfolios of children’s work; allow families to track children’s progress and enhance; and to communicate with families about their children’s accomplishments and daily experiences as well as provide information about the program.

**Guiding Principle #4:** Technology is more effective for learning when adults and peers interact or co-view with young children. Children benefit when adults participate in children’s use of technology. Adults can watch the content alongside children, interacting as the content is offered. They can introduce children to the content or story line before viewing and they can engage children in related activities after viewing, such as singing a song or reading a book.

### **Technology and Interactive Technology for Children with Unique Needs**

Children who have disabilities may benefit from the use of assistance technology. “Technology can be a tool to augment sensory input or reduce distractions. It can provide support for cognitive processing or enhancing memory and recall. The variety of adaptive and assistive technologies ranges from low-tech toys with simple switches to expansive high-tech systems capable of managing complex environments. When used thoughtfully, these technologies can empower young children, increasing their independence and supporting their inclusion in classes with their peers. With adapted materials, young children with disabilities can be included in activities in which they once would have been unable to participate. By using assistive technology, educators can increase the likelihood that children will have the ability to learn, move, communicate, and create.” (*NAEYC and Fred Rogers Center: Technology and interactive media as tools in early childhood programs serving children from birth through age*)

Digital resources can enhance the development of both home language and English language skills for dual language learners. Professionals can translate materials, use speech-recording or playback and families can create their own stories to add to the classroom library.

## References

- American Academy of Pediatrics. Growing up digital: Media research symposium. (2015). Retrieved from. [https://www.aap.org/en-us/Documents/digital\\_media\\_symposium\\_proceedings.pdf](https://www.aap.org/en-us/Documents/digital_media_symposium_proceedings.pdf)
- American Academy of Pediatrics Council on Communications and Media. Media and Young Minds. Pediatrics. (2016).138 (5); 20162591. Retrieved from <https://pediatrics.aappublications.org/content/pediatrics/138/5/e20162591.full.pdf>
- Barr, Rachel; McClure Elizabeth, Parlakian, Rebecca. Screen Sense: What the Research Says About the Impact of Media on Children Aged 0-3 Years Old. (2018). Zero To Three. Retrieved from <https://www.zerotothree.org/resources/2536-screen-sense-what-the-research-says-about-the-impact-of-media-on-children-aged-0-3-years-old#downloads>.
- Early Childhood STEM Working Group. Early STEM Matters: Providing High-Quality STEM Experiences for All Young Learners (January, 2017). Retrieved from [http://d3lwefg3pyezlb.cloudfront.net/docs/Early\\_STEM\\_Matters\\_FINAL.pdf](http://d3lwefg3pyezlb.cloudfront.net/docs/Early_STEM_Matters_FINAL.pdf).
- Epstein, Ann. Using Technology Appropriately in the Classroom. High Scope Extensions. Vol 28, No 1. Retrieved from <https://ccie-media.s3.amazonaws.com/exchangefocus/001-exchangefocus.pdf>.
- Erikson Institute. Technology and Young Children in the Digital Age: A Report from the Erikson Institute. (2016). Retrieved from <https://www.erikson.edu/wp-content/uploads/2018/07/Erikson-Institute-Technology-and-Young-Children-Survey.pdf>.
- National Association for the Education of Young Children and the Fred Rogers Center for Early Learning and Children's Media. Technology and interactive media as tools in early childhood programs serving children from birth through age 8. (January 2012). Retrieved from [http://www.naeyc.org/files/naeyc/PS\\_technology\\_WEB.pdf](http://www.naeyc.org/files/naeyc/PS_technology_WEB.pdf)
- Paciga, K.A., Donohue, C.D., Struble Myers, K., Fernandes, R., & Li, J. (2017). Carrying Fred Rogers' Message Forward in the Digital Age. Fred Forward Symposium Proceedings, May 14, 2017. Latrobe, PA: Fred Rogers Center for Early Learning and Children's Media at Saint Vincent College. Retrieved from <https://www.fredrogerscenter.org/wp-content/uploads/2015/07/Carrying-Fred-Rogers-Message-Forward-in-the-Digital-Age-1.pdf>
- U.S. Department of Health and Human Services, Administration for Children and Families, Office of Head Start. *Front Porch Series: Young Children's Learning with Digital Media*. Washington D.C., January 23, (2012). Retrieved from <https://eclkc.ohs.acf.hhs.gov/hslc/ttssystem/teaching/Broadcast%20Calls/LearningWithDig.htm>
- Zero To Three: Making Good Decisions About Television and Screen Time for Young Children. (Feb 2016). Retrieved from <https://www.zerotothree.org/resources/318-making-good-decisions-about-television-and-screen-time-for-young-children#downloads>
- U.S. Departments of Education and Health and Human Services, Office of Educational Technology, (2016), Early Learning and Technology: Policy Brief. Retrieved from <http://tech.ed.gov/netp/>



## APPENDIX SEVEN

### Glossary

---

#### General Terms

**Active learners:** Children who learn by doing, participating, and/or playing.

**Active physical play:** Playful physical activities (structured or free-play) that promote physical fitness and motor development.

**Accommodate:** To make changes in materials, activities, interactions, or environments so all children can participate fully.

**Adaptive equipment:** Devices or equipment designed to be used to support development and learning by helping a child more easily participate in play, curriculum activities, and caregiving routines.

**Age Appropriate:** Learning opportunities, experiences, a physical learning environment, equipment, materials and interactions with that match a child's age and/or stage of growth and development.

**Alignment:** The relationship between content addressed in two sets or age levels of standards.

**Assessment:** The act of gathering information about a child's level of development and learning for purposes of making decisions that will benefit the child.

**Assistive technology:** A range of devices and strategies used to promote a child's access to and participation in learning opportunities, from making simple changes to the environment and materials to helping a child use special equipment.

**Child-directed play:** Allowing children to choose their own play in an environment that includes several options or choices.

**Child-Initiated:** Experiences which offer children choices among a wide range of opportunities for play and learning so that they can directly experience and manipulate new ideas and objects (e.g., choosing from a variety of activities throughout much of the day).

**Developmental delay:** When children's development in one or more domains lags behind what is typical for their age.

**Developmental Indicator:** Specific statement that defines what children are able to do at a particular age level.

**Developmental stage:** The typical progression in children's physical, social, emotional, and cognitive development, which includes developmental milestones or specific skills or tasks that most children can do in a certain age range.

**Disability:** A delay or impairment that is physical, cognitive, mental, sensory, emotional, or some combination of these.

**Domain:** One of the broad categories of learning and development in which goals and strategies are grouped, such as Physical Development and Health.

**Dual Language Learner (DLL):** Refers to children who are learning a second language at the same time they are continuing to develop their native or home language.

**Engaged:** To become involved or to be attentive.

**Family:** the closest relationships that a child has, including the child's mother, father, foster or adoptive parents, grandparents, and/or others who are the primary caregivers in a child's life.

**Evidence-Based Practice:** Designing program practices based on the findings of current best evidence from well-designed and respected research and evaluation (e.g., better understanding of preschool children's mathematics capabilities as a function of recent research).

**Goal:** Statement that describes a general area or aspect of development that children make progress on throughout the birth through age five period.

**Hands-on learning experiences:** Learning activities that enhance children's understanding of a concept through activities that they do with materials, toys, etc., rather than just listening to an adult or practicing isolated skills or knowledge.

**Home language:** The language that a child's family typically speaks and that the child learns first.

**Imagination:** the ability to form a picture in your mind of something that you have not seen or experienced; the ability to think of new things.

**Imitate:** To copy, pretend or practice the activity of another individual.

**Impulse:** A sudden spontaneous action based on needs or wants.

**Inclusion:** attitude and knowledge that encourages the enrollment and participation of all children, including children with disabilities.

**Inclusive setting:** The environment, facilitated through the organization and provision of space, (e.g., preschool children learn concepts through their play or in an activity like a project; early primary children work as a team on a project that includes literacy, math and science or the arts).

**Integrated Approach:** Children's learning activities, experiences and projects that involve multiple domain areas of the curriculum, instead of constant isolated study of content areas.

**Interest areas:** Areas in a childcare environment where similar materials, such as dramatic play materials, are grouped together to capture children's interest and engage them in play and learning activities.

**Model:** The act of teaching others (children) through the example of doing the desired behavior.

**Modeled and Shared Writing:** The teacher demonstrates how writing works.

**Parallel talk:** Adults talking to a child, describing what the child is doing.

**Redirect:** A teaching strategy used to re- focus a child's attention on an alternative object, feature in the environment, and/or activity rather than directly correcting the child's behavior.

**Reinforce:** To strengthen a response with some type of physical, emotional, or verbal reward.

**Responsive:** Warm, sensitive, well-timed, and appropriate to the child's needs; used to describe caregiver-child interactions that promote healthy development.

**Reciprocal:** Refers to something that goes both ways or to something that is done in return for a similar behavior (e.g., mom blows a kiss to her child and the child responds by blowing a kiss back to mom).

**Routines:** A pattern of events or interactions planned and occurring on a regular basis.

**Safe environments:** Environments where children can be actively involved in things that interest

**Scaffolding:** Teacher's use their knowledge of children's Zones of Proximal Development (ZPD) to support and guide children's learning to build upon their emerging abilities and interests.

**Self talk:** Narrating your own actions. Talking about what you are doing, seeing, eating, touching, or thinking when your child is present.

**Sensory:** Related to the senses: hearing, seeing, touching, tasting, and smelling.

**Sensory impairments:** Vision or hearing losses or other sensory disabilities that may require specialized assistance or early intervention.

**Sensory materials:** Materials and experiences that stimulate at least one of the five senses: hearing, seeing, touching, tasting, and smelling.

**Separation anxiety:** The stress experienced by a child when separated from a parent or primary caregiver.

**Setting:** Any place where children receive care.

**Special needs:** Developmental disabilities that may require specialized care.

**Stimulation:** Any number of sounds, textures, temperatures, tastes, or sights that impact a child's senses or development.

**Strategies:** Suggested activities, materials, and ways of interacting that promote development and learning in the areas described by the Goals and Developmental Indicators.

**Subdomain:** Subtopics that fall within a domain, such as "Healthy Habits" which is included in the Physical Development and Health domain.

**Symbol:** Something that represents something else by association.

**Transition:** To move or change from one activity or location to another activity or location.

**Turn-taking games:** Games between adults and young children where an adult makes a sound or action and waits for the child to mimic or copy them. Once the child responds, the adult makes a sound or action.

**Universal Design for Learning (UDL):** A set of principles is intended to assist educators and others to design flexible learning opportunities that provide children with: (1) multiple means of representation; (2) multiple means of expression; and, (3) multiple means of engagement.

**Zone of Proximal Development (ZPD):** The difference between what a learner can do without help and what he or she can do with help or between a learner's ability to perform a task independently versus with guidance.

SECTION

1

## Relationships and Connections Glossary

### *Family and Community Engagement*

**Collaboration:** actively working together to achieve a common goal.

**Culturally Sensitive:** being aware that people may have different backgrounds or experiences without assigning a value to them, such as negative or positive or good or bad or better or worse.

**Family-centered approach:** supporting children's positive learning experience through engagement with the whole family that builds on families' strengths.

**Family Engagement:** a shared, interactive process, when families and early learning adults work together to support children's growth and development and success.

**Family Involvement:** the amount of participation that a family member has with the child's school and learning.

**Formal Information Sharing:** Planned information exchanges such as conferences or home visits, family handbooks, written incident reports.

**Home-school connections:** partnerships built between families and schools to focus on student progress and success.

**Home visits:** a service that is provided within the home of families with their young children.

**Informal Information Sharing:** casual and unofficial ways to transmit information, often spontaneously. Examples include an update when children are being picked-up or delivered, a quick reminder note or social media postings.

**Parent volunteers:** parents who volunteer their time to their children's school.

**Partnership:** a relationship created between 2 or more people or groups to achieve a common goal through an expressed or implied commitment.

**Reciprocal:** mutual, two-way, give and take between family members and program adults.

**Referrals:** the process or steps school staff members take to acquire additional assistance for students with whom they work directly on a regular basis.

**Strength-based Approach:** focus on families' abilities, talents and resources.

**Transition:** Movement from one activity or program to the next.

**Two-way communication:** occurs when both the sender and receiver share information and feedback.

### *Social Emotional Development*

**Attach/Attachment:** The strong emotional tie children feel with special people in their lives (family members and other caregivers).

**Co-regulation:** the warm, responsive interactions and support, structure, coaching and modeling provided by caregivers to foster self-regulation development in children (Pahigiannis, Rosanbalm, & Murray, 2019)

**Cultural responsiveness:** Equitable, unbiased, and culturally conscious supports and practices (CASEL, 2018).

**Emotional Literacy:** The ability to label emotions and regulate them in socially appropriate ways.

**Empathy:** the ability to recognize, respond and share in another's emotions, thoughts or feelings.

**Executive function:** the ability to display inhibitory control, working memory, and attention such as the set of mental processes that enable a person to plan, remember, focus, and balance multiple tasks. (Center for Development of the Child, Harvard, 2017)

**Pro-social behavior:** voluntary behaviors designed to help another person, such as cooperating, sharing, helping, informing, comforting, and increasing capabilities to initiate engagement with peers and adults in child's environment. (Eisenberg et al., 2006; Early Social Development Lab, Brownell, 2016)

**Self-awareness:** Being aware of oneself, including feelings, behaviors, and characteristics.

**Self-care routines:** Tasks or routines carried out to take care of health and hygiene needs.

**Self-identity:** the way in which people view themselves and their role in the world.

**Self-regulation:** the ability to recognize and control and cope with emotion, changes, etc., and cooperate in relationships with peers and adults. (Center for Development of the Child, Harvard, 2017)

**Temperament:** The unique way a child responds to the world.

**Trauma-informed teaching:** the ability to recognize childhood trauma, stressors, mental health, etc. and respond appropriately to the child's needs in the classroom and potentially connect to resources outside the classroom. (Child Trends, National Center for Children in Poverty, Barlett, Smith, & Bringewatt, 2019)

## *Social Studies*

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

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

**Community Helpers:** Any group or individual who plays a role in the community such as doctors, nurses, dentists, teachers, parents, fire fighters, police officers, trash collectors, animal control officers.

**Culture:** A way of life of a group of people, including the behaviors, beliefs, values, traditions, religion, and symbols that are typical for the group and generally done/ accepted without thinking about them.

**Diversity:** Refers to the variety of characteristics that make individuals (and/or families) unique (e.g., culture, ethnicity, education, religion, economic background, etc.).

**Ecology:** the study of how living things interact with and rely on other living and non-living things in the environment where they live.

**Economics:** A social science dealing with the production, distribution and consumption of goods and services.

**Environment:** the surroundings or conditions in which a person, animal, or plant lives or operates.

**Geography:** The natural features of a region; a science that deals with the natural features of the earth and the climate, products and inhabitants.

**History:** A branch of knowledge that records and explains past events.

**Landform:** a natural feature of the earth.

**Natural Resources:** Something that is found in nature and is necessary or useful to humans, such as a forest, mineral deposits, or fresh water.

**Resource:** A source of supply or support; a natural source of wealth or revenue; a source of expertise or information.



## Exploration and Critical Thinking Glossary

### *Approaches to Play and Learning*

**Attentiveness:** The ability to focus and maintain attention on one topic or thing.

**Approach:** a way of looking or thinking about something.

**Disposition:** frequent and voluntary habits of thinking and doing; a pattern of behavior that is repeated regularly (Katz, 1993).

**Executive function:** the ability to display inhibitory control, working memory, and attention such as the set of mental processes that enable a person to plan, remember, focus, and balance multiple tasks. (Center for Development of the Child, Harvard, 2017)

**Habits of Mind:** A cluster of traits reflect thoughtful, individual approaches to learning, acting, creating, and problem solving.

**Inventiveness:** The ability to invent or create with one's imagination.

**Independence:** The child's ability to do, think, and learn on his/her own with little or no help.

**Initiative:** The inclination or ability to start or begin an activity.

**Persistence:** Continued effort; steadfastness.

**Play:** Spontaneous actions chosen by children and considered by them to be fun and meaningful.

**Problem-solving:** Behaviors practiced by young children that allow them to explore questions or situations and try different solutions.

**Social Dispositions:** A cluster of selected positive behaviors that have value in society and allow children to participate and interact more effectively with others.

**Trial and error:** Attempting to solve a problem by randomly trying different approaches.

### *Science Exploration and Thinking*

**Discovery learning:** children find out for themselves by looking into problems and asking questions.

**Earth and sky:** the study of earth and sky. The way children explore and interact with the earth and sky.

**Experiment:** an organized and detailed series of steps or investigation that is conducted to validate or reject a hypothesis.

**Exploration:** investigation or study.

**Hypothesis:** an idea or theory that can be tested or evaluated.

**Inquiry:** research into a topic to gain knowledge and insight.

**Investigation:** to study something using close examination and systematic inquiry.

**Life science:** the study of life and things. The way children interact with things in the natural environment.

**Matter:** anything that has weight and takes up space (i.e. all items children interact with).

**Physical thinking:** the way children explore and interact with matter in the environment.

**Prediction:** a forecast, what someone thinks will happen.

**Property (of an object):** something that can be observed using the five senses or can be measured without changing the matter.

**Scientific inquiry:** The way children naturally explore the world.

### *Engineering and Technology*

**Abstraction:** See what is different between all the problems. (see computational thinking)

**Algorithms:** Write out a sequence of instructions using. (see computational thinking)

**Computational thinking:** the process of approaching a problem in a systematic manner and creating and expressing a solution such that it can be carried out by a computer and has 4 stages: decomposition, pattern location, abstraction and algorithms.

**Decomposition:** Analyze the problem and break it up into smaller problems. (see computational thinking)

**Digital citizenship:** teaching students to be responsible, respectful with online tools and interactive and social media with the support of adults.

**Digital Literacy:** The ability to use, understand and explore both technology and various types of interactive media.

**Digital Technology Tools:** (include interactive multitouch screens, iPads, tablets, television, computers.

**Media literacy:** the ability to access and create media with the support of adults.

**Pattern Location:** See patterns that are common in all the problems. (see computational thinking)

**Technology Literacy:** the ability to responsibly use appropriate technology to communicate, solve problems, and access, manage, integrate, evaluate, and create information to improve learning in all areas of learning and to acquire lifelong knowledge and skills in the 21st century.

**Technology tools:** simple tools (e.g. toy hammer, toy cell phone, toy shovel)

**Tools:** Anything used or created to accomplish a task or purpose.or

### *Mathematics*

**Algebraic Thinking:** learning to recognize patterns, make generalizations, and then use symbols to represent problems and their solutions.

**Attribute:** characteristics or qualities of objects, such as color, position, shape or size.

**Classification:** Knowledge of grouping objects by attribute (ex: cows, pigs, and dogs are animals). (Kamii, Miyakawa, Kato, 1996)

**Cardinality:** The ability to count a set and match numeral to set without recounting (NTCM, 2019).

**Directionality:** the ability to identify where things are and understand where they in relationship to those things.

**Geometry:** the area of mathematics that involves shape, size, position, direction, and movement.

**Graphs:** a way to display information.

**Logical Thinking:** (mental relationships) that occurs within a child's mind which combines the following types of knowledge: social-conventional, physical, spatio-temporal knowledge, and classification relationships. (Inhelder & Piaget, 1964; Piaget, 1974; Kamii, 2004).

**Object Permanence:** The ability to locate an object that is hidden (typically 7-10 months of age) (ex: hiding a ball under blanket, infant removes blanket and finds ball) .(Piaget, 1963)

**One-to-one correspondence:** The ability to match each item in one set to another item within a different but equal set (e.g., matching a set of socks with a set of shoes).

**Non-Standard Measurement:** unit of measure whose values may vary, such as a person's foot length, paper clips, paces, or blocks.

**Numeral:** A written symbol used to represent a number.

**Operations:** mathematical processes, like addition or subtraction.

**Patterns:** regular or repetitive forms, orders, or arrangements of objects, sounds, or movements.

**Physical Knowledge:** Knowledge of how objects move and function in the observable world (Piaget, 1974; Kamii, 2004). (ex: knowledge that a cylinder block will roll, a piece of paper will tear).

**Reasoning:** the ability to understand how to solve a problem and then apply strategies to reach a solution; thinking in a logical way to form a conclusion.

**Rote count:** Counting in sequence (e.g. 1, 2, 3, 4, 5, etc.) without assignment of number to object (i.e. rational counting).

**Sets:** a group of objects.

**Social-Conventional Knowledge:** Knowledge that people create over-time (Piaget, 1974; Kamii, 2004) (ex: words such as one, two, three, the numeral one, days of the week, etc.).

**Spatial-temporal Knowledge:** Knowledge of spatial relationships and ordinal relationships in situations, objects, or during problem solving (ex: in pick up sticks, if I move this stick first, then I can move that stick next) (Inhelder & Piaget, 1959, 1964).

**Standard unit of measurement:** measurements whose values don't change, such as an inch or a pound standard unit of measure, such as inch or pound, whose values do not vary.

**Subitize:** The ability to name a set of objects without individually counting each object (ex: \* \* \* \* child looks at stars and immediately says, "there are four stars" ) (Clements, 1999)/

**Two-dimensional shape:** a flat image of the shape.

**Three-dimensional shape:** a three-dimensional shape appears to have width and height and allows for rotation and depth.

## Communication Glossary

### *Language and Literacy*

**Alphabetic principle:** The understanding that letters and letter patterns represent the sounds of spoken language.

**Book knowledge:** Knowledge of the basic features of a book such as the cover, title, author, etc.

**Communication :** The act of understanding and/or expressing wants, needs, feelings, and thoughts with others. Forms of communication may include crying, vocalizing, facial expressions, speech, gestures, sign language, pictures, and/or objects.

**Critical Period of Language:** The first few years of life constitute the time during which language develops readily and after which (sometime between age 5 and puberty) language acquisition is much more difficult and ultimately less successful.

**Decoding:** The ability to apply knowledge of letter-sound relationships, including knowledge of letter patterns, to correctly pronounce written words. Understanding these relationships gives children the ability to recognize familiar words quickly and to figure out words they haven't seen before.

**Early literacy:** Describes the foundations of reading and writing that begin to develop in infancy and continue to emerge through the toddler, preschool, and kindergarten age periods.

**Environmental Print:** The print seen in our immediate surroundings and used in our everyday lives. Environmental print awareness is the ability to recognize signs, symbols, and words that occur frequently in the environment (Westwood, 2004).

**Expressive language:** The ability to use words or gestures to communicate meaning.

**Grammatical construction:** Words that are put together according to the conventional rules of grammar to form sentences.

**Informational text:** A type of non-fiction writing that conveys factual information about the natural or social world.

**Language:** Words, signs, and symbols used by a group of people to communicate.

**Literacy:** the ability to read and write.

**Modeled and Shared Writing:** The teacher demonstrates how writing works

**Onset and Rime:** Parts of monosyllabic words in spoken language that are smaller than syllables—onset is the initial consonant sound of a syllable (the onset of 'bag' is 'b'); rime is the part of a syllable that contains the vowel and all that follows it (the rime of 'bag' is '-ag').

**Phonological awareness:** The ability to detect, manipulate, or analyze the auditory aspects of spoken language (including the ability to distinguish or segment words, syllables, or phonemes) independent of meaning; breaking the stream of language into smaller and smaller parts.

**Print awareness:** Awareness of the purposes of print, the conventions of print and book handling skills; children discovering print as organized in fun and meaningful ways.

**Print conventions:** The concept of the basic features of print, including what a letter is, the concept of words, and the understanding of the directionality of print.

**Reading behaviors:** An understanding of the reading process, including the developmental skills and strategies children need to become proficient readers.

**Receptive Language:** What children can understand from the communication around them; understanding what is said and understanding what is read (once you are a reader).

**Segmenting:** pulling words apart into syllables and sounds.

**Vocabulary:** The collection of words that a child understands or uses to communicate.

**Word awareness:** Knowledge that words have meaning. Students with word awareness can discriminate individual words in a passage read to them. Beginning readers must have this skill before they can extract meaning from what they read.

**Writing conventions:** Generally accepted rules for writing, such as spelling, punctuation, and capitalization.

### *Creative Arts*

**Visual effects:** Results of a child's artistic efforts that can be seen by others.

**Rhythm:** A musical term that refers to the repeated pattern of sounds or silences. Also referred to as the "beat" of a song.

**Dramatic play:** Refers to the various kinds of play where children can take on roles and act them out (e.g., pretending to be a parent or using dolls to tell a story).

**Creativity:** The ability to move beyond the usual ideas, rules, patterns, or relationships.

**Creative arts:** activities that engage the child's imagination through art, dance, music, or dramatic play.

**Tempo:** the speed at which music should be played.

**Melody:** a pleasant or agreeable sequence or arrangement of single notes.

**Storytelling:** the art of using words and actions to tell a story that captures the listener's imagination.

**Performing Arts:** creative activities that are performed in front of an audience.

**Imagination:** the ability to form a picture in your mind of something that you have not seen or experienced; the ability to think of new thing.

## Physical Development and Health Glossary

**Large muscle control:** Ability to use the large muscle groups, such as the muscles in the arms and legs, in a relatively coordinated manner.

**Manipulatives:** Materials that allow children to explore, experiment, and interact by using their hands, such as beads, puzzles, small blocks or snap beads.

**Dexterity:** Skill and grace in physical movements.

**Motor coordination:** Various parts of the body working together in a smooth, purposeful way.

**Natural reflexes:** The body's automatic response to specific stimuli (leg kicks upward when knee is tapped).

**Eye-Hand coordination:** The ability to coordinate vision and hand movement in order to accomplish a task.

**Locomotor:** movement that causes the body to move from one place to another or travel, such as walking, running, hopping, or marching.

**Non-locomotor:** body movement without causing the body to travel. They may be specific body parts or the whole body, such as swinging arms, twisting, bending, or stretching.

**Pincer grasp:** Putting the index finger and the thumb together.

**Self-Help Skills:** Adaptive skills that enable children to take care of themselves and move toward independence in activities related to eating, dressing, toileting, washing hands, etc.

**Small muscle control:** Ability to use the small muscles of the hands in a relatively coordinated manner.

**Stamina:** The ability to maintain prolonged physical or mental effort.



## APPENDIX EIGHT

### Resources

---

#### General Resources

Catherine Scott-Little, Ph.D. ; Sharon Lynn Kagan, Ed.D. ; Jeanne L. Reid, Ed.D.;Teressa Cameron Sumrall, M.A. Emily A. Fox, B.A. Common Early Learning and Development Standards Analysis for the North Carolina EAG Consortium - SUMMARY REPORT. Build Initiative.

Daily, S., Burkhauser, M., and Halle, T. (2010). A review of school readiness practices in the states: Early Learning Guidelines and Assessment. Early Childhood Highlights: Child Trends, Vol. 1 Issue 3. June 17, 2010.

Division for Early Childhood (2014) DEC Recommended Practices in Early Intervention/ Early Special Education 2014. Retrieved from <http://dec-sped.org/recommendedpractices>

Division for Early Childhood (2010). Responsiveness to Family Cultures, Values, and Languages: Position Statement. Retrieved January 2014, from Division of Early Childhood [www.dec-sped.org](http://www.dec-sped.org)

Early Childhood Learning and Knowledge Center: The Head Start Early Learning Outcome Framework. (2015). Retrieved from <https://eclkc.ohs.acf.hhs.gov/hslc/hs/sr/approach/pdf/ohs-framework.pdf>

Early Learning Guidelines Resource: Recommendations and Issues for Consideration when Writing or Revising Early Learning Guidelines. Catherine Scott-Little, Ph.D. ; Sharon Lynn Kagan, Ed.D. Victoria Stebbins Frelow.

Education Development Center (EDC). Supporting Emergent Bilingual Children in Early Learning. <https://www.edc.org/sites/default/files/Emerging-Bilingual-Promising-Practices.pdf>

Greenman, J. (2007). Caring Spaces, Learning Places: Children's Environments that Work. Redmond: Exchange Press, Inc.

Lally, J. R. and Signer, S. (2008). WestEd, The Program for Infant/Toddler Care. Retrieved March 2008, from The Program for Infant and Toddler Care: <http://www.pitc.org>

National Association for the Education of Young Children and the National Association of Early Childhood Specialists in State Departments of Education (2002). Early Learning Standards: Creating the Conditions for Success. Washington, DC: Author.

National Association for The Education of Young Children (2009). Responding to Linguistic and Cultural Diversity: Recommendations for Effective Early Childhood Education. Position Statement. Washington, DC: NAEYC. Retrieved January 2014 from <http://www.naeyc.org/files/naeyc/file/positions/diversity.pdf>

National Center on Early Childhood Development, Teaching, and Learning. Alignment Self Assessment Tool: State Early Learning Standards-Head Start Child Outcomes.

States' Early Learning Standards and Guidelines

SECTION

1

## Resources: Relationships and Connections

### *Family and Community Engagement*

Delgado-Gaitan, C., (2001). The power of community: Mobilizing for family and schooling. Boulder, CO: Riwman & Littlefield.

National Standards for Family-School Partnerships. PTA <https://www.pta.org/home/run-your-pta/National-Standards-for-Family-School-Partnerships>

NEA Policy and Practice Department, Center for Great Public Schools. NEA Policy Brief. Parent, Family, Community Involvement in Education. Retrieved from [http://www.nea.org/assets/docs/PB11\\_ParentInvolvement08.pdf](http://www.nea.org/assets/docs/PB11_ParentInvolvement08.pdf)

U.S Department of Health and Human Services and U.S. Department of Education. (2016) Family Engagement: From the Early Years to the Early Grades. Retrieved from <https://www2.ed.gov/about/inits/ed/earlylearning/files/policy-statement-on-family-engagement.pdf>

U.S. Department of Health and Human Services, Administration for Children and Families, Office of Head Start, National Center on Parent, Family, and Community Engagement. (2011). *The Head Start Parent, Family, and Community Engagement Framework: Promoting family engagement and school readiness, from prenatal to age 8*. Retrieved from <https://eclkc.ohs.acf.hhs.gov/hslc/standards/im/2011/pfce-framework.pdf>

WIDA. (2014). ABCs of Family Engagement: Key Considerations for Building Relationships with Families and Strengthening Family Engagement Practices. Wisconsin Center for Education Research. Retrieved from <https://wida.wisc.edu/sites/default/files/resource/ABCs-Family-Engagement.pdf>

### *Social Emotional Development*

Collaborative for Academic, Social, and Emotional Learning. (n.d.). [Website]. Retrieved from <http://www.casel.org/>

Center on the Social and Emotional Foundations for Early Learning. <http://csefel.vanderbilt.edu/>

Dombro, A. L., Jablon, J., & Stetson, C. (2011). *Powerful interactions: How to connect with children to extend their learning*. Washington, D.C.: National Association for the Education of Young Children.

Dusenbury, L. et al. (2011) State Learning Standards to Advance Social Emotional Learning: The State Scan of Social and Emotional Learning Standards, Preschool through High School. University of Illinois at Chicago Social and Emotional Research Group.

Epstein, A. (2009). *Me, you, us: Social-emotional learning in preschool*. Ypsilanti, MI: HighScope Press.

Fostering Healthy Social & Emotional Development in Young Children: Tips for EARLY Childhood Teachers and Providers

Rosanbalm, K.D., & Murray, D.W. (2017). OPRE Brief # 2017-79. Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, US. Department of Health and Human Services

U.S. Department of Health and Human Services, Administration for Children and Families. Head Start Effective Practice Guides. Social Emotional Development. <https://eclkc.ohs.acf.hhs.gov/school-readiness/effective-practice-guides/social-emotional-development>

### *Social Studies*

Epstein, A. Social Studies in Preschool? Yes! (2014). Young Children.

Fromboluti and Seefeldt.(1999). Early Childhood: Where Learning Begins-Geography. Retrieved from <http://teacherlink.ed.usu.edu/tlresources/reference/geography.pdf>.

Hachey, AC & Butler, D. (2013). *Science education for preschoolers through gardening and nature-based play*. Spotlight on Young Children: Exploring Science. Washington, DC: NAEYC.

Koralek, D., & Mindes, G. (Eds.) (2006). *Spotlight on young children and social studies*. Washington, : NAEYC.

Mindes, Gayle. (2005) Social Studies in Today's Early Childhood Curricula. Beyond the Journal. Young Children on the Web.

National Council of Social Studies (2019). Early Childhood in the Social Studies Context. Retrieved from <https://www.socialstudies.org/early-childhood-social-studies-context>

National Association for the Education of Young Children, (2005). Exploring Social Studies through Children's Books. *Young Children*, 60(5), 1- 5.

NAEYC Position Paper. Responding to Cultural and Linguistic Diversity: Recommendations for Effective Early Childhood Education (NAEYC 1995) NAEYC Position Paper Update. Where We Stand: On Responding to Cultural and Linguistic Diversity (NAEYC 2009)

National Council of Social Studies. (2010) National Curriculum Standards for Social Studies. Retrieved from <https://www.socialstudies.org/standards>

Shaffer, LF, Hall, E., Lynch, M. (2013). *Toddlers' scientific explorations: Encounters with insects*. Spotlight on Young Children: Exploring Science. Washington, DC: NAEYC.

Sparks, L.D., Edwards, J.O. (2010). Anti-bias education for young children and ourselves. Washington, DC: National Association for the Education of Young Children (NAEYC).

#### SECTION

## 2

### **Resources: Exploration and Critical Thinking (STEM Skills)**

#### *Approaches to Play and Learning*

Ackerman, Debra J., Friedman-Krauss, Allison H. (2017) Preschoolers' Executive Function: Importance, Contributors, Research Needs and Assessment Options.

Center on the Developing Child at Harvard University (2011). Building the brain's "air traffic control" system: How early experiences shape the development of executive function: Working Paper No. 11. Retrieved from [www.developingchild.harvard.edu](http://www.developingchild.harvard.edu)

Center on the Developing Child (2012). *Executive Function* (InBrief). Retrieved from [www.developingchild.harvard.edu](http://www.developingchild.harvard.edu).

Galinsky, E. (2010). *Mind in the making: The seven essential life skills every child needs*. New York: Harper Collins.

Ginsburg, K. (2007). The importance of play in promoting healthy child development and maintaining strong parent/child bonds. *Pediatrics* 119;182 Available at <http://pediatrics.aappublications.org/content/119/1/182.full.html>

Hyson, M. (2008). *Enthusiastic and engaged learners: Approaches to learning in the early childhood classroom*. New York, Teachers College Press and Washington, DC: NAEYC

Hyson, Marilou, Ph.D. (retrieved 2019) The Role of Play in Promoting Children's Positive Approaches to Learning. <https://www.researchconnections.org/files/childcare/pdf/PlayandApproachestoLearning-MarilouHyson-1.pdf>

National Association for the Education of Young Children. (2011). Fostering critical thinking and problem-solving skills. *Young Children*.

Peterson, S. (2012, Sept.). Approaches to learning: Supporting brain development for school success. *Zero to Three*. 33(1), 24-27.

Sue Robson & Victoria Rowe (2012) Observing young children's creative thinking: engagement, involvement and persistence, *International Journal of Early Years Education*, 20:4, 349-364, DOI: [10.1080/09669760.2012.743098](https://doi.org/10.1080/09669760.2012.743098)

Twardosz, S. (2010). Effects of experience on the brain: The role of neuroscience in early development and education. *Early Education and Development*, 23: 96–119.

U.S. Department of Health and Human Services, Administration for Children and Families. Head Start Effective Practice Guides. Approaches to Learning. <https://eclkc.ohs.acf.hhs.gov/school-readiness/effective-practice-guides/approaches-learning>

### *Science Exploration and Knowledge*

Early Childhood STEM Working Group. (2017). Early STEM Matters. Retrieved from [http://d3lwefg3pyezlb.cloudfront.net/docs/Early\\_STEM\\_Matters\\_FINAL.pdf](http://d3lwefg3pyezlb.cloudfront.net/docs/Early_STEM_Matters_FINAL.pdf)

Education Development Center (EDC). Integrating Technology into Early Learning. Retrieved from [https://www.edc.org/sites/default/files/Integrating-Technology-Brochure\\_English.pdf](https://www.edc.org/sites/default/files/Integrating-Technology-Brochure_English.pdf)

Erikson Institute Technology in Early Childhood Center. <http://teccenter.erikson.edu>

McClure, E. R., Guernsey, L., Clements, D. H., Bales, S. N., Nichols, J., Kendall-Taylor, N., & Levine, M. H. (2017). *STEM starts early: Grounding science, technology, engineering, and math education in early childhood*. New York: The Joan Ganz Cooney Center at Sesame Workshop

National Association for the Education of Young Children and the Fred Rogers Center for Early Learning and Children's Media. (2012). Technology and Interactive Media as Tools in Early Childhood Programs Serving Children from Birth to Age 8. Retrieved from: [www.naeyc.org/files/naeyc/PS\\_technology\\_WEB.pdf](http://www.naeyc.org/files/naeyc/PS_technology_WEB.pdf)

National Association for the Education of Young Children and the Fred Rogers Center for Early Learning and Children's Media at Saint Vincent College. (2012). Selected Examples of Effective Classroom Practice Involving Technology Tools and Interactive Media

NGSS Lead States. 2013. Next Generation Science Standards: For states, by states. Washington, DC: National Academies Press.

National Science Teaching Association. Position Statement: Early Childhood Science Education. Retrieved from <https://www.nsta.org/about/positions/earlychildhood.aspx>

Preschool Development Grant (PDG). STEM for Early Learning Modules. <https://pdg.grads360.org/#program/stem-in-early-childhood>

U.S. Department of Health and Human Services, Administration for Children and Families. Head Start Effective Practice Guides. Cognition. <https://eclkc.ohs.acf.hhs.gov/school-readiness/effective-practice-guides/cognition>

Zan, B., & Geiken, R. (2010, Jan.). Ramps and pathways: Developmentally appropriate, intellectually rigorous, and fun physical science. *Young Children*.

### *Mathematics*

DREME Development and Research in Early Mathematics Education. <https://dreme.stanford.edu/projects/early-math-resources-teacher-educators>

Erikson Institute: Early Math Collaborative. <https://earlymath.erikson.edu>

Greenberg, J. (2012). *More, All Gone, Empty, Full: Math Talk with Infants and Toddlers—Every Day, in Every Way*. Spotlight on Young Children: Exploring Math. Washington, DC: NAEYC.

Mathematics learning in early childhood: Paths toward excellence and equity. Committee on Early Childhood Mathematics, Christopher T. Cross, Taniesha A. Woods, and Heidi Schweingruber, Editors. Center for Education, Division of Behavioral and Social Sciences and Education. Washington, DC: The National Academies Press

NAEYC and the National Council of Teachers of Mathematics (2010). Position Statement: Early Childhood Mathematics: Promoting Good Beginnings. Washington, DC: NAEYC.

National Association for the Education of Young Children. (2009). Mathematics. *Young Children*.

Moomaw, S., Carr, V., Boat, M., & Barnett, D. (2010, Feb.). Preschoolers' number sense. *Teaching Children Mathematics*.

NAEYC/NCTM Joint Position Statement: Early Childhood Mathematics - Promoting Good Beginnings.  
<http://www.naeyc.org/files/naeyc/file/positions/psmath.pdf>

NAEYC & NCTM. (2003). *Learning Paths and Teaching Strategies in Early Mathematics*. Spotlight on Young Children: Math, 29-31. Washington, DC: NAEYC.

National Council of Teachers of Mathematics. Executive Summary: Principles and Standards for School Mathematics. Retrieved from [https://www.nctm.org/uploadedFiles/Standards\\_and\\_Positions/PSSM\\_ExecutiveSummary.pdf](https://www.nctm.org/uploadedFiles/Standards_and_Positions/PSSM_ExecutiveSummary.pdf)

NCSL. (2015). Early Mathematics Education. Retrieved from [http://www.ncsl.org/Portals/1/Documents/educ/Early\\_Mathematics\\_Education\\_Weyer\\_FINAL.pdf](http://www.ncsl.org/Portals/1/Documents/educ/Early_Mathematics_Education_Weyer_FINAL.pdf)



National Mathematics Advisory Panel. (2008). Foundations for success: The final report of the National Mathematics Advisory Panel. Jessup, MD: U.S. Department of Education. Retrieved from <http://www2.ed.gov/about/bdscomm/list/mathpanel/report/final-report.pdf>

National Research Council. (2009). Mathematics learning in early childhood: Paths toward excellence and equity. Washington, DC: National Academy Press.

U.S. Department of Health and Human Services, Administration for Children and Families. Head Start Effective Practice Guides. Cognition. <https://eclkc.ohs.acf.hhs.gov/school-readiness/effective-practice-guides/cognition>

## SECTION

## 3

**Resources: Communication***Language and Literacy*

Early Literacy: Policy and Practice

<http://www.readingrockets.org/article/early-literacy-policy-and-practice-preschool-years>

Learning to Read and Write (NAEYC)

<https://www.naeyc.org/sites/default/files/globally-shared/downloads/PDFs/resources/position-statements/PSREAD98.PDF>

National Board for Professional Teaching Standards

<http://nbpts.org/wp-content/uploads/EMC-LRLA.pdf>

National Center for Family Literacy. What Works: An Introductory Teacher Guide for Early Childhood Language and Emergent Literacy Instruction. 2009 Center for Early Literacy Learning

<http://www.earlyliteracylearning.org/pgpracts.php>

The National Center for Family Literacy. (2008). Developing early literacy: Report of the National Early Literacy Panel. Jessup, MD: National Institute for Literacy

National Council of Teachers of English and the International Reading Council Standards <http://www.ncte.org/library/NCTEFiles/Resources/Books/Sample/StandardsDoc.pdf>

The National Early Literacy Panel. (2009). Early beginnings: early literacy knowledge and instruction: A guide for early childhood administrators and professional development providers. Jessup, MD: National Institute for Literacy.

National Early Literacy Panel and Preschool Literacy Instruction. (2011). Green Lights, Caution Lights and Red Lights. Young Children.

Parlakian, R., Lerner, C., & Im, J. (2008). Getting ready to read: Helping your child become a confident reader and writer from birth. (pamphlet) Washington, DC: Zero to Three

Preschool Development Grant (PDG) Modules on Early Literacy  
<https://pdg.grads360.org/#program/early-learning-language-and-literacy-series>

Schickedanz, J. & Collins, M. (2013). So much more than the ABCs: The early phases of reading and writing. Washington, DC: NAEYC.

Schickedanz, J. & Casbergue, R. (2009). Writing in preschool: Learning to orchestrate meaning and marks (2nd ed). Washington, DC: International Reading Association and Zero to Three.

Vukelich, C. & Christie, J. (2009). Building a foundation for preschool literacy: Effective instruction for children's reading and writing development (2nd ed). Newark, DE: International Reading Association.

U.S. Department of Health and Human Services, Administration for Children and Families. Head Start Effective Practice Guides. Language and Literacy. <https://eclkc.ohs.acf.hhs.gov/school-readiness/effective-practice-guides/language-literacy>

### *Creative Expression*

Mills, Hannah. (2014). The Importance of Creative Arts in Early Childhood Programs. Texas Child Care Quarterly. Retrieved from [https://www.childcarequarterly.com/pdf/summer14\\_arts.pdf](https://www.childcarequarterly.com/pdf/summer14_arts.pdf)

National Endowment for the Arts. (2015). The Arts in Early Childhood: Social and Emotional Benefits of Arts Participation. Retrieved from <https://www.arts.gov/sites/default/files/arts-in-early-childhood-dec2015-rev.pdf>

National Core Arts Standards. <https://www.nationalartsstandards.org>

O'Connor, D. (2014) Developing Creativity in Early Childhood: The Role of Educators. In O'Connor, D. (Ed.) Creative Engagements with Children: Educational Tales of the Unexpected. Oxford: Inter-Disciplinary Press.

The College Board, Child Development and Arts Education: A Review of Recent Research and Best Practices, New York, N.Y., January 2012. Retrieved from <https://www.nationalartsstandards.org/sites/default/files/College%20Board%20Research%20-%20Child%20Development%20Report.pdf>

## SECTION

## 4

**Resources for Section Four: Physical Development and Health**

Blythe, Sally. MSc, FRSA Director. The Right to Move Assessing Neuromotor Readiness for Learning Why physical development in the early years supports educational success. *The Institute for Neuro-physiological Psychology (INPP), Chester, UK*

Caring for Our Children: National Health and Safety Performance Standards, Guidelines for Out-of-Home Child Care Programs, 2<sup>nd</sup> Edition <http://cfoc.nrckids.org/>

*Practical Strategies for Developing Fine Motor Skills.* <https://connectability.ca/2011/03/21/practical-strategies-for-developing-fine-motor-skills/>

National Board for Professional Teaching Standards. Physical Education Standards for Teachers of Students, 3-18+, 2<sup>nd</sup> Edition. 2014.

Practical Strategies for Developing Fine Motor Skills.  
<https://connectability.ca/2011/03/21/practical-strategies-for-developing-fine-motor-skills/>

U.S. Department of Health and Human Services, Administration for Children and Families. Head Start Effective Practice Guides. Perceptual, Motor and Physical Development. <https://eclkc.ohs.acf.hhs.gov/school-readiness/effective-practice-guides/perceptual-motor-physical-development>

U.S Department of Health and Human Services. Physical Activity Guidelines for Americans, 2<sup>nd</sup> edition. Washington D.C. U.S. Department of Health and Human Services, 2018  
[https://drive.google.com/drive/folders/1jgXkEexlix\\_MX3qptq89CfJjQuRC6q6G](https://drive.google.com/drive/folders/1jgXkEexlix_MX3qptq89CfJjQuRC6q6G)

Wright, P. M., & Stork, S. (2013). Recommended practices for promoting physical activity in early childhood education settings. *Journal of Physical Education, Recreation & Dance*, 84(5), 40-43.

Zero to Three. (2004). On the Move: The Power of Movement in the Child's First Three Years. Retrieved from <https://www.zerotothree.org/resources/316-on-the-move-the-power-of-movement-in-your-child-s-first-three-years>

## APPENDIX NINE

### Acronyms

Acronym	Full Name
ADA	American Disabilities Act
AlaKiDS	Alabama Kindergarten Inventory of Developing Skills
ALSDE	Alabama State Department of Education
ANFRC	Alabama Network for Family Resource Centers
APC	Alabama Partnerships for Children
ASELD	Alabama Standards for Early Learning and Development
ASQ	Ages and Stages Questionnaire
ASQ-SE	Ages and Stages -Social Emotional Questionnaire
ASRA	Alabama School Readiness Alliance
ASSIST	Additional Support Systems and Instructional Strategies for Teachers
CACFP	Child and Adult Food Program
CCDBG	Child Care Development Block Fund
CCR &R	Child Care Resource and Referral
CDA	Child Development Associate
CFTF	Children's First Trust Fund
CLASS	Classroom Assessment Scoring System
CNP	Children's Nutrition Program
COR	Child Observation Record (High Scope
CTF	Children's Trust Fund
DAP	Developmentally Appropriate Practice
DEC	Division for Early Childhood
DECA	Deveraux Early Childhood Assessment
DECE (AL)	Department of Early Childhood Education
DHR (AL)	Alabama Department of Human Resources
DPH (AL)	Alabama Department of Public Health
ECAC	Early Childhood Advisory Council
ECE	Early Childhood Education
ECERS-R	Early Childhood Environment Rating Scale
ECLKC	Early Childhood Learning and Knowledge Center
EHS	Early Head Start
EI	Early Intervention

Acronym	Full Name
EITC	Earned Income Tax Credit
EPSDT	Early and Periodic Screening, Diagnostic and Treatment
FCCERS-R	Family Child Care Environment Rating Scale
HMG	Help Me Grow
HS	Head Start
HV	Home Visiting
IDEA	Individuals with Disabilities Act
IECMH	Infant and Early Childhood Mental Health
IEP	Individual Education Plan
IFSP	Individualized Family Service Plan
IRR	Inter-rater Reliability
ITERS-R	Infant Toddler Environment Rating Scale
KEA	Kindergarten Entry Assessment
LEA/SEA	Local Education Agency/State Education Agency
MIECHV	Maternal Infant and Early Childhood Home Visiting
NAEYC	National Association for the Education of Young Children
NIEER	National Institute for Early Education Research
OSEP	Office of Special Education
OSR (AL)	Office of School Readiness
PAL	Parent Assistance Line
PAS	Program Administration Scale
PBIS	Positive Behavioral Support
PD	Professional Development
PDG B-5	Preschool Development Grant, Birth to 5
PITC	Program for Infant Toddler Care
QRIS	Quality Rating Improvement System
SF	Strengthening Families
SLDS	State Longitudinal Data System
SNAP	Supplemental Nutrition Assistance Program
T/TA	Training and Technical Assistance
TANF	Temporary Assistance for Needy Families
TEACH	Teacher Education and Compensation Helps
VFC	(Alabama) Vaccines for Children
WIC	(Alabama) Women Infant and Children Program



ALABAMA DEPARTMENT OF  
**Early Childhood  
Education**

*Publications or audiovisual media must include the following disclaimer: "The Alabama Standards for Early Learning and Development was made possible by grant number 90TP0065-01-00. Its contents are solely the responsibility of the authors and do not necessarily represent the official view of the United States Department of Health and Human Services, Administration for Children and Families." [HHS Grants Policy Statement, page II-31].*

**children.alabama.gov**

— In partnership with —



ISBN 978-0-578-79548-5

90000>



9 780578 795485