



Arizona Early Learning Standards
4th Edition



Arizona Department of Education

EARLY LEARNING STANDARDS

May 2018

Arizona Department of Education

Early Learning Standards

Diane Douglas

Superintendent of Public Instruction

Carol Lippert

Associate Superintendent of High Academic Standards

Table of Contents

Introduction	11
Social Emotional Standard	21
Approaches to Learning Standard	41
Language and Literacy Standard	66
Mathematics Standard	107
Science Standard	146
Social Studies Standard	163
Physical Development, Health, & Safety Standard	187
Fine Arts Standard	207
Resources	228



Top Row (left to right): Eric Bucher, Juliana Panqueva, Sas Jakeo-Singer, and Lauren Zbyszinski

Bottom Row (left to right): Nicole Peterson, Erika Argueta, Kristy Rosen, Elizabeth Hamilton,

Nicol Russell, Heather Drinovsky, Millie Archer, Suzanne Perry, Lori Masseur

Early Childhood Education Unit

Nicol Russell

Deputy Associate Superintendent of Early Childhood Education and Head Start Collaboration Director

Suzanne Perry

Director/619 Coordinator,
Early Childhood Special Education

Lori Masseur

Director, Early Childhood Education

Lauren Zbyszinski, Ph.D.

Director, Professional Learning and Sustainability

Heather Drinovsky

Administrative Assistant

Elizabeth Hamilton

Early Childhood Education Program Specialist

Eric Bucher

Early Childhood Education Program Specialist

Erika Argueta

Early Childhood Education Program Specialist

Kristy Rosen

Early Childhood Education Program Specialist

Millie Archer

Early Childhood Education Program Specialist

Nicole Peterson

Early Childhood Education Program Specialist

Sas Jakeo-Singer

Early Childhood Education Program Specialist

Millicent Archer

Early Childhood Education Program Specialist

Juliana Panqueva

Early Childhood Education Fiscal Program Specialist

ACKNOWLEDGEMENTS

The Department extends its thanks and appreciation to the following individuals who participated in the 2017-2018 Revision and Realignment of the Early Learning Standards.

Chelsea Adams

Morenci Unified School District

Jennifer Atteberry-Pierport

Canyon Del Oro High School CTE

Terri Clark

Read On Arizona

Kathryn Evans

Arizona PBS

Chris Gilbert

Camp Verde Unified School District

Amy Hust

Pinal County Community Child Services

Margaret Larson

Chicanos Por La Causa

Lauren Moraga

Pima County JTED

Michele Pilsbury

Washington Elementary USD

Melanie Alexander

Chandler Unified School District

Alisa Burroughs

Bullhead Elementary District

Danielle Dueppen

Awakening Seed School

Diane Fellows

Child and Family Resources

Barbara Gordon

Association for Supportive Childcare

Joyce Kocoureck

Pinon Unified School District

Margaret Lehn

4M Consulting Group

Penni Natvig

Tucson USD

Dr. Debbie Pischke

Peoria Unified School District

Sherilyn Analla

Chicanos Por La Causa

Penni Case

Page Unified School District

Dr. Stacia Emersion

Northern Arizona University

Kim Freehan

Mesa Public Schools

Jennifer Heffington

First Methodist Church

Dr. Allison Landy

Northland Pioneer College

Cheryl McGlothlen

Sahuarita Early Childhood Center

Kimberly Owens

Skyline Education

Carlos A. Powell Sr.

Havasupai Head Start

Stacy Rucker
Grand Canyon University

Michel Rutin
Maricopa County Education Service Agency

Dr. Susan Shinn
Flowing Wells USD

Lisa South
Tempe Elementary SD

Jenny Stahl
Cave Creek USD

Lori Stinson
Gila River Head Start

Julie Stockton
Gilbert Public SD

Angela Stratton
Rio Salado College

Lisa Sutherland
AdvanED

Brittany Tarango
Buckeye Elementary SD

Leslie Totten
First Things First

Mary Beth Turner
Yuma District One

Helen Unangst
ADHS Childcare Licensing

Leticia Velarde
Chandler USD

Amy Wasson
Washington Elementary USD

Amy Williams
Kyrene SD

Bonnie Williams
ADHS Empower Program

To begin the revision and realignment process, all participants were provided an overview of the **Arizona K-12 Standards**, the **Head Start Early Learning Outcomes Framework**, and current research on the content areas of Mathematics, Science, Language and Literacy, and Social Emotional Development. Our thanks to the following individuals who helped inform the review process through their experience and expertise:

- **Tracy Fazio**, K-12 Mathematics Specialist, Arizona Department of Education
- **Becky Rapier**, K-12 ELA Specialist, Arizona Department of Education
- **Dr. Isela Garcia**, Alesi Group
- **Brenda Mann**, Early Childhood Specialist, Head Start-Region IX TTA Network

In addition, the Early Childhood Education Unit would like to acknowledge the following outside expert reviewers who provided additional guidance and expertise throughout the revision and realignment process:

Amy Kemp, Ph.D.

Dynamic Analysis, LLC

www.dynamicanalysisllc.com

Kathy R. Thornburg, Ph.D.

TA Specialist

AEM Corporation

AEM Education Services

www.aemcorp.com/education

Original Edition Contributors

The development process of the Arizona Early Childhood Education Standards began in February of 2001, through an Even Start Family Literacy Statewide Initiative Grant, which was housed in the Department of Education’s Adult Education Section. Under the leadership of Karen Liersch, Deputy Associate Superintendent, the first team of dedicated early childhood practitioners developed and wrote the original Arizona Early Childhood Standards. The Arizona State Board of Education approved the original standards document in May 2003.

The Arizona Department of Education wishes to acknowledge the contributions and foundations created by the following early childhood experts: Holly Abbott, Pauline Baker, Elaine Brideschge, Marilyn Box, Kelvin Broad, Eva Curley, Eleanor Droegemeier, Sandy Foreman, Olivia Jimenez, Dari Johnson, Wanda Billings-Reber, Bonnie Lund, Leonor Lundholm, Karen McIlroy, Catherine Mulligan, Garthanne de Ocampo, Nancy Perry, Kay Stritzel Rencken, Rhonda Richardson, Natalie Scott, Ramona Staires, Lois Schneider, Kimberly Tan, June Torrance, Gloria Williams, Sue Yale and Lizzie Zamora.

Refined Edition Contributors

In January of 2004, new focuses, new mandates, and new research brought renewed attention to the field of Early Childhood. The newly created Early Childhood Education Section of the Arizona Department of Education under the leadership of Karen Woodhouse, Deputy Associate Superintendent, began the refinement process of the Early Childhood Standards. The “Refinement Team” consisted of the many faces and facets of early childhood stakeholders from around the state.

The Department wishes to acknowledge and extend its appreciation to “Refinement Team Members” for their commitment, expertise and wisdom in refining the Early Learning Standards:

Elayne Achilles	Rosanne Dlugosz	Gay Kohl	Jill Rosenzweig
Carolyn Alcadida	Claude Endfield	Margaret Larsen	Anne Schnable
Jenni Brasington	Laurel Endfield	Tammy Lee	Susan Shinn
Ana Bribiesca	Janna Finnegan	Denise Lopez	Alicia Smith
Carmelita Briones	Bobbi Firebush	Avis Macktima	Laurie Stockton
Patricia Butler	Becky Hancock	Konnie Marcum	Garry Taylor
Jerry Cabrera	Susan Pond	Antoinette Means	Susan Taylor
Angela Capone	Pamela Powell	Lydia Medina	Monique Tilton
Vicki Callett-Newby	Jacquelyn Power	Barbara Mezzio	Lynn Tuttle
Debbie Caviglia	Judy Haubert	Karen McIlroy	Sandy Uterhardt

Latrisha Centers-Broom
Gloria Chee
Terry Doolan

Hazel Heard
Sally Hurwitz
Verna Johnson

Lavonne Navakuku
Nancy Perry
Cecilia Ramirez
Kathy Rice

Carol Warren
Dale Waters
Lacey Wieser
Lin Wright

In addition, the Department wishes to acknowledge the hundreds of early childhood practitioners, parents and stakeholders who attended focus sessions conducted around the state and who sent comments and suggestions throughout the refinement process. Through their assistance, the newly refined Early Learning Standards have evolved into a quality framework that can be utilized by parents, caregivers, teachers, instructors and administrators.

We acknowledge the assistance provided by Susan Pimentel and the Aha Consultants, as well as many Department personnel and other outside expert reviewers.



Introduction

Statement of Purpose

The Arizona Early Learning Standards have been developed to provide a framework for the planning of quality learning experiences for all children three to five years of age. The standards cover a broad range of skill development and provide a useful instructional foundation for children from diverse backgrounds and with diverse abilities. The standards are intended for use by all those who work with young children in any early care and education setting in urban, rural and tribal communities.

Every Child

Is a unique, complex learner;

Is a social being who learns through the development of relationships with peers and adults;

Is entitled to learning environments that support optimal development of the whole child;

Is entitled to opportunities to learn through active exploration;

Learns through child-initiated, child-directed, teacher- supported play.

GUIDING PRINCIPLES

Although the Early Learning Standards document is separated into specific domains of learning, the intent is not to suggest that children’s skills develop separately or apart from each other. Nor is it the intent that isolated skill instruction be used as an appropriate way to support learning during the preschool years. The standards document is based on the premise that learning occurs on a continuum and that developmental domains are highly interrelated. Children reach their highest potential in nurturing environments that support their learning across domains.

- ✚ Families are the primary caregivers and educators of young children.
- ✚ Children are capable and competent regardless of their backgrounds, their experiences, and their varying abilities.
- ✚ Children learn best when they have relationships that are safe, consistent, predictable and nurturing and when there is positive interaction among teacher, parent, and child and when their health, nutritional and emotional needs are met.
- ✚ Early Childhood is a critical period for children to develop executive functioning which is the basis of all life skills including self-regulation, motivation, consider perspective of others, **cognitive flexibility**, self-reflection, and positive social dispositions.
 - Young children learn through active exploration of their environment where there is a balance between self- discovery, intentional planned experiences and adult-initiated activities.
 - Children construct knowledge based on prior experiences, play, and social interactions with other children and nurturing adults.
 - Optimal learning occurs in environments where the adult is respectful of the child, the family, the language, the culture, and the community.
 - Children develop a sense of empowerment, curiosity, and persistence by consistently having many opportunities to make choices within their daily routines.
- ✚ Children progress at unique rates, have individual learning styles and possess diverse abilities.
- ✚ Children’s progress is best understood through using ongoing and consistent observation and monitoring, anecdotal record keeping, and collection of children’s work.
- ✚ Children’s learning is enhanced when assessment information is interpreted and results are applied through the intentional development of new learning encounters that support all essential domains of school readiness.

INCLUSIVE PRACTICES













[Early Childhood Special Education](#)

Standards are an essential first step for designing effective preschool curricula since they represent an agreed upon agenda for teaching and learning. They assist all early education professionals in setting high expectations for children rather than lowering expectations for children with disabilities or other challenges. Therefore, the Arizona Early Learning Standards should be used for students with disabilities as well as with typically developing children. Because these standards establish the content for learning, the focus for classrooms no longer needs to be on an age, grade, or specific functional level but on actual performance on or toward a standard. Like any quality standard, the Arizona Early Learning Standards are designed to be used to plan creative experiences that support children in reaching their highest potential, capture their interest in learning, and build on what they already know. However, the Arizona Early Childhood Community recognizes that each child, regardless of ability level, is unique. Each child has a wide range of learning and developmental needs. At times, all children will need some level of support to help them reach their goals. To assist with what some of these supports may look like, embedded within each standard are examples of adaptations and [Universal Design of Learning \(UDL\)](#) principles adults working with young children can refer to and use.







[English Language Learners](#)

All children have acquired knowledge because of the language used in their home since birth. Extensive home language and background experiences prime children's abilities to learn a second language. Children develop language much the same way they acquire other skills, along a continuum, at different rates, and with individual learning styles. Some children may experience a silent period while they learn English; other children may practice their knowledge by mixing or combining languages; still others may quickly acquire English-language proficiency. Each child's progress in learning English needs to be respected and viewed as acceptable, logical, and part of the ongoing process of learning any new skill. The language skills needed for young English language learners to become proficient in English are fully embedded in the Arizona Early Learning Standards. Using the standards to plan enriching experiences will enhance children's proficiency in English and enable them to become successful learners in Kindergarten – 12 schools.

The Arizona Early Learning Standards are:

-  A framework that provides an essential first step for designing and/or choosing an effective, high-quality preschool curriculum
-  Common, agreed upon goals and outcomes for teaching and learning
-  Building blocks that illustrate the interconnectedness of emotional, social, language, cognitive and physical development and learning that address the whole child
-  A reflection of current brain development, early childhood research and best practices
-  A continuum of learning outcomes for preschool children
-  A link between early learning expectations and school readiness
-  A framework that links content and curriculum, professional development and assessment tools to ensure age-appropriate activities, goals and performance outcomes for three to five-year old children
-  Appropriate for all children regardless of background, language and diverse needs
-  Flexible; can be modified up or down to meet the specific needs of all children
-  A step toward eliminating fragmentation in early care and education programs throughout Arizona
-  Separated into domains; yet the indicators in each domain are interrelated and interdependent. They all need to be woven together into daily routines, activities and play
-  A tool to assist parents, caregivers and teachers in creating meaningful and appropriate learning experiences for preschool children

The Arizona Early Learning Standards are not:

-  Intended for use as a curriculum
-  Intended for use as a checklist
-  Intended for use as an assessment tool
-  Meant to be used in isolation
-  Meant to stifle the creativity of caregivers or teachers
-  Intended to imply that only formal and structured activities are to be planned for young children

The Arizona Early Learning Standards Format

The Arizona Early Learning Standards represent an agreed upon framework of skills that young children need to experience to develop a foundation for higher levels of learning. The Early Learning Standards Document is comprised of three components:

1. The Strands, Concepts, Indicators, and Examples relevant to Daily Routines, Activities, and Play;
2. Integration - Guidance and examples for integrating mathematics and language/literacy into all domains of early learning; and
3. Alignment - A matrix demonstrating how the Early Learning Standards align with the Infant and Toddler Developmental Guidelines, the Head Start Early Learning Outcomes Framework, and the Arizona Kindergarten Standards.

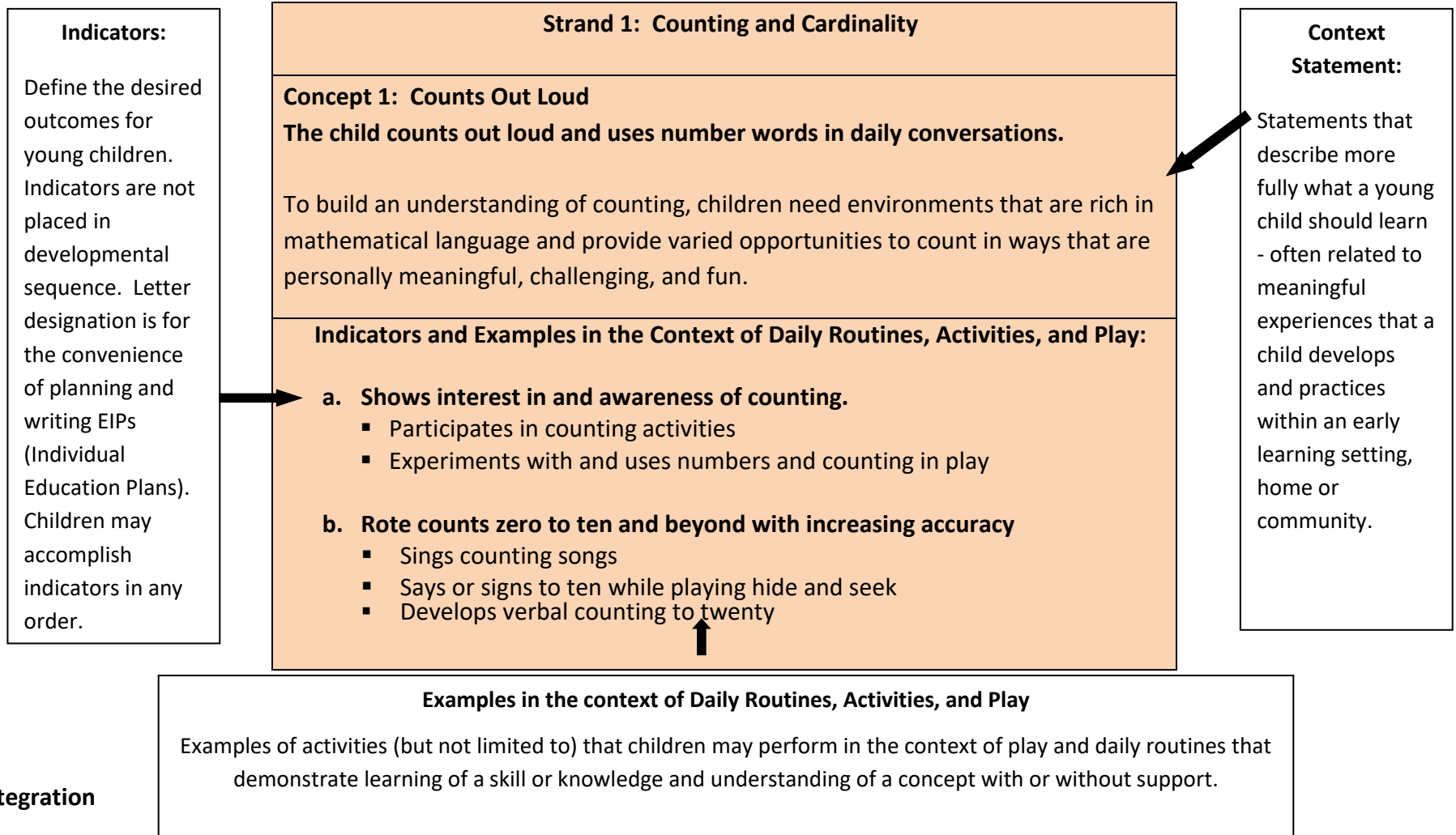
At the beginning of each section, there is a *Definitions* page. Throughout the document, various terms are defined to provide clarity of meaning in the context of the Early Learning Standards. These terms are underlined.

A Visual Explanation of the Arizona Early Learning Standards

Standard: An agreed upon framework of skills that young children need to experience to develop a foundation for higher levels of learning.

Strand: The “Big Idea” – a component of the Standard

Concept: One topic or sub-skill of the Element



Integration

The Integration Section within each Domain Standard provides guidance and examples for integrating approaches to learning, mathematics and language/literacy into all domains of early learning. For example, in the Mathematics Domain, the Integration section provides examples of Approaches to Learning and for integrating Language and Literacy into the early learning mathematics experience.

MATHEMATICS	
STRAND 1: COUNTING AND CARDINALITY	
Approaches to Learning – Actions that would incorporate Approaches to Learning into Mathematics.	Language & Literacy – Actions that would incorporate Language and Literacy into Mathematics.
1. Facilitates the investigation of airplanes because the class was curious about how many airplanes were flying over their playground. During the year, with support from the teachers, children tallied the number of planes that flew over their playground each day.	1. Supports children to graph a chart and reinforces mathematical vocabulary (i.e. greater than, less than, “Tuesday had more trains than Thursday”.) to help tell the story about the number of trains that went by the playground over the course of a week. The teacher brought non-fiction books into the classroom about trains ⁶ .
2. Comments on how persistent children were in completing the task of moving chairs into the block area to create the seating on a bus for first, second, and third rows.	2. Joins the children in the “airplane” and acts as the flight attendant by asking “What do the passengers in the first row want to drink? What do the passengers in the second row want to drink?” The caregiver then writes the answers on a piece of paper, for another child to act as the second flight attendant: “We need five milks, three orange juices, and three packages of string cheese.”

⁶ Zambrzycka, J. (2014). Improving preschoolers' mathematical performance: The nature of spatial input by early childhood educators. *Scholars Commons at Laurier*. Retrieved from <http://scholars.wlu.ca/etd/1656/>

Alignment

The Alignment Section within each Domain provides a matrix demonstrating how the Early Learning Standards align with the Infant and Toddler Guidelines, the Head Start Child Outcomes, and the Arizona Kindergarten Standards.

Example

STRAND 1: LANGUAGE			
	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Listening and Understanding (LDC)	Receptive Language Understanding	Receptive Language Attending and Understanding	Literature
Shows interest in listening to sounds. (LDC)	a. Demonstrates understanding a variety of finger-plays, rhymes, chants and songs, poems, conversations, and stories.	Attends to language during conversations, songs, stories, or other learning experiences.	With prompting and support, retell familiar stories, including key details. (RL)

Within the Alignment Matrix are codes that reference where in the Head Start Outcomes and the Infant/Toddler Guidelines the examples are found. For example, under Infant & Toddler Guidelines (above) is the code (LDC) which means this guideline is found in the Language Development and Communication section of the Infant & Toddler Guidelines. The reference codes for Head Start Outcomes and Infant and Toddler Guidelines are consistent throughout the Alignment sections in each domain.

Reference Codes for the [HS Early Learning Outcomes Framework](#)

- ATL – Approaches to Learning
- C – Cognition
- LC – Language and Communication
- LIT – Literacy
- LR - Logic & Reasoning
- MD – Mathematics Development
- PMPD – Perceptual, Motor, and Physical Development
- SED – Social & Emotional Development
- SR – Scientific Reasoning

Reference Codes for the [Infant / Toddler Developmental Guidelines](#)

- ATL – Approaches to Learning
- CD – Cognitive Development
- LDC – Language Development and Communication
- PHD – Physical Health and Development
- SED – Social and Emotional Development

[The Arizona Kindergarten Standard](#) reference codes are unique to each domain and are also included in the Alignment Section for each Domain.

Social Studies Codes-

- AH - American History
- CG - Civics/Government
- E – Economics
- G – Geography
- WH - World History

Science Codes

- IP – Inquiry Process
- PS – Physical Science

Physical Education Codes

- PE – Physical Education
- PB - Personal Behavior
- SB - Social Behavior
- VPA - Values Physical Activity

Health Education Codes

- AH - Asking for Help
- CEH - Communication to Enhance Help
- HE – Health Education

English Language Arts Codes

- CC – Comprehension and Collaboration
- CS – Craft and Structure
- CSE – Conventions of Standard English
- FL – Fluency

- KID – IT – Key Ideas and Details – Reading Standards for Information Text K-2
- KID –LIT – Key Ideas and Details – Reading Standards for Literature K-2
- PA – Phonological Awareness
- PC – Print Concepts
- PDW – Production and Distribution of Writing
- PKI – Presentation of Knowledge and Ideas
- RBPK – Research to Build and Present Knowledge
- RRLTC – Range of Reading and Level of Text Complexity
- TTP – Text Types and Purposes
- VAU – Vocabulary Acquisition and Use

Mathematics Codes

- MP – Mathematical Practices



Social Emotional Standard

SOCIAL-EMOTIONAL STANDARD

Social-emotional development is the core of early care and education because it sets a firm foundation on which all other learning will take place.

Children’s emotional development is built into the architecture of their brains. Relationships that provide social, emotional, and physical security promote and enhance a child’s ability to learn and thrive.

To grow socially and emotionally, children need to develop an increasing capacity to experience, express, and gain self-control over their emotions and social interactions. This development is enhanced by nurturing relationships and positive early learning experiences. A consistent, predictable, and engaging environment strengthens a child’s confidence in approaching new challenges, interacting with others, and exploring their environment.

Established social-emotional skills have a significant, positive impact on a child’s learning, particularly in **cognitive development**. It sets the foundation for life-long success. This Standard articulates the ways in which a child can demonstrate their understanding of themselves and others, form positive social relationships, and relate to the world at large. Well-developed, strong, social emotional skills are critical when a child encounters a stressful life challenge. These hardships may include neglect, trauma, poverty, cultural and language differences, bias, and disabilities.

The Social-Emotional Development Standard is organized into the following Strands and related Concepts:

Strand 1: Self-Awareness and Emotional Skills

- Self-Awareness
- Recognizes and Expresses Feelings
- Self-Regulation

Strand 2: Relationships and Social Skills

- Attachment
- Social Interactions
- Respect

Social Emotional Development Standard Definitions

Autonomy is the ability and desire to be in charge of oneself.¹

Cognitive Development is the field of study which focuses on the child's ability to acquire new knowledge and skills.

Emotional Literacy is the ability to label emotions and regulate them in socially appropriate ways.²

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

Nature and Nurture refers to the influence of both environmental and genetic factors on development.

Secure Attachment leads to confidence and trust that children have with the individual responsible for their care. It is the framework within which children develop their growing ability to regulate emotions and behavior.

Self-Awareness is the ability to recognize and understand one's self as an individual.

Temperament refers to a term used to describe the manner in which a child approaches and reacts to the world. It is their personal "style".

¹ Riley, D., San Juan, R., Klinker, J., & Ramminger, A. (2008). Social & emotional development: Connecting science and practice in early childhood settings. St Paul MN. Red Leaf Press.

² Zambo, D. & Hansen, C.C. (2007). Child development through the eyes of children's authors: Using picture books to understand theory. London, England: Pearson.

STRAND 1: SELF-AWARENESS AND EMOTIONAL SKILLS

Concept 1: Self-Awareness

The child demonstrates an awareness of self.

Children develop a sense of personal identity as they begin to recognize the characteristics that make them unique as individuals and to build self-esteem.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

a. Demonstrates self-confidence.

- Acknowledges her own accomplishments and says, “I can hit the ball.”
- Explains, “I’m learning how to take care of myself and my friends.”
- Signs, “I can do it myself.”

b. Makes personal preferences known to others.

- Chooses carrots over celery during meal time.
- Tells friends, “I don’t like that.”

c. Demonstrates knowledge of self-identity/autonomy.

- Declares, “I’m the big brother,” while looking at a family picture.
- Tells the teacher, “I’m at school while mommy is at work.”
- Holds up three fingers and says, “I am this many.”

d. Displays an awareness of similarities and differences between self and others.

- Says, “My hair is curly and yours is straight.”
- Points to shirt and then to friend’s shirt, indicating that they are wearing the same color of shirt.

e. Demonstrates developmentally appropriate cultural curiosity and responsiveness.

- Wonders about a friend’s seaweed snack and asks for a taste.
- The group widens the story time circle to make room for the child and their wheel chair.
- A guest speaker (parent) shares a storybook and song in their home language to the class.

STRAND 1: SELF-AWARENESS AND EMOTIONAL SKILLS

Concept 2: Recognizes and Expresses Feelings

The child recognizes and expresses feelings of self and others.

Children develop **emotional literacy** through the ability to identify and acknowledge their feelings and feelings of others through daily interactions.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

- a. **Associates emotions with words, facial expressions, and body language.**
 - Describes the emotions of a character in a book.
 - Signs, “I am mad” when asked how they feel.
- b. **Identifies, describes, and expresses their own feelings.**
 - Covers their eyes and says, “This is scary!” while listening to a story.
 - Says, “I am happy today because it’s my birthday!”
- c. **Identifies and describes feelings of others.**
 - Approaches an adult and says, “That child is sad. They are crying.”
 - Says, “My mommy will be so excited to see my picture!”
- d. **Expresses feelings of satisfaction in independent activities**
 - Independently peddles the tricycle with a smile on their face.
 - Displays their clay structure and says, “Look what I did!”
- e. **Expresses empathy for others.**
 - Sees a friend crying and then gives the friend a hug.
 - Asks, “Are you ok?” after seeing a friend fall down.

STRAND 1: SELF-AWARENESS AND EMOTIONAL SKILLS

Concept 3: Self-Regulation

The child manages the expression of feelings, thoughts, impulses, and behaviors.

Young children develop self-control as they acquire the ability to regulate their impulses with decreasing support from adults. This enables children to function successfully and independently in both personal and social contexts. **Temperament** displays itself through the way a child manages their behaviors in daily activity; temperament is driven by both **nature and nurture**.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

- a. **Understands and follows expectations in the learning environment.**
 - Uses walking feet when transitioning to the library.
 - Puts the puzzle away, where it belongs, when finished.
- b. **Adjusts behavior and adapts to transitions, daily routines, and unexpected events.**
 - Moves through activities independently.
 - Stays with the group and follows the teacher during a fire drill.
 - Chooses a cozy corner away from the group when needed.
- c. **Chooses appropriate words and actions.**
 - Says and/or signs, “Stop, I don’t like it when you hit me.”
 - Waits their turn during a shared game or toy time.

STRAND 2: RELATIONSHIPS AND SOCIAL SKILLS

Concept 1: Attachment

The child demonstrates the ability to engage in and maintain secure relationships.

Positive social relationships between adults and children develop in an environment where children feel safe and secure. When caregivers provide a secure base of physical and emotional support, children construct **secure attachments** with their caregivers which supports them in moving into deeper and more complex learning.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

- a. Expresses interest, curiosity, and trust with familiar adults.**
 - Child welcomes a new guest to the classroom.
 - When teacher smiles, child responds with a smile back.
- b. Seeks support from familiar adults.**
 - Asks for comfort/reassurance after a playground fall.
 - Seeks out the caregiver when they need help doing a task.
- c. Separates from familiar adult with minimal distress.**
 - Continues to paint after acknowledging a family member's departure.
 - Transitions quickly into classroom activity after family drop off.

STRAND 2: RELATIONSHIPS AND SOCIAL SKILLS

Concept 2: Social Interactions

The child displays positive social behavior.

A child's relationship with peers and adults reflect their ability to initiate and sustain positive and appropriate interactions while increasing their capacity to acknowledge someone else's perspective.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

- a. Responds when adults or other children initiate interactions.**
 - Selects from the choice board when asked, "What do you want to do now?"
 - Decides whether to join a group when invited to play.
- b. Initiates and sustains positive interactions with adults and other children.**
 - Shares about a new food at dinner.
 - Suggests, "Let's build a road for our cars." Then the children work together to build a road.
- c. Acknowledges someone's perspective by demonstrating positive ways to resolve conflict.**
 - Child asks, "When you're done, can I play with it?"
 - Seeks assistance from a teacher when a disagreement starts to escalate.

STRAND 2: RELATIONSHIPS AND SOCIAL SKILLS

Concept 3: Respect

The child has an increasing capacity to understand social boundaries about behavior and the environment.

When children interact with others, they become aware of the boundaries of acceptable behavior and possess a growing sense of the potential consequences of their actions. Children thrive in environments when they have a sense of ownership.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

- a. Respects the rights and property of others.**
 - Walks around a block structure built by another child.
 - Waits behind friend for their turn to go down the slide.

- b. Defends own rights and the rights of others.**
 - Tells his friend not to knock down his block structure.
 - Tells teacher, “I can’t have anything with peanuts.”

- c. Shows respect for learning materials in the learning environment.**
 - Stacks up books after reading time.
 - Puts caps on markers after using them.

Integration

The integration page lists examples of strategies, activities, and experiences that an adult caregiver might offer to support the integration of Approaches to Learning, Language and Literacy, and Mathematics into the Social-Emotional Development Standard.

SOCIAL-EMOTIONAL DEVELOPMENT		
STRAND 1: SELF-AWARENESS AND EMOTIONAL SKILLS		
Approaches to Learning - Approaches that are best integrated into Social-Emotional Development.	Language & Literacy – Actions that would incorporate Language and Literacy into Social-Emotional Development.	Mathematics – Actions that would incorporate Mathematics into Social-Emotional Development.
<p>1. Bends down and makes eye contact to acknowledge emotion of a crying child at drop-off by saying, “It looks like you’re feeling sad. Sometimes it’s hard when you get dropped off. Let’s think of some things we can do to help you feel better” (Examples: Redirect to their favorite toy, provide a hug, help create picture for caregiver.)</p>	<p>1. Models appropriate behavior for emotional control by using feeling picture cards/poster to discuss choices for dealing with emotions, reasons behind emotions, and consequences of poor behavior choices.</p>	<p>1. Provides behavior choices and opportunities for open discussion to children and allows them to vote/graph on which would be the best choice.</p>
<p>2. Model open-ended questions about children’s show and share items which will elicit a deeper conversation between peers. For example, “Why is this bear so special to you?” “How do you take care of your bear?” “Tell your friends about your bear” The children will continue questioning.</p>	<p>2. Reads aloud a book focusing on self-regulation (e.g., It's Hard to Be Five: Learning How to Work My Control Panel by Jamie Lee Curtis). Asks children to draw a picture of something that is hard for them to do. Follows activity with conversation on how child can overcome this difficult task.</p>	<p>2. Compares and contrasts child preferences with them: “What is your favorite learning area?” “What is your least favorite?”</p>

SOCIAL-EMOTIONAL DEVELOPMENT

STRAND 2: RELATIONSHIPS AND SOCIAL SKILLS

Approaches to Learning - Approaches that are best integrated into Social-Emotional Development.	Language & Literacy – Actions that would incorporate Language and Literacy into Social-Emotional Development.	Mathematics – Actions that would incorporate Mathematics into Social-Emotional Development.
<p>1. Designates a “problem solving” area in the classroom (e.g., a Peace Rug) and assists children in problem-solving skills: emphasizes active listening and provides words for conversation to meet a solution. Additional support: shows children possible solution cards to use with one another.</p>	<p>1. Models how to utilize names when greeting others or saying goodbye; provides name tags with photo of child to place in the attendance chart.</p>	<p>1. Begins by starting a conversation about “important people” in their life (friends, siblings, parents, etc.); discusses why these people are important to them and make them happy.; asks children to draw a picture of who are the people that are important to them; collects and performs a whole-group tally of how many people the class has drawn. Extension idea: puts all the drawings together and creates a class book for the library.</p>
<p>2. Acknowledges children’s positive interactions with peers. (e.g., “McKenzie you are such a good friend to give Omar your chair so that he can use the art space when you’re finished.”)</p>	<p>2. Provides/models words for children to use when in a conflict with a peer. For example, when a child wants a toy from another child, they are able to verbalize, “Can I have it when you’re done?”</p>	<p>2. Encourages helpers during snack time to place one plate per one cup to help develop one-to-one correspondence.</p>

Alignment

Within the Alignment Matrix are codes that reference where in the Head Start Outcomes and the Infant / Toddler Guidelines the examples are found.

Reference Codes for the Head Start Early Learning Outcomes

Framework Alignment

- ATL – Approaches to Learning
- C – Cognition
- LC – Language and Communication
- LIT – Literacy
- MATH – Mathematical Thinking
- PMP – Perceptual, Motor, and Physical Development
- SCI – Scientific Inquiry
- SE – Social-Emotional Development

Reference Codes for the Infant/Toddler Developmental Guidelines

Alignment:

- ATL – Approaches to Learning
- CD – Cognitive Development
- LDC – Language Development and Communication
- PHD – Physical Health and Development
- SE – Social Emotional Development

Reference Codes for Kindergarten Standards

Kindergarten Physical Education Standards

- PB - Personal Behavior
- SB - Social Behavior
- VPA - Values Physical Activity

Kindergarten Health Education Standards

- AH - Asking for Help
- CEH - Communication to Enhance Help

Kindergarten English Language Arts Standards

- ELA – English Language Arts

STRAND 1: SELF AWARENESS AND EMOTIONAL SKILLS

INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Self-Awareness (SE)	Self-Awareness	Sense of identity and belonging (SE)	Health Education or Physical Education
Shows confidence in increasing abilities.	Recognizes own self-confidence.	Child expresses confidence in own skills and positive feelings about self.	Participates in new skills and movement activities (VPA) .
Expresses feelings and emotions through facial expressions, sounds or gestures.	Makes personal preferences known to others.	Child expresses a broad range of emotions and recognizes these emotions in self and others.	Demonstrate healthy ways to express needs, wants, and feelings (CEH) .
Develops awareness of self as separate from others.	Demonstrates knowledge of self-identity/autonomy.	Child recognizes self as a unique individual having own abilities, characteristics, emotions, and interests.	

<p>Develops awareness of self as separate from others (SE).</p>	<p>Displays an awareness of similarities and differences between self and others.</p>	<p>Child recognizes self as a unique individual having own abilities, characteristics, emotions, and interests.</p>	<p>Accept all classmates without regard for personal differences (SB).</p>
	<p>Demonstrates developmentally appropriate cultural curiosity and responsiveness.</p>	<p>Child has sense of belonging to family, community and other groups.</p>	

STRAND 1: SELF-AWARENESS AND EMOTIONAL SKILLS (Continued)

INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Social-Emotional Development (SE)	Recognizes and Expresses Feelings	Emotional Functioning (SE)	Health Education or Physical Education
Expresses feelings and emotions through facial expressions, sounds or gestures.	Associates emotions with words, facial expressions, and body language.	Child expresses a broad range of emotions and recognizes these emotions in self and others.	Exhibit both verbal and nonverbal expressions of enjoyment (VPA) .
Begins to show concern for others. Learns social skills and eventually uses words for expressing feelings, needs and wants.	Identifies, describes, and expresses their own feelings.	Child expresses a broad range of emotions and recognizes these emotions in self and others.	Demonstrates healthy ways to express needs, wants, and feelings (CEH) .
Begins to recognize and respond to other children’s feelings and emotions.	Identifies and describes feelings of others.	Child expresses care and concern toward others.	Speak audibly and express thoughts, feelings, and ideas clearly (ELA) .
Expresses feelings and emotions through facial expressions, sounds or gestures.	Expresses feelings of satisfaction in independent activities.	Child manages emotions with increasing independence.	

Begins to show concern for others. Learns social skills and eventually uses words for expressing feelings, needs and wants.	Expresses empathy for others.	Child expresses care and concern toward others.	Shows compassion for others by helping them (SB) .
---	-------------------------------	---	---

STRAND 1: SELF-AWARENESS AND EMOTIONAL SKILLS (Continued)

INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Self-Regulation (ATL)	Self-Regulation	Emotional & Behavioral Self-Regulation (ATL)	Health Education or Physical Education
Behave in consistent ways to elicit desired response.	Understands and follows expectations in the learning environment.	Child follows classroom rules and routines with increasing independence.	Follows directions in class (PB) .
Begins to manage own behavior and show self-regulation. Understands simple routines, rules or limitations (SE) .	Modifies behavior and adapts to transitions, daily routines, and unexpected events.	Child demonstrates flexibility in thinking and behavior.	Works in a diverse group setting without interfering with others (SB) .
Use sounds, gestures and movements to impact the environment and interactions.	Chooses appropriate words and actions.	Child manages actions, words, and behavior with increasing independence. Child demonstrates an increasing ability to control impulses.	Demonstrates healthy ways to express needs, wants, and feelings (CEH) .

STRAND 2: RELATIONSHIPS AND SOCIAL SKILLS			
INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Trust and Emotional Security (SE)	Attachment	Relationships with Adults (SE)	Health Education or Physical Education
Shows preference for familiar adults.	Expresses interest, curiosity, and trust with familiar adults.	Child engages in and maintains positive relationships and interactions with adults.	Demonstrate ways to tell a trusted adult if threatened or harmed (AH) .
Engages in behaviors that build relationships with familiar adults.	Seeks support from familiar adults.	Child engages in and maintains positive relationships and interactions with adults.	
Seeks to find comfort in new situations.	Separates from familiar adult with minimal distress.	Child manages emotions with increasing independence.	

STRAND 2: RELATIONSHIPS AND SOCIAL SKILLS (Continued)			
INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Developing Relationship with other children (SE)	Social Interactions	Relationships with other children (SE)	Health Education or Physical Education
Responds to and interacts with other children.	Responds when adults or other children initiate interactions.	Child engages in and maintains in positive interactions and relationships with other children.	Continues a conversation through multiple exchanges (ELA) .
Engages in behaviors that build relationships with familiar adults.	Initiates and sustains positive interactions with adults and other children.	Child engages in cooperative play with other children.	Ask and answer questions to seek help, get information, or clarify something that is not understood (ELA) .
Uses a variety of strategies to solve problems (CD) .	Acknowledges someone's perspective by demonstrating positive ways to resolve conflict.	Child used basic problem-solving skills to resolve conflicts with other children.	Demonstrate the elements of socially acceptable conflict resolution during class activity (SB) .

STRAND 2: RELATIONSHIPS AND SOCIAL SKILLS (Continued)			
INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Social-Emotional Development (SE)	Respect	Relationships with Other Children (SE)	Health Education or Physical Education
<p>Begins to recognize and respond to other children’s feelings and emotions.</p> <p>Shows awareness of and interest in the environment (ATL).</p>	<p>Respects the rights and property of others.</p> <p>Defends own rights and the rights of others.</p> <p>Shows respect for learning materials in the learning environment.</p>	<p>Recognizes cause and effect relationships (LR).</p> <p>Helps, shares, and cooperates in a group (ATL).</p>	<p>Demonstrates safe use of equipment during all class activities (PB).</p>

Universal Design for Learning and Social-Emotional Development

Multiple Ways to Engage Learners

Help children to understand why self-regulation is important, why positive interactions with other children and adults is necessary, and why friendship is important. Using children's interests and strengths increases their engagement as they develop these skills.

Multiple Ways to Represent Information to Learners

This is an opportunity to show children, in a variety of ways, what they will learn about social and emotional development. Displays should be multi-modal using visual, auditory and tactile methods to develop an understanding of social emotional skills.

Multiple Ways for Learners to Share that they Understand

The strengths, interests, and challenges each child experiences will direct how they may share what they know about such skills as cooperation and social problem solving. Provide scaffolding and varied opportunities for self-expression.

Suggested Adaptations for Social Emotional Development

- Model positive strategies for creating adult-to-adult, adult-to-child, and child-to-child relationships (e.g., use eye contact, maintain personal space, share enthusiasm).
- Help identify and understand adult and peer emotional cues (e.g., "She looks sad. Her eyes are watery with a tear running down her face. Her mouth is turned down and her body is closed off.")
- Give an ample amount of time for self-care routines to help build on self-help skills and a sense of responsibility.



Approaches to Learning Standard

APPROACHES TO LEARNING

Approaches to learning refers to behaviors that indicate ways children become engaged in social interactions and learning experiences.

Approaches to learning contribute to their success in school and influence their development and learning in other domains. For example, curiosity is a **prerequisite** of exploration, and reasoning and problem solving are as necessary for social relationships as they are for mathematics. A child’s ability to stay focused, interested, and engaged in activities supports a range of positive outcomes, including cognitive, language, and social and emotional development. Many early learning experts view approaches to learning as one of the most important domains of early childhood development. When children have a positive experience in learning, they are likely to want to learn more.

A child’s brain development is the architecture that supports and shapes approaches to learning. Approaches to learning leads to **executive functions**, an umbrella term for a set of **neurologically-based processes** that involve managing one’s self and one's resources to achieve a goal.³ These include the ability to remember and follow multi-step instructions, avoid distractions, control [...abrupt] responses, adjust when rules change, and persist at problem-solving.⁴ When adults provide a solid foundation in approaches to learning, children will be better equipped for kindergarten and to take advantage of Arizona’s K-12 Standards.

The Approaches to Learning Standard is organized into the following strands and related Concepts:

Strand 1: Initiative and Curiosity

- Initiative
- Curiosity

Strand 2: Attentiveness and Persistence

- Attentiveness
- Persistence

³ Cooper-Kahn, J. & Dietzel, L. (2008). Late, lost, and unprepared: A parent’s guide to helping children with executive functioning. Bethesda, MD: Woodbine House.

⁴ 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.

Strand 3: Confidence and Resilience

- Confidence and Resilience

Strand 5: Reasoning and Problem-Solving

- Reasoning
- Problem-Solving

Strand 4: Creativity

- Creativity

Approaches to Learning Standard Definitions

Attentiveness is the ability to demonstrate focused concentration.

Executive Functions are the ability to analyze situations, plan, focus and maintain attention, and adjust one's actions to complete a task.⁵

Initiative is the power or ability to exhibit a spirit of independence, resourcefulness, and motivation about making choices when interacting with others or independently.

Neurologically-based are the processes based in the brain and the nervous system.

Persistence is the ability to stick with an activity to completion or satisfaction. From Concept: the capacity to engage in what they are doing and to meet challenges appropriate to their level of development.

Prerequisite is required or necessary as a prior condition.

⁵ Copple, C. (2012). Growing minds, building strong cognitive foundations in early childhood. Washington, DC: NAEYC.

STRAND 1: INITIATIVE AND CURIOSITY

Concept 1: Initiative

The child demonstrates motivation, independence, and responsibility while participating in a range of activities and routines.

Initiative refers to a child's ability to exhibit a spirit of independence, resourcefulness, and motivation regarding making choices when interacting with others or independently.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

- a. **Seeks interaction with others.**
 - Joins three other children playing in the sand.
 - Asks a friend to play with them on the slide, while playing outside.
- b. **Demonstrates independence during activities, routines, and play.**
 - Upon entering the learning environment, the child hangs up their coat and backpack.
 - Gathers needed items to paint at the easel (paint, brush, paper, smock).
- c. **Exhibits flexibility, imagination, and inventiveness when attempting tasks and activities.**
 - While playing in the block area child shares a picture from a book about buildings.
 - Tries diverse ways to make a design using pattern blocks, combining multiple shapes.

STRAND 1: INITIATIVE AND CURIOSITY (Continued)

Concept 2: Curiosity

The child demonstrates eagerness to learn about and discuss a range of topics, ideas, and activities.

Curiosity relates to children's natural tendencies as active learners to explore all aspects of the environment, from objects and people, to ideas and customs. It is through discovering the answers to their own questions that children construct knowledge.

Indicators and Examples in Context of Daily Routine, Activities, and Play

- a. **Shows interest in learning new things and trying new experiences.**
 - Says, "Ohhhh, what does that do?" when a microscope is brought into the room for the first time.
 - Gets a magnifying glass to look at a bug.
- b. **Expresses interest in people.**
 - Says, "Where is your friend?"
 - Asks, "Do you have a big sister?"
- c. **Asks questions to get information.**
 - Asks, "What do birds eat?", when on a walk.
 - Asks, "What color is your dog?", after listening to a story about a dog.

STRAND 2: ATTENTIVENESS AND PERSISTENCE

Concept 1: Attentiveness

The child demonstrates the ability to focus on an activity.

Attentiveness refers to the child's ability to focus attention and concentrate. This enhances academic learning, including language acquisition and problem solving, as well as social skills and cooperation.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

- a. **Displays ability to pay attention when engaged in an activity.**
 - Claps every time they hear the /m/ sound in a poem as directed by the teacher.
 - Listens for the teacher to call their name and say the color they are wearing before getting up to wash hands, during a transition.
- b. **Sustains attention when engaged in an age-appropriate activity.**
 - Focuses on making a menu for the pizza parlor while others are rolling clay to make pizzas.
 - Continues to work on a puzzle while other children are playing musical instruments nearby.
- c. **Ability to return to activities after distractions and interruptions.**
 - Stops their art activity to join in a problem-solving discussion at the teacher's request and then returns to art activity. Returns to the art project again after outdoor play.
 - Continues a construction project over several days, adding new pieces each day.

STRAND 2: ATTENTIVENESS AND PERSISTENCE (Continued)

Concept 2: Persistence

The child demonstrates the ability to maintain and sustain a task.

Children demonstrate **persistence** in their capacity to engage in what they are doing and to meet challenges appropriate to their level of development. The ability to persist in a task is an essential element in learning.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

a. Pursues challenges.

- Continues to stack blocks to duplicate a picture until they no longer tumble down.
- Practices walking on a balance beam.

b. Copes with frustration or disappointment independently or with support.

- Knocks the cup over, resets the cup, and tries again, while trying to pour juice into a cup.
- Seeks out teacher to open bike garage when there are not enough tricycles for everyone.

c. Establishes goals, generates plans, and follows through to completion.

- Works on building a Lego airport throughout the course of the day.
- Works on creating a 3-D art project based on their drawing.

STRAND 3: CONFIDENCE AND RESILIENCE

Concept 1: Confidence and Resilience

The child demonstrates self-assurance, motivation, and stamina in a variety of circumstances.

Confident children feel positive about themselves and their ability to do things or to adapt to changing situations. Confidence is supported by a mindset of resiliency. A confident child is willing to take a reasonable risk, to express or defend ideas, to try new experiences, or to engage in challenging tasks.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

a. Expresses opinions or ideas.

- Indicates carrots are their favorite snack and chooses them even though peers say they don't like them.
- Says to friend, "I can help you get the top to stay on" while building a castle.

b. Views self as competent and skilled.

- Says, "I can pour the juice myself."
- Tells friend, "I don't need help. I can do it!"

c. Is willing to take risks and consider a variety of alternatives.

- Says, "I want to try it", when offered broccoli and hummus.
- Chooses to play with the baby dolls instead of playing at the water table with his friends.

d. Demonstrates a mindset of resilience when approaching challenging tasks.

- Freely finds another play area, when being excluded from dramatic play causes child to be upset.
- Says, "**That's okay**, I can be snack helper next time", when child is told they can't be snack helper.

STRAND 4: CREATIVITY

Concept 1: Creativity

The child demonstrates the ability to express their own unique way of seeing the world.

Creativity involves generating novel ideas while engaging curiosity, risk-taking, and imagination. Creativity can be expressed in many ways. We commonly think of this word in association with the expressive arts. However, creativity involves being able to cope with new situations and problems as well as to see things from a different perspective. A creative child extends and elaborates on ideas and appreciates humor.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

a. Uses imagination to generate innovative ideas.

- Creatively places eight eyeballs and two tentacles on their octopus.
- Suggests, “How about we walk like turtles to the playground!”, during transition.

b. Displays curiosity and acknowledges others’ perspectives.

- Requests their picture to be hung sideways to showcase their personal preference.
- Shows enjoyment of others stringing nonsense words together, such as; “link, pink, stink, frink, gink...”.

c. Engages in inventive social play.

- Says, “Let’s take the babies to the park”, while playing house with a friend.
- Says, “Let’s use these boxes to build a rocket and go to the moon!”, during center time.

STRAND 5: REASONING AND PROBLEM-SOLVING

Concept 1: Reasoning

The child demonstrates the ability to think in a logical way.

Reasoning involves the child's ability to use prior knowledge and information to generate a decision or conclusion. Logic and reasoning skills are key to child development in early learning. These skills help children work cooperatively and solve problems independently.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

a. Gathers and analyzes information to reach a conclusion.

- Notices friend is not at the breakfast table, looks around, and states, "My friend isn't here."
- States, "It melted! It must be hot outside", during an experiment with ice.

b. Recognizes relationships between cause and effect.

- Moves a magnet in the sand to pick up metal objects, when working in the science area.
- Reaches for more soap after realizing they do not have enough bubbles, while washing hands.
- Notices banana quickly browned when taken out of its peel, at snack time.

c. Connects prior experiences with new learning.

- Mixed yellow and red to make orange on Monday. On Tuesday states, "I'm going to mix purple and orange to make a new color!"
- Independently buttons own jacket, after practicing on the dressing frames.

STRAND 5: REASONING AND PROBLEM-SOLVING (Continued)

Concept 2: Problem-Solving

The child demonstrates their ability to focus energies on suitable solutions.

Problem solving involves the child's ability to look for or find multiple solutions to a question, task, or problem. This ability is crucial for constructing knowledge as the child builds conflict resolution skills.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

a. Finds out what is wanted or needed.

- Says, "My building is not finished. It needs a ramp for my friend's truck."
- Two children want to play with the red truck and look to see if there is another one on the shelf.

b. Defines the problem.

- Asks, "I'm cold, will you zip up my jacket?", when putting on their jacket.
- Opens the paint container and notifies teacher that the paint has dried out.

c. Brainstorms and chooses a solution to try.

- Gets a wet paper towel and wipes the paint off, when child discovers paint on their pants.
- Asks another child to hold their bike while putting on their helmet.

d. Checks in to see if the solution worked.

- Begins painting after adding water to the dried paint container.
- Sends a marble down the new ramp to see if it lands in the bucket.

Integration

The integration page lists examples of strategies, activities, and experiences that an adult caregiver might offer to support the integration of Approaches to Learning, Language and Literacy, and Mathematics into the Science Standard.

APPROACHES TO LEARNING		
STRAND 1: INITIATIVE AND CURIOSITY		
Science - Approaches that are best integrated into Science.	Language & Literacy – Approaches that are best integrated into Language & Literacy.	Mathematics – Approaches that are best integrated into Mathematics.
1. Pairs students to work on cooperative science activities. Children going on a nature walk are given a paper bag to collect materials and for older preschoolers a clipboard, paper, and pencil to draw with a partner what they observe.	1. Reads a story and then asks open ended questions (“what do you think would happen if we write our own story?”) to allow children to communicate their reasoning skills.	1. Describes, “I have four cookies, but we have eight children. How are we going to solve this problem and make sure everyone gets an equal amount of the cookies?”
2. Leaves materials out intentionally after an investigation so children can persist with further investigation on their own or in groups.	2. Invites children to record the story and places it in the listening center after reading a familiar story; includes the book with the recording or have children illustrate their own book to add to the listening center.	2. Explains, “You’ve worked a long time making a long line of car, person, car, person. You are making a pattern. What comes next in your pattern?”

APPROACHES TO LEARNING		
STRAND 2: Attentiveness and Persistence		
Science - Approaches that are best integrated into Science.	Language & Literacy – Approaches that are best integrated into Language & Literacy.	Mathematics – Approaches that are best integrated into Mathematics.
1. Models how to care for a class garden or individual seed/plant by watering and observing growth.	1. Provides the children with story props (stick puppets, “clank can”, felt board, story sticks) to encourage participation during read aloud time.	1. Provides a variety of materials (e.g., keys, buttons, other recycled manipulative) and assists children to sort objects first by shape then by size.
2. Provides a variety of materials for children to use to build bridges or towers. Encourages children to persist and try new things if the bridges or towers fall or don’t work. Asks questions like, “What would happen if you used a smaller block instead of the big block?”	2. Provides a basket of magnet letters and name cards for children to find the letters of their name.	2. Displays attendance chart and the helper counts how many children are here today.

APPROACHES TO LEARNING		
STRAND 3: Confidence and Resilience		
Science - Approaches that are best integrated into Science.	Language & Literacy – Approaches that are best integrated into Language & Literacy.	Mathematics – Approaches that are best integrated into Mathematics.
1. Asks the children, “What do you think we will see inside when we open the gourd?” Children share their ideas in partner conversation.	1. Observes a conflict between children and provides scaffolded guidance to help them express their feelings and model appropriate responses.	1. Records each child’s predictions of, “How many seeds do you think will be in the apple?” during snack then opens the apple and counts the seeds.

2. Shows the children a block of ice and asks, “What do you think will happen if we put this block of ice outside?” Children “write” their prediction on a clipboard and share with each other.	2. Reads a book about confidence and resilience and facilitates a class discussion about feelings.	2. Introduces the scale and models how to use it with counting bears. The children practice using the scale and say, “Look! The red bears and yellow bears weigh the same!”
---	--	---

APPROACHES TO LEARNING		
STRAND 4: Creativity		
Science - Approaches that are best integrated into Science.	Language & Literacy – Approaches that are best integrated into Language & Literacy.	Mathematics – Approaches that are best integrated into Mathematics.
1. Takes children on a nature hike and encourages children to collect nature items then display what they find together (Teachers should discuss nature items and safety).	1. Designs a “Make a book center” for children to create books. Children are encouraged to read their book to friends.	1. Places pieces of paper and markers near the Dramatic Play area for children to create their own menus and other written dramatic play props.
2. Provides a variety of colors of paint. Children can create new colors by mixing different colors.	2. Writes down a story the child dictates. Child is then encouraged to draw an illustration for their story.	2. Helps children measure and mix portions of their fruit salads during lunch using a picture recipe.

APPROACHES TO LEARNING

STRAND 5: Reasoning and Problem-Solving

Science - Approaches that are best integrated into Science.

Language & Literacy – Approaches that are best integrated into Language & Literacy.

Mathematics – Approaches that are best integrated into Mathematics.

Asks children to predict what will happen when we add more water to the corn starch. Children are given ample time to experiment with different amounts.

Asks children to create their own stories using the same format based on the book, *If You Give a Mouse a Cookie*.

Elicits guidance from the children to create a graph using the question of the day answers during group meeting time.

Questions, “What can we add to this playdough to make this less sticky?” Children can experiment with different ingredients.

Begins singing song, “There’s a hole in the bucket” and elicits children’s ideas of how to fix the bucket. Their ideas are integrated into the song.

Provides materials for children to design a replica of a bridge or to build their own bridge after overhearing children describing a visit to the London Bridge in Lake Havasu.

Alignment

Within the Alignment Matrix are codes that reference the Head Start Early Learning Outcomes Framework, the Arizona *Infant and Toddler Guidelines*, and Arizona’s Kindergarten Standards.

Reference Codes for the Head Start *Early Learning Outcomes Framework* Alignment

- ATL – Approaches to Learning
- CD – Cognitive Development
- LC – Language and Communication
- LIT – Literacy
- MATH – Mathematical Thinking
- PMP – Perceptual, Motor, and Physical Development
- SCI – Scientific Inquiry
- SE – Social-Emotional Development

Reference Codes for the *Infant/Toddler Developmental Guidelines* Alignment:

- ATL – Approaches to Learning
- CD – Cognitive Development
- LDC – Language Development and Communication
- PHD – Physical Health and Development
- SE – Social and Emotional Development

Reference Codes for Kindergarten Approaches to Learning Standards Alignment

PE – Physical Education

STRAND 1: INITIATIVE AND CURIOSITY

INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Initiative & Curiosity	Initiative & Curiosity	Initiative & Curiosity	English Language Arts
Responds to and interacts with other children. (SE)	Seeks interaction with others.	Engages in independent activities. (ATL)	Actively engage in group reading activities with purpose and understanding. Participate in collaborate conversations with diverse patterns and kindergarten topics and texts with peers and adults in a small and large group.
Engage in and actively explores self, objects, and surroundings.	Demonstrates independence during activities, routines, and play.		

Demonstrate ability to initiate activities.	Exhibits flexibility, imagination, and inventiveness when attempting tasks and activities.	Demonstrates eagerness to learn about and discuss a range of topics, ideas, and activities. (ATL)	Speaks Audibly and expresses thoughts, feelings, and ideas clearly.
Shows eagerness and curiosity as a learner. Shows interest and curiosity in new people and objects. (CD)	Shows interest in learning new things and trying new experiences.	Demonstrates eagerness to learn about and discuss a range of topics, ideas, and tasks. (ATL)	
Begins noticing people, events and things. (ATL) Shows interest in and awareness of other children. (SE)	Expresses interest in people.	Develops friendships with peers. (SE)	
Shows awareness of and interest in the environment. (SE)	Asks questions to get information.	Asks questions and seeks new information. (ATL)	

STRAND 2: ATTENTIVENESS AND PERSISTENCE			
INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Indicators of Persistence	Attentiveness & Persistence	Cognitive & Self-Regulation	
Pay attention briefly and try to reproduce interesting and pleasurable effects and events. (ATL)	Displays ability to pay attention when engaged in an activity.	Engages in purposeful play for extended periods of time. (ATL)	
Notice and show interest in and excitement with familiar objects, people and events. (ATL)	Sustains attention when engaged in an age-appropriate activity.	Returns with focus to an activity or project after being away from it. (ATL)	
Begins to manage own behavior and show self-regulation. (SE)	Ability to return to activities after distractions and interruptions.	Maintains focus on activities for extended periods of time. (SE)	
Developing confidence; trying new things and taking risks.	Pursues challenges.		
Shows ability to cope with stress. (SE)	Copes with frustration or disappointment independently or with support.	Tries different strategies to complete work or solve problems including with other children. (ATL)	

<p>Approach and explore new experiences in familiar settings. (ATL)</p>	<p>Establishes goals, generates plans, and follows through to completion.</p>	<p>Completes tasks that are challenging or less preferred despite frustration, either by persisting independently or seeking help from an adult or other child. (ATL)</p>	
--	---	--	--

STRAND 3: CONFIDENCE AND RESILIENCE

INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
	Confidence and Resilience	Self-Concept	
Uses sounds, gestures, or actions to express needs and wants. (LDC)	Expresses opinions or ideas.	Expresses emotions in ways that are appropriate to the situation. (ATL)	Express positive feelings on progress made while learning a new movement skill. (PE)
Shows confidence in increasing abilities. (SE)	Views self as competent and skilled.	Demonstrates knowledge of uniqueness of self, such as talents, interests, preferences, or culture. (SE)	
Watches what others do, begin to pretend, and use materials in new and different ways. (ATL)	Is willing to take risks and consider a variety of alternatives.	Is willing to participate in new activities or experiences even if they are perceived as challenging. (ATL)	
	Demonstrates a mindset of resilience when approaching challenging tasks.		

STRAND 4: CREATIVITY

INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Indicators of Creativity	Creativity	Approaches to Learning	
Uses imitation or pretend play to express creativity and imagination. (CD)	Uses imagination to generate innovative ideas.	Engages in social and pretend play.	
Develops likes and dislikes; with a growing sense of playfulness, they begin to see things as “funny” and enjoy surprising others. (ATL)	Displays curiosity and acknowledges others’ perspectives.	Tries different strategies to complete work or solve problems including with other children.	Exhibits both verbal and nonverbal expressions of enjoyment. (PE)
Pretend and use imagination during play.	Engages in inventive social play.	Engages in joint play, such as using coordinated goals, planning, roles, and games with rules, with at least one other child at a time.	

STRAND 5: REASONING AND PROBLEM-SOLVING			
INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
	Reasoning & Problem-Solving	Reasoning & Problem Solving	
Shows ability to acquire and process new information. (CD)	Gathers and analyzes information to reach a conclusion.	Analyzes and interprets data and summarizes results of investigation. (CD)	
Use sounds, gestures and movements to impact the environment and interactions. (ATL)	Recognizes relationships between cause and effect.	Draws conclusions, constructs explanations, and verbalizes cause and effect relationships.	
Recalls and uses information in new situations. (CD)	Connects prior experiences with new learning.	Makes predictions and brainstorms solutions based on background knowledge and experiences.	
Applies knowledge to new situations. (CD)	Finds out what is wanted or needed.	Makes predictions and brainstorms solutions based on background knowledge and experiences.	

<p>Uses variety of strategies to solve problems. (CD)</p>	<p>Defines the problem.</p>	<p>Asks questions that can be answered through an investigation.</p>	
	<p>Brainstorms and chooses a solution to try.</p>	<p>Makes predictions and brainstorms solutions based on background knowledge and experiences.</p>	
<p>Shows imagination and creativity in solving problems (CD)</p>	<p>Checks in to see if the solution worked.</p>	<p>With adult support, compares results to initial prediction and offers evidence as to why they do or do not work.</p>	

Universal Design for Learning and Approaches to Learning

Multiple Ways to Engage Learners

Approaches to Learning and cognitive skills are very individual and a child's interests impact the intensity of attending, engaging, being curious etc. Children's motivation, memory, flexibility, and inventiveness increases with topics and concepts that are of most interest to the child.

Multiple Ways to Represent Information to Learners

To engage children's Approaches to Learning and cognitive skills, tap into their background knowledge, use multi-media tools, and provide alternatives to just auditory or visual information. The use of illustrations, patterns, hands-on activities, and thinking about "big ideas" supports the development of new skills.

Multiple Ways for Learners to Share that they Understand

For children to demonstrate their knowledge around Approaches to Learning and cognitive skills, providing options is important. Physical action for expression used in place of words and tools, assistive technology, and scaffolding to practice and perform skills, all assist children with differing levels of need to participate and learn.

Suggested Adaptations for Approaches to Learning

- Nurture children's curiosity by providing thought-provoking, hands-on, investigative experiences that motivate them to apply their developing skills and prior knowledge, and challenge them to think critically.
- Provide well-defined boundaries for preschool and kindergarten children who need support to focus (e.g., use freestanding cardboard dividers for table activities and colored tape to define workspaces on the floor). Limit the number of choices they need to make.
- Emphasize the process children use to come up with possible approaches to tasks instead of focusing on finished products and answers.



Language and Literacy Standard

LANGUAGE AND LITERACY STANDARD

Environments rich with print, language, storytelling, books, digital tools, and writing materials allow children to experience the joy and power associated with reading and writing, while mastering basic concepts of print.

Children learn language BEST when they are **actively engaged** in meaningful and purposeful interactions. Daily exposure to verbal and written language provides young children with the opportunities to begin acquiring understanding of the concepts of **literacy** and its functions. Through play and intentional activities, children learn to create meaning from language and communicate with others using verbal and non-verbal language, pictures, **symbols**, and print.

The preschool environment is respectful and supportive of children’s cultural heritages and home languages while encouraging English language acquisition. The ability to listen, speak, read, and write emerge interdependently in environments designed to meet each child’s unique skills, abilities, interests, and needs.

The Language and Literacy Standard is organized into the following Strands and related Concepts:

Strand 1: Language

- Receptive Language Understanding
- Expressive Language and Communication Skills
- Vocabulary

Strand 2: Emergent Literacy

- Concepts of Print
- Book Handling Skills
- Phonological Awareness
- Alphabet Knowledge
- Comprehension and Text Structure

Strand 3: Emergent Writing

- Writing Processes and Writing Applications

Language and Literacy Standard Definitions

Active Engagement is a reciprocal relationship between children and teacher involved in the learning activity; interactive dialogue, listening, and focused attention are emphasized.

Alliteration contains the same consonant sounds at the beginning of words in a sentence, a group of words, or a line of poetry; e.g., the “P” in Peter Piper picked a peck of pickled peppers.” There are two levels of alliteration awareness: 1) identification – the ability to recognize that several words start with the same sound; and 2) production – the ability to produce two words that start with the same sound such as “bumble bee.”

Alphabet Knowledge is a state of familiarity with the alphabet, which is the complete set of letters or other graphic symbols representing speech sounds used in writing a language.

Assistive Technology Devices are tools that help someone communicate, such as picture cards or boards, touch screens, personal amplification systems, tablets, or television closed-captioning.

Blending combines syllables and sounds to make words.⁶

Concepts of Print is knowledge of print conventions (e.g., left-right, top-to-bottom, front and back) and print concepts (e.g., book cover, author, and text).

Dialogic Reading is a process of incorporating conversation as an oral technique in teaching reading skills.

Digital Tools are interactive media and electronic technology that generate, store, and process data and information. Examples include: tablets, mobile devices, CD players, light tables, computers, microscopes, DVDs, and electronic keyboards.

Discriminate is a verb that means to recognize or identify a difference.

Literacy is a view that literacy learning begins at birth and is encouraged by having children participate early in a range of literacy and language activities.

⁶ Paulson, L.H. & Moats, L.C. (2010). LETRS for early childhood educations. Boston, MA. Sopris

Environmental Print includes common words and messages that guide us through our world (e.g., signs, advertisements, labels, directions).

Expository/Informational books are a genre that present and explain information. The primary purpose of expository text is to inform, explain, or persuade.

Inflection is a change in the tone or pitch of the voice.

Interactive Shared Reading is a strategy where the adult involves a child or small group of children in reading a book that introduces concepts of print and new vocabulary, or encourages predictions, rhyming, discussion of pictures, and other interactive experiences.

Inventive Writing is the spelling of words from a beginning writer's first attempts to associate sounds with letters (kp ot = keep out).

Literacy includes reading, writing, and the creative and analytical acts involved in producing and comprehending texts.

Manipulate is a verb that means to maneuver or work with something; e.g., the child manipulates sounds in words.

Narratives/Storybooks are books that tell a story with a beginning, middle, and ending. Narrative stories include characters, settings, themes, a central problem/conflict, and a solution to the problem.

Onset is the beginning consonant sound in a syllable that precedes the vowel (e.g., /b/-ook).

Phonemes are the smallest units of spoken language that combine to form words; e.g., the word *hat* is made up of three phonemes (/h/-/a/- /t/).

Phonemic Awareness is the ability to notice, think about, and work with the individual sounds in spoken words.

Phonics is the association of letters with the speech sounds they represent, rather than visual recognition of the whole word as a unit.

Phonological Awareness is the ability to notice and work explicitly with the sounds of language. Phonological Awareness activities can involve work with words, onsets and rimes, alliteration, rhymes, and separating individual syllables into sounds.

Pragmatics is social language involving three major communication skills: 1) using language for different purposes (e.g., greeting, informing, demanding); 2) changing language according to the needs of the listener or situation (e.g., talking differently to a baby than to an adult); and

3) following rules for conversations and storytelling. (e.g., taking turns in conversation, staying on topic, and rephrasing when misunderstood).⁷

Picture Walk is a shared activity between an adult reader and a child or a group of children before reading a book or story.⁸

Print Awareness is a basic knowledge about print and how it is typically organized on a page (e.g., print conveys meaning, print is read left to right, and words are separated by spaces).

Rare Words are words that are not commonly heard in conversations with young children. The phrase, “rare words,” was coined by researcher, Catherine Snow, Harvard University.

Rime is the initial vowel and all that follows it in the syllable (e.g., b-/ook/).

Scaffold is to provide support at a level just above a child’s current skill level that pushes them to a slightly higher level of skill.

Scribbles and Letter-Like Forms are common writing strokes (e.g., horizontal and vertical lines, points, circles, spirals, zigzag lines, wavy lines) used to approximate letters.

Segmenting pulls words apart into syllables and sounds.⁹

Syllables are words or part of a word pronounced with a single uninterrupted sound of the voice.

Symbol a mark, sign, or word that indicates, signifies, or is understood as representing an idea, an object or relationship.

Tone is the way something is said that is an indicator of what the speaker is feeling or thinking.

⁷ American Speech-Language-Hearing Association. (n.d.). Social Communication. Retrieved from <https://www.asha.org/public/speech/development/Pragmatics/>

⁸ Schnickedanz, J. A. & Collins, M. (2013). So much more than the ABCs. Washington, D.C.: National Association for the Education of Young Children

⁹ Paulson, L. H. & Moats, L. C. (2010). LETRS for early childhood educators. Boston, MA: Sopris

STRAND 1: LANGUAGE

Concept 1: Receptive Language Understanding

The child demonstrates understanding of directions, stories, conversations, and nonverbal cues.

Receptive language is the ability to understand or comprehend language that is heard or read. During the preschool years, children continue to learn language at a rapid pace. Connections within the brain supporting vision and hearing develop first, followed by pathways for early language skills and higher cognitive functions that build on earlier neurological foundations. “Sensory pathways like those for basic vision and hearing are the first to develop, followed by early language skills and higher cognitive functions. Connections proliferate and prune in a prescribed order, with later, more complex brain circuits built upon earlier, simpler circuits.”¹⁰

Associating language with pleasant and stimulating experiences nurtures this development. Young children’s sense of words and sentences, sensitivity to tone, and understanding of ideas communicated, influences their abilities to listen and to comprehend. Listening involves active engagement with adults and peers as they share their ideas, feelings, and needs. Language is learned through engaging conversations, related literacy activities such as oral storytelling and interactive shared reading.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

- a. **Demonstrates understanding of a variety of finger-plays, rhymes, chants and songs, poems, conversations, and stories.**
 - Follows gestures and actions.
 - Teacher asks, “Where would you like to play? It’s time to work.” Child points to blocks or answers, “Blocks.” Teacher extends the interaction and builds on child’s response by saying, “Oh, you want to play in the block area.”
- b. **Engages actively in finger-plays, rhymes, chants and songs, poems, conversations, and stories.**
 - Claps when prompted with, “If you’re happy and you know it, clap your hands.”
 - Participates in story, *Going on a Bear Hunt*.
- c. **Demonstrates understanding and follows directions that involve one step, two steps, or multiple steps.**
 - Places toy truck on shelf when adult says, “Please put the truck on the shelf.”
 - Responds to the directions, “Put the block on the table, put your paper in the cubby, and line up to go outside.”

¹⁰ Center on the Developing Child. (2015). In Brief: The science of early childhood development. Retrieved from <http://developingchild.harvard.edu/>.

STRAND 1: LANGUAGE (Continued)

Concept 2: Expressive Language and Communication Skills

The child uses verbal and nonverbal communication for a variety of purposes; to share observations, ideas, experiences, problem-solve, reason, predict, seek new information, and make connections.

Children develop language by engaging in conversations with others and listening and responding to rhymes, chants, songs, stories, and poems. This kind of shared interaction is called “serve and return.”¹¹ Children who are encouraged to share their personal experiences, ideas, feelings, and opinions use increasingly complex language. By noticing serves, you’ll learn a lot about a child’s abilities, interests, and needs.

Indicators and examples in the Context of Daily Routines, Activities, and Play

a. Communicates needs, wants, ideas, and feelings through three to five-word sentences.

- Engages intentionally in simple or multi-turn conversations with peers and adults at snack time replying to the question, “What did you have for breakfast?” “My mom made pancakes.” “What kind of pancakes did your mom make?” “She made blueberry pancakes.” “Oh, yum! I love blueberry pancakes too.”
- Talks with a peer about a trip to a park, another child utilizes sign language which includes social rules; pragmatics; age appropriate tone, and volume and responds, “I went to the park too.” “What did you do at the park?” “ We had a picnic.”

b. Speaks clearly and understandably to express ideas, feelings, and needs.

- Combines words into simple sentences – “Is it time to go home?” Or “More milk please.”
- Says, “I want to go play at the water table.”

c. Makes culturally relevant responses (both verbal and nonverbal) to questions and comments from others.

- Exclaims, “I did it!” after teacher asks, “Did you get your jacket on?”
- Says, “I have a cat, too,” after teacher shows a picture of a cat.
- Responds, “¡sí, mamá! I have my peanut butter sandwich,” during drop off, after a parent asks, ¡Adiós! ¿Tienes tu sándwich?

d. Initiates, sustains, and expands conversations with peers and adults using open-ended responses.

- Approaches peers and asks, “What are you making?”
- Says, “I went to the zoo.” Teacher expands by asking, “What was your favorite animal?” Child replies, “The lion.” Teacher responds, “The lion is your favorite. Why?” Child answers, “I like the way he roars.”

¹¹ Center on the Developing Child. (2015). In Brief: The science of early childhood development. Retrieved from <http://developingchild.harvard.edu/>.

Indicators and examples in the Context of Daily Routines, Activities, and Play (Continued)

e. With modeling and support, child uses language that includes social rules; e.g., pragmatics, appropriate tone, volume, and inflection to express ideas, feelings, and needs.

- Responds excitedly, “That’s my favorite!”, when an adult begins to read a book.
- Tells a classmate emphatically, “Stop, I don’t like that!” or whispers in a classmate’s ear during circle time.

f. Uses culturally relevant responses such as eye contact, turn taking, and intonation while having conversations with adults and peers.

- Uses turn-taking during conversations with peers and adults.
- Looks towards her friend, while speaking.

g. Recognizes when the listener does not understand and varies the amount of information¹² to clarify the message.

- Uses a different word to clarify the intended message when child realizes he has been misunderstood.
- Points to a picture to clarify his intent.

h. With modeling and support, uses increasingly complex phrases and sentences.

- Says, “Let’s put the cars up higher on the ramp so they will go really fast.”
- Says, “I want to go home because my grandma is there.”

¹² Flynn, E. f. (2016). Language-Rich Early Childhood Classroom: Simple but Powerful Beginnings. *Reading Teacher*, 70(2), 159-166. doi:10.1002/trtr.1487

STRAND 1: LANGUAGE (Continued)

Concept 3: Vocabulary

The child understands and uses increasingly complex vocabulary.

The early childhood years are a period of vocabulary expansion and exploration. Research indicates that there is a strong connection between vocabulary development and reading comprehension which correlates to academic success. Children gain language and vocabulary skills by having multiple and frequent opportunities to listen, talk, read, share ideas, relate experiences, and engage in meaningful conversations. They need to play with familiar language and experiment with language in different settings. Rhymes, songs, and read-alouds that use rare words allow children to talk about and develop an understanding of words they would not otherwise hear in everyday conversations.

Indicators and examples in the Context of Daily Routines, Activities, and Play

b. Uses rich vocabulary across many topic areas.

- Says, “Let me listen to your heart with a stethoscope” while in dramatic play.
- Reads *The Very Hungry Caterpillar* and exclaims, “I see a cocoon.”
- The child uses new words or signs during play and other activities.

c. Figures out the meanings of unfamiliar words and concepts using the context of conversations, pictures that accompany text, or concrete objects.

- Explains, “I am making skyscraper,” while playing with the wooden blocks.
- Says, “I will get the colander to rinse the grapes” while playing in the dramatic play area.

d. Uses category labels and names objects within a category; e.g., fruit, vegetable, animal, transportation.

- Replies, “I want a carrot,” when asked, “Which vegetable do you want?”
- Gathers a variety of animals and says, “I found a dog, two pigs, and a duck.”

e. Demonstrates understanding of and uses words that indicate position and direction; e.g., in, on, out, under, over, off, besides, behind.

- Responds to the teacher’s requests to return his car to the shelf, put blocks in the container, or stand beside a peer.
- Says, “I am standing between Billy and Rita.”

STRAND 2: EMERGENT LITERACY

Concept 1: Concepts of Print

The child knows that print carries messages.

Through daily experiences with materials, in a print rich environment, young children delight in discovering the connections between spoken and written words. They learn what print is used for and that print conveys meaning such as in signs, letters, menus, storybooks, and magazines.

Indicators and examples in the Context of Daily Routines, Activities, and Play

- a. **Identifies signs, symbols, and labels in a variety of environments (environmental print).**
 - Points to a stop sign and says, “That says stop.”
 - Sees recycling symbol and says, “This is the recycling bin.”
- b. **Demonstrates and understands that print conveys meaning and that each spoken word can be written and read.**
 - Finds name on her placemat at lunch.
 - Pretends to read a letter while playing Post Office.
- c. **Recognizes that letters are grouped to form words.**
 - Asks teacher to write name on paper.
 - Groups letters together and asks, “What does this say?”
- d. **Recognizes own written name and the written names of friends and family.**
 - Reads job chart naming classmates.
 - Picks up a name card and says, “This says Jose.”
- e. **Seeks information in printed materials.**
 - Says, “We caught a cricket in our bug jar. Let’s find a book about crickets.”
 - Looks at grocery advertisements while creating a shopping list.

STRAND 2: EMERGENT LITERACY (Continued)

Concept 2: Book Handling Skills

The child demonstrates how to handle books appropriately and with care.

It is important to provide young children with many opportunities to interact with and care for books in all environments. Young children need to have access to a variety of fiction and nonfiction books throughout the day, including those that reflect diverse cultures. Through these experiences, children learn to hold books right side up and to turn the pages one at a time to view the illustrations and to gain a sense of the story or content.

Indicators and examples in the Context of Daily Routines, Activities, and Play

- a. **Holds a book right side up with the front cover facing the reader and understands left to right and top to bottom directionality.**
 - Turns the pages one page at a time to continue reading.
 - Turns the book right side up before beginning to look at it, when handed a book upside down.
- b. **Identifies where in the book to begin reading.**
 - Finds the front of the book, the first page of the text, and the first word on the page.
 - Points to the first page and says, “Start here.”
- c. **Understands a book has a title, author, and/or illustrator.**
 - Makes a book and says, “My book is called *My Mom*, and I’m the author.”
 - Identifies that the illustrator draws the pictures in a book.

STRAND 2: EMERGENT LITERACY (Continued)

Concept 3: Phonological Awareness

The child develops awareness that language can be broken in words, syllables, and smaller units of sounds (phonemes).

Young children learn to discriminate between the similarities and differences in spoken language. Such awareness is the foundation of young children’s abilities to hear and discriminate different sounds in words (phonological awareness). Research indicates how quickly and how easily children learn to read often depends on how much phonological awareness they have. Children’s abilities to play with or manipulate the smallest units of speech (phonemes) are demonstrated in a variety of ways, including using rhymes, alliteration, blending, segmenting, and experimenting with beginning and ending sounds. Phonological awareness and phonemic awareness are the foundations that enable preschool children to later match sounds to their letters (phonics).

Indicators and examples in the Context of Daily Routines, Activities, and Play

- a. **Differentiates between sounds that are the same and different (e.g., environmental sounds, animal sounds, phonemes).**
 - Plays the game, Sound Bingo, and can differentiate between sounds – “That’s a telephone.” “That’s a dog barking.”
 - Says, “Hey, the beginning of my name sounds like that /t/.”
- b. **Identifies rhyming words.**
 - Shows thumbs up when two words rhyme in a poem, cat/hat.
 - Points to pictures of words that rhyme.
- c. **Produces rhyming words.**
 - Sings, “Joy, noy, boy, loy, toy,” while playing.
 - Finishes the rhyme “The fat cat sat on the ____.”
- d. **Recognizes spoken words that begin with the same sound.**
 - Exclaims Millie, “My name starts like Mel’s name!”
 - Selects man and mop as beginning with the same sound when presented with pictures of man, hat, and mop.

Indicators and examples in the Context of Daily Routines, Activities, and Play (Continued)

e. Hears and shows awareness of separate words within spoken phrases or sentences.

- Jumps when hearing a specified word in a story/poem.
- Claps each word spoken in a sentence “I like blocks.”

f. Identifies and discriminates syllables in words.

- Claps each syllable of a name during a name game or name song. (Ben-ja-min = clap, clap, clap)
- Takes a step for each syllable heard in a word. (hi-ber-na-tion = step, step, step, step)

g. Combines onset and rime to form a familiar one-syllable word with and without pictorial support.

- Selects the correct picture of the cat when the adult says the name by segmenting it into its onset and rime components. (/c/ + /at/)
- Guesses, “Dog.” when teacher says the onset and rime /d/+og/.

STRAND 2: EMERGENT LITERACY (Continued)

Concept 4: Alphabet Knowledge

The child demonstrates knowledge of the alphabet. Child identifies letters of the alphabet and produces correct sounds associated with several letters.

Learning the alphabet involves more than teaching letter identification. Children must also come to understand the alphabet as a system and learn how the letters function in written language.¹³ Young children begin to recognize some printed alphabet letters, especially those letters found in their own names. To support young learners' knowledge of letters, adults need to provide children with easy and repeated meaningful interactions with written letters and words within the context of daily experiences and engage them in activities that are fun and interesting.

Indicators and examples in the Context of Daily Routines, Activities, and Play

a. Discriminates letters from other shapes and symbols.

- Reads the book *Chicka Chicka Boom Boom*, and child points to the letter [a] and says, "That's the letter 'A' falling off coconut tree."
- Looks at an advertisement (environmental print) and the child points to the "W" for Walmart.

b. Matches and recognizes similarities and differences in letters, with modeling and support.

- Traces the letter S and says, "The letter has curves."
- Says, "My name starts with a big A." The teacher says, "Let's make a letter A like the letter in your name." Then using playdough, the child and teacher create the letter A.

c. Recognizes an increasing number of letters, especially those in own name, familiar objects, family, and friends.

- Names some letters while playing with alphabet stamps, magnets, cards, or puzzles.
- Says, "My name starts with an [I]."
- Paints the letter L like in her friend's name, while at the easel.

d. Demonstrates understanding of letters by producing letter forms using a variety of materials; e.g., playdough, blocks, marker, and paper.

- Rolls out the first letter of their name, "K" in playdough.
- Writes letter "M" for "mom" on an envelope, while at the writing center.

¹³ Council of Exceptional Children, 20 (2), p. 55.

e. Uses letter-sound knowledge, identifying the sounds of a few letters and producing the correct sounds for an increasing number of letters.

- Writes name (Taylor) by making the “t” sound and then prints the letter.
- Says, “/S/, /s/, /s/, snake.” when looking at a letter [S].
- Replicates the letter sound, when a teacher shows and says a letter.

STRAND 2: EMERGENT LITERACY

Concept 5: Comprehension and Text Structure

The child demonstrates an understanding of narrative structure through storytelling, questioning, and recall.

Children gain understanding about language and reading through their interactions with verbal language, print, and daily routines. Through shared reading (or dialogic reading), children learn about reading concepts by experiencing a learning environment rich in signs, symbols, words, numbers, and art that reflect diverse cultures. When children are read to regularly and encouraged to intentionally interact with printed materials, they develop an interest in books and other printed materials.

“To comprehend what they read, children must continually draw on relevant background knowledge. This means that having a solid conceptual and informational base is a vital part of becoming a skilled reader.”¹⁴

Indicators and examples in the Context of Daily Routines, Activities, and Play

- a. Takes an active role in reading activities.**
 - Picks up a book and pretends to read.
 - Chooses a book and asks someone to read it.
- b. Identifies characters and major events in a story.**
 - Provides details about the characters and actions after listening to a story.
 - Tells adult “The wolf blew the house down.”
- c. Asks and answers a variety of questions about books or stories told or read aloud.**
 - Asks, “Where do whales live?” while reading a story about whales.
 - After reading the book *No, David*, the teacher discusses the story with a small group of children. The teacher asks, “What would you tell David?” The child declares, “I think David should have made a better choice.”

¹⁴ Neuman, S.B., Copple, C., & Bredekamp, S. (2000). *Learning to read and write: Developmentally appropriate practices for young children*. Washington, D.C.: National Association for the Education of Young Children

- d. Draws connections between story events and personal experiences.**
- Exclaims, “I have a cat!” after hearing a story about pets.
 - Says, “We went sledding in Flagstaff.” after reading *The Snowy Day*.
- e. Identifies events and details in the story and makes predictions.**
- Says, “I think the story will be about frogs.” after completing a picture walk of a book.
 - Responds, “I think the bear will go sleep in the cave,” after the teacher asks, “What do you predict will happen next?”
- f. Gives an opinion for liking or disliking a book or story.**
- Says, “I like that book because David is funny.”
 - Says, “I don’t like that book because it is scary.”
- g. Begins to demonstrate an understanding of the differences between fiction and non-fiction.**
- Says, “Dogs don’t talk” after listening to a story about a talking dog.
 - Gets a *Ranger Rick* magazine to find information about bears.
- h. Identifies the topic of informational text that has been read aloud.**
- Says, “I am going to build a house just like we read about in the book.”
 - Says, “This book tells us how to bake a cake.”
- i. Retells or reenacts a story in sequence with pictures or props.**
- Acts out a familiar story using dramatic play materials.
 - Uses felt board to retell story of *The Hungry Caterpillar*.
- j. Demonstrates reading fluency by use of phrasing, intonation, and expression in shared reading of familiar books, poems, chants, songs, nursery rhymes, or other repetitious or predictable texts.**
- Repeats phrase in book using appropriate intonation and phrasing “Who’s been sitting in my chair?” said Papa Bear.
 - Says, “Brown Bear, Brown Bear what do you see?” with teacher.

STRAND 3: EMERGENT WRITING

Concept 1: Writing Processes and Writing Applications

Children engage in a variety of writing activities and begin to convey meaning through their increasingly sophisticated marks. Children write to communicate ideas and to convey meaning. These skills include the understanding of print, the development of motor skills, and the generation of ideas.

Children begin to recognize the relationship between spoken and written messages by engaging in writing, drawing, and related activities that have meaning and purpose for them. Children receive powerful messages about literacy's pleasures and rewards by observing others' reading and writing. Children develop as writers when they are encouraged to write in an environment that has readily accessible writing materials. Children's writing develops in a well-defined sequence that represents their understanding of how print works. The stages begin with simple scribbles and progress to writing words in a conventional manner.¹⁵

Indicators and examples in the Context of Daily Routines, Activities, and Play

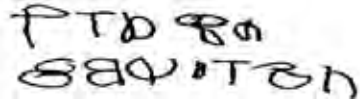
- a. In writing process, uses a variety of writing tools, materials, and surfaces to create drawings or symbols.**
 - Draws random lines/scribbles on a page.
 - Scribbles a note to mom, prior to leaving school.
 - Draws to produce letter-like forms - creating a mock word - the child says, "This is 'Papa'."
 - Listens to a book about where people live, and paints a picture of their home.
 - Uses an interactive whiteboard to make an onscreen drawing of the snake from a story about snakes.

- b. Writes own name using letter-like forms or conventional print.**
 - Writes own name on drawing.
 - Writes own name from left to right on the sidewalk when playing with chalk on sidewalk.

¹⁵ Paulson, L. H. & Moats, L. C. (2010). LETRS for early childhood educators. Boston, MA: Sopris

c. Intentionally uses scribbles/writing and inventive writing to convey meaning, ideas, or to tell a story; e.g., signing artwork, captioning, labeling, creating lists, making notes.

- Asks, “What would you like to eat?” while playing restaurant and scribbles the order on a pad.



- Writes W L C M and says, “This says, ‘Welcome’.”

d. Forms letters starting with large motor (sky writing, paint brush and water, sidewalk chalk) progressing to fine motor (paper and writing utensil).

- Writes letters from name on the sidewalk with chalk.
- Writes letter-like forms on a page and says, “This is a note for my mommy.”

e. Organizes writing from left to right, indicating a print awareness that letters cluster as words and words cluster into phrases or sentences by use of spacing or marks.

- Plays at writing a message by placing spaces between the “words” on the page.
- Writes a series of letters and asks, “What word does this make?”

Integration

Integration of Approaches to Learning and Mathematics into the Language and Literacy Standard.

LANGUAGE AND LITERACY	
STRAND 1: LANGUAGE	
Approaches to Learning - Approaches that are best integrated into Language and Literacy.	Mathematics – Actions that would incorporate Mathematics into Language and Literacy.
1. Reads a story and then asks open-ended questions (“What do you think would happen if we write our own story?”) to allow children to communicate their reasoning skills.	1. Uses daily routines to develop children’s analysis and reasoning by asking questions such as, “How many napkins do we need to set the table for snack?” and “How did you figure that out?”
2. Provides puppets for children to problem solve common conflicts in the classroom such as name calling, biting, pushing, and taking toys from each other.	2. Utilizes mathematical vocabulary (plane, angle, more, less, fewer, big, bigger, biggest, compare) regularly in daily activities.
3. Creates and offers a visual support during routines to help child successfully choose a center e.g. picture schedule or picture of centers.	3. Uses songs and books to teach about counting, sequence, addition, and subtraction; e.g., <i>There was Ten in the Bed; Five little Monkeys Jumping on the Bed; Five Little Ducks; Chicka, Chicka 123; While you were Sleeping.</i>

LANGUAGE AND LITERACY

STRAND 2: EMERGENT LITERACY

Approaches to Learning - Approaches that are best integrated into Language and Literacy	Mathematics – Actions that would incorporate Mathematics into Language and Literacy.
1. Promotes children’s curiosity and Phonological Awareness by bringing in a basket with objects that rhyme and playing the game “A tisket a tasket the rhyming basket.”	1. Sets up a variety of non-fiction books around the learning space that represent mathematical concepts throughout the classroom.
2. Invites each child to bring in an example of Environmental Print to create a class book and then the teacher places it in the library center for children to read independently.	2. Scaffolds activities to reinforce counting and awareness of syllables (e.g., have children count as they clap the syllables in their own names and then the syllables in their friend’s names. Bailey-2, Brenda-2, Tom-1.)
3. Asks children to record the story after a small group read-aloud and places it in the listening center; includes the book with the recording or have children illustrate their own book to add to the listening center.	3. Creates a graph and provides plastic foods for children. The children then sort the foods by the number of syllables in each word (e.g., banana-3, milk-1, apple-2).

LANGUAGE AND LITERACY

STRAND 3: EMERGENT WRITING

Approaches to Learning - Approaches that are best integrated into Language and Literacy.	Mathematics – Actions that would incorporate Mathematics into Language and Literacy.
1. Ensures that all children have opportunities to write throughout the day and promote their self-expression by offering items such as journals, clip boards, message boards, lists, blank paper, and writing tools.	1. Writes a question of the day; e.g., “How many pets do you have?” Children help tally the results and report their findings in their journals.
2. Creates brainstorming webs with children by having the children dictate their thoughts and ideas related to their interests or studies in the learning environment.	2. Sets up trays of sand for students to practice writing numbers.

Alignment

Within the Alignment Matrix are codes that reference the *Head Start Early Learning Outcomes Framework*, the *Arizona Infant and Toddler Guidelines*, and Arizona’s Kindergarten Standards.

Reference Codes for the Head Start Early Learning Outcomes

Framework Alignment

- ATL – Approaches to Learning
- LC – Language and Communication
- L- Literacy
- LR- Logic & Reasoning
- MD – Mathematics Development
- PMPD – Perceptual, Motor, and Physical Development
- SED – Social & Emotional Development
- SR – Scientific Reasoning

Reference Codes for the Infant/Toddler Developmental Guidelines

Alignment:

- ATL – Approaches to Learning
- CD – Cognitive Development
- LDC – Language Development and Communication
- PHD – Physical Health and Development
- SED – Social and Emotional Development

Reference Codes for Kindergarten English Language Arts (ELA)

- RL – Reading Standards for Literature
- RI – Reading Standards for Informational Text
- RF – Reading Standards for Foundational Skills
- W – Kindergarten Writing Standards
- WF – Kindergarten Writing Standards: Foundational Skills
- SL – Kindergarten Speaking and Listening Standards.
- L – Kindergarten Language Standards

STRAND 1: LANGUAGE			
INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Listening and Understanding (LDC)	Receptive Language Understanding	Receptive Language Attending and Understanding	Literature
Shows interest in listening to sounds. (LDC)	Demonstrates understanding a variety of finger-plays, rhymes, chants and songs, poems, conversations, and stories.	Attends to language during conversations, songs, stories, or other learning experiences.	With prompting and support, retell familiar stories, including key details. (RL)
Begins to understand gestures, words, questions, or routines. (LDC)	Actively engages in finger-plays, rhymes, chants and songs, poems, conversations, and stories.	Attends to language during conversations, songs, stories, or other learning experiences.	Follow agreed-upon rules for discussions (e.g., Listening to others, taking turns speaking about the topics and texts under discussion). (CC) With prompting and support, retell familiar stories, including key details. (RL)
Begins to understand gestures, words, questions, or routines. Responds to verbal communication of others. (LDC)	Demonstrates understanding and follows directions that involve one step, two steps, or multiple steps.	Understands and responds to increasingly complex communication and language from others.	

STRAND 1: LANGUAGE (Continued)

INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Communication and Speaking (LDC)	Expressive Language and Communication Skills	Language and Communicating (LC)	Speaking and Listening (SL)
<p>Uses sounds, signs, or words for a variety of purposes.</p> <p>Uses consistent sounds, gestures, or words to communicate, imitates sounds, gestures or words.</p> <p>Uses sounds, signs, or words, for a variety of purposes.</p>	<p>Communicates needs, wants, ideas, and feelings through three to five-word sentences.</p>	<p>Child varies the amount of information provided to meet the demands of the situation.</p>	<p>Speak audibly and expresses thoughts, feelings, and ideas clearly. (L)</p>
<p>Uses sounds, signs, or words for a variety of purposes.</p> <p>Uses consistent sounds, gestures, or words to communicate, imitates sounds, gestures or words.</p> <p>Uses sounds, signs, or words, for a variety of purposes.</p>	<p>Speaks clearly and understandably to express ideas, feelings, and needs.</p>	<p>Child understands and follows and uses social and conversational rules.</p>	<p>Speaks audibly and expresses thoughts, feelings and ideas clearly.</p> <p>Speak audibly and expresses thoughts, feelings, and ideas clearly. (L)</p>

STRAND 1: LANGUAGE (Continued)

INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
<p>Uses consistent sounds, gestures or words to communicate, Imitates sounds, gestures or words.</p> <p>Shows reciprocity in using language in simple conversations.</p>	<p>Makes culturally relevant responses (both verbal and nonverbal) to questions and comments from others.</p>	<p>Expresses self in increasingly long and sophisticated ways.</p>	<p>Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups. (SL)</p> <p>Follow agreed-upon rules for discussions (e.g., listening to others, taking turns speaking about the topics and texts under discussion).</p> <p>Continue a conversation through multiple exchanges. (L)</p>
<p>Shows reciprocity in using language in simple conversations.</p>	<p>Initiates, sustains, and expands conversations with peers and adults using open-ended responses.</p>	<p>Expresses self in increasingly long and sophisticated ways.</p>	
<p>Uses consistent sounds, gestures or words to communicate, Imitates sounds, gestures or words.</p>	<p>With modeling and support, child uses language that includes social rules; e.g., pragmatics, appropriate tone, volume, and inflection to express ideas, feelings, and needs.</p>	<p>Child understands, follows, and uses appropriate social and conversational rules.</p>	
<p>Uses sounds, gestures, or actions to express needs and wants.</p> <p>Shows reciprocity in using language in simple conversations.</p>	<p>Uses culturally relevant responses such as eye contact, turn taking, and intonation while having conversations with adults and peers.</p>	<p>Child varies the amount of information provided to meet the demands of the situation.</p>	

STRAND 1: LANGUAGE (Continued)

INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Uses sounds, signs or words for a variety of purposes.	Recognizes when the listener does not understand and varies the amount of information to clarify the message.	Child varies the amount of information provided to meet the demands of the situation.	Speaks audibly and express thoughts, feelings, and ideas clearly.
Shows reciprocity in using language in simple conversations	Uses increasingly complex phrases and sentences.	Child understands and responds to increasingly complex communication and language from others.	

STRAND 1: LANGUAGE (Continued)

INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Communication and Speaking Listening and Understanding (LDC)	Vocabulary	Vocabulary (LC)	Language (L)
<p>Uses consistent sounds, gestures, or words, to communicate, imitates sounds, gestures or words.</p> <p>Uses sounds, signs, or words for a variety of purposes.</p>	<p>Uses rich vocabulary across many topic areas. The child uses new words or signs during play and other activities.</p>	<p>Child understands and uses a variety of words for a variety of purposes.</p>	<p>Use words and phrases acquired through conversations, reading and being read to, and responding to texts.</p>
<p>Shows reciprocity in using language in simple conversations.</p> <p>Begins to Understand gestures, words, questions, or routines.</p>	<p>Figures out the meanings of unfamiliar words and concepts using the context of conversations, pictures that accompany text, or concrete objects.</p>	<p>Child shows understanding of word categories and relationships among words.</p>	
<p>Uses sounds, signs or words for a variety of purposes.</p>	<p>Uses category labels and names objects within a category; e.g., fruit, vegetable, animal, transportation.</p>	<p>Child understands and uses a variety of words for a variety of purposes.</p>	

<p>Shows reciprocity in using language in simple conversations.</p> <p>Begins to understand gestures, words, questions or routines.</p>	<p>Demonstrates understanding of and uses words that indicate position and direction; e.g., in, on, out, under, over, off, besides, behind.</p>	<p>Child understands and uses a variety of words for a variety of purposes.</p>	
---	---	---	--

STRAND 2: EMERGENT LITERACY			
INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Emergent Literacy (LDC)	Concepts of Print	Print Concepts & Conventions (LIT)	Reading
Begins to recognize and understand symbols.	Identifies signs, symbols, and labels in a variety of environments (environmental print).	Child writes for a variety of purposes using increasingly sophisticated marks.	<p>Demonstrate understanding of the organization and basic features of print.</p> <p>Follow words from left to right, top to bottom, and page by page.</p> <p>Recognize that spoken words are represented in written language by specific sequences of letters. (RF)</p> <p>Identify that a sentence is made up of a group of words. d. Recognize the difference between a letter and a printed word.</p> <p>Understand that words are separated by spaces in print.</p> <p>Recognize and name all upper and lowercase letters of the alphabet.</p>

Begins to recognize and understand symbols.	Demonstrates and understands that print conveys meaning and that each spoken word can be written and read.	Child writes for a variety of purposes using increasingly sophisticated marks.	
Develops interest in and involvement with books and other print materials.	Recognizes that letters are grouped to form words.	Child demonstrates and understanding of how print is used (functions of print) and the rules that govern how print works (conventions of print).	Demonstrate understanding of spoken words, syllables, and sounds (phonemes). (RF)
Begins to recognize and understand symbols.	Recognizes own written name and the written names of friends and family.		Demonstrate understanding of the organization and basic features of print. (RF)
Develops interest in and involvement with books and other print materials. (LDC)	Seeks information in printed materials.	Recognizes words as a unit of print and understands that letters are grouped to form words.	With guidance and support from adults, participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them). (RI)

STRAND 2: EMERGENT LITERACY (Continued)			
INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Emergent Literacy (LDC)	Book Handling Skills	Book Appreciation and Knowledge (LIT)	Informational Text (RI)
Develops interest in and involvement with books and other print materials.	Holds a book right side up with the front cover facing the reader and understands left to right and top to bottom directionality.	Recognizes how books are read, such as front-to-back and one page at a time, and recognizes basic characteristics such as title, author, and illustrator.	Demonstrate understanding of the organization and basic features of print. a. Follow words from left to right, top to bottom, and page by page. (RF)
Develops interest in and involvement with books and other print materials.	Identifies where in the book to begin reading.	Asks and answers questions and makes comments about print materials. Understands that print conveys meaning.	Demonstrate understanding of the organization and basic features of print. (RF)
Develops interest in and involvement with books and other print materials.	Understands a book has a title, author, and/or illustrator.	Recognizes how books are read, such as front-to-back and one page at a time, and recognizes basic characteristics such as title, author, and illustrator.	With prompting and support, name the author and illustrator of a text and define the role of each in presenting the ideas or information in a text. (RI)

STRAND 2: EMERGENT LITERACY (Continued)			
INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Emergent Literacy and Communicating and Speaking, Listening and Understanding (LDC)	Phonological Awareness	Phonological Awareness (LIT)	Reading: Foundational Skills (RF)
Shows interest in songs, rhymes and stories. Begins to recognize and understand symbols. Uses consistent sounds, gestures or words. Imitates sounds, gestures or words.	Differentiates between sounds that are the same and different; e.g., environmental sounds, animal sounds, phonemes.	Identifies and discriminates between sounds and phonemes in language, such as attention to beginning and ending sounds of words and recognition that different words begin or end with the same sound.	Demonstrate understanding of spoken words, syllables, and sounds (phonemes). (RF)
Shows interest in songs, rhymes and stories. Begins to recognize and understand symbols. Uses consistent sounds, gestures or words to communicate, Imitates sounds, gestures or words.	Identifies rhyming words.	Identifies and discriminates between words in language.	

STRAND 2: EMERGENT LITERACY (Continued)			
INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Uses consistent sounds, gestures or words to communicate, Imitates sounds, gestures or words. Shows interest in songs, rhymes and stories.	Produces rhyming words.	Identifies and discriminates between words in language.	Demonstrate understanding of spoken words, syllables, and sounds (phonemes). (RF)
Uses consistent sounds, gestures or words to communicate, Imitates sounds, gestures or words.	Recognizes spoken words that begin with the same sound.	Child identifies letters of the alphabet and produces correct sounds associated with letters.	Demonstrate understanding of spoken words, syllables, and sounds (phonemes). (RF)
Begins to Understand gestures, words, questions or routines.	Hears and shows awareness of separate words within spoken phrases or sentences.	Child identifies letters of the alphabet and produces correct sounds associated with letters.	Identify that a sentence is made up of a group of words. (RF)

STRAND 2: EMERGENT LITERACY (Continued)

INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Begins to recognize and understand symbols.	Identifies and discriminates syllables in words.	Child identifies letters of the alphabet and produces correct sounds associated with letters.	Demonstrate understanding of spoken words, syllables, and sounds (phonemes). (RF)
Uses sounds, signs, or words for a variety of purposes	Combines onset and rime to form a familiar one-syllable word with and without pictorial support.	Child demonstrates awareness that spoken language is composed of smaller segment of sound.	Demonstrate understanding of spoken words, syllables, and sounds (phonemes). (RF)

STRAND 2: EMERGENT LITERACY (Continued)			
INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Emergent Literacy (LDC)	Alphabet Knowledge	Print & Alphabet Knowledge (LIT)	Reading: Foundational Skills (RF) and Writing Standards (W)
Begins to recognize and understand symbols.	Discriminates letters from other shapes and symbols.	Understands that written words are made up of a group of individual letters.	Demonstrate understanding of the organization and basic features of print. (RF)
	Matches and recognizes similarities and differences in letters, with modeling and support.	Names 18 upper- and 15 lower-case letters.	Demonstrate understanding of the organization and basic features of print. (RF)
	Recognizes an increasing number of letters, especially those in own name, familiar objects, family, and friends.		Demonstrate understanding of the organization and basic features of print. (RF)

STRAND 2: EMERGENT LITERACY (Continued)			
INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Uses sounds, signs or words for a variety of purposes.	Demonstrates understanding of letters by producing letter forms using a variety of materials; e.g., playdough, blocks, marker, and paper.	Child identifies letters of the alphabet and produces correct sounds associated with letters.	Demonstrate and apply handwriting skills. (WF)
	Demonstrates understanding of letters by producing letter forms using a variety of materials; e.g., playdough, blocks, marker, and paper.	Attempts to independently write some words using invented spelling.	
	Uses letter-sound knowledge identifying the sounds of a few letters and producing the correct sounds for an increasing number of letters.	Knows the sounds associated with several letters.	

Emergent Literacy (LDC) and Memory (CD)	Comprehension and Text Structure	Comprehension and Text Structure	Informational Text (RI) and Literature (RL)
Develops interest in and involvement with books and other print materials. (LDC)	Takes an active role in reading activities.	Child asks and answers questions about a book that is read aloud.	With prompting and support, actively engage in group reading activities with purpose and understanding. (RI)
	Identifies characters and major events in a story.	Child demonstrates an understanding of narrative structure through storytelling and re-telling.	With prompting and support, identify characters, settings, and major events in a story. (RL)
	Asks and answers a variety of questions about books or stories told or read aloud.	Asks and answers questions and makes comments about print materials. Child asks and answers questions about a book that is read aloud.	With prompting and support, ask and answer questions about key details in a text. (RL)

STRAND 2: EMERGENT LITERACY (Continued)

INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
<p>Develops interest in and involvement with books and other print materials. (LDC)</p> <p>Recognizes familiar people, places and things. Recalls and uses information in new situations. (CD)</p>	<p>Draws connections between story events and personal experiences.</p>	<p>Answers questions about details of a story with increasing specific information.</p>	<p>With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text. (RI)</p>
<p>Uses a variety of strategies to solve problems. (CD)</p>	<p>Identifies events and details in the story and makes predictions.</p>	<p>Answers increasingly complex inferential questions that require making predictions based on multiple pieces of information from the story.</p>	<p>With prompting and support, identify characters, settings, and major events in a story. (RL)</p>
<p>Develops interest in and involvement with books and other print materials. (LDC)</p>	<p>Gives an opinion for liking or disliking a book or story.</p>	<p>Provides a summary of a story, highlighting several of the key ideas in the story and how they relate.</p>	<p>With prompting and support, actively engage in group reading activities with purpose and understanding (RL)</p>

Develops interest in and involvement with books and other print materials. (LDC)	Begins to demonstrate an understanding of the differences between fiction and non-fiction.	Tells fictional or personal stories using a sequence of at least 2-3 connected events.	
Develops interest in and involvement with books and other print materials. (LDC)	Identifies the topic of informational text that has been read aloud.	Identifies characters and main events in books and stories.	With prompting and support, identify the main topic and retell key details of a text. (RL)
Uses imitation or pretend play to express creativity and imagination. (CD)	Retells or reenacts a story in sequence with pictures or props.	Child demonstrates an understanding of narrative structure through storytelling and re-telling.	With prompting and support, retell familiar stories, including key details. (RL)
Begins to recognize and understand symbols. (LDC) Uses sounds, signs or words for a variety of purposes. (LDC)	Demonstrates reading fluency by use of phrasing, intonation, and expression in shared reading of familiar books, poems, chants, songs, nursery rhymes, or other repetitious or predictable texts.	With increasing independence, matches the tone and volume of expression to the content and social situation.	Read emergent-reader texts with purpose and understanding. (RF)

STRAND 3: EMERGENT WRITING			
INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Fine Motor Development (PHD), Communicating and Speaking and Emergent Literacy (LDC)	Writing Processes and Writing Applications	Writing (LIT)	Writing (W)
Develops small muscle control and coordination. Uses different actions on objects. (PHD)	In writing process, uses a variety of writing tools, materials, and surfaces to create drawings or symbols.	Child writes for a variety of purposes using increasingly sophisticated marks.	With guidance and support from adults, explore a variety of digital tools to produce and publish writing, including in collaboration with peers.
Uses hands or feet to make contact with objects or people. (PHD) Uses sounds, signs or words for a variety of purposes. (LDC)	Writes own name using letter-like forms or conventional print.		Use of a combination of drawing, dictating and writing to compose opinion pieces in which they tell a reader the topic or the name of the book they are writing about and state an opinion or preference about the topic or book.

STRAND 3: EMERGENT WRITING (Continued)			
INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Uses sounds, signs or words for a variety of purposes. (LDC)	Intentionally uses scribbles/writing and inventive writing to convey meaning, ideas, or to tell a story (e.g., signing artwork, captioning, labeling, creating lists, and making notes).	Child writes for a variety of purposes using increasingly sophisticated marks.	With guidance and support from adults, explore a variety of digital tools to produce and publish writing, including in collaboration with peers.
Controls small muscles in hands when doing simple tasks. (PHD)	Forms letters starting with large motor (e.g., sky writing, paint brush and water, sidewalk chalk) progressing to fine motor (paper and writing utensil).	Uses a pincer grip to hold and manipulated tools for writing, drawing, and painting. (PMPD)	
Begins to recognize and understand symbols. (LDC) Develops small muscle control and coordination. (PHD)	Organizes writing from left to right, indicating a print awareness that letters cluster as words, words cluster into phrases or sentences by use of spacing or marks.	Writes (draws, illustrates) for a variety of purposes and demonstrates evidence of many aspects of print conventions.	Demonstrate and apply handwriting skills (WF) topic.

Universal Design for Learning and Language and Literacy

Multiple Ways to Engage Learners

Engaging learners in language, ultimately in learning to read, starts with cultivating a love of story. Stories, whether spoken or in print, provide children with informal and formal opportunities for learning about the intricacies of language as a form of communication. Knowing why we read, why we engage in all the activities associated with literacy, is foundational to developing and refining skills. Capitalizing on children’s strengths and interests furthers is an effective strategy for engaging young learners.

Multiple Ways to Represent Information to Learners

Knowing the components of literacy—phonological awareness, phonics, alphabet, comprehension and writing, these concepts could be shared through multiple means: different ways to display and share the information, as well as using auditory, visual, and tactile modalities. Provide opportunities to practice and generalize these skills to everyday experiences.

Multiple Ways for Learners to Share that they Understand

Reducing barriers to how children share their language and literacy skills is a prime focus of UDL. Whether they use voice output devices, manipulatives, speaking rather than drawing/writing, or alternate languages, provide options for self-expression.

Suggested Adaptations for Language and Literacy

- Visual Supports that may include: sequencing cards based on stories, songs or fingerplays; graphic organizers; choice boards to indicate choice of activity; and pictures for predictions.
- Simple assistive technologies devices such as the use of an output voice device or a “Big Button.”
- A variety of sensory modalities to support writing (i.e., shaving cream, sand, dry erase board, playdough).



Mathematics Standard

MATHEMATICS STANDARD

Mathematics is a way of thinking, knowing, problem-solving, and reasoning that is accessible to all children regardless of their prior knowledge and experiences.

Mathematical knowledge, interests, and skills are basic to children’s success in school and later life. From a very early age, mathematics helps children to connect ideas, develop logical thinking, question, analyze, and understand the world around them.

Through their senses, children embrace mathematics as an integral part of their world. Children thrive in environments that promote thinking and curiosity, are rich in mathematical language, and nurture their natural drive to explore and experiment with numbers, shapes, measurement, and **patterns**. Spontaneous and planned math experiences that are developmentally appropriate encourage children’s positive attitudes towards mathematics.

The Mathematics Standard is organized into the following strands and related Concepts:

Strand 1: Counting and Cardinality

- Counts Out Loud
- Knows Number Names and **Symbols**
- Compares Numbers and Quantities
- Counts to Tell Number of Objects

Strand 2: Operations and Algebraic Thinking

- Explores Addition and Subtraction
- Patterning

Strand 3: Measurement and Data

- **Sorts** and Classifies
- **Data** Analysis
- Measures

Strand 4: Geometry

- Shapes
- **Spatial Reasoning**

Mathematics Standard Definitions

Algebraic Thinking is being taught when teachers help children recognize patterns, make generalizations, and then use symbols to represent problems and their solutions.¹⁶

Attributes are characteristics or qualities of objects, such as color, position, roundness, shape, size, number of corners; e.g., a child notices that the plate is round.

Cardinality tells how many things are in a set. When counting a set of objects, the last word in the counting sequence names the quantity for that set.

Classify is to arrange objects or symbols in groups by some property.

Concrete Representation is a graph/table on which physical objects or pictures are arranged.

Data is information, often in the form of facts or figures, obtained from experiments or surveys, used as a basis for making calculations or drawing conclusions.

Extend (a pattern) means to continue for a distance, in this case, the pattern; to increase the length of the pattern.

Geometric Shapes are forms such as triangles, rectangles, squares, circles, etc.

Graphs display information in an organized manner.

Match means to pair items or objects that are identical.

Nonstandard Measurement is a unit of measure whose values may vary, such as a person's foot length, paper clips, paces, or blocks. It is unlike a standard unit of measure, such as inch or pound, whose values do not vary.

Numerals are the written symbols that represents a number; e.g., "seven" is the numeral for the number seven.

¹⁶ Copley, J.V. (2009). The young child and mathematics, 2nd edition. Washington, D.C.: NAEYC.

One-to-One Correspondence is the ability to match numbers to objects or objects to objects; e.g., 4 forks with 4 spoons.

Operations are mathematical processes such as addition, subtraction, multiplication, and division.

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

Positional Terms are words that describe people, places, and objects in relation to other things or in the way an object is placed or arranged such as in, out, under, over, off, besides, behind, before, after, etc.; e.g., a child says, “I put the bowl on the table.”

Processes are a series of actions, changes, or functions bringing about a result.

Quantity is an amount, measure or number; e.g., how many cars are in a box?

Rational Counting is matching each number name to an object in a collection; synchronizing rote counting with one-to-one correspondence².

Rote Counting is reciting the number names in order from memory.¹⁷

Set is a group of objects.

Spatial Reasoning is a sense of objects and how they relate to each other in terms of their position or direction.

Sorts means to classify objects that share certain attributes; e.g., place all red blocks in one group and all blue blocks in another.

Standard Measuring Tools are tools such as rulers, yardsticks, scales, thermometers; used to measure length, height, weight, temperature, etc.

¹⁷ Erikson Institute. (2013). Big Ideas of early Mathematics: What teachers of young children need to know, 1st Ed. London, England: Pearson.

Subitize means to count items in groups; e.g., not counting items individually. Utilizing visualization, it is recognizing an amount rather than counting it; e.g., when someone rolls the dice in a game and knows instantly what was rolled without counting each dot on the dice, that person is subitizing.

Symbols are gestures or printed signs that represent quantities or numerals in mathematics; e.g., using three fingers, three dots, or squiggly lines to represent “three”.

Three-Dimensional (geometric forms) are solid geometric shapes such as cubes, cylinders, spheres, and cones.

Two-Dimensional (geometric shapes) are shapes with flat surfaces such as circles, triangles, squares, or rectangles.

STRAND 1: COUNTING AND CARDINALITY

Concept 1: Counts Out Loud

The child counts out loud and uses number words in daily conversations.

To build an understanding of counting, children need environments that are rich in mathematical language and provide varied opportunities to count in ways that are personally meaningful, challenging, and fun.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

- a. Shows interest in and awareness of counting.
 - Participates in counting activities.
 - Experiments with and uses numbers and counting in play.
- b. Rote counts zero to ten and beyond with increasing accuracy.¹⁸
 - Sings counting songs.
 - Says or signs to ten while playing hide and seek.
 - Counts to twenty while lathering hands with soap during handwashing.

¹⁸ Clements, D.H. (2009). Learning and teaching early math: The learning trajectories approach. New York, NY: Routledge.

STRAND 1: COUNTING AND CARDINALITY

Concept 2: Knows Number Names and Symbols

The child identifies numerals and uses number words in daily activities.

To build an understanding of number names and symbols, materials and opportunities for mathematical thinking should be embedded in a variety of learning experiences to allow children the opportunity to explore and play with numbers and numerals throughout the day, across the curriculum, and at home.¹⁹

Indicators and Examples in the Context of Daily Routines, Activities, and Play

- a. Uses numerals and number symbols in the context of daily routines, activities, and play.**
 - Draws a squiggly line and says, “Here is my phone number.”
 - Looks at the grocery advertisement and says, “Oranges are on sale for three dollars.”
- b. Uses and creates symbols to represent numbers.**
 - Holds up four fingers when asked, “How old are you?”
 - Uses buttons and other manipulatives to represent numbers.
- c. Uses a variety of materials (i.e. clay, sand, shaving cream) to write and form numerals and numeral-like symbols.**
 - Writes out a bill while playing restaurant and says, “You owe ten dollars.”
 - Scrapes lines in the sand table and says, “I wrote the number one.”
- d. Identifies numerals zero to ten.**
 - Names some numerals while reading a book.
 - Recognizes numerals in the environment; e.g., signs, grocery store, room numbers.
 - Points to numerals on his shirt and says, “I have a two and a five on my shirt.” (The numerals may or may not be a two and a five).

¹⁹ Moomaw, S. & Hieronymus, B. (2011). More than counting: Math activities for preschool and Kindergarten. St. Paul, MN: Red Leaf Press.

Indicators and Examples in the Context of Daily Routines, Activities, and Play (Continued)

- e. Differentiates some written numerals from written letters.**
 - Describes the numeral eight as a racetrack.
 - Says, “The four looks like the letter H missing a leg.”

STRAND 1: COUNTING AND CARDINALITY

Concept 3: Compares Numbers and Quantities

The child applies a range of strategies such as matching or counting to compare sets of objects.

Children develop an understanding of numbers through hands-on experiences, using a variety of objects found in the home, the learning environment, and nature. To build an understanding of numbers and the quantities they represent, young children need daily experiences involving comparing groups of objects in ways that are personally meaningful, challenging, and fun.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

- a. **Compares two sets of objects using terms such as greater than, less than, or equal to.**
 - Looks at friend's blocks and says, "I have more blocks than you."
 - Matches one car for each person to see if there are fewer cars or people.

STRAND 1: COUNTING AND CARDINALITY

Concept 4: Counts to Tell Number of Objects

The child uses number words and counting to identify quantity.

Developing an understanding of numbers begins with hands-on experiences using a variety of objects found in the home, the learning environment, and nature. To build an understanding of “how much” and to explore number relationships, children need daily experiences involving counting in ways that are personally meaningful, challenging, and fun¹.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

- a. **Identifies quantities of three to five objects without counting using visual approximation (Subitize).**
 - Sees and labels collections of one to three with a number.²⁰
 - Looks at a pile of blocks and says, “There are four blocks.”
- b. **Demonstrates the ability to match object to object in a group (One-to-one correspondence).**
 - Matches one cup to each plate at the table during snack time.
 - Recognizes that there is one shoe for each foot.
- c. **Counts groups of objects using a number word for each object (Rational counting).**
 - Assigns a number name to cars on the rug, “one, two, three, four, five.”
 - Counts out four straws for the four children at the table.
- d. **Counts a collection of up to ten items using the last counting word to tell, “How many?” (Cardinality)**
 - Counts out six eggs. When adult asks, “How many?” the child responds, “six.”
 - Counts and responds, “seven” when the teacher asks, “How many children are here today?”
- e. **Matches numerals to quantities using manipulatives.**
 - Spins a spinner, lands on five and moves five steps.
 - Matches three objects to the numeral three.

²⁰ Copley, J.V. (2009). The young child and mathematics, 2nd edition. Washington, D.C.: NAEYC.

STRAND 2: OPERATIONS AND ALGEBRAIC THINKING

Concept 1: Explores Addition and Subtraction

The child recognizes addition as adding to and subtraction as taking away from.

Developing an understanding of a number begins with hands-on experiences using a variety of objects found in the home, the learning environment, and nature. To build an understanding of numbers and to discover number relationships, children need opportunities to describe the changes that result from putting sets of objects together or taking them apart (e.g., blocks, animals, toy people).

Indicators and Examples in the Context of Daily Routines, Activities, and Play

a. Recognizes that adding increases the number of objects in a group.

- Adds one block to the pile of blocks and says, "Now I have more."
- Adds another slice of apple on the plate and says, "Now I have two."

b. Describes changes in two or more sets of objects when they are combined.

- Recognizes that three cars and two trucks is a total of five vehicles.
- Puts the red, yellow, and blue crayons together and tells how many crayons.

c. Recognizes that taking away (subtracting) decreases the number of objects in a group

- Eats an apple slice and says, "I only have one left."
- Gives some marbles to a friend and then says, "Now I have less."

d. Describes changes in a set of objects when they are separated into parts.

- Plays with a plastic ball and bowling pins and tells how many pins fell down and how many are left standing.
- Gives two grapes to a friend and says, "Now I have two grapes, and you have two grapes."

e. Counts on from the larger number for addition.

- Recognizes immediately a **set** of two and then counts on three, four, five as objects are added to the set.

STRAND 2: OPERATIONS AND ALGEBRAIC THINKING (Continued)

Concept 2: Patterning

The child recognizes, fixes, duplicates, extends, describes, and creates patterns.

Recognition and investigation of **patterns** are important components of a child's development. A child's ability to work with patterns is the precursor to mathematical thinking, especially **algebraic processes**. Children need frequent opportunities to engage in pattern-related activities such as playing with repetitive sounds and movement or noticing patterns in textures and pictures.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

a. Recognizes patterns in the real world.

- Follows and remembers movements in familiar songs and rhymes.
- Notices patterns on clothing. "Look, the stripes on your shirt go red, blue, red, blue."
- Anticipates what comes next in the daily routine.

b. Fixes simple patterns.

- Sees a row of blocks: red, blue, red, red the child says, "Hey something is wrong, that block should be blue."
- Notices that their peers' insect manipulatives are lined up as butterfly, ladybug, butterfly, and cricket and says, "the ladybug comes after the butterfly."

c. Duplicates simple patterns.

- Matches a pattern on a picture to make a necklace from shaped beads.
- Imitates a pattern in a rhythmic activity such as stomp, clap, stomp, and clap.

d. Extends patterns.

- Places the next two dominoes, one up and one down when shown a series of dominoes with one up, one down, one up, one down.
- Extends a rhythmic pattern by answering what comes next: clap, pat, stomp, clap, pat, - _____

e. Creates patterns.

- Builds a road alternating different size and shaped unit blocks.
- Creates a simple pattern using shells.

f. Describes similarities and differences in patterns.

- Says, “We always wash our hands after we come in from outside, but today we got a drink first.”
- Says, “My shirt has two red stripes and one blue stripe, your shirt has one green stripe and one red stripe.”

STRAND 3: MEASUREMENT AND DATA

Concept 1: Sorts and Classifies

The child sorts and groups objects by a variety of attributes.

Recognizing relationships between objects, people, and events allows young children to make generalizations and predictions beyond information directly available to them. The ability to think logically and to reason (problem solve) extends far beyond mathematical boundaries.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

- a. **Sorts and classifies objects by one or more attributes (e.g., size, color, shape, texture, use).**
 - Picks all the books about bugs out of the library.
 - Puts objects together that have the same use (e.g., puts all the vehicles in a pile and all the blocks in another pile)
 - Sorts rough and smooth objects into two separate piles.

- b. **Explains how items were sorted into groups.**
 - Says, “I put all of these together [helicopter, bee, plane, birds] because they all fly.”
 - Sorts buttons and says, “All these have two holes. These have four holes.”
 - Uses labels during clean up to determine where objects are placed.

STRAND 3: MEASUREMENT AND DATA (Continued)

Concept 2: Data Analysis

With prompting and support the child collects, organizes, displays, and describes relevant data.

Children are natural observers and questioners. To build upon this strength, adults should facilitate children’s opportunities to ask questions, sort and classify objects, collect and display information, and talk about what is meaningful to them.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

- a. **Asks questions to gather measurable data.**
 - Asks, “What is your favorite color?” Child uses a photo to indicate a favorite color on a class graph.
 - Surveys the classroom asking, “Do you like chocolate milk or white milk?”
- b. **Displays data to answer simple questions about themselves or the environment.**
 - Makes tally marks representing the number of brothers and sisters they have.
 - Moves to an area of the room to indicate their vote for the next game to play.
- c. **Uses descriptive language to compare data in picture graphs or other concrete representations.**
 - Looks at picture graph of selected fruit and says, “A lot of kids like bananas.”
 - Identifies which category has more, fewer, or the same number of objects.
- d. **Analyzes data from charts and graphs to answer questions.**
 - Counts the number of children who have a pet and do not have a pet to answer the question, “Are there more children in our class who have a pet or who do not have a pet?”
 - Looks at attendance chart to determine if more boys or girls are present.
 - Analyzes the data by answering, “Why do you think more children like the red apple than the green apple?”

STRAND 3: MEASUREMENT AND DATA (Continued)

Concept 3: Measures

The child uses measurement to describe and compare objects in the environment.

Starting at a very young age, children compare based on observable attributes and characteristics. Immersing children in measurement activities provides them with opportunities to explore, compare, and discuss the use of measurement in their environment.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

- a. **Compares objects and uses terms (e.g. lighter-heavier, hotter-colder, and faster-slower).**
 - Says, “My car is going faster than your car.
 - Exclaims, “I can’t pull the wagon. The blocks are too heavy. Get them out!” Says, “I need a bigger box for these dolls.”

- b. **Uses non-standard units of measurement (e.g., hands, bodies, containers) to estimate measurable attributes.**
 - Measures how many small containers it takes to fill one large container at the water table.
 - Uses outstretched arms to measure a doorway.
 - Cuts a piece of yarn they think will be long enough to go around a pumpkin.

- c. **Uses various standard measuring tools for simple measuring tasks.**
 - Takes measuring tape and pretends to measure objects in a room.
 - Helps measure cups of flour for bread.
 - Helps measure a doorway with a yardstick to see if a wheelchair will fit.

c. Orders objects by measurable attributes.

- Places purple color samples (as from a paint store) in order from lightest to darkest.
- Places blocks in order by height.

d. Uses appropriate vocabulary to describe time and sequence related to daily routines (e.g. tomorrow, yesterday, next, this morning).

- Says, “After snack, we go outside.”
- Responds appropriately when asked, “What did you do this morning?”
- Relates a sequence of events from a trip to school.

STRAND 4: GEOMETRY

Concept 1: Shapes

The child recognizes names and describes common shapes and their properties.

Geometry for young children involves observing, playing with, and purposefully investigating shapes that are found in their environment. Beginning in infancy, children compare objects by form and shape. This familiarity is a foundation for more complex learning experiences involving shape, position, and orientation in space.²¹

Indicators and Examples in the Context of Daily Routines, Activities, and Play

- a. Recognizes basic two-dimensional shapes when presented in different orientations.²²**
 - When reading a book, points to a door in a picture when requested to point to something that is a rectangle.
 - Exclaims, “My buttons are circles!”
- b. Uses the names of geometric shapes when describing objects found in the environment.**
 - Says, “I have a pink oval,” when playing Shape Bingo.
 - Asks, “May I have another square block?”
 - Declares, “Look, the stop sign is an octagon.”
- c. Creates two-dimensional shapes during play.**
 - Uses arms to form a circle to represent the sun.
 - Uses finger to draw basic shapes in shaving cream or sand.

²¹ Hawes, Z., LeFevre, J., Xu, C. & Bruce, C.D. (2015). Mental rotation with tangible three-dimensional objects: A new measure sensitive to developmental differences in 4- to 8-year-old children. *Mind, Brain, and Education*, 9 (1). Retrieved from <http://onlinelibrary.wiley.com/doi/10.1111/mbe.12051/abstract>

²² Hawes, Z. et al. (2015). Mental Rotation With Tangible Three-Dimensional Objects: A New Measure Sensitive to Developmental Differences in 4-to-8-Year-Old-Children. *Mind, Brain, and Education*, 10-18.

d. Creates three-dimensional (solid) shapes during play.

- Uses blocks of various sizes and shapes to create a structure.
- Uses clay or playdough to create a caterpillar.

e. Compares, describes, analyzes, and sorts two- and three- dimensional objects in the environment using formal and informal mathematical language with prompting and support based on their attributes.

- Describes shapes in a feely box, such as, “I feel the sides. This one feels like a square. This one is round.”
- Says, “The ball doesn’t have any corners but the shoe box does.”

STRAND 4: GEOMETRY (Continued)

Concept 2: Spatial Reasoning

The child uses and demonstrates an understanding of positional terms.

Geometry for young children involves observing, playing with, and purposefully investigating shapes that are found in their environment. Children spontaneously make **spatial** comparisons using vocabulary such as: location/**positional terms**, movement, distance, and transformation. This familiarity is a foundation for more complex learning experiences involving shape, position, and orientation in space.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

- a. **Uses and responds to spatial language (e.g., between, inside, under, above, behind).**
 - Moves next to Jaime when asked to stand next to a friend.
 - Says to his friend, “Let’s play under the slide.”

- b. **Describes the relative position or location of objects in relation to self or to other objects with mathematical precision².**
 - While standing at the sink, the child says to their friend, “Stand behind me, it’s my turn.”
 - Notices a puppy between two children in a magazine picture and says, “The puppy is in the middle.”
 - Notices that when working with a puzzle that they must flip or rotate the piece to make it fit.

Integration

The integration page lists examples of strategies, activities, and experiences that an adult caregiver might offer to support the integration of Approaches to Learning, Language and Literacy, and Mathematics into the Science Standard.

MATHEMATICS	
STRAND 1: COUNTING AND CARDINALITY	
Approaches to Learning – Actions that would incorporate Approaches to Learning into Mathematics.	Language & Literacy – Actions that would incorporate Language and Literacy into Mathematics.
<p>1. Facilitates the investigation of airplanes because the class was curious about how many airplanes were flying over their playground. During the year, with support from the teachers, children tallied the number of planes that flew over their playground each day.</p>	<p>i. Supports children to graph a chart and reinforces mathematical vocabulary (i.e. greater than, less than, “Tuesday had more trains than Thursday”) to help tell the story about the number of trains that went by the playground over the course of a week. The teacher brought non-fiction books into the classroom about trains.²³</p>
<p>2. Comments on how persistent children were in completing the task of moving chairs into the block area to create the seating on a bus for first, second, and third rows.</p>	<p>3. Joins the children in the “airplane” and acts as the flight attendant by asking “What do the passengers in the first row want to drink? What do the passengers in the second row want to drink?” The caregiver then writes the answers on a piece of paper, for another child to act as the second flight attendant: “We need five milks, three orange juices, and three packages of string cheese.”</p>

²³ Zambrzycka, J. (2014). Improving preschoolers' mathematical performance: The nature of spatial input by early childhood educators. Scholars Commons at Laurier. Retrieved from <http://scholars.wlu.ca/etd/1656/>.

MATHEMATICS

STRAND 2: OPERATIONS AND ALGEBRAIC THINKING

Approaches to Learning – Actions that would incorporate Approaches to Learning into Mathematics.

Language & Literacy – Actions that would incorporate Language and Literacy into Mathematics.

1. Says, “I have four cookies, but we have eight children. How are we going to solve this problem and make sure everyone gets an equal amount of the cookies?”

1. Points out the pattern in a book such as *Polar Bear, Polar Bear or I Went Walking* and questions, “Did you notice a pattern in the book? What pattern do you hear?”

2. Mentions, “Avery, you’ve worked a long time making a long line of car, person, car, person. You are making a pattern. What comes next in your pattern?”

2. Supports children to use interesting materials in the math space. The first child takes three buttons from the bucket and the second child takes two buttons out of the bucket. With teacher assistance, the children combine their buttons and caregiver asks, “When you add three buttons and two buttons, how many are there all together?” The children count out loud one, two, three, four, five and say, “five buttons.” The caregiver then suggests that they draw a picture of their discovery in combining numbers.

MATHEMATICS

STRAND 3: MEASUREMENT AND DATA

Approaches to Learning – Actions that would incorporate Approaches to Learning into Mathematics.

Language & Literacy – Actions that would incorporate Language and Literacy into Mathematics.

1. Invites children to each cut a string that they estimate will go around the tree when children express curiosity about the circumference of the tree outside their classroom. They each try to wrap their string around the tree to see who was closest to the correct length.

1. The teacher asked the children to take their strings home and see if they had something at home the same length as their string. She asked their families to help them tell a story, through drawing or dictation, of what they measured.

2. Notices that a child is measuring the tables with connecting cubes: “I noticed that you have spent a very long time measuring the tables with the connecting cubes. What made you decide to measure the tables? What are some other things you would like to measure? What are some other objects you could use to measure with?”

2. Facilitate children to analyze a graph to discover that seven of the children had dogs, two had cats, and one had a dog and cat. They concluded that dogs were more popular than cats.

MATHEMATICS

STRAND 4: GEOMETRY

Approaches to Learning – Actions that would incorporate Approaches to Learning into Mathematics.

Language & Literacy – Actions that would incorporate Language and Literacy into Mathematics.

1. Observes children using paper towel tubes to print circles on the paper with paint. They dipped the end of the tube in paint and created many circles on the paper. During a conversation with some of the children, caregiver describes, “Oh look the tube is called a cylinder and the end prints circles,” then brings over other three-dimensional shapes and asks, “Which one might print a square? How can we find out?”

1. Introduces two new books to the children, *The Shape of Things* and *Mouse Shapes*. The class engaged in various dialogic reading activities throughout the week. On Friday, the class took a “shape” walk around the neighborhood to hunt for shapes in their community. During the walk a child spotted a lemon on the tree and said, “That’s a sphere.” The caregiver asked the child, “How do you know it’s a sphere?” The child replied, “Its round but not flat.”

2. Provides children with a variety of found materials to create their own unique set of blocks after children have spent several weeks working with a classroom set of blocks. The children then use the new set of blocks to create their new structure.

2. Asks “What do you think would fit in this mitten?” after reading *The Mitten*, and collects children’s mittens for children to compare for size.

Alignment

Within the Alignment Matrix are codes that reference the Head Start Early Learning Outcomes Framework, the Arizona *Infant and Toddler Guidelines*, and Arizona’s Kindergarten Standards.

Reference Codes for the Head Start Early Learning Outcomes Framework Alignment

- ATL – Approaches to Learning
- C – Cognition
- LC – Language and Communication
- LIT – Literacy
- MATH – Mathematical Thinking
- PMP – Perceptual, Motor, and Physical Development
- SCI – Scientific Inquiry
- SE – Social-Emotional Development

Reference Codes for the Infant/Toddler Developmental Guidelines Alignment:

- ATL – Approaches to Learning
- CD – Cognitive Development
- LDC – Language Development and Communication
- PHD – Physical Health and Development
- SE – Social and Emotional Development

Reference Codes for Kindergarten Math Standards

- CC- Counting and Cardinality
- OAT- Operations and Algebraic Thinking
- MP- Mathematical Practices
- MD- Measurement and Data
- G- Geometry

STRAND 1: COUNTING AND CARDINALITY

INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Cognitive Development	Counts Out Loud	Counting and Cardinality	Counting and Cardinality
<p>Searches for missing or hidden objects.</p> <p>Uses sounds, signs or words for a variety of purposes. (LDC)</p> <p>Uses objects in new ways or pretend play.</p> <p>Uses imitation or pretend play to express creativity and imagination.</p>	<p>Shows interest in and awareness of counting.</p> <p>Rote counts zero to ten and beyond with increasing accuracy.</p> <p>Uses numerals and number symbols in the context of daily routines, activities, and play.</p> <p>Uses and creates symbols to represent numbers.</p>	<p>Counts verbally or signs to at least 20 by ones.</p> <p>Recognizes and, with support, writes some numerals up to ten.</p> <p>Recognizes and, with support, writes some numerals up to ten.</p>	<p>Count to 100 by ones and by tens. Write numbers from 0-20.</p> <p>Represent a number of objects with a written numeral 0-20.</p>

<p>Recognizes familiar people, places and things.</p>	<p>Identifies numerals zero to ten. Differentiates some written numerals from written letters.</p>	<p>Associates a number of objects with a written numeral 0-5. Recognizes and, with support, writes some numerals up to ten. Recognizes and, with support, writes some numerals up to ten.</p>	
---	--	---	--

STRAND 1: COUNTING AND CARDINALITY (Continued)

INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Cognitive Development	Compare Numbers and Quantities	Counting and Cardinality (C/MD)	Counting and Cardinality
<p>Pays attention to people and objects.</p> <p>Uses different actions on objects. (PHD)</p>	<p>Compares two sets of objects using terms such as greater than, less than, or equal to.</p> <p>Identifies quantities of three to five objects without counting using visual approximation (subitize).</p>	<p>Identifies whether the number of objects in one group is more than, less than, or the same as objects in another group for up to at least 5 objects.</p> <p>Instantly recognizes, without counting, small quantities of up to 5 objects and says or signs the number.</p>	<p>Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group; (Include groups with up to ten objects.)</p> <p>Compares two numbers between 0 and 10 presented as written numerals.</p>

	<p>Demonstrates the ability to match object to object in a group (One-to-one correspondence).</p> <p>Counts groups of objects using a number word for each object (Rational Counting).</p>	<p>When counting objects, says or signs the number names in order, pairing one number word that corresponds with one object, up to at least 10.</p> <p>Understands that the last number said represents the number of objects in the set.</p>	<p>When counting objects, say the number names in the standard order pairing each object with one and only one number name and each number name with one and only one object.</p>
<p>Listens with interest to language of others (CD)</p>	<p>Counts a collection of up to ten items using the last counting word to tell, “How many?” (Cardinality).</p>	<p>Accurately counts as many as 5 objects in a scattered configuration.</p> <p>Counts and answers “How many?” questions for approximately 10 objects.</p>	<p>When counting objects, say the number names in the standard order pairing each object with one and only one number name and each number name with one and only one object.</p> <p>Count to answer” questions about “how many?” when 20 or fewer objects are arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects.</p>

	Matches numerals to quantities using manipulatives.	Associates a number of objects with a written numeral 0-5.	Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group; (Include groups with up to ten objects)
--	---	--	---

STRAND 2: OPERATIONS AND ALGEBRAIC THINKING			
INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Cognitive Development	Explores Addition and Subtraction	Operations and Algebraic Thinking	Operations and Algebraic Thinking
<p>Makes things happen and watches for results or repeats action.</p> <p>Shows ability to acquire and process new information.</p> <p>Searches for missing or hidden objects.</p> <p>Recalls and uses information in new situations.</p>	<p>Recognizes that adding increases the number of objects in a group.</p> <p>Describes changes in two or more sets of objects when they are combined.</p> <p>Recognizes that taking away (subtracting) decreases the number of objects in a group.</p> <p>Describes changes in a set of objects when they are separated into parts. Counts on from the larger number for addition</p>	<p>Represents addition and subtraction in different ways, such as with fingers, objects, and drawings.</p> <p>Solves addition and subtraction word problems. Adds and subtracts up to 5 to or from a given number</p> <p>With adult assistance, begins to use counting on from the larger number for addition.</p>	<p>Represent addition and subtraction concretely</p> <p>Solve addition and subtraction word problems and add and subtract with 10</p> <p>Decompose numbers less than or equal to 10 into pairs in more than one-way (e.g., using fingers, objects, symbols, tally marks, drawings, expressions).</p> <p>Fluently add and subtract within 5.</p>

STRAND 2: OPERATIONS AND ALGEBRAIC THINKING (Continued)			
INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Cognitive Development	Patterning	Operations and Algebraic Thinking (C/MD)	Mathematical Practices
Attends to colors, shapes, patterns or pictures.	<p>Recognizes patterns in the real world.</p> <p>Fixes simple patterns.</p> <p>Duplicates simple patterns. Extends simple patterns.</p> <p>Creates simple patterns Describes similarities and differences in patterns.</p>	<p>Fills in missing elements of simple patterns.</p> <p>Duplicates simple patterns in a different location than demonstrated, such as making the same alternating color pattern with blocks at a table that was demonstrated on the rug.</p> <p>Extends patterns, such as making an eight-block tower of the same pattern that was demonstrated with four blocks.</p> <p>Identifies the core unit of sequentially repeating patterns, such as color in a sequence of alternating red and blue blocks.</p>	<p>Look for and make use of structure.</p> <p>Mathematically proficient students use structure and patterns to assist in making connections among mathematical ideas or concepts when making sense of mathematics.</p>

STRAND 3: MEASUREMENT AND DATA			
INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Cognitive Development	Sorts and Classifies	Measurement	Measurement and Data
<p>Explore object characteristics in many different ways. (ATL)</p> <p>Shows eagerness and curiosity as a learner. (ATL)</p>	<p>Sorts and classifies objects by one or more attributes (e.g., size, color, shape, texture, use).</p> <p>Explains how items were sorted into groups.</p> <p>Ask questions to gather measurable data.</p>	<p>Compares or orders up to five objects based on their measurable attributes such as height or weight.</p> <p>Uses comparative language, such as shortest, heavier, or biggest.</p> <p>Asks questions that can be answered through an investigation, such as “What do plants need to grow?” or “What countries do the children in our class come from?” (SR)</p>	<p>Classify objects into given categories; count the number of objects in each category and sort the categories by count. (Limit category counts to be less than or equal to 10).</p> <p>Describe measurable attributes of a single object (e.g. length and weight).</p> <p>Directly compare two objects with a measurable attribute in common, to see which object has “more of”/ “less of” the attribute, and describe the difference (e.g. directly compare the length of ten cubes to a pencil and describe one as longer or shorter). <i>Directly compare the heights of two children and describe one child as taller/shorter.</i></p>

<p>Engage in and actively explores self, objects, and surroundings. (ATL)</p> <p>Uses consistent sounds, gestures or words to communicate. (LDC)</p> <p>Approach and explore new experiences in familiar settings. (ATL)</p>	<p>Displays data to answer simple questions about themselves or the environment.</p> <p>Uses descriptive language to compare data in picture graphs or other concrete representations.</p>	<p>Represents observable phenomena with pictures, diagrams, and 3-D models.</p> <p>Uses senses and simple tools to observe, gather, and record data, such as gathering data on where children’s families are from and creating a graph that shows the number of children from different countries.</p> <p>Draws conclusions, constructs explanations, and verbalizes cause and effect relationships.</p> <p>Communicates results, solutions, and conclusions through a variety of methods, such as telling an adult that plants need water to grow or putting dots on a map that show the number of children from each country.</p>	
---	--	---	--

STRAND 3: MEASUREMENT AND DATA (Continued)			
INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Explore object characteristics in many different ways. (ATL)	Analyzes data from charts and graphs to answer questions.	Analyzes and interprets data and summarizes results of investigation.	

STRAND 3: MEASUREMENT AND DATA (Continued)			
INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
	Measures	Measurement	Measurement and Data
Explore object characteristics in many different ways. (ATL)	<p>Compares objects and uses terms such as longer-shorter, hotter-colder, and faster-slower.</p> <p>Uses non-standard units of measurement (e.g., hands, bodies, containers) to estimate measurable attributes.</p> <p>Uses various standard measuring tools for simple measuring tasks.</p> <p>Orders objects by measurable attributes.</p>	<p>Compares or orders up to 5 objects based on their measurable attributes such as height and weight.</p> <p>Uses comparative language, such as, shortest, heavier, or biggest.</p> <p>Measures using the same unit, such as putting together snap cubes to see how tall a book is.</p>	<p>Describe measurable attributes of a single object (e.g. length and weight).</p> <p>Directly compare two objects with a measurable attribute in common, to see which object has “more of”/ “less of” the attribute, and describe the difference (e.g. directly compare the length of ten cubes to a pencil and describe one as longer or shorter).</p>
Understands simple routines, rules or limitations. (SE)	<p>Uses appropriate vocabulary to describe time and sequence related to daily routines.</p>	<p>Shows an ability to recall (in order) multiple step directions. (LC)</p> <p>Shows an understanding of talk related to the past or future (LC)</p>	

STRAND 4: GEOMETRY

INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Physical Health and Development	Spatial Reasoning	Geometry & Spatial Sense	Geometry
<p>Develops increasing ability to change positions and move body from place to place.</p> <p>Coordinates eye and hand movements.</p>	<p>Uses and responds to spatial language (e.g., between, inside, under, above, behind).</p>	<p>Understands and uses language related to directionality, order, and the position of objects, including up/down, and in front/behind.</p> <p>Correctly follows directions involving their own position in space, such as “Stand up” and “Move forward.”</p>	<p>Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, besides, in front of, behind and next to.</p>
	<p>Describes the relative position or location of objects in relation to self or to other objects with mathematical precision.</p>		<p>Analyze and compare two- and three- dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides, and vertices/”corners”) and other attributes (e.g., having sides of equal length).</p>

STRAND 4: GEOMETRY (Continued)

INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Cognitive Development	Shapes	Geometry & Spatial Sense	
<p>Uses senses to explore people, objects, and the environment.</p> <p>Attends to colors, shapes, patterns or pictures.</p>	<p>Recognizes basic two-dimensional shapes when presented in different orientations.</p>	<p>Names and describes shapes in terms of length of sides, number of sides, and number of angles.</p> <p>Correctly names basic shapes regardless of size and orientation.</p>	<p>Correctly name shapes regardless of their orientations or overall size (e.g. circle, triangle, square, rectangle, rhombus, trapezoid, hexagon, cube, cone, cylinder, sphere).</p>

	<p>Uses the names of geometric shapes when describing objects found in the environment.</p> <p>Creates two-dimensional shapes during play including whole body kinesthetic.</p> <p>Creates three dimensional (solid) shapes during play including whole body kinesthetic.</p> <p>Compares, describes, analyzes, and sorts two- and three-dimensional objects in the environment using formal and informal mathematical language with prompting and support based on their attributes.</p>	<p>Analyzes, compares and sorts two and three-dimensional shapes and objects in different sizes.</p> <p>Describes their similarities, differences, and other attributes, such as size and shape.</p> <p>Creates and builds shapes from components.</p>	<p>Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, besides, in front of, behind and next to. Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").</p> <p>Analyze and compare two-and three- dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides, and vertices/ "corners") and other attributes (e.g., having sides of equal length).</p>
--	---	--	--

Universal Design for Learning and Mathematics

Multiple Ways to Engage Learners

Children’s natural interest and experience with mathematical concepts are enhanced when using areas of strength, interest, and skill. Helping children to know why mathematics is important and their connection to it is one way to increase engagement.

Multiple Ways to Represent Information to Learners

When children are provided with the “what” of mathematics they are helped to see the big, overarching themes. Such concepts as quantity, numeracy, spatial relationships and measurement are represented through accessible means such as multi-media, symbolism, alternate language, and vocabulary development.

Multiple Ways for Learners to Share that they Understand

Provide children with the methods to express their mathematical knowledge by allowing them to use their best communication methods and their choices of tools, and provide the appropriate level of support.

Suggested Adaptations for Mathematics

- Manipulatives of varied size and or that require that use of varied sensory modalities.
- Modify classroom manipulatives by adding grips that stabilize them to make them easier for children to manipulate (e.g. grips to writing tools; Velcro on shape pieces; Velcro on items to use in matching games).
- Make up a new song to the rhythm of a familiar song (e.g., a shapes song to the tune of Mary Had a Little Lamb).



Science Standard

SCIENCE STANDARD

Children are capable of complex scientific thinking and approaches to investigating the world, developing new ideas, collaborating with others, solving problems, constructing theories, and exploring with abundant curiosity.²⁴

Science, for young children and their caregivers, is an active and open-ended search to construct new knowledge. Children ask questions and seek answers to understand the world around them and learn by being actively engaged with experiences, real objects and natural, relevant **phenomena**. As children seek answers, they will plan, observe, predict, and form **conclusions**. Children’s observations, predictions, explanations, and conclusions should be respected and valued by their caregivers and can lead to meaningful opportunities to develop skills, knowledge, and relationships. Children’s experiences with scientific **inquiry** form the basis for further investigation and thought.

Learning through inquiry requires both the child’s curiosity and adult guidance: planning and preparing the environment for scientific exploration, supporting and scaffolding investigation, provoking deeper thought with reflective questions, and engaging in scientific inquiry *with* children.²⁵

The Science Standard is organized into the following Strand and related Concepts:

Strand 1: Scientific Inquiry and Application

- Exploration, Observations, and Hypotheses
- Investigation
- **Analysis** and Conclusions
- Communication

²⁴ Bucher, E. & Hernandez, M. (2016). Beyond bouncing the ball: Toddlers and teachers investigate physics. *Young Children*, 71(3). Retrieved from <http://www.naeyc.org/yc/article/bouncing-ball-physics>.

²⁵ National Science Teachers Association. (n.d.). Early childhood science education. Retrieved from <http://www.nsta.org/about/positions/earlychildhood.aspx>

Science Standard Definitions

Analysis means breaking up a whole (object, investigation, or thought) into parts to find out or study the parts.

Attributes are characteristics of a person, place, or thing or qualities of objects, such as color, position, roundness, shape, size, number of corners, and what types of experiences and explorations the object can afford.

Conclusions are explanations about an object, idea, or occurrence based on previous experience, background knowledge, and investigation.

Culturally and linguistically responsive refers to quality practice when educators promote “children’s home language, respect (hold in high regard) and value (esteem, appreciate) the home culture, and promote and encourage the active involvement and support of all families”²⁶ in learning to make experiences and activities more responsive to the individual strengths of children.

Digital Tools, also referred to as interactive media, are digital and analog materials (e.g., software programs, applications/apps, broadcast and streaming media, e-books, the Internet, and other forms of content) that are “designed to facilitate active and creative use by young children and to encourage social engagement with other children and adults”²⁷.

Graphs are visual displays of information and of the learning process, developed both by children and their caregivers, during scientific inquiry (e.g., charts, indexes, journals).

Hypotheses (plural of hypothesis) are theories or explanations of a happening or event which can start and then sustain an investigation.

Inquiry is the study of, investigation of, or research into a topic to gain knowledge and insight. Scientific inquiry encompasses active learning, collaborating with peers, talking and questioning, and using a variety of methods and tools to represent learning.²⁸

Persistence (see the **Approaches to Learning Standard**)

²⁶ NAEYC. (1995). Responding to linguistic and cultural diversity: Recommendations for effective early childhood education. Retrieved from <https://www.naeyc.org/sites/default/files/globally-shared/downloads/PDFs/resources/position-statements/PSDIV98.pdf>

²⁷ NAEYC. (2012). Technology and interactive media as tools in early childhood programs serving children from birth through age 8. Retrieved from https://www.naeyc.org/sites/default/files/globally-shared/downloads/PDFs/resources/topics/PS_technology_WEB.pdf.

²⁸ Edson, M. T. (2013). Starting with science: Strategies for introducing young children to inquiry. Portland, ME: Stenhouse.

Phenomena are observable events that occur in children’s everyday experiences and that teachers can guide children through to use science knowledge to explain or predict.²⁹

Tools are resources that help children to observe more closely, expand their understanding, ask and answer questions, and display their ideas.³ (e.g., colored pencils, magnifying lenses, photographs, informational books, balances and scales, computers, tweezers and tongs)

²⁹ Next Generation Science Standards. (2018). Using phenomena in NGSS-designed lessons and units. Retrieved from <https://www.nextgenscience.org/sites/default/files/Using%20Phenomena%20in%20NGSS.pdf>.

STRAND 1: SCIENTIFIC INQUIRY AND APPLICATION

Concept 1: Exploration, Observations, and Hypotheses

The child observes, explores, and interacts with materials, others, and the environment.

Curiosity about the natural world leads children to ask questions and make predictions, which are their theories about why, how, where, and what if. Materials and instructional strategies that are **culturally and linguistically responsive** and relevant to the child's context support their exploration, observations, and hypotheses about relationships between objects, people, and events in their world.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

- a. **Exhibits curiosity about objects, living things, and other natural events in the environment.**
 - Examines a Palo Verde (*Parkinsonia aculeata*) branch using a magnifying glass.
 - Wonders with another child which recycled materials would best make a home for the toy animals when combined with giant blocks.
- b. **Identifies attributes of objects, living things, and natural events in the environment.**
 - Explains that the wooden ball will roll down the ramps and pathways he constructed because it is round and heavy.
 - Moves in the sunlight and realizes that her own shadow moves when she moves.
- c. **Describes changes in objects, living things, and natural events in the environment.**
 - Describes that he grows taller as he gets older.
 - Uses communication board to relay, "When I came to school it was cloudy, and now it is sunny."
- d. **Begins to describe the similarities, differences and relationships between objects, living things and natural events.**
 - Places a picture of a baby chick with a hen.
 - Says, "Your rock is smooth and mine is rough" while placing all the rough igneous rocks in one basket.
- e. **Asks and responds to questions about relationships of objects, living things, and events in the natural environment.**
 - Answers, "It will melt," in response to the question, "What do you think will happen if we put the ice in the sun?"
 - Asks, "What is the nest made of? How did a bird do this without hands?"

STRAND 1: INQUIRY AND APPLICATION

Concept 2: Investigation

The child researches their own predictions and the ideas of others through active exploration and experimentation.

Children use their skills and a variety of **tools** and materials to gather information while investigating. Active experimentation requires questioning, refining, and **persistence**. Children explore answers to questions and begin to form more complex conclusions. Information gathered in the process deepens a child's knowledge of the world and their environment.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

- a. **Uses a variety of tools and materials to investigate.**
 - Uses various tools to examine insects; such as a magnifying lens, tongs, or tweezers.
 - Selects a scale to figure out how many small blocks will weigh as much as one big block.
- b. **Makes predictions and researches hypotheses through active investigation.**
 - Predicts that the igneous rocks will sink when placed in a water table.
 - Says, "If I add another block on top, it will fall over!"
- c. **Adjusts their approach if results are different than expected and continues testing.**
 - Continues to mix varying combinations of paint to try to make purple.
 - Looks for another metal object when the magnet will not stick to the coins.
- d. **Persists with an investigation.**
 - Returns day after day to see if their grasshopper "friend" is hopping around the playground.
 - Plants seeds and continues to water and care for them as they observe the changes in growth.

STRAND 1: INQUIRY AND APPLICATION

Concept 3: Analysis and Conclusion

The child analyzes data (their observations and background knowledge) and forms conclusions about their investigation.

Children form conclusions about their observations and investigations by collecting, discussing and communicating, and reflecting upon the information gathered. Adults can help children organize their information using tools such as graphs, digital media, manipulatives, and other relevant methods.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

a. Uses a variety of materials to record and organize data.

- Uses journals, drawings, graphs, or **digital tools** to record information about the pine cones collected on a nature walk.
- Creates a collection of materials relevant to building a “robot” including recycled and found items and various adhesives.

b. Identifies cause and effect relationships.

- Says, “It fell because I let go of the string” while using a pulley to hoist a bucket.
- Explains, “When it rains, the playground gets muddy.”

c. Constructs theories to explain their investigations.

- Concludes that round objects roll down the ramp and flat objects slide down the ramp after placing different objects on a ramp.
- Says, “Your plant died because you didn’t water it.”

STRAND 1: INQUIRY AND APPLICATION

Concept 4: Communication

The child discusses, communicates, and reflects upon the scientific investigation and its findings.

Based on their experiences, children express their deeper understanding of science concepts and their environment through words and other representations such as digital tools, painting, drawing, sculpting, or movement. When caregivers engage children in dialogue with meaningful scientific vocabulary relevant to their experiences, they can promote language, literacy, and cognitive skills which are essential foundations for later success in school and in life.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

a. Displays and interprets data.

- Places all floating materials on one tray and all sinking items on another tray during a sink/float activity.
- Looks at a chart displaying the various objects used to investigate ramps and pathways and interprets that marbles roll faster than other items.

b. Presents their scientific ideas in a variety of ways.

- Designs their own version of a bird nest with clay, twigs, and other art media.
- Sketches a picture with emerging details of a plant after planting seeds and watching them grow.

c. Conducts further investigation based on prior experience and information gained.

- Says, "Next time I want to see what happens if I water the plant every day."
- Chooses to mix shades of red and blue paint to see if a new hue of purple can be developed to represent the flower petals.

Integration

The integration page lists examples of strategies, activities, and experiences that an adult caregiver might offer to support the integration of Approaches to Learning, Language and Literacy, and Mathematics into the Science Standard.

SCIENCE		
STRAND 1: INQUIRY AND APPLICATION		
Approaches to Learning - Approaches that are best integrated into Science.	Language & Literacy – Actions that would incorporate Language and Literacy into Science.	Mathematics – Actions that would incorporate Mathematics into Science.
1. Pairs students to work on cooperative science activities that require collaborative use of tools such as measuring flour for a play-dough recipe.	1. Provides science journals (individual or class) to record observations, experiments, and/or investigations (e.g., class pet, adopted tree, school garden).	1. Uses natural object collections (e.g., rocks, shells, pine cones, sticks, bark) for children to sort, classify, order, and engage in other mathematical concepts.
2. Leaves recycled materials out intentionally after an investigation so children can persist with further investigation on their own or in small groups.	2. Provides non-fiction books, magazines, and technology resources on a variety of science topics throughout the classroom.	2. Employs graphing strategies to record student predictions and results of science activities.
3. Supports children as they study ramps and pathways over the course of several months, providing opportunities for children to investigate block building materials for long periods of time throughout the day.	3. Refers to fiction and non-fiction literature available in the learning space to use a variety of rich, descriptive vocabulary to describe materials and experiences in the classroom (e.g., in conversation with children, talks about the geode as being rough and bumpy on the outside with translucent quartz inside)	3. Helps children investigate to answer a child’s question, “Which sunflowers will grow taller, those under the shade of the patio, or those in the garden?” Provides tools (rulers, clipboards with paper) for children to use to collect the data over the course of the investigation.

Alignment

Within the Alignment Matrix are codes that reference the *Head Start Early Learning Outcomes Framework*, the *Arizona Infant and Toddler Guidelines*, and Arizona’s Kindergarten Standards.

Reference Codes for the Head Start *Early Learning Outcomes Framework* Alignment

- ATL – Approaches to Learning
- C – Cognition
- LC – Language and Communication
- LIT – Literacy
- MATH – Mathematical Thinking
- PMP – Perceptual, Motor, and Physical Development
- SCI – Scientific Inquiry
- SE – Social-Emotional Development

Reference Codes for the *Infant/Toddler Developmental Guidelines* Alignment:

- ATL – Approaches to Learning
- CD – Cognitive Development
- LDC – Language Development and Communication
- PHD – Physical Health and Development
- SED – Social and Emotional Development

Reference Codes for Kindergarten Science Standards Alignment

- IP – Inquiry Process
- PS – Physical Science

STRAND 1: INQUIRY AND APPLICATION

INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Cognitive Development	Exploration, Observations, and Hypotheses	Scientific Skills & Method	Observations, Questions, and Hypotheses
Uses senses to explore people, objects and the environment.	Exhibits curiosity about objects, living things, and other natural events in the environment by using 1 or more senses.	Identifies the five senses (smell, touch, sight, sound, taste) and uses them to make observations. Uses observational tools to extend the five senses, such as a magnifying glass, microscope, binoculars, or stethoscope.	Observe common objects using multiple senses.
Attends to colors, shapes, patterns, or pictures.	Identifies attributes of objects, living things, and natural events in the environment.	Uses scientific practice words or signs, such as observe, describe, compare, contrast, question, predict, experiment, reflect, cooperate, or measure	Identify the following observable properties of objects using the senses: shape, texture, size and color.
	Describes changes in objects, living things, and the natural events in the environment.	Categorizes by sorting observable phenomena into groups based on attributes such as appearance, weight, function, ability, texture, odor, and sound.	Compare objects according to their measurable characteristics (e.g., longer/shorter, lighter/heavier).

	Begins to describe the similarities, differences and relationships between objects, living things and natural events.	<p>Observes, describes, and discusses living things, and natural processes.</p> <p>Categorizes by sorting observable phenomena into groups based on attributes such as appearance, weight, function, ability, texture, odor, and sound.</p>	Organize (e.g., compare, classify and sequence) objects, organisms, and events according to various characteristics.
Uses sounds, signs or words for a variety of purposes. (LDC)	Asks and responds to questions about relationships of objects, living things, and events in the natural environment.	<p>Ask questions and seeks new information. (ATL)</p> <p>Categorizes by sorting observable phenomena into groups based on attributes such as appearance, weight, function, ability, texture, odor, and sound.</p>	Asks questions based on experiences with objects, organisms, and events in the environment.

STRAND 1: INQUIRY AND APPLICATION (Continued)

INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Uses objects as intended. (ATL)	Investigation	Scientific Skills & Method	Scientific Testing (Investigating and Modeling)
	Uses a variety of tools and materials to investigate.	Uses observational tools to extend the five senses, such as a magnifying glass, microscope, binoculars, or stethoscope.	Demonstrates safe behavior and appropriate procedures (e.g., use of instruments, materials, organisms) in all science inquiry. (IP)
Makes things happen and watches for results or repeats action. (CD)	Makes predictions and checks them through hands-on investigation with adult support.	Asks questions that can be answered through an investigation, such as "What do plants need to grow?" or "What countries do the children in our class come from?" With support, forms guess about the meaning of new words from context clues.	Predicts results of an investigation based on life, physical, and Earth and space sciences (e.g., five senses, changes in weather). (IP)
Experiments with different uses for objects. (CD)	Adjusts the experiment if results are different than expected and continues testing.	Implements steps and uses materials to explore testable questions, such as "Do plants need water to grow?" by planting seeds and giving water to some but not to others. (ATL)	Participate in guided investigations in life, physical, and Earth and space sciences. (PS)

<p>Developing confidence; trying new things and taking risks. (ATL)</p>	<p>Persists with an investigation.</p>	<p>Sets goals and develops and follows through on plans. (ATL)</p> <p>Demonstrates eagerness to learn about and discuss a range of topics, ideas, and activities.</p> <p>Articulates steps to be taken and lists materials needed for an investigation or experiment.</p>	
--	--	--	--

STRAND 1: INQUIRY AND APPLICATION (Continued)

INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Cognitive Development	Analysis and Conclusions	Scientific Skills & Method	Analysis and Conclusions
<p>Makes things happen, and watches for results or repeats action.</p> <p>Recalls and uses information in new situations.</p>	<p>Uses a variety of materials to record and organize data.</p> <p>Identifies cause and effect relationships.</p> <p>Constructs explanation about investigations.</p>	<p>Uses measurement tools, such as a ruler, balance scale, eye dropper, unit blocks, thermometer, or measuring cup, to quantify similarities and differences of observable phenomena.</p> <p>Uses comparative language, such as shortest, heavier, or biggest. (MATH)</p> <p>Draws conclusions, constructs explanations, and verbalizes cause and effect relationships.</p> <p>Adult support, compares results to initial prediction and offers evidence as to why they do or do not work.</p> <p>Generates new testable questions based on results. (LR)</p> <p>Articulates steps to be taken and lists materials needed for an investigation or experiment.</p>	<p>Organize (e.g., compare, classify, and sequence) objects, organisms, and events according to various characteristics.</p> <p>Compare objects according to their measurable characteristics (e.g., longer/shorter, lighter/heavier).</p> <p>Investigate how applied forces (push and pull) can make things move. (PS)</p> <p>Communicate with other groups to describe the results of an investigation. (IP)</p>

STRAND 1: INQUIRY AND APPLICATION (Continued)

INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Cognitive Development	Communication	Scientific Skills & Method	Communication
Recalls and uses information in new situations.	Displays and interprets data.	<p>Collects, describes, and records information through discussions, drawings, maps, and charts.</p> <p>Uses senses and simple tools to observe, gather, and record data, such as gathering data on where children's families are from and creating a graph that shows the number of children from different countries</p>	Communicate observations with pictographs, pictures, models or words.
	Presents their scientific ideas in a variety of ways.	<p>Collects, describes, and records information through discussions, drawings, maps, and charts</p> <p>Implements steps and uses materials to explore testable questions</p> <p>With adult support, compares results to initial prediction and offers evidence as to why they do or do not work.</p>	Communicate with other groups to describe the results of an investigation.

	<p>Conducts further investigation based on prior experience and information gained.</p>	<p>Uses past knowledge to build new knowledge. (LR)</p> <p>With adult support, compares results to initial prediction and offers evidence as to why they do or do not work. Generates new testable questions based on results.</p>	<p>Participate in guided investigations in life, physical, and Earth and space sciences. (IP)</p>
--	---	---	--

Universal Design for Learning and Science

Multiple Ways to Engage Learners

Children's curious and investigative interests often lead to Science opportunities. These relevant experiences help connect children to important topics in science and why we learn about them.

Multiple Ways to Represent Information to Learners

To meet the needs of the variety of ways that children perceive science topics, consider use of colors, organization, location, size, and materials. As children explore living things, properties of objects, and the physical environment, support learning through visual, auditory, and hands-on exploration. Align the use of symbols, images, and graphic representations to individual children's needs.

Multiple Ways for Learners to Share that they Understand

Consider children's challenges as they seek to demonstrate their knowledge. Reduce media-specific barriers (e.g., allergens, sensitivities) and increase access to assistive technology to show what they know.

Suggested Adaptations for Science

- Raise the height of the sand/water table to allow children in wheelchairs to play with their peers.
- Provide an adaptive handle to investigative tools (i.e., a magnifying glass) to support the child's developing physical grasp.
- Create a visual map to help children interpret directions.



Social Studies Standard

SOCIAL STUDIES STANDARD

Social Studies is the study of the complex and intertwined relationships between people, their environment, and their needs.³⁰

The inclusion of **Social Studies** in early childhood environments is important to nurture children’s understanding of themselves and others. Social Studies includes basic skills and competencies that set the foundation for learning about concepts of social science. Social Studies is about interdependence.

At a young age, children begin to develop their social identity and think about their place in the social world. As children grow, they develop an increased awareness of their personal histories and heritage, and a sense of time and place. Through everyday interactions with children and adults, they develop an appreciation for rights and responsibility within a group, and how social rules help people in promoting safety and fairness.

The Social Studies Standard is organized into the following Strands and related Concepts:

Strand 1: Family

- Understands Family

Strand 2: Community

- Understands Community
- Rights, Responsibilities, and Roles within Community
- Environment

Strand 3: History and Events

- Understands Time – Past, Present, and Future

³⁰ Koralek, D., & Mindes, G. (2006). Spotlight on Young Children and Social Studies. National Association for the Education of Young Children.

Social Studies Standard Definitions

Community is a place where one belongs; a group one is a part of as a result of social, emotional, and cultural ties. A community also represents a support network for an individual.

Culture is the unique collection of beliefs, practices, traditions, values, world views, and histories that characterize a group of people. Culture is expressed in patterns of language, behavior, customs, attitudes, and practices. Members of a group absorb cultural knowledge by observing their elders and participating in activities of the group. Individuals and families may self-identify as part of a culture but may not follow all the practices and beliefs of that culture.

Directionality means relating to or indicating direction within community.

Economics is the field that studies the use, production, distribution, and acquisition of goods and services.

Family means all persons living in the same household who are supported by the child’s parent(s)’ or guardian(s)’ income; and are related to the child’s parent(s) or guardian(s) by blood, marriage, or adoption; or are the child’s authorized caregiver or legally responsible party.³¹

Historical thinking is the ability “that enables children to differentiate [between] the past, present, and future time; raise questions; seek and evaluate evidence; compare and analyze historical stories, illustrations, and records from the past; [and] interpret the historical record, and construct historical narratives of their own”.

History is the study of the past, including significant social, cultural, and natural events that have affected humanity.

Social Studies is the integrated study of the social sciences and humanities to promote civic competence. Within the school program, social studies provide coordinated, systematic study drawing upon such disciplines as anthropology, archaeology, economics, geography, history, law, philosophy, political science, psychology, religion, and sociology, as well as appropriate content from the humanities, mathematics, and natural sciences. The primary purpose of social studies is to help young people make informed and reasoned decisions for the public good as citizens of a culturally diverse, democratic society in an interdependent world.³²

³¹ U.S. Department of Health and Human Services, Administration for Children and Families, & Office of Head Start. (2016). *Head Start Program Performance Standards*. Washington, DC.

³² National Council for the Social Studies. (2010). National Curriculum Standards for Social Studies: Introduction. Retrieved December 17, 2017, from <https://www.socialstudies.org/standards/introduction>.

STRAND 1: FAMILY

Concept 1: Understands Family

The child demonstrates an understanding of families and the roles and responsibilities of being a family member.

Children are curious about their world. They thrive on learning experiences that are meaningful and that connect to what they have previously learned. A child's family is central to their understanding of themselves and provides a foundational reference for their roles and relationships at school and within the larger community. As their perception grows, children further expand this scope to understand how systems work together.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

a. Views self in relationship to others in a family.

- Signs, "I'm going on vacation with my family."
- Mentions, "I have a baby brother and a big sister."

b. Identifies family members (e.g., mother, father, sister, brother, grandparents, and other important people in the child's life).

- Draws a picture of caregivers.
- Points to or names family members in a photograph.

c. Describes/discusses own cultural or familial traditions.

- States, "We do that at my house" during a story about a relevant celebration.
- Tells another child about a recent family activity (e.g., holiday, birthday, dinner, and wedding).

d. Identifies similarities and differences in their family composition and the families of others such as blended, foster, and other family structures.

- Participates in a small group chart-making activity graphing who lives with them.
- Says, "I have two sisters and you only have one!"

e. Develops an awareness of their personal and family history.

- Shares information about their adoption.
- Draws a picture that explains that mom was in the Army, and now she came back home.

f. Shows knowledge of family members' roles and responsibilities in the home.

- Says, "My big brother cleans up the kitchen after we eat."
- Says, "I take you to school" during dramatic play with other children.

STRAND 2: COMMUNITY

Concept 2: Rights, Responsibilities, and Roles within Community

The child demonstrates a sense of belonging to the community and contributes to its care.

Children recognize themselves as part of their home and community. Children are given opportunities to experience choices and to make their own decisions to demonstrate their roles as individuals. As children learn to demonstrate respect for ideas and rules, they gain the skills necessary for being contributing members of their family and of a community.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

a. Demonstrates responsible behaviors.

- Assists with setting the table.
- Cleans up the play area when finished.

b. Recognizes that people rely on others for economics, goods, and services (e.g., farm goods, mail delivery, safety, health care).

- Pretends to buy or sell food in “grocery store” dramatic play.
- Says, “I went to the doctor because I was sick.”

c. Seeks opportunities for leadership.

- Shows a friend how to fold clothes in dramatic play.
- Selects a task from the job chart.

d. Describes the purpose of rules.

- Discusses with peers in ways to work well together in the classroom.
- Reminds a friend to use kind words.
- Explains, “We wash our hands before we eat, so we don’t have germs.”

e. Recognizes that people have wants and must make choices because resources and materials are limited.

- Notices that the red paint is gone and asks the teacher for more.
- Offers to share the sponge in the water table when there is only one available.
- Turns off the water when brushing teeth.

f. Describes their role at home, at school, and in the community.

- Says, “I am the door holder today.”
- Says, “I helped my grandma count the apples at the grocery store.”

STRAND 2: COMMUNITY

Concept 3: Environment

The child demonstrates awareness of locations within and around their community and of the environment.

As young children explore their community and visit a variety of places, they begin to develop a sense of direction and location. While going for rides on the bus or in a car, or while walking in their neighborhoods, children become aware of signs, symbols, and other landmarks. This helps to develop a stronger relationship with a sense of place which encourages children to take care of and advocate for their environment.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

a. Describes directionality and/or location within the community.

- Says, “We went by the library on our way to the park.”
- Draws a simple map of their home and recreates it with blocks and recycled materials.

b. Describes some physical features of the environment in which she lives (e.g., buildings and natural elements like mountains and weather).

- Says, “There are a lot of mountains where I live.”
- Says, “It is hot outside.”

c. Recognizes that people share the environment with other people, plants, and animals.

- Says, “Don’t squish the bug! The playground is its home.”
- Takes photo of the bird’s nest instead of disturbing it.

a. Shows an understanding of how to care for the indoor and outdoor environment.

- Picks up trash outside and puts paper in the recycling container.
- Helps to plant flowers.
- Puts the caps on the markers so the next peer can use them.

STRAND 3: HISTORY AND EVENTS

Concept 1: Understands Time – Past, Present, and Future

The child demonstrates an awareness of time and sequence of events in their daily lives.

As young children explore their family and community identity and roles, they begin to differentiate a sense of what is in the past, present, and future. While describing, experiencing, planning, and discussing past events, children become aware of time, what is now and what is later. Moreover, children begin to develop cognitive skills regarding how the past can affect the present and future, and how people live and what they do changes over time.³³

Indicators and Examples in the Context of Daily Routines, Activities, and Play

- a. **Demonstrates an understanding of time in the context of daily experiences.**
 - Tells their mom that a friend was sick yesterday and not at school.
 - Reminds substitute teacher that they go on the playground after snack in the morning.
 - Shows the new child in the class the picture schedule so they know what comes next.
 - Describes what happens next in a familiar story.

- b. **Understands that events happened in the past and how these events relate to one’s self, family, and community.**
 - Describes a family snow trip while reading *The Snowy Day*.
 - Says, “We had a piñata at my party, too.”

- c. **Communicates time and sequence vocabulary (e.g., before, after, during, later, first, last, yesterday, tomorrow, today) to describe relevant history and events.**
 - Exhibits their **historical thinking**, “Before I go to school, we drop my baby sister off at Nana’s.”
 - Tells their friend, “I am going to play in the science center with you like yesterday!”

³³ Epstein, A. S. (2014). Social studies in preschool? Yes! *Young Children*, 69(1), 78.

Integration

The integration page lists examples of strategies, activities, and experiences that an adult caregiver might offer to support the integration of Approaches to Learning, Language and Literacy, and Mathematics into the Science Standard.

SOCIAL STUDIES		
STRAND 1: FAMILY		
Approaches to Learning - Approaches that are best integrated into Social Studies.	Language & Literacy – Actions that would incorporate Language and Literacy into Social Studies.	Mathematics – Actions that would incorporate Mathematics into Social Studies.
1. Asks the children to share their family book during small group and talk about what makes their family unique.	1. Plans for the children to make their own “Family” book. They can draw pictures or bring in photographs of the members of their family, write their names/ roles (mommy, grandpa, big sister, etc.), dictate family traditions/ customs.	1. Plans a graphing activity to compare the number of family members in each child’s family.
2. Engages children with a puppet show/role play to encourage the children to talk about their favorite activities to do with their family.	2. Reads a book about families and provide props in the dramatic play area for the children to act out the story read to them.	2. Offers a cooking activity that includes all tasks necessary to make a desired food for snack, including measuring, counting, dividing quantities for all children to share.

SOCIAL STUDIES

STRAND 2: COMMUNITY

Approaches to Learning - Approaches that are best integrated into Social Studies.

Language & Literacy – Actions that would incorporate Language and Literacy into Social Studies.

Mathematics – Actions that would incorporate Mathematics into Social Studies.

1. Reviews the classroom community rules consistently with children so the children can demonstrate independence during activities, routines, and play by reminding peers to use “walking feet” in the classroom as one of the Community rules.

1. Leads the children through an activity about storytelling. While children create the story, the teacher writes and dictates their words.

1. Displays pictures and books of various traffic signs to discuss shapes and colors associated with different safety rules in the community. The children then create their own traffic sign by making a rule and choosing a shape to represent their rule. Children will match their shapes to the rule they created.

2. Reads a book about local engineers constructing a building, then develops curiosity by leading the children in asking questions, looking for pictures, and actively searching out information about how buildings are constructed in their local community.

2. Places picture/word cards of various people from the classroom and their homes (e.g., apartment, home) for the children to match

2. Collects recycled materials with children and invites them to construct relevant buildings, focusing on discussion related to planning, estimating, measuring, counting using rulers, graphs, pictures of examples, etc.

SOCIAL STUDIES

STRAND 3: HISTORY AND EVENTS

Approaches to Learning - Approaches that are best integrated into Social Studies.	Language & Literacy – Actions that would incorporate Language and Literacy into Social Studies.	Mathematics – Actions that would incorporate Mathematics into Social Studies.
<p>1. Encourages the children to draw pictures to represent the animals after visiting the zoo.</p>	<p>1. Guides the children to create a storybook based on their field trip to the zoo.</p>	<p>1. Helps children tally which animals were their favorite ones from their field trip.</p>
<p>2. Creates a visual support for handwashing using photos of the children. The children followed the steps as they learned to wash their hands.</p>	<p>2. Assists in creating a timeline of events with the children after their trip to the zoo.</p>	<p>2. Offers sequencing cards for hand washing procedures, tooth brushing, dressing, daily classroom schedule, etc. so the children can recognize and practice the sequence of events on their daily routines.</p>

Alignment

Within the Alignment Matrix are codes that reference the *Head Start Early Learning Outcomes Framework*, the *Arizona Infant and Toddler Guidelines*, and Arizona’s Kindergarten Standards.

Reference Codes for the Head Start Early Learning Outcomes Framework Alignment

- ATL – Approaches to Learning
- C – Cognition
- LC – Language and Communication
- LIT – Literacy
- MATH – Mathematical Thinking
- PMP – Perceptual, Motor, and Physical Development
- SCI – Scientific Inquiry
- SE – Social-Emotional Development

Reference Codes for Kindergarten Social Studies Standards


- AH - American History
- CG - Civics/Government
- E - Economics
- G - Geography
- WH - World History

Reference Codes for the Infant/Toddler Developmental Guidelines Alignment:

- ATL – Approaches to Learning
- CD – Cognitive Development
- LDC – Language Development and Communication
- PHD – Physical Health and Development
- SED – Social and Emotional Development

STRAND 1: FAMILY

INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Trust and Emotional Security	Understands Family	Sense of Identity and Belonging	Rights, Responsibilities, and Roles of Citizenship
Engages in behaviors that build relationships with familiar adults. (SED)	Views self in relationship to others in a family.	Identifies self as being part of different groups, such as family, community, culture, faith, or preschool. (SE)	Give examples of work activities that people do at home. (E)
Shows a preference for familiar adults. (SED)	Identifies family members (e.g., mother, father, sister, brother, grandparents, and other important people in the child’s life).		
Recognizes familiar people, places and things. (CD)	Describes/discusses own cultural or familial traditions.	Demonstrates knowledge of uniqueness of self, such as talents, interests, preferences, or culture. (SE)	
	Identifies similarities and differences in their family composition and the families of others such as blended, foster, and other family structures.		
Develops awareness of self as separate from others. (SED)	Develops an awareness of their personal and family history.	Identifies similarities and differences about self across familiar environment and settings. (SE)	

<p>Expresses feelings and emotions through facial expressions, sounds, or gestures. (SED)</p> <p>Expresses physical needs verbally and non-verbally. (PHD)</p> <p>Responds when physical needs are met. (PHD)</p>	<p>Shows knowledge of family members' roles and responsibilities in the home.</p>	<p>Relates personal stories about being a part of different groups. (SE)</p>	
--	---	---	---

STRAND 2: COMMUNITY			
INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Trust and Emotional Security	Understands Community	Sense of Identity and Belonging	Exploration and Colonization
<p>Seeks to find comfort in new situations. (SED)</p> <p>Listens with interest to language of others. (LDC)</p> <p>Shows ability to acquire and process new information. (CD)</p>	<p>Recognizes that places where people live are made up of individuals who may be from different cultures, perspectives, and backgrounds and who speak different languages.</p>	<p>Plans play scenarios, such as dramatic play or construction, by establishing roles for play, using appropriate materials, and generating appropriate scenarios to be enacted. (ATL)</p>	<p>Recognize that Native Americans are the original inhabitants of North America. (AH)</p> <p>Recognize that groups of people in early civilizations (e.g., people of the Americas, Europeans, Asians, Africans) moved from place to place to hunt and gather food. (WH)</p> <p>Recognize through images how people live differently in other places and times.</p>
<p>Responds to unfamiliar adults cautiously. (SED)</p> <p>Shows interest in and awareness of other children. (SED)</p> <p>Shows interest and curiosity in new people and objects. (CD)</p>	<p>Identifies, discusses, and asks questions about similarities and differences in other people in their community.</p>		<p>Recognize that classmates have varied backgrounds but may share principles, goals, customs, and traditions. (CG)</p> <p>Discuss the food, clothing, housing, recreation, and celebrations practiced by cultural groups in the local community. (G)</p>

STRAND 2: COMMUNITY (Continued)			
INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
<p>Shows emotional connection and attachment to others. (SED)</p> <p>Shows interest in songs, rhymes, and stories. (LDC)</p> <p>Shows interest in photos, pictures, and drawings. (LDC)</p> <p>Pays attention to people and objects. (CD)</p>	<p>Describes some characteristics (e.g., clothing, food, jobs) of the people in their community.</p>	<p>Child shows interest in, interacts with, and develops personal relationships with other children. (SE)</p>	<p>Recognize national symbols and monuments that represent American democracy and values. (CG)</p> <p>Recognize the significance of national holidays. (CG)</p> <p>Discuss how land in the students' community is used for industry, housing, business, agriculture, and recreation. (G)</p> <p>Describe how people earn a living in the community and the places they work. (G)</p>

STRAND 2: COMMUNITY (Continued)			
INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Self-Regulation	Rights, Responsibilities, and Roles within Community	Sense of Identity and Belonging	Rights, Responsibilities, and Roles of Citizenship
<p>Begins to manage own behavior and show self-regulation. (SED)</p> <p>Responds to and interacts with other children. (SED)</p> <p>Responds to verbal communication of others. (LDC)</p> <p>Responds to non-verbal communication of others. (LDC)</p> <p>Begins to develop self-help skills. (PHD)</p> <p>Shows characteristics of healthy behaviors. (PHD)</p>	<p>Demonstrates responsible behaviors (e.g., puts trash in the trash can, wears a seat belt, points out when someone needs help).</p>	<p>Cleans up and puts materials away appropriately, such as: places blocks back on correct shelf or places markers in the correct bin. (ATL)</p>	<p>Discuss the importance of students contributing to a community (e.g., helping others, working together, cleaning up the playground). (CG)</p>

<p>Uses objects in new ways or in pretend play; e.g., pretending to clean table with baby blanket. (CD)</p>	<p>Recognizes that people rely on others for economics, goods, and services (e.g., farm goods, mail delivery, safety, health care).</p>	<p>Engages in joint play, such as using coordinated goals, planning, roles, and games with rules, with at least one other child at a time.</p> <p>Plans play scenarios, such as dramatic play or construction, by establishing roles for play, using appropriate materials, and generating appropriate scenarios to be enacted. (ATL)</p>	<p>Identify the origin of natural resources (e.g., fish from sea, minerals from the ground, wood from trees, food from farms). (G)</p> <p>Recognize that resources are renewable, recyclable, and non-renewable. (G)</p>
<p>Shows increasing independence. (SED)</p> <p>Uses consistent sounds, gestures, or words to communicate. (LDC)</p> <p>Makes things happen and watches for results or repeats action. (CD)</p> <p>Shows imagination and creativity in solving problems. (CD)</p> <p>Moves body with purpose to achieve a goal. (PHD)</p> <p>Uses different actions on objects. (PHD)</p>	<p>Seeks opportunities for leadership (e.g., holds the door open for others when group is leaving the room, asks to pass out napkins during lunch time, helps others clean up after a meal).</p>	<p>Uses basic strategies for dealing with common conflicts, such as sharing, taking turns, and compromising. (SE)</p>	<p>Identify the current President of the United States and Governor of Arizona. (CG)</p>

STRAND 2: COMMUNITY (Continued)			
INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
<p>Understands simple routines, rules or limitations. (SED)</p> <p>Begins to understand gestures, words, questions, and routines. (LDC)</p> <p>Begins to recognize and understand symbols. (LDC)</p> <p>Applies knowledge to new situations. (CD)</p> <p>Begins to understand safe and unsafe behaviors. (PHD)</p>	<p>Describes the purpose of rules.</p> <p>Collaborates with peers to develop ways to live harmoniously together in the classroom.</p>	<p>Engages in joint play, such as using coordinated goals, planning, roles, and games with rules, with at least one other child at a time. (SE)</p> <p>Plans play scenarios, such as dramatic play or construction, by establishing roles for play, using appropriate materials, and generating appropriate scenarios to be enacted. (ATL)</p>	<p>Recognize the rights and responsibilities of citizenship:</p> <ol style="list-style-type: none"> Elements of fair play, good sportsmanship, and the idea of treating others the way you want to be treated Importance of participation and cooperation in a classroom and community Why there are rules and the consequences for violating them Responsibility of voting (every vote counts) (CG) <p>Discuss differences between needs and wants. (E)</p> <p>Recognize various forms of U.S. currency. (E)</p> <p>Recognize that people use money to purchase goods and services. (E)</p>

STRAND 2: COMMUNITY (Continued)			
INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
<p>Shows ability to cope with stress. (SED)</p> <p>Begins to recognize and respond to other children’s feelings and emotions. (SED)</p> <p>Begins to show concern for others. Learns social skills and eventually uses words for expressing feelings, needs, and wants. (SED)</p> <p>Uses sounds, gestures, or actions to express needs and wants. (LDC)</p> <p>Uses a variety of strategies to solve problems. (CD)</p> <p>Uses imitation or pretend play to learn new roles and relationships. (SED)</p> <p>Recalls and uses information in new situations. (CD)</p> <p>Uses imitation or pretend play to express creativity and imagination. (CD)</p>	<p>Recognizes that people have wants and must make choices because resources and materials are limited.</p>	<p>Makes empathetic statements to adults or other children.</p> <p>Offers support to adults or other children who are distressed. (SE)</p>	<p>Recognize that early civilizations improved their lives through advancements (e.g., domestication of animals, tools, farming methods, calendars). (WH)</p> <p>Identify people who help keep communities and citizens safe (e.g. police, fire fighters, nurses and doctors.) (C/G)</p> <p>Discuss different types of jobs that people do. (E)</p> <p>Match simple descriptions of work with the names of those jobs. (E)</p>

Shows confidence in increasing abilities. (SED)	Describes their role at home, at school, and in the community.		Identify examples of responsible citizenship in the school setting and in stories about the past and present. (CG)
--	--	--	---

STRAND 2: COMMUNITY (Continued)			
INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Relationships with Other Children	Environment	People & the Environment	Geography
<p>Uses sounds, signs, or words for a variety of purposes; e.g., When asked, “Where is the ball?” a toddler points to the ball in the corner. (LDC)</p> <p>Uses senses to explore people, objects and the environment. (CD)</p> <p>Searches for missing or hidden objects. (CD)</p> <p>Develops increasing ability to change positions and move body from place to place. (PHD)</p> <p>Imitates sounds, gestures or words; e.g., sounds heard in their neighborhood. (LDC)</p> <p>Attends to colors, shapes, patterns or pictures. (CD)</p>	<p>Describes directionality and/or location within the community.</p> <p>Describes some physical features of the environment in which the child lives (e.g., buildings and natural elements like mountains and weather).</p> <p>Recognizes that people share the environment with other people, plants, and animals.</p> <p>Shows an understanding of how to care for the indoor and outdoor environment.</p>	<p>Understands and uses language related to directionality, order, and the position of objects, including up/down, and in front/behind. (MATH)</p> <p>Identifies similarities and differences about self across familiar environment and settings. (SE)</p>	<p>Discuss geographic concepts related to current events.</p> <p>Recognize the differences between maps and globes.</p> <p>Construct maps of a familiar place (e.g., classroom, bedroom, playground, neighborhood).</p> <p>Determine the relative location of objects using the terms near/far behind/in front, over/under, left/right, up/down.</p> <p>Identify land and water on maps, illustrations, images, and globes.</p> <p>Locate continents and oceans on a map or globe.</p> <p>Identify the basic properties of earth materials (rocks, soil, water; natural or man-made; reusable, and recyclable).</p>

STRAND 3: HISTORY AND EVENTS			
INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Self-Awareness	Concept 1: Understanding Time – Past, Present, and Future	History & Events	Research Skills for History
Shows reciprocity in using language in simple conversations; e.g., answering simple questions about their day. (LDC) Participates in physical care routines. (PHD)	Demonstrates an understanding of time in the context of daily experiences.	Tells fictional stories using a sequence of at least two or three connected events. (LIT)	Sequence recounts of historical events and people using concepts before and after. (AH)

	<p>Understands that events happened in the past and how these events relate to one’s self, family and community.</p>	<p>Shows an ability to recall (in order) multiple step directions. (LC)</p> <p>Shows an understanding of talk related to the past or future (LC)</p> <p>Tells fictional stories or personal stories using a sequence of at least two or three connected events. (LIT)</p>	<p>Retell personal events to show an understanding of how history is the story of events, people, and place in the past. (AH, WH)</p> <p>Listen to recounts of historical events and people and discuss how they relate to present day. (AH, WH)</p> <p>Use primary source materials (e.g., photos, artifacts) to study people and events from the past. (AH, WH)</p> <p>Use information from written documents, oral presentations, and the media to discuss current local events. (AH, WH)</p>
	<p>Communicates time and sequence vocabulary (e.g., before, after, during, first, last, yesterday, tomorrow) to describe relevant history and events.</p>		

Universal Design for Learning and Social Studies

Multiple Ways to Engage Learners

Social Studies is an opportunity to help the child explore who they are as a learner and what their role in the world is. Their knowledge of self is often nested in their knowledge of their family history, and this historical perspective can help with understanding concepts like past, present, and future. Tasks to support this learning include keeping topics relevant, authentic, and valuable to the child.

Multiple Ways to Represent Information to Learners

To make Social Studies learning accessible, ensure subjects are not only socially and culturally relevant, but that topics such as geographic knowledge and citizenship are represented in visual and auditory ways. Hands-on learning experiences could provide opportunities to reinforce these ideas.

Multiple Ways for Learners to Share that they Understand

As children share their knowledge and experiences related to Social Studies activities, they may need to learn to use tools that are a match between their abilities and the demands of the tasks. Educators at the forefront of technology and other assistive tools will be most supportive of children demonstrating their knowledge.

Suggested Adaptations for Social Studies

- Offer a variety of outdoor tools that promote turn-taking and collaboration (e.g., sharable bins of chalk, various textures of balls), or adapted physical equipment (e.g., paint tools with thicker grasps, modified swings) to promote social engagement.
- To support a child with a physical impairment, create opportunities for floor activities with peers by providing floor puzzle of maps and children from around the world.



Physical Development, Health and Safety Standard

PHYSICAL DEVELOPMENT, HEALTH, & SAFETY

Children in our care deserve environments that are safe and encourage healthy living.

It is important to recognize that children’s physical development and their health and safety have as important a place in the curriculum as other areas of development. Children develop skills necessary for future social and academic success as they explore, combine, and refine their physical movements. Thoughtfully planned movement experiences with **vigorous** outdoor and indoor activities should be part of the daily schedule. Therefore, it is important to model healthy living practices and teach children the importance of safe behavior, good hygiene, a healthy diet, and the need for physical activity and rest.

The Physical Development, Health and Safety Standard is organized into the following Strands and related Concepts:

Strand 1: Physical Health and Development

- **Gross Motor** Development
- **Fine Motor** Development

Strand 2: Health

- Personal Health and Hygiene Practices

Strand 3: Safety

- Safety and Injury Prevention

Physical Development, Health, and Safety Standard Definitions

Dexterity is having skill in using one's hands, body, or mind.

Eye-Hand Coordination involves visual and tactile senses working together to develop and perfect physical skills.

Fine Motor refers to the physical development of the smaller muscles of the body, which includes the hands, feet, and eyes.

Fine Motor Skills are demonstrated when children attempt or perform activities that use and coordinate the small muscles in the hand and wrists.

Gross Motor pertains to the physical development of the large muscles in the legs, arms, and torso.

Locomotor is movement that travels from one location to another or in a pathway through space (e.g., walk, run, tip-toe, slither, roll, crawl, jump, march, gallop).

Manipulatives are small items used by children to gain control of their small muscles and to develop eye hand coordination; they are concrete materials used to develop concepts and skills.

Stamina is the ability to sustain prolonged physical or mental effort.

Vigorous is characterized by or involving physical strength, effort, or energy.

STRAND 1: PHYSICAL HEALTH AND DEVELOPMENT

Concept 1: Gross Motor Development

The child moves with maturing, fundamental movement skills.

Children are frequently in motion. This movement develops young children's large muscles as they run, jump, and play in both structured and unstructured settings. Children increase their ability to control their bodies and learn that regular physical activity can enhance their overall physical, social health, mental health, cognitive academic performance, and learning.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

a. Moves with maturing balance skills.

- Performs to the song, *Head, Shoulders, Knees and Toes*.
- Bends, stretches, and twists while playing without losing balance.

b. Moves with maturing locomotor skills (e.g., walks, runs, skips, jumps, gallops, hops, slides, leaps).

- Runs during a game of tag, slowing and accelerating as needed to maneuver around equipment and people.
- Hops four or more times on the same foot. Crouches, then jumps forward for distance using both legs.

c. Moves with maturing coordination (e.g., reach, grasp, throw, catch).

- Catches a ball with hands only.
- Steps forward with foot as they throw. Swings horizontally as they strike a ball off a tee.

d. Demonstrates an understanding of movement concepts including body awareness, spatial awareness, and directional awareness.

- Moves forward, backward, and sideways upon request during a game.
- Changes movement when dancing with scarves to avoid bumping into a peer.
- Places hand on the body part indicated in the song.

STRAND 1: PHYSICAL HEALTH AND DEVELOPMENT

Concept 2: Fine Motor Development

The child uses fingers, hands, and wrists to manipulate tools and materials.

Developing **fine motor skills** is an important foundation for other developmental areas such as cognitive development, artistic expression, daily living skills, and handwriting. Children begin to demonstrate an increased amount of strength, **dexterity**, and **stamina** to perform fine motor tasks using a variety of **manipulatives** and tools. When children are engaged in appropriate activities and experiences, they develop the ability to gain fine motor control, which leads to independence.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

- a. **Uses fingers, hands, and wrists to manipulate a variety of tools and materials, (e.g., crayons, markers, chalk, sponges, paint brushes, scissors, pencils, silverware).**
 - Tears paper into pieces to make a collage.
 - Draws and paints a mural on paper taped to the wall.
- b. **Uses eye-hand coordination to perform simple tasks.**
 - Strings large beads.
 - Hits peg with a wooden hammer.
- c. **Manipulates smaller objects, tools, and instruments that require wrist and squeezing motions.**
 - Twists the cap off a jar.
 - Uses pencil/crayon to make recognizable shapes, lines, and dots.
 - Cuts paper with scissors.
- d. **Uses fine motor skills in daily living.**
 - Buttons, unbuttons, snaps, buckles, laces, or zips jacket.
 - Uses eating utensils at mealtimes.

STRAND 2: HEALTH

Concept 1: Personal Health and Hygiene Practices

Child demonstrates knowledge of personal health practices and routines and understands the functions of body parts.

Children begin to learn self-help/adaptive skills that will assist them in making appropriate healthy choices. They learn that proper nutrition, physical activity, and rest are necessary for a healthy body.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

a. Demonstrates hygiene practices and personal care tasks with increasing independence.

- Uses a tissue to wipe nose when needed and throws the tissue away.
- Washes and dries hands after using the toilet.

b. Demonstrates healthy nutrition practices:

1. Nutrition knowledge

- Can sort foods into food groups in dramatic play.
- Explains how they picked melons off the vines when they were ripe.

2. Nutrition choices

- Explains why the body needs healthy food: “to make my body grow strong!”
- Indicates their familial and cultural food practices: “I bake bread with *mi abuela*”.
- Self-regulates own eating by indicating that they are full after breakfast.

c. Demonstrates active physical play and rest.

- Says as they’re running, “When I run my legs get strong.”
- Takes a break under the shade and drinks water after running on the playground.
- Rides around the bicycle trail several times, increasing speed to catch up to a peer.

d. Demonstrates emerging knowledge of wellness.

- Identifies function of body parts; “I can use my ear and the stethoscope to listen to a friend’s heartbeat!”
- Tells caregiver, “I’m cold! I need my jacket.”

e. Demonstrates emerging knowledge of oral health.

- Mentions, “When I brush my teeth, they get so clean!”
- Knows (from daily routine) to rinse and spit water, with adult guidance, after meals.

STRAND 3: SAFETY

Concept 1: Safety and Injury Prevention

Child demonstrates knowledge of personal safety practices and routines.

Safety awareness refers to development of the ability to identify potential risks and use safe practices to protect oneself and others. Children recognize and avoid potentially harmful persons, objects, substances, activities, and environments to keep themselves safe. These principles should be relevant to Arizona and to the community/region in which the child lives.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

- a. **Identifies and follows basic safety rules with guidance and support (e.g., sun safety, animal and plant safety, outdoor and indoor safety).**
 - Puts on sun protection, e.g., hat and sunglasses, before going outside in the sun.
 - Keeps a safe distance from moving swings.
 - Says, “When I use a hammer, I wear goggles.”
- b. **Identifies basic signs and symbols that indicate danger (e.g., stop sign, poison, exit, flammable, slippery when wet, railroad crossing).**
 - Says, “There is the exit sign” as they exit room during fire drill.
 - Tells a friend “We have to wait; the crossing guard is holding a stop sign.”
- c. **Demonstrates transportation and street safety practices.**
 - Waits for an adult to say, “It’s safe” to cross the street.
 - Cooperates using car seat and seat belts in family car or school bus.
- d. **Enforces personal boundaries (safety, self-advocacy, and boundary awareness).**
 - Says, “Don’t touch me” and moves away.
 - Tells a friend, “Move, I’m coming down the slide.”

e. Knows personal information.

- Tells a caregiver/teacher their guardians' first and last name.
- Tells a familiar adult their first and last name.

f. Demonstrates emergency safety practices.

- Tells a friend, in dramatic play, to "call 911" because the "doll is hurt."
- Participates in classroom fire drill routine with adult support and modeling.

g. Demonstrates ways to tell a trusted adult if threatened or harmed.

- Gets the attention (by touch or sound) of a trusted adult when made to feel uncomfortable or unsafe by another person.
- Child yells, "Teacher, my friend is bleeding and needs a band aid!"

h. Identifies how adults help to keep us safe.

- Identifies the roles of firefighters and police officers in an emergency.
- Child takes the role of school nurse in dramatic center as takes the temperature of a friend.

Integration

The integration page lists examples of strategies, activities, and experiences that an adult caregiver might offer to support the integration of Approaches to Learning, Language and Literacy, and Mathematics into the Science Standard.

PHYSICAL DEVELOPMENT, HEALTH, AND SAFETY		
STRAND 1: PHYSICAL HEALTH AND DEVELOPMENT		
Approaches to Learning - Approaches that are best integrated into Physical Development, Health and Safety.	Language & Literacy – Actions that would incorporate Language and Literacy into Physical Development, Health and Safety.	Mathematics – Actions that would incorporate Mathematics into Physical Development, Health and Safety.
1. Plans cooperative group games, activities, and events.	1. Prepares an obstacle course using symbols, pictures, and words to direct student through the course.	1. Facilitates the children through a game using direction words that utilize counting and math concepts (e.g., “Simon Says do three jumping jacks”, “Simon Says stand next to a friend.”).
2. Develops children’s self-control by using a “Freeze Dance” technique.	2. Provides clay for children to explore and manipulate and build fine motor muscles.	2. Offers tweezers for children to move small objects to create patterns in ice cube trays.

PHYSICAL DEVELOPMENT, HEALTH, AND SAFETY		
STRAND 2: HEALTH		
Approaches to Learning - Approaches that are best integrated into Physical Development, Health, and Safety.	Language & Literacy – Actions that would incorporate Language and Literacy into Physical Development, Health, and Safety.	Mathematics – Actions that would incorporate Mathematics into Physical Development, Health, and Safety.
1. Provides a “We Care” kit for students to assist other students who may need a band-aid or tissue.	1. Includes non-fiction books on a variety of health topics throughout the classroom.	1. Encourages students to notice the patterns in their actions or sing a math song while washing hands.

<p>2. Plans a small group activity to have children persist in hand-washing practice.</p>	<p>2. Helps student create <i>All About Me</i> books where children can record personal data such as height and weight.</p>	<p>2. Facilitates portions by using the terms more and less and by using equivalent standard measuring tools during meal time (e.g., children are served with two $\frac{1}{4}$ cup servings in place of one $\frac{1}{2}$ cup serving of fruit).</p>
---	---	---

PHYSICAL DEVELOPMENT, HEALTH, AND SAFETY

STRAND 3: SAFETY

Approaches to Learning - Approaches that are best integrated into Physical Development, Health, and Safety.	Language & Literacy – Actions that would incorporate Language and Literacy into Physical Development, Health, and Safety.	Mathematics – Actions that would incorporate Mathematics into Physical Development, Health, and Safety.
1. Utilizes puppets to have students act out safety rules of the playground.	1. Provides a variety of non-fiction books about safety and community helpers throughout the classroom.	1. Provides a variety of safety signs in the block area and encourages discussion around shapes of signs.
2. Creates a school bus setting in the dramatic play center for the children to practice bus safety.	2. Facilitates and helps children to create a class book about school safety rules.	2. Plans for children to make simple cell phones to use in the dramatic play center to practice calling 911 when appropriate.

Alignment

Within the Alignment Matrix are codes that reference where in the Head Start Outcomes and the Infant / Toddler Guidelines the examples are found.

Reference Codes for the Head Start *Early Learning Outcomes*

Framework Alignment

- ATL – Approaches to Learning
- C – Cognition
- LC – Language and Communication
- LIT – Literacy
- MATH – Mathematical Thinking
- PMP – Perceptual, Motor, and Physical Development
- SCI – Scientific Inquiry

SE – Social-Emotional Development

Reference Codes for the *Infant/Toddler Developmental Guidelines*

Alignment:

- ATL – Approaches to Learning
- CD – Cognitive Development
- LDC – Language Development and Communication
- PHD – Physical Health and Development
- SED – Social and Emotional Development

Reference Codes for Kindergarten Physical Development and Health and Safety Standards

PE – Physical Education

STRAND 1: PHYSICAL HEALTH AND DEVELOPMENT

INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Gross Motor Development	Gross Motor Development	Perceptual, Motor, and Physical Development	Physical Education
Demonstrates large muscle balance, stability, control, and coordination.	Moves with maturing balance skills.	Demonstrates balance and large muscle movement such as walking on a log without falling or balancing on one leg.	Performs locomotor skills. (S1.E1)
Demonstrates large muscle balance, stability, control, and coordination.	Moves with maturing locomotor skills (e.g., walks, runs, skips, jumps, gallops, hops, slides, leaps).		Jumps and lands with balance. (S1.E3) Underhand throw with opposite foot forward. Drops a ball and catches it before it drops twice.

<p>Moves body, arms, and legs with coordination.</p>	<p>Moves with maturing manipulative skills. (e.g., reach, grasp, throw, catch).</p>	<p>Easily coordinates hand and eye movement to carry out tasks such as working on puzzles or stringing beads together.</p>	
	<p>Demonstrates an understanding of movement concepts including body awareness, spatial awareness, and directional awareness.</p>	<p>Demonstrates awareness of own body and other people's space during interactions.</p>	<p>Differentiates between movement in personal (self-space) and general space.</p> <p>Travels in three different pathways.</p>

STRAND 1: PHYSICAL HEALTH AND DEVELOPMENT (Continued)

INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Fine Motor Development	Fine Motor Development	Perceptual, Motor, and Physical Development: Fine Motor	English Language Arts
Develops small muscle control and coordination. (PHD)	Uses fingers, hands, and wrists to manipulate a variety of tools and materials, (e.g., crayons, markers, chalk, sponges, paint brushes,	Easily coordinates hand and eye movement to carry out tasks such as working on puzzles or stringing beads together.	Demonstrate and apply handwriting skills.
Coordinates eye and hand movements.	Uses eye-hand coordination to perform simple tasks.		
Uses different actions on objects.	Manipulates smaller objects, tools, and instruments that require wrist and squeezing motions.	Uses a pincer grip to hold and manipulate tools for writing, drawing, and painting.	
Controls small muscles in hands when doing simple tasks.	Uses fine motor skills in daily living.		

STRAND 2: HEALTH			
INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Physical Health and Well-Being	Personal Health and Hygiene Practices	Perceptual, Motor, and Physical Development: Health, Safety, and Nutrition	Comprehensive of Health Promotions and Disease Prevention Concepts
Shows characteristics of healthy development.	Demonstrates hygiene practices and personal care tasks with increasing independence.	Demonstrates increasing ability to take responsibility for participating in self-care skills such as brushing teeth or getting dressed.	Describe ways to prevent communicable diseases.
Participates in physical care routines.	Demonstrates healthy nutrition practices: 1) Nutrition knowledge; 2) Nutrition choices.	Identifies a variety of healthy and unhealthy foods.	Recognize what the human body is and what it means to be healthy.

	Demonstrates active physical play and rest.	Engages in independent activities (ATL) Demonstrates strength and stamina that allow for participation in a range of physical activities such as running and playing tag.	Recognizes that physical activity is important for good health. (PE)
	Demonstrates emerging knowledge of wellness.	Demonstrates increasing ability to take responsibility for participating in self-care skills such as brushing teeth or getting dressed.	Identify that healthy behaviors affect personal health and overall well-being.
	Demonstrates emerging knowledge of oral health.		

STRAND 3: SAFETY

INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Physical Health and Well-Being	Safety and Injury Prevention	Perceptual, Motor, and Physical Development: Health, Safety, and Nutrition	Comprehensive of Health Promotions and Disease Prevention Concepts
Begins to understand safe and unsafe behaviors.	Identifies and follows basic safety rules with guidance and support; e.g., sun safety, animal and plant safety, outdoor and indoor safety.	Identifies, avoids, and alerts others to dangers such as keeping a safe distance from swings.	Demonstrate healthy practices and behaviors to maintain or improve personal health.
	Identifies basic signs and symbols that indicate danger (e.g., stop sign, poison, exit, flammable, slippery when wet, railroad crossing).	Identifies basic safety rules with adult guidance and support such as transportation and street safety practice.	Demonstrate behaviors that avoid or reduce health risks.
	Demonstrates transportation and street safety practices.		Make requests to promote personal health.
	Enforces personal boundaries (safety, self-advocacy, and boundary awareness).	Demonstrates control over actions and words in response to challenging situations. (ATL)	
Uses sounds, signs or words for a variety of purposes. (LDC)	Knows personal information.		

Begins to understand safe and unsafe behaviors.	Demonstrates emergency safety practices.		Demonstrate healthy practices and behaviors to maintain or improve physical health. Demonstrate ways to respond when in an unwanted, threatening, or dangerous situation.
	Demonstrates ways to tell a trusted adult if threatened or harmed.	Seeks help from adults when needed. (SE)	Identify trusted adults and professionals who can help promote health.
	Identifies how adults help to keep us safe.		

Universal Design for Learning and Physical Development, Health, and Safety

Multiple Ways to Engage Learners

Help children to understand why physical development is important (skills like balancing, traveling, large, and small muscle movement). When children understand their bodies and practice physical skills, it may increase their engagement, persistence, and self-regulation skills.

Multiple Ways to Represent Information to Learners

This is an opportunity to show children what they will learn about physical development and skills. Providing options for learning about physical development that include visual, auditory, and hands-on learning experiences.

Multiple Ways for Learners to Share that they Understand

Children may need alternative methods for demonstrating knowledge and skill in the physical domain. How something is done can be demonstrated, as well as described in many ways.

Suggested Adaptations for Physical Development, Health, and Safety

- Plan for gross and fine motor activities to provide opportunities for children to actively engage using their whole bodies.
- Provide step-by-step picture schedules of everyday health-related activities such as hand washing and nose-blowing to help children become more successful at self-help skills.
- To support a child with a hearing impairment, allow them to sit near or to touch a speaker you play music so they may feel the vibrations the music produces. Adjust the bass to enhance the experience.



Fine Arts Standard

FINE ARTS STANDARD

The arts connect all areas of learning and are fundamental to children’s development and education.

The arts nurture the imagination and creative spirit of all children. Sensory awareness (sight, sound, touch, smell, taste) is the foundation for all imaginative activity and creative expression. For young children, the importance of the arts is in the process of creating and constructing rather than the result of the product.

Arts connect all areas of learning and are fundamental to children’s development and education. As children are involved in the arts process they develop independence, self-esteem, and self-expression. They discover ways through which to understand, design, and explain their ideas, thinking, and theories about the world. The arts enable all children to discover more about who they are and gain insight into their own culture and the cultures around them.

The Fine Arts Standard is organized into the following Strands and related Concepts:

Strand 1: Visual Arts

- Improvises and Connects with Visual Arts

Strand 2: Music

- Creates and Connects with Musical Concepts and Expressions

Strand 3: Creative Movement and Dance

- Creates and Connects with Creative Movement and Dance

Strand 4: Dramatic Play

- Creates and Connects with Dramatic Activities

Fine Arts Standard Definitions

Beat is an underlying, steady pulse present in most music.

Chant is most commonly the rhythmic recitation of rhymes or poems without a sung melody; a type of singing with a simple, unaccompanied melody line and free rhythm.

Characteristic(s) is an attribute, feature, property, or essential quality.

Connect is the artistic act of relating artistic ideas and work with personal meaning and external context.

Creates means to conceive and develop new artistic ideas - such as an improvisation, composition, or arrangement - into a work.

Creativity is the ability to conceive and develop rich, original ideas, discover unexpected connections, and invent or make new things.

Dramatic play is make-believe where children naturally assign and accept roles, then act them out.

Gestures are expressive and planned movement of the body or limbs.

Improvisation is music created and performed spontaneously or in-the-moment, often within a framework determined by the musical style.

Improvisations are songs, games, stories, dance, or chants that a child makes up.

Instruments can be any traditional or non-traditional devices used or made to create musical sounds.

Interpretation is the intent and meaning that a performer realizes in studying and performing a piece of music.

Locomotor is movement that travels from one location to another or in a pathway through space (walk, run, tip-toe, slither, roll, crawl, jump, march, gallop).

Media can be any means or materials used to express or communicate an idea or thought. Medium is the mode of artistic expression or communication through material or other resources used for creating art (e.g., clay, markers, oil pastels, watercolor, Tempera paint, recycled materials, varying types of paper, buttons).

Movement is the act of moving in non-locomotor (such as clapping and finger snapping) and locomotor (such as walking and running) patterns to represent and interpret musical sounds.

Play is the spontaneous, engaged activity through which children learn to experience, experiment, discover, and create.

Processes are methods and procedures used to accomplish a task or make a creation.

Respond means the artistic act of understanding and evaluating how the Arts convey meaning.

Rhythm is the patterning or structuring of time through movement or sound.

Style is dance that has specific movement characteristics, qualities, or principles that give it distinctive identity (for example, Graham technique is a style of Modern Dance; rhythm tap is a style of Percussive Dance; Macedonian folk dance is a style of International Folk dance; Congolese dance is a style of African Dance).

Tempo is the rate or speed of the beat in a musical work or performance.

Tools are implements, instruments or utensils that are used to cut, dig, pound, rub, paint, write, or create works of expression.

Two or Three Dimensional are works of art that have height, depth, and/or width.

STRAND 1: VISUAL ARTS

Concept 1: Improvises and Connects with Visual Arts

The child uses a wide variety of materials, media, tools and digital tools, techniques, and processes to explore, create, respond to, and connect with visual arts.

Children approach art as open-ended play³⁴ and communicate their ideas, experiences, and feelings by generating representations using a multitude of media such as crayons, markers, paints, paper, modeling, and construction. Children develop vocabulary to share their opinions about their artistic creations and experiences. Caregivers can support children to reflect upon and describe the characteristics and qualities of their work and the work of others.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

- a. **Creates their own original works using a variety of materials/media, tools, and techniques (e.g., materials/media, such as, paper, digital drawing application, sand, clay).**
 - Makes a collage using a collection of natural objects like flowers and leaves that were gathered during a nature walk.
 - Chooses to construct a three-dimensional piece using recycled materials and buttons from home.
- b. **Represents creative choices, ideas, experiences, and feelings with details that connect to personal meaning.**
 - Draws a portrait including facial details.
 - Uses oil pastels to illustrate a picture of where they went for vacation.
 - Takes the time to select a piece of paper for the desired texture and color.
- c. **Engages in two- and three-dimensional artistic investigations.**
 - Collaborates with others to paint a large mural of the desert sunset.
 - Selects blocks, scarves, and bottle caps to construct a house in the block space.
- d. **Describes and communicates an understanding of their work and the artwork of others.**
 - Gestures to their oil pastel drawing and signs a story about the picture they drew.
 - Asks, “How did you make the clay do that?” when observing another child’s sculpture.

³⁴ Bongiorno, L. (2010). How process art experiences support preschoolers. *Teaching Young Children*, 7(3). Retrieved from <http://www.naeyc.org/tyc/files/tyc/Bongiorno.pdr>.

STRAND 2: MUSIC

Concept 1: Creates and Connects with Musical Concepts and Expressions

The child uses a wide variety of instruments, media, and tools, techniques, and music to explore and connect.

Singing, making, and listening to music are fundamental musical activities of young children. These activities help young children explore and demonstrate self-expression, creativity, and appreciation for the arts. Engagement with music encourages mathematical thinking concepts such as patterning and sequencing, physical movement and spatial awareness, and social interaction.³⁵

Indicators and Examples in the Context of Daily Routines, Activities, and Play

- a. **Experiments with a variety of instruments, vocalizations, sounds.**
 - Uses voice to make animal sounds.
 - Uses a tin pie pan and spoon to drum.
- b. **Sings to familiar rhymes, songs, and chants.**
 - Claps, slowing down or speeding up with the music.
 - Sings the lyrics to the “Hello, Good Morning” song.
- c. **Uses familiar songs, rhymes, or chants to create their own musical improvisations.**
 - Makes up their own verse to a favorite song/tune.
 - Records a rhyming song made up with a friend and plays back for their friends.
- d. **Responds to different styles of music, (e.g., rock, classical, jazz, spirituals, Hawaiian, reggae, Native American, gospel, bluegrass, lullabies, marches, and country music), and music representative of a variety of cultures.**
 - Rocks a baby doll softly when hearing a lullaby.
 - Signs, “I like the music with the drums in it.”
- e. **Describes and communicates an understanding of music in the contexts of daily experiences.**
 - “Bakes a cake” in the dramatic play center and sings “Happy Birthday” to a friend.
 - Explains they love this song because their dad sings it in Spanish in the car.

³⁵ Cooper, J. (2016). Integrating music, drama, and dance helps children explore and learn. *Young Children*, 9(4). Retrieved from <https://www.naeyc.org/resources/pubs/tyc/apr2016/integrating-music-drama-and-dance-helps-children>.

STRAND 3: CREATIVE MOVEMENT AND DANCE

Concept 1: Creates and Connects with Creative Movement and Dance

The child uses a wide variety of movement, expressions, media and tools, and techniques, to explore and connect with their own bodies within space.

“As children explore ways they can move their bodies and make objects move,” they construct knowledge about their capabilities as learners³⁶. Movement and dance provides children with a “vehicle and organizing framework to express ideas and feelings as well to develop and enhance locomotor skills”³⁷. These activities help young children explore and demonstrate self-expression, creativity, and appreciation for the arts. Intentional engagement with music between caregivers and children encourages mathematical thinking concepts such as patterning and sequencing, physical movement and spatial awareness, and social interaction.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

a. Experiments with a variety of movements.

- Stretches as high as they can during yoga to “reach the sun”.
- Moves to their interpretation of the animals in the story as the teacher reads it aloud.

b. Dances and moves to rhymes, songs, and chants.

- Choreographs a spontaneous movement to a favorite song in a small group.
- Teaches a familiar finger play to a friend that they learned at the library story time.

c. Responds with movement to various sensory stimuli.

- Rolls their wheelchair in response to the beat of the drums in the song.
- Imitates the trees bending in the wind using scarves on the playground.
- Use of different tempos of music or sound, light and shadow, dramatic play acting.

³⁶ Bucher, E. & Hernández, M. (2016). Beyond bouncing the ball: Toddlers and teachers investigate physics. *Young Children*, 71(3). Retrieved from <http://www.naeyc.org/yc/article/bouncing-ball-physics>.

³⁷ Early Childhood Leadership Committee of Colorado. (2011) Colorado early learning & development guidelines. Retrieved from <https://www.cde.state.co.us/early/eldgs>.

d. Describes and communicates an understanding of movement and dance in the contexts of daily experiences.

- Drives like a train during the transition to the playground, imitating the trains that travel through the nearby railroad.
- Sways while hearing the “the wipers on the bus, goes swish, swish, swish...”

STRAND 4: DRAMATIC PLAY

Concept 1: Creates and Connects with Dramatic Activities

The child uses the portrayal of events, characters, or stories through acting and using props and language to explore, create, and connect.

Children use the richness of their daily activities to create pretend play, assuming different roles and characters. These experiences contribute to children’s ability to self-regulate, communicate more effectively, and engage in cooperative activity with peers while practicing roles of others. When caregivers design environments for children to easily access relevant dramatic play tools and props, children can explore and understand the world around them³⁸ creating a deeper comprehension of the relationships between objects, people, and events.

Indicators and Examples in the Context of Daily Routines, Activities, and Play

- a. **Assumes roles from daily activities using a variety of props.**
 - Selects from a box of clothes a hat, jacket, and piece of rope and portrays a firefighter putting out a fire.
 - Pretends to be a teacher and reads a book to the stuffed bear.
- b. **Takes on more than one dramatic play role at a time.**
 - Changes their voice while pretending to be a “daddy” and a “baby.”
 - Says, “I’ll be the doctor and the nurse. You be the patient.”
- c. **Pretends an object exists without using a prop.**
 - Orders a “cheese pizza” and reaches into pocket for imaginary money to pay.
 - Pretends to put on a hat and coat to go outside, during dramatic play.
- d. **Dramatizes familiar stories.**
 - Plays the wolf in *The Three Little Pigs*.
 - Says, “My grandfather told me a story about where the wind comes from. I’ll be the wind.”

³⁸ College Board for the National Coalition for Core Arts Standards. (2012). Child Development and Art Educations: A Review of Current Research and Best Practices. Retrieved from <https://nccas.wikispaces.com/file/view/NCCAS+Child+Development+Report.pdf>.

e. Adds details and expresses original ideas in dramatic play situations.

- Adds their own ending to a story they read in the library center.
- Brings large blocks from the block center to the dramatic play center to construct the wings for the airplane for their “trip to the Grand Canyon”.

Integration

The integration page lists examples of strategies, activities, and experiences that an adult caregiver might offer to support the integration of Approaches to Learning, Language and Literacy, and Mathematics into the Science Standard.

FINE ARTS		
STRAND 1: VISUAL ARTS		
Approaches to Learning - Approaches that are best integrated into Fine Arts.	Language & Literacy – Actions that would incorporate Language and Literacy into Fine Arts.	Mathematics – Actions that would incorporate Mathematics into Fine Arts.
1. Gathers and maintains an accessible art area that includes a variety of materials to allow children to display initiative in creating or designing an original work of art.	1. Introduces new and unique vocabulary in describing colors such as fuchsia, magenta, indigo, teal, etc.	1. Helps children recognize and name lines, circles, and other shapes in works of art.
2. Designates time and space to save and display children’s art creations to foster sustained attention and persistence.	2. Records child’s description of artwork or the work of others.	2. Provides materials for creating <u>two and three-dimensional</u> works of art.

FINE ARTS		
STRAND 2: MUSIC		
Approaches to Learning - Approaches that are best integrated into Fine Arts.	Language & Literacy – Actions that would incorporate Language and Literacy into Fine Arts.	Mathematics – Actions that would incorporate Mathematics into Fine Arts.
1. Promotes risk-taking and builds confidence by inviting children to demonstrate self-expression in movement to music	1. Posts printed lyrics with pictures for classroom songs to connect printed words to vocal expressions.	1. Provides opportunities for children to clap patterns in a variety of rhythms and tempos.

2. Encourages curiosity and experimentation by providing a diverse variety of musical <u>instruments</u> and music.	2. Introduces descriptive musical vocabulary words such as <u>tempo</u> , <u>rhythm</u> , <u>beat</u> , pause, crescendo, a cappella, and names of musical <u>instruments</u> .	2. Uses manipulatives such as bean bags to support children’s positional experience with words like high/ low, top/ bottom, side to side, and front/ back.
--	---	--

FINE ARTS		
STRAND 3: CREATIVE MOVEMENT AND DANCE		
Approaches to Learning - Approaches that are best integrated into Fine Arts	Language & Literacy – Actions that would incorporate Language and Literacy into Fine Arts	Mathematics – Actions that would incorporate Mathematics into Fine Arts
1. Promotes risk-taking and builds confidence by allowing children to demonstrate self-expression in movement to music.	1. Introduces descriptive vocabulary words along with movement and dance such as stretch, pause, rhythm, crescendo, and other names of movement.	1. Incorporates materials that support children in varying their movements (e.g., slow with scarves, fast with balls)

FINE ARTS		
STRAND 4: DRAMA		
Approaches to Learning - Approaches that are best integrated into Fine Arts	Language & Literacy – Actions that would incorporate Language and Literacy into Fine Arts	Mathematics – Actions that would incorporate Mathematics into Fine Arts
1. Provides props representative of the local community to allow children to practice reasoning and problem-solving skills by creating their own dramatic play experiences.	1. Develop children’s comprehension skills through re-enacting shared stories and nursery rhymes.	1. Provides place settings in the dramatic play area to promote one-to-one correspondence.

<p>2. Encourages and extends expression of child’s own opinions, ideas, and feelings through imaginary play to build confidence.</p>	<p>2. Asks children to record and illustrate stories related to their imaginary play and helps them to “publish” the stories in the writing space using tape and other materials for binding.</p>	<p>2. Provides materials to allow children to identify variability in size, number, weight, shape, etc.</p>
--	---	---

Alignment

Within the Alignment Matrix are codes that reference the Head Start Early Learning Outcomes Framework, the Arizona *Infant and Toddler Guidelines*, and Arizona’s Kindergarten Standards.

Reference Codes for the Head Start *Early Learning Outcomes Framework* Alignment

- ATL – Approaches to Learning
- C – Cognition
- LC – Language and Communication
- LIT – Literacy
- MATH – Mathematical Thinking
- PMP – Perceptual, Motor, and Physical Development
- SCI – Scientific Inquiry
- SE – Social-Emotional Development

Reference Codes for the *Infant/Toddler Developmental Guidelines* Alignment:

- ATL – Approaches to Learning
- CD – Cognitive Development
- LDC – Language Development and Communication
- PHD – Physical Health and Development
- SED – Social and Emotional Development

Reference Codes for Kindergarten Arts Standards Alignment

VA – Visual Arts

MU – Music

TH – Theatre

STRAND 1: VISUAL ARTS			
INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Approaches to Learning	Improvises and Connects with Visual Arts	Approaches to Learning (Creativity)	Visual Arts
Delight in finding new properties and uses for familiar objects and experiences.	Creates their own original works using a variety of materials/media, tools, and techniques to create original works of art (e.g., materials/media such paper, digital drawing application, rocks, sand, clay; tools such as cotton swabs, small/large brushes, branches drinking straws, and techniques such as drawing, painting, sculpting).	Uses imagination with materials to create stories or works of art.	Engage collaboratively (such as, using manipulatives for construction, adding to group collage, etc.) in creative art making in response to an artistic problem.
Uses different actions on objects. (PHD)	Represents creative choices, ideas, experiences and feelings with details that connect to personal meaning.	Uses multiple means of communication to creatively express thoughts, feelings, or ideas.	Create art that tells a story about a life experience.
Develops small muscle control and coordination. (PHD)	Engages in two- and three-dimensional artistic investigations.	Creates and builds shapes from components. (C/M)	Identify various types (such as drawing, painting, sculpture, architecture, etc.) of art.

	Describes and communicates an understanding of their work and the artwork of others.	Uses multiple means of communication to creatively express thoughts, feelings, and ideas.	Describe what an image represents.
--	--	---	------------------------------------

STRAND 2: MUSIC

INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Approaches to Learning	Creates and Connects with Musical Concepts and Expressions	Approaches to Learning	General Music
Uses different actions on objects. (PHD) Uses sounds, gestures and movements to impact the environment and interactions. (ATL)	Experiments with a variety of instruments, vocalizations, sounds	Uses multiple means of communication to creatively express thoughts, feelings, or ideas.	With appropriate guidance, explore various uses of music in daily experiences. With appropriate guidance, explore relationships between music and other content areas.
Observes and imitates sounds, gestures and behavior. (CD)	Sings to familiar rhymes, songs, and chants.		
Shows interest in listening to sound. (LDC)	Uses familiar songs, rhymes or chants to create own musical improvisations.		
Responds to nonverbal communication of others. (LDC)	Responds to different types of music (e.g., rock, classical, jazz, spirituals, reggae, Native American, gospel, bluegrass, lullabies, marches and country music).	Performs activities that combine and coordinate large muscle movements, including swinging on a swing, climbing a ladder, or dancing to music. (P/GM)	

	Describes and communicates an understanding of music in the contexts of daily experiences.	Communicates clearly enough to be understood by adults across a range of situations. (LC)	
--	--	---	--

STRAND 3: CREATIVE MOVEMENT AND DANCE

INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Approaches to Learning	Creates and Connects with Creative Movement and Dance		Dance
Uses different actions on objects. (PHD) Uses sounds, gestures and movements to impact the environment and interactions. (ATL)	Experiments with a variety of movements.	Demonstrates strength and stamina that allow for participation in a range of physical activities. (PGM)	Demonstrate a range of locomotor and non-locomotor movements.
Observes and imitates sounds, gestures and behavior. (CD)	Dances and moves to rhymes, songs, and chants.	Performs activities that combine and coordinate large muscle movements.	
Shows interest in listening to sound. (LDC)	Responds with movement to different sensory stimuli (e.g., different tempos of music or sound, light and shadow, dramatic play acting).		
Moves body with purpose to achieve a goal. (PHD)	Describes and communicates an understanding of movement and dance in the contexts of daily experiences.		

STRAND 4: DRAMATIC PLAY

INFANT & TODDLER GUIDELINES	AZ EARLY LEARNING STANDARD	HEAD START EARLY LEARNING OUTCOMES FRAMEWORK	AZ KINDERGARTEN STANDARD
Approaches to Learning	Creates and Connects with Dramatic Activities	Approaches to Learning	Theatre
Uses objects in new ways or in pretend play . (CD)	Assumes roles from daily activities using a variety of props.	Child demonstrates initiative and independence.	<p>With prompting and support, actively engage with others in a guided theatrical experience (e.g., process drama, story drama, creative drama)</p> <p>Uses imagination to transform objects</p> <p>With prompting and support, identify stories that are different from one another in a guided theatrical experience (e.g., process drama, story drama, creative drama).</p>
	Takes on more than one dramatic play role at a time.	Child uses imagination in play and interactions with others	
Pretends and uses imagination during play . Uses imitation or pretend play to express creativity and imagination. (CD)	Pretends an object exists without using a prop.	Uses imagination with materials to create stories or works of art. Re-tells or acts out a story that was read, putting events in the appropriate sequence, and demonstrating more sophisticated understanding of how events relate, such as cause and effect relationships. (LIT)	
Pays attention briefly and tries to reproduce pleasurable effects and events.	Dramatizes familiar stories.		

<p>Watches what others do, begin to pretend, and uses materials in new and different ways.</p>	<p>Adds details and expresses original ideas in dramatic play situations.</p>	<p>Plans play scenarios, such as dramatic play or construction, by establishing roles for play, using appropriate materials, and generating appropriate scenarios to be enacted.</p>	<p>With prompting and support, express original ideas in a guided theatrical experience.</p>
--	---	--	--

Universal Design for Learning and Fine Arts

Multiple Ways to Engage Learners

Art is the expression of self, experience, and imagination across a variety of mediums. As we consider providing choice and options we look to affect and preferences that children bring to the table. Helping children to understand the “why” of art and their connection to it, will support engagement with the subject.

Multiple Ways to Represent Information to Learners

The topics within the art subject include visual, musical, movement, and dramatic skills. Using multiple methods for teaching about each area may help all children to access the content. Consider how children will be able to perceive the topic, what language will be necessary to share information, and how children will construct their knowledge around each topic.

Multiple Ways for Learners to Share that they Understand

Children may present a variety of challenges and impairments. These can range from fears to actual physical motor impairments which greatly affect how children will approach demonstrating their knowledge and impact planning. Provide scaffolding for children as they work to find ways to show what they know.

Suggested Adaptations for Fine Arts

- Use modeling or molding dough, or other sensory materials that allow for fine muscle practice.
- Visual supports to support following directions to use the materials appropriately.
- Add handles or grips to art tools to make easier to use.



Resources

Arizona Resources

There are many quality resources for children and families in Arizona and within your community. This is not an all-inclusive list. This is a starting point.

Arizona Department of Education, Early Childhood Education Unit
www.azed.gov/ece

Arizona Department of Health Services,
Bureau of Child Care Licensure
<http://www.azdhs.gov/licensing/childcare-facilities/index.php>

Arizona Child Care Resource and Referral
<http://www.arizonachildcare.org/>

Arizona Early Childhood Education Association
<http://azece.org/>

Arizona's Children Association
<http://www.arizonaschildren.org/>

Arizona Early Intervention Program
<https://des.az.gov/services/disabilities/developmental-infant>

Arizona Promising Practices
<http://www.azpromisingpractices.com/>

Arizona School-Age Coalition
<http://www.azfoundation.org/catalog/org>

Association for Supportive Child Care
<http://www.asccaz.org/>

Birth to Five Helpline
www.azftf.gov/WhatWeDo/Programs/Pages/birthtofivehelpline.aspx
1-877-705-KIDS (5437)

Child and Family Resources, Inc
(Cochise, Graham, Greenlee, La Paz, Pima, Santa Cruz or Yuma Counties) 520.323.4283 (Pima county) 1.800.905.4389 (outside Pima county) Tucson, AZ
<http://www.Childfamilyresources.org>

Childhood Assessment System for OPM
<http://www.azed.gov/early-childhood/files/2012/02/arizonas-early-childhood-assessment-system-for-on-going-progress-monitoring-2012-13.pdf>

Children's Action Alliance
<http://azchildren.org//>

Child Find
<http://www.azed.gov/special-education/az-find/>

First Things First

www.firstthingsfirst.org

Read On Arizona

www.readonarizona.org

Special Needs

An Administrator's Guide to Preschool Inclusion

[http://www.fpg.unc.edu/sites/default/files/resources/reports-and-policy-briefs/ECRII Administrators Guide 2000.pdf](http://www.fpg.unc.edu/sites/default/files/resources/reports-and-policy-briefs/ECRII_Administrators_Guide_2000.pdf)

The Blue Pages-Arizona's Disability Resource Guide

<http://www.azed.gov/special-education/files/2011/06/gr07-pin-blue-pages.pdf>

Creating Adaptations for Routines and Activities (Cara's Kit)

[http://www.dec-sped.org/Store/Additional Resources](http://www.dec-sped.org/Store/Additional_Resources)

Mountain Plains Regional Resource Center

<http://www.cpdusu.org/projects/rrc1213/>

Early Childhood Technical Assistance Center (ECTA)

<http://www.ectacenter.org/googleresults.asp?cx=001354871196560068277%3Alkpeognsxh8&cof=FORID%3A11&q=REsources>

Early Childhood Technical Assistance Center

www.ectacenter.org/enotes/enotes.asp

Office of Special Education Programs (OSEP)

<http://www2.ed.gov/about/offices/list/osers/osep/index.html>

Raising Special Kids

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

Arizona Division of Early Childhood of the Council for Exceptional Children

<http://home.mindspring.com/~llevine1/>

Child Care

After School Alliance

<http://www.afterschoolalliance.org>

Child Care Exchange

<http://www.childcareexchange.com>

Better Baby Care Campaign

www.betterbabycare.org

National Network for Child Care

<http://www.nncc.org>

Clearinghouse on Early Education and Parenting
(Articles in English and Spanish)

<http://ecap.crc.illinois.edu/poptopics.html>

Family Support America

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

Arizona Families for home Education

www.afhe.org

Kid Source On line

www.Kidsource.com

Net Family News (Links to Family Resources)

netfamilynews.org/links.htm

National Child Care Information Center

http://www.csrees.usda.gov/nea/family/part/childcare_part_nccic.html

Family/Parents

Parents Action for Children

www.iamyourchild.org

Parent Education Resources

<http://www.parent-education.com/index.html>

PBS Parents

www.pbs.org

Pediatric Parenting

www.keepkidshealthy.com/

PTA (National)

www.pta.org

Teacher Magazines

Early Childhood Today

www.scholastic.com/earlychildhoodtoday

Pre-K Now Newsletter

<http://www.preknow.org>

NAEYC Journal

<https://oldweb.naeyc.org/pubs/>

Teachers Guide

www.theteachersguide.com

Arizona Association for the Education of Young Children

<http://azaeyc.net/>

Affiliate Chapters of AzAEYC:

Central Arizona AEYC

<http://azaeyc.net/affiliates/central-azaeyc>

Southern Arizona AEYC

<http://azaeyc.net/affiliates/southern-azaeyc->

Northern Arizona AEYC

<http://azaeyc.net/affiliates/northern-azaeyc>

Organizations

Yuma County AEYC

<http://azaeyc.net/affiliates/yuma-azaeyc>

Valley of the Sun AEYC

<http://azaeyc.net/affiliates/vsaeyc>

Association for Childhood Education International (ACEI)

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

National Association for the Education of Young Children (NAEYC)

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

National Black Child Development Institute (NBCDI)

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

Multicultural Education

Center for Research on Education, Diversity and Excellence

<http://www.crede.org>

Multicultural Education Resource Directory

Oregon Department of Education

(**COMPREHENSIVE** directory organized by resource topics with individual listings under each topic.)

<http://www.ode.state.or.us/teachlearn/specialty/multicultural/multieddirectory03.doc>

National Association for Multicultural Education

<http://nameorg.org/>

Web Sites with Comprehensive Education Links

Ask Evelyn

<http://www.askevelyn.com/links.htm>

Administration for Children and Families

Head Start Bureau

<http://www.acf.hhs.gov/programs/ohs/>

Discovery School

<http://www.discoveryeducation.com/teachers/>

Earlychildhood.com

<http://www.earlychildhood.com/?domainredirect=true&>

National Center for Family Literacy

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

National Governors Association

<http://www.nga.org/center/>

PBS Teacher Source

<http://www.pbs.org/teachersource/prek2.htm>

Pre-K Fun

<http://www.prekfun.com/>

Early Childhood Educators' and Family Web Corner

[Http://users.stargate.net](http://users.stargate.net)

Education World

www.education-world.com

Federal Resources for Educational Excellence

www.free.ed.gov

The Teacher's Guide

www.theteachersguide.com

Preschool Education.com

<http://www.preschooleducation.com>

Web Site 4 Teachers

<http://www.websites4teachers.com/>

The Activity Idea Place

www.123child.com