Language Development and Communication for Infants and Toddlers

Arizona Department of Education
Early Childhood Education Unit

Welcome and Ice Breaker

Agenda

- Objectives
- Connect Language Development and Communication to School Readiness
- Explore Arizona resources and initiatives while connecting to infants and toddlers
- Explore the components of the Language Development and Communication Domain
  - Listening and Understanding
  - Communicating and Speaking
  - Emergent Literacy
- Identify the role of the caregiver/teacher
- Demonstrate the interconnectedness of the domains
- Wrap-up and Questions

Objectives

Participants will:

- Define Language Development and Communication
- Discuss characteristics of children birth to 3
- Briefly review the new Arizona Infant and Toddler Guidelines and the Arizona Early Learning Standards (specifically the Language and Literacy components)
- Explore effective strategies to support language development of infants and toddlers

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Diaper Bag

Reflection!

5

Connecting to School Readiness…

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Arizona State Literacy Plan

The purpose of the Arizona State Literacy Plan is to create a cohesive, seamless roadmap for parents, educators, professionals, policy makers, and community stakeholders that clearly and articulately outlines the stages of literacy development from birth through grade twelve.

Arizona State Literacy Plan

"Literacy is an achievement that rests on all levels of linguistic processing, from the elemental sounds to the most overarching structures of text."

(Moats, L. 2000, p. 1)

Read On Arizona: The Four Legs of Emergent Literacy

Infant & Toddler Developmental Guidelines

Arizona Early Learning Standards for 3 to K entry

Arizona's College and Career Ready Standards

College and Career Ready Outcomes for All Children

Arizona's Infant and Toddler Developmental Guidelines

Domains:

- Social and Emotional Development
- Approaches to Learning
- Language Development and Communication
- Cognitive Development
- Physical and Motor Development

Arizona's Early Learning Standards

Standards:

- Approaches to Learning
- Social and Emotional Development
- Language and Literacy
- Mathematics
- Science
- Social Studies
- Physical Development, Health, and Safety
- Fine Arts

Alignment in Language and Literacy

ITDG Language Development and Communication Domain

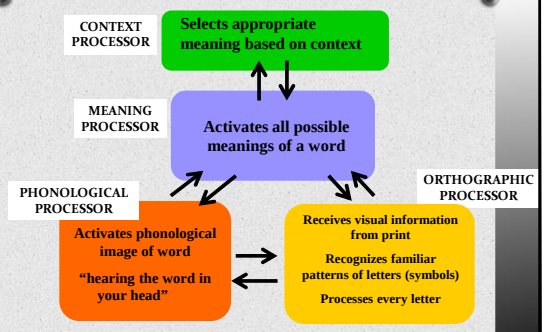
- Listening and Understanding
- Communicating and Speaking
- Emergent Literacy

AZELS Language and Literacy Standard

- Language
- Emergent Literacy
- Emergent Writing

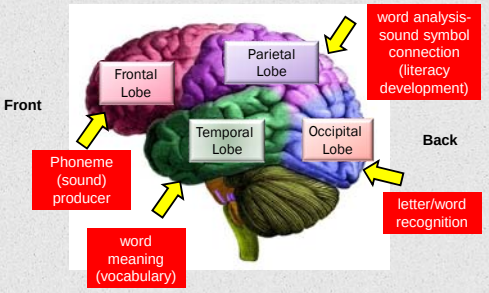
Hiccup

4 Part Processor

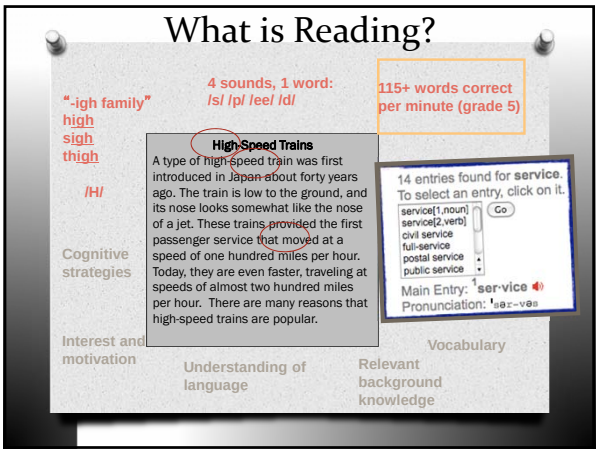


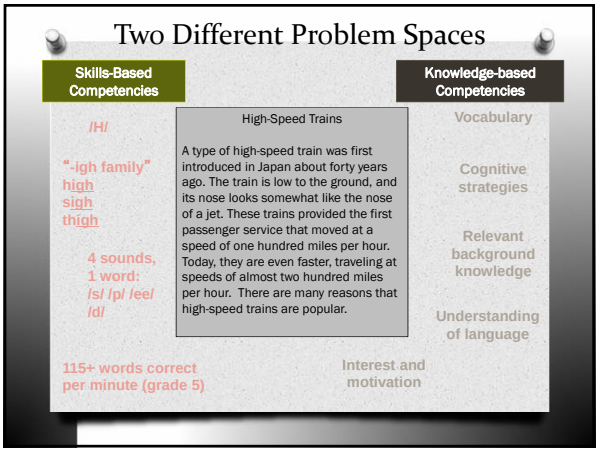
(Adams, 1990), (Seidenburg and McClelland, 1989) (Berninger & Richards, 2002; Eden & Moats, 2002; Shaywitz, 2003)

Language and Literacy: How the Brain Works



Richards, Aylward, Raskind, et. al. 2006


What is Reading?
"-igh family"
high
sigh
thigh
/H/
4 sounds, 1 word:
/s/ /p/ /ee/ /d/
115+ words correct per minute (grade 5)
High-Speed Trains
A type of high-speed train was first introduced in Japan about forty years ago. The train is low to the ground, and its nose looks somewhat like the nose of a jet. These trains provided the first passenger service that moved at a speed of one hundred miles per hour. Today, they are even faster, traveling at speeds of almost two hundred miles per hour. There are many reasons that high-speed trains are popular.
14 entries found for service.
To select an entry, click on it.
service[1,noun]
service[2,verb]
civil service
full-service
postal service
public service
Go
Main Entry: 1ser·vice
Pronunciation: ˈsər-vəs
Cognitive strategies
Interest and motivation
Understanding of language
Relevant background knowledge
Vocabulary


Two Different Problem Spaces
Skills-Based Competencies
Knowledge-based Competencies
/H/
"-igh family"
high
sigh
thigh
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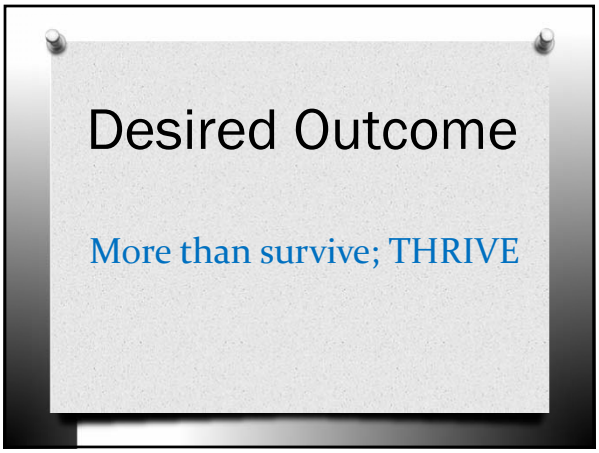
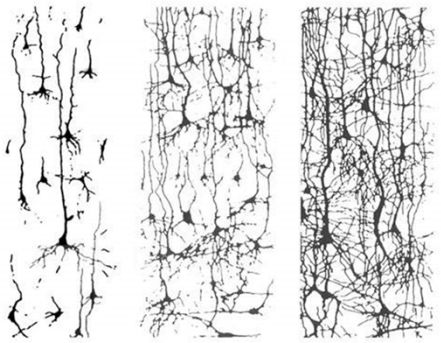

Desired Outcome
More than survive; THRIVE

Early Experiences Matter:

- The infant's brain is literally waiting for experiences to determine how connections are made (Johnson2005).
- Before birth, it appears that genes mainly directed how the brain establishes basic wiring patterns.
- After birth, environmental experiences guide the brain's development.
- The inflowing stream of sights, sounds, smells, touches, language, and eye contact help shape the brain's neural connections (Johnson, 2007).
- Depressed brain activity has been found in children who grow up in a deprived environment (Nelson, Jeanah, & Fox,2007).
- Infants whose caregivers expose them to a variety of stimulation—talking, touching, playing—are most likely to develop to their full potential.

2014 Physical and Cognitive Development in Infancy (Santrock_Ch3.pdf



Drawings of neural connections in the human brain.

Defining Infancy and Toddlerhood

- Young Infants: birth to 8 months
- Older Infants: 6 months to 18 months
- Toddlers: 15 months to 36 months

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Characteristics of Communication in Infants and Toddlers

Infants and Toddlers are learning :

- about themselves (trust and independence)
- about their feelings (crying, smiles, laughs)
- about other people (response)
- to communicate (crying, gestures, sounds and words)
- to move and do

Long before children say their first words, they begin learning language. Starting at birth, infants actively build connections between sounds, gestures, facial expressions, and meaning. Their brains are set up to master language.

The Program for Infant Toddler Caregivers
WestEd

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Receptive versus Expressive

Receptive

Not only do infants understand more vocabulary than they are able to produce, but they also demonstrate awareness of the properties of the language or languages they are exposed to before they acquire words (Ingram 1999). During the first six months of life, infants are better than adults at perceiving various types of contrasts in speech (Plunkett and Schafer 1999).

Expressive

Infants use their expressive language skills to make sounds or use gestures or speech to begin to communicate. Even preverbal infants use vocalizing or babbling to express themselves. They also imitate the sounds and rhythm of adult speech. As they develop, infants generate increasingly understandable sounds or verbal communication. They demonstrate their expressive language abilities by asking questions and responding to them and repeating of sounds or rhymes.

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The Importance of Language Development and Communication

Recent research supports an **interactive and experiential process** of learning spoken and written language skills that begins in early infancy. We now know that children gain significant knowledge of language, reading, and writing long before they enter school. Children learn to talk, read, and write through such **social literacy experiences** as adults or older children interacting with them using books and other literacy materials, including magazines, markers, and paper.

Adapted from ZERO TO THREE, 2003

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Developmental Stages

Language Development	Years	Literacy Development
1. Prelexic (cooing and babbling) 0-1 years	0	**1. Prelogographic** (before symbols) 0-2 ½ years
2. Lexic (whole oral words) 1-1 ½ years	1	
3. Systematic Simplification (word combinations) 1 ½- 2 ½ years	2	**2. Logographic/Prealphabetic** (whole written word) 2 ½- 4 years
4. Assembly (syllable combinations) 2 ½- 3 ½ years		
5. Metaphonological (aware of word structure) 3-4 years	3	
	4	**3. Early Alphabetic** (simple letter-sound correspondences) 4-5 years
	5	**4. Later Alphabetic** (phonetic spelling) 5-7 years
	6	**5. Consolidated Alphabetic** (fluent reader) 7+ years
	7	

Child Language Development

Approximate Age	Expressive Language	Receptive (Auditory) Comprehension
2 to 4 months	Verbal play through cooing, gooing and laughing. Vowel sounds heard such as ooohh, eee, and ahhh.	Turns head toward sounds and can begin to discriminate one sound from another.
4 to 8 months	Babbling begins. Some Consonant sounds can be heard.	Anticipates an event (e.g. peek-a-boo) and follows a line of regard (e.g. visually follows toy moving across floor) as well as joint attention (i.e. is capable of visually attending to object with caregiver).
8 to 12 months	Syllable variation (e.g. badugatadudah). First word approximations (e.g. dada for daddy). Non-verbal communication. Jargon (i.e. unintelligible speech) is present.	Relates words with physical objects (e.g. understands that the word "ball" actually means the object ball). Responds to simple phrases such as "no".

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Child Language Development

1 to 2 years	10-15 words at 18 months, 40-50 words at 24 months. Uses mostly nouns and pronoun me/mine. Jargon (i.e. unintelligible speech) still present.	Increased attention to toys. Changes behavior in response to comments made to him/her. Knows a few simple commands with gestures needed at times. Understands simple questions. Points to simple pictures.
2 to 3 years	150 words at age 2; 300-400 at age 3 years. Uses two-three word phrases frequently. Asks simple questions. Fluency can be poor. Jargon (unintelligible speech) mostly gone. Vowel sounds intact.	Comprehension shows rapid increase. Responds to more 2 step commands with prepositions (e.g. Pick up the ball and put it on the table).
3 to 4 years	Uses 600-1000 words and 3-4 word sentences. Pronouns and adjectives are used as well as some adverbs, prepositions, past tense and plurals. Answers what, where and when questions.	Understands 1500 words. Recognizes gender differences, plurals, pronouns, adjectives, and colors.

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Domain III: Language Development and Communication

Components:

- Listening and Understanding
- Communicating and Speaking
- Emergent Literacy

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Strategies to Enhance Language Development

1. Be responsive when children initiate communication
2. Engage in nonverbal communication
3. Use child-directed language
4. Use self talk and parallel talk
5. Help children expand language
6. Support bilingual development
7. Attend to individual development and needs
8. Engage infants with books and stories
9. Be playful with language
10. Create a communication friendly environment

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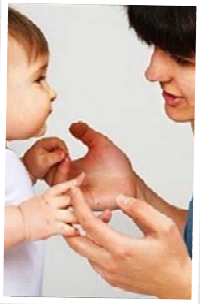
Listening and Understanding



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What does listening and understanding look like?

- Shows interest in listening to sounds
- Listens with interest to language of others
- Responds to verbal communication of others
- Responds to nonverbal communication of others
- Begins to understand gestures, words, questions or routines

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Before we speak, we listen…

- Listening helps our brains to distinguish sounds
- Environment sounds have an impact on speech
- Research shows that babies as young as 4 months can differentiate between sounds
- Brain development helps young children perceive language

Receptive Skills → Expressive Skills

Activity

Listening

Understanding

Verbal: 7% Gestures: 17% Non-verbal: 76%

Approximate Age	Receptive (Auditory) Comprehension
1 to 4 months	Turns head toward sounds and can begin to discriminate one sound from another.
4 to 8 months	Anticipates an event (e.g. peek-a-boo) and follows a line of regard (e.g. visually follows toy moving across floor) as well as joint attention (i.e. is capable of visually attending to object with caregiver).
8 to 12 months	Relates words with physical objects (e.g. understands that the word "ball" actually means the object ball). Responds to simple phrases such as "no".
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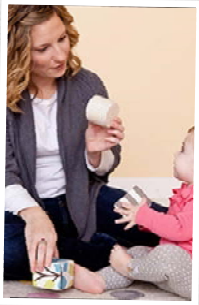
Strategy Reflection

EXAMPLES OF CAREGIVER STRATEGIES for promoting listening and understanding

Young Infant (Birth to 8 months)	Older Infant (8 to 18 months)	Toddler (15 to 36 months)
Talk with baby and allow baby time to respond to you, perhaps by turning to look at you, smiling or cooing. Watch for cues that baby is attending or listening and repeat sounds, gestures or simple language. Greet baby by name and repeatedly use the name in conversations with baby. Revive baby's response when adults use animated voices, gestures or exaggerated facial expressions while communicating with baby. Repeat familiar words and gestures that accompany your actions when taking	Talk with, and use baby's name, in conversation. Provide opportunities for conversations with others who have varied voices or interactive styles. Recognize and support baby's learning of home languages and culture. Use familiar gestures or words during routines and allow time for baby's response. Observe baby's response to nonverbal communication of others, such as different pitch or tone of voice, gestures or body language. Allow baby time to respond with gestures, actions, sounds or words to simple requests or questions.	Provide opportunities for toddler to hear the sounds of birds, animals, people and the neighborhood. Talk about what you and others are doing or saying and describe the actions and results. Describe simple routines and repeat nonverbal requests for toddler. Acknowledge toddler's attempts to communicate with others by listening and using words. Use language for simple one-step directions and acknowledge toddler's responses and actions. Share stories, games and picture books with toddler that are fun to look at, talk about and read together.

Communicating and Speaking



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Communicating and Speaking in infants and toddlers?

- Uses sounds, gestures or actions to express needs and wants
- Uses consistent sounds, gestures or words to communicate
- Imitates sounds, gestures or words
- Uses sounds, signs or words for a variety of purposes
- Shows reciprocity in using language in simple conversations

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[redacted]

Brains are set up to master language!

As infants grow, their biologically built-in potential to learn language unfolds. During the first months of life, infants communicate with cries, coos, smiles, and frowns to get their needs met.

Responses from their caregivers help them pick up the rhythmic give and take of communication. At first, young infants babble sounds from all known human languages. By the time they are 8 months old, they respond to familiar sounds made by their caregivers and selectively babble those sounds.

Kuhl, Andruski, Chistovich, Kozhevnikova, Ryskina, Stolyarova, Sundber, & Lacerda, 1997

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Baby Talk (Parentese)

- Not "tummy" for "stomach" or "choo-choo" for "train"
- Speech modified to be interesting and understandable to young children
- Baby talk has:
  - A higher pitch with more overall variation in pitch (some words very high and some very low)
  - Dramatic variations in loudness (even whispers often hold the baby's attention)
  - An exaggerated stress on words that forms a regular rhythmic pattern

Adults to not have to learn how to talk baby talk....we have an inborn ability to teach language, just as babies have an inborn ability to learn it (Bernstein Ratner 1984)

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[redacted]

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[redacted]

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Approximate Age	Expressive Language
1 to 4 months	Verbal play through cooing, gooing and laughing. Vowel sounds heard such as ooohh, eee, and ahhh.
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3 to 4 years	Uses 600-1000 words and 3-4 word sentences. Pronouns and adjectives are used as well as some adverbs, prepositions, past tense and plurals. Answers what, where and when questions.

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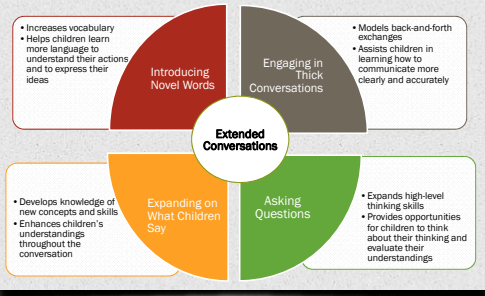
How do conversations benefit children?



...and benefits for caregivers!

- Conversations build positive relationships between children and teachers. (No significant learning occurs without a significant relationship)
- Conversations support curriculum, learning outcomes, and progress monitoring:
  - Tell what children already know.
  - What they are ready to learn next.
  - How well they are learning new skills.

Developmental Acquisition of Core Concept Vocabulary

Approximate age level	Concepts of position/ location	Concepts of quantity	Concepts of time/sequence	Concept of quality
2-0 to 2-6	In off	One	NA	Hot Cold Dirty Clean Happy Sad
2-6 to 3-0	On Under Out of Together Away from	Big Tall All None	NA	Soft Heavy

Conversation times

Routine times that easily elicit conversations:

- Arrival and departure
- Times of extended play
- Meal and snack times
- Transitions
- Diapering and Toileting

[redacted]

Let's Practice!

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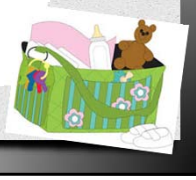
Strategy Reflection

EXAMPLES OF CAREGIVER STRATEGIES for promoting communicating and speaking

Young Infant (Birth to 8 months)	Older Infant (8 to 18 months)	Toddler (15 to 36 months)
During caregiving routines, talk about what you are doing and wait for response Listen and watch for different types of sounds, gestures or cries that baby makes Imitate sounds or gestures that baby makes and allow time for baby to imitate you Respond to baby's cooing and babbling and converse as if baby understands everything you are saying Talk about what baby is doing and acknowledge efforts to communicate	Acknowledge baby's use of simple sounds, words or gestures to express needs Introduce and model new sounds, gestures or words for baby to imitate Play naming games with baby, such as naming animals and making the sounds of the animals Use new, as well as familiar, words or sign language with baby, and repeat them in different contexts Allow sufficient time for baby to respond to questions or suggestions	Ask questions and allow time for either a verbal or nonverbal response Model using two- or three-word phrases and new words that toddler can imitate Make a list of toddler's vocabulary, new words and phrases Look for new ways toddler uses language, such as for humor or pretending Respond to toddler's use of words to express needs or wants



Emergent Literacy

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What is emergent literacy?

- Shows interest in songs, rhymes and stories
- Shows interest in photos, pictures and drawings
- Develops interest in and involvement with books and other print materials
- Begins to recognize and understand symbols

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Literacy Rich Environment

- Create a safe and comfortable setting that supports relationships and invites exploration. Rooms for toddlers should include spaces for quiet and active play, for intimate gatherings, and for larger group activities.
- Furnish the rooms with equipment, books, and materials/toys* that are appropriate for the developmental age or stages of the children.
- Make the environment "print rich." Add decorations and learning materials that demonstrate various functions of print and that provide the children with multiple opportunities to explore print in various forms. Post signs and symbols that show children and adults what the environment offers and that invite their participation, reflection, conversation, and play.

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What Is Phonological Awareness?

Two important elements:

- awareness of speech sounds
- ability to manipulate the sound structures in words

Of the phonological processing components, phonological awareness is the most strongly related to literacy development.

Component Skills of Phonological Awareness

Rhyming
- produce words in songs and fingerplays
- match word endings (rimes)
- produce word endings

Alliteration
- match words with the same beginning sound
- produce words with the same beginning sound

Blending
- combine syllables to make words
- combine sounds to make words

Segmenting
- pull words apart into syllables
- pull words apart into sounds

Skills at 2-3 years old

Rhyming	Children participate in saying words in nursery rhymes, fingerplays, jingles, songs, and books that are read to them.
Alliteration	Children start to recognize words with a common initial sound.
Blending	Children start to combine a sequence of isolated syllables to produce words.
Segmenting	Children identify syllables in words (3-4 years old).

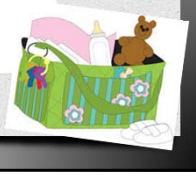
"It is essential to help children build strong foundations for both ***learning to read*** and ***reading to learn*** in the years before formal schooling. By engaging infants, toddlers and preschoolers in experiences that foster oral language and content knowledge, literacy skills, and thinking, early childhood professionals help secure children's later academic success."

(NELP 2008, Senechal, Oulette, & Rodney 2006;Storch & Whitehurst 2002)

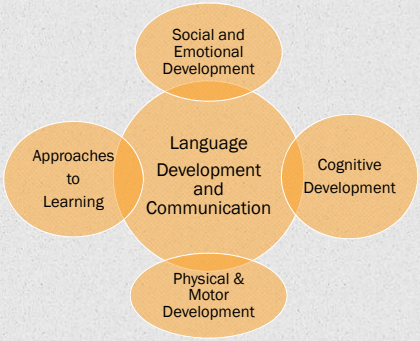
Strategy Reflection

EXAMPLES OF CAREGIVER STRATEGIES for promoting emergent literacy

Young Infant (Birth to 8 months)	Older Infant (8 to 18 months)	Toddler (15 to 36 months)
Talk, sing, repeat rhymes, do finger plays or tell stories Show baby pictures of family members or photos of other babies and young children Provide cloth or cardboard picture books for baby to hold and look at Identify and talk about familiar pictures or symbols on toys and household objects	Repeat favorite songs, stories, rhymes or finger plays on a regular basis when interacting with baby Make a photo or picture book for baby with some favorite people, animals and things Choose books for baby that have clear, colorful pictures with simple text Hold baby and read a variety of books over and over when baby is interested Provide opportunities to explore and use writing materials, such as large crayons, markers and paper	Sing songs with motions and do simple finger plays that toddler can imitate Talk about favorite pictures, drawings or photos and name the people and things in the pictures Make board books available for toddler to look at, turn pages and talk about with you and others Provide opportunities to explore writing tools, such as large crayons or markers with paper, and allow time for scribbling and drawing



Interconnected Activity



Approaches to Learning

Physical & Motor Development

Social & Emotional Development

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Responsive Planning

- Consider children's interests
- Give children something new to think about
- Intentionality
- Meet individual needs
- Observations
- Positive relationships
- Safe physical environments
- Support
- Talk to infants, toddlers, and young children about and during activities
- Variety of indoor and outdoor experiences

Strategies to Enhance Language Development

1. Be responsive when children initiate communication
2. Engage in nonverbal communication
3. Use child-directed language
4. Use self talk and parallel talk
5. Help children expand language
6. Support bilingual development
7. Attend to individual development and needs
8. Engage infants with books and stories
9. Be playful with language
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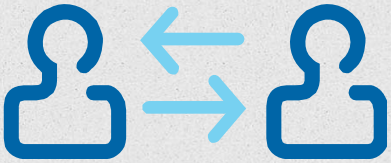
Quick Fire Share!



Resources

- A First Look at the Common Core and College and Career Readiness. Retrieved from http://www.act.org/commoncore/pdf/FirstLook.pdf
- Arizona's Infant and Toddler Developmental Guidelines, 1st Edition. Retrieved from http://www.azftf.gov/Documents/Arizona%20Infant%20and%20Toddler%20Developmental%20Guidelines%20DRAFT%20for%20VETTING.pdf
- Copple et al. (2013). Developmentally Appropriate Practice: Focus on Infants and Toddlers. National Association for the Education of Young Children (NAEYC)
- Dodge, D. T. et al. (2006). The Creative Curriculum for Infants, Toddlers & Twos: Second Edition. Teaching Strategies, Inc. Washington, D.C.
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- Move on When Reading. Retrieved from http://www.azed.gov/mowr/
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Questions?