NURTURING YOUR CHILD'S DEVELOPMENT FOR SCHOOL SUCCESS:

Cognition and Language Development (Part 1)

Ages 7–11

Presentation developed by
LAUSD Psychological Services

Presentation Goals

- Explore language and cognitive development in children ages 7-11
- Learn how these core development domains relate to your child's reading ability
- Identify parenting strategies that enhance school success

➢ **Question:** Why is learning about a child's development relevant to parents?

- It can inform the decisions we make.
- Understanding development can help us set appropriate expectations.
- It can guide opportunities we provide for our children.
- It can help us understand prerequisite skills that support optimal growth.

(Santrock, 2009)

Three Universal Goals of Parenting

- Ensure children's health and safety
- Prepare children to be productive adults
- Transmit cultural values

American Psychological Association, Home//Psychology Topics// Parenting. Retrieved September18, 2014, from http://apa.org/topics/parenting/index.aspx

- Each of these areas is informed by our own experiences, culture, resources, and family structure.
- Our presentation today will flow in and out of these three points, but will focus primarily on the second item, emphasizing its relationship to school success.

How Does Development Unfold?

Development is influenced by:

- Nature and Nurture
- Stability and Change
- Interaction with and Reactions to:
  - objects
  - events
  - people
  - Ideas

Santrock, J. W., (2009). *Life span development (12th ed.).* New York, NY: McGraw-Hill.

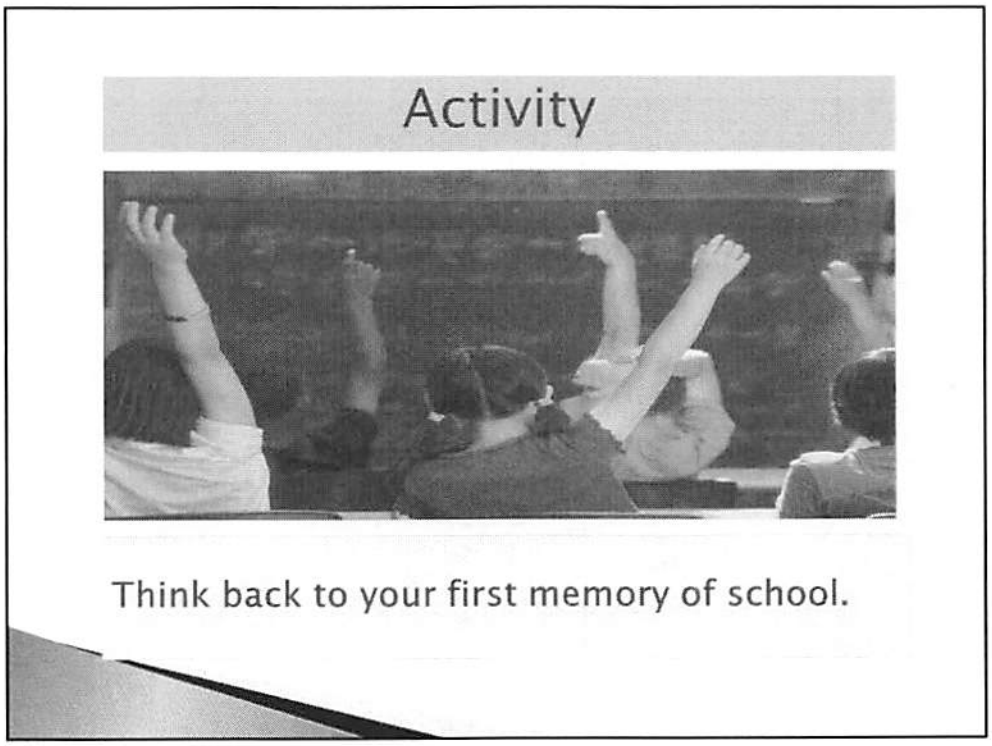
Thibault, J. P., & McKee, J. S. (1982). Practical parenting with Piaget. Young Children, 38.(2), 18-27.

- Nature - genetic make-up/biological inheritance.
- Nurture – environmental experiences and interactions with other people and the outside world (external factors).
- Stability vs. Change -**The degree to which early traits persist or change.**
- It is important to note that while some areas of development can not be controlled, other areas can be influenced by how we parent.
- Development is co-constructed by biology , culture and the individual. (**Santrock, 2009)**

➢ **Question:** What is the difference between development and growth?

Growth: relates to physical changes in size
Development: refers to a child's ability to think, feel, communicate and move with increasing complexity

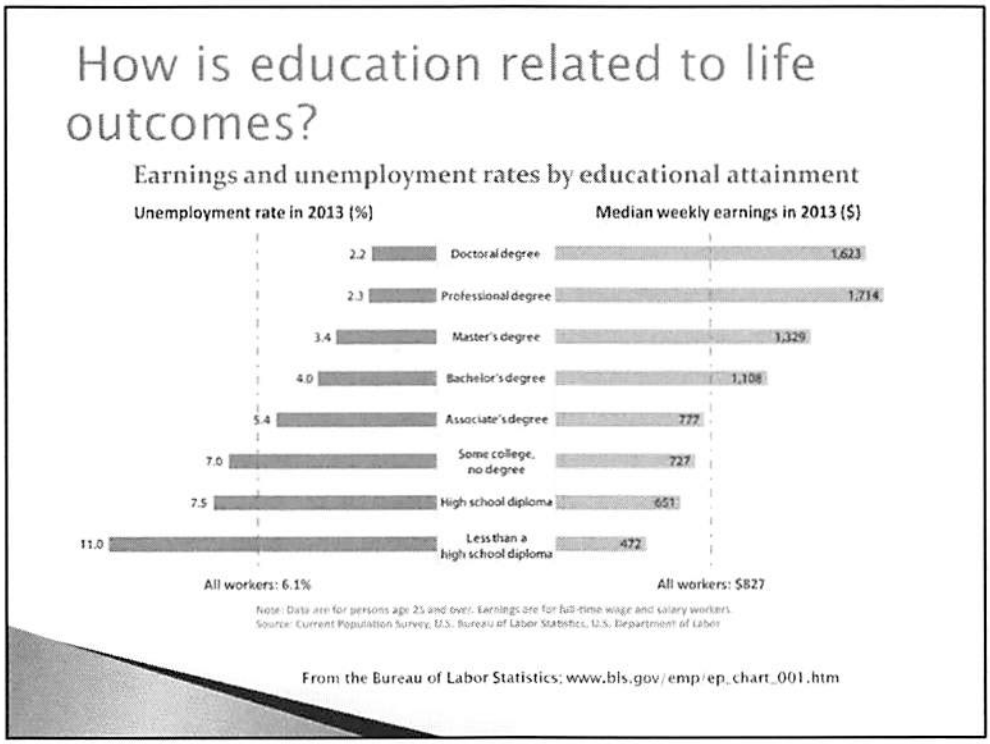
(Santrock, 2009; Thibault & Mckee, 1982)



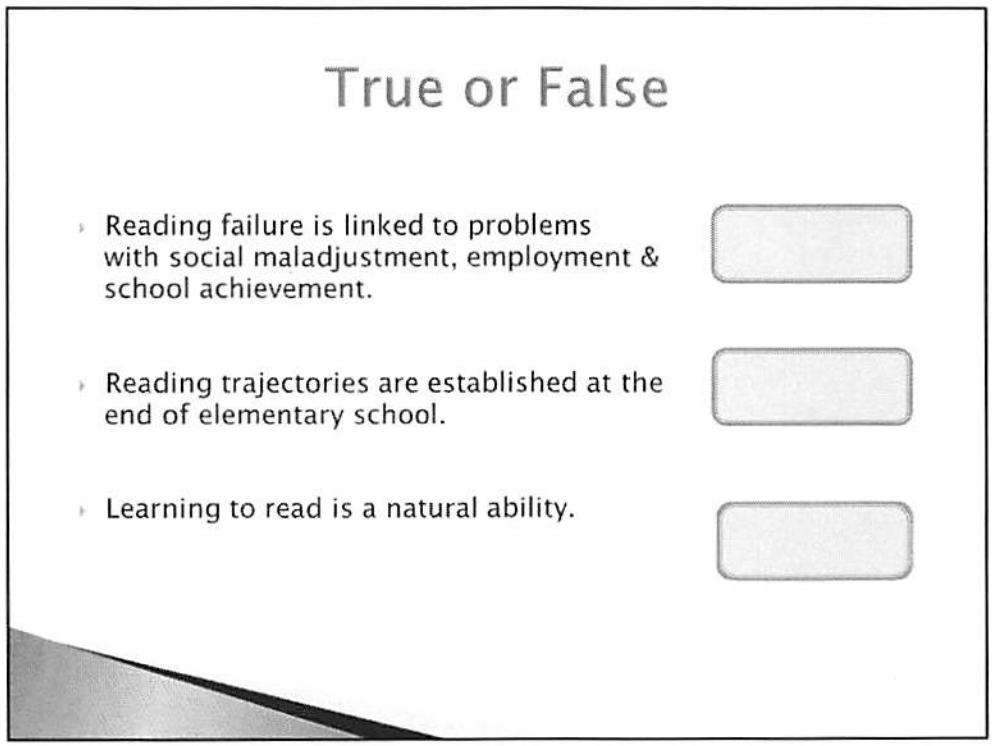
Discuss Questions

- Was it positive, negative, neutral?
- What were you like as a student?
- How does it compare to your child's experience?

How is education related to life outcomes?



- School experiences can be good, bad, and/or neutral. It is important to remember that our own experiences can color our child's perceptions of learning.
- Education nevertheless is related to income and employment, which often determines the resources and experiences we have; our jobs as educators is to **help prepare all children for success.**
- Understanding typical development - informs our ability to raise our children to be productive citizens. As parents we play an important role in helping children bridge experiences with knowledge; **making school learning relevant and applicable to the real world.**
- A high school diploma no longer guarantees a living wage in our current economy, in comparison with the economic conditions of the past.
- The table above (from the Bureau of Labor Statistics) illustrates the relationship between education and an individual's earnings.



Reading ability is a strong predictor of school success; it is the foundation of all school learning.

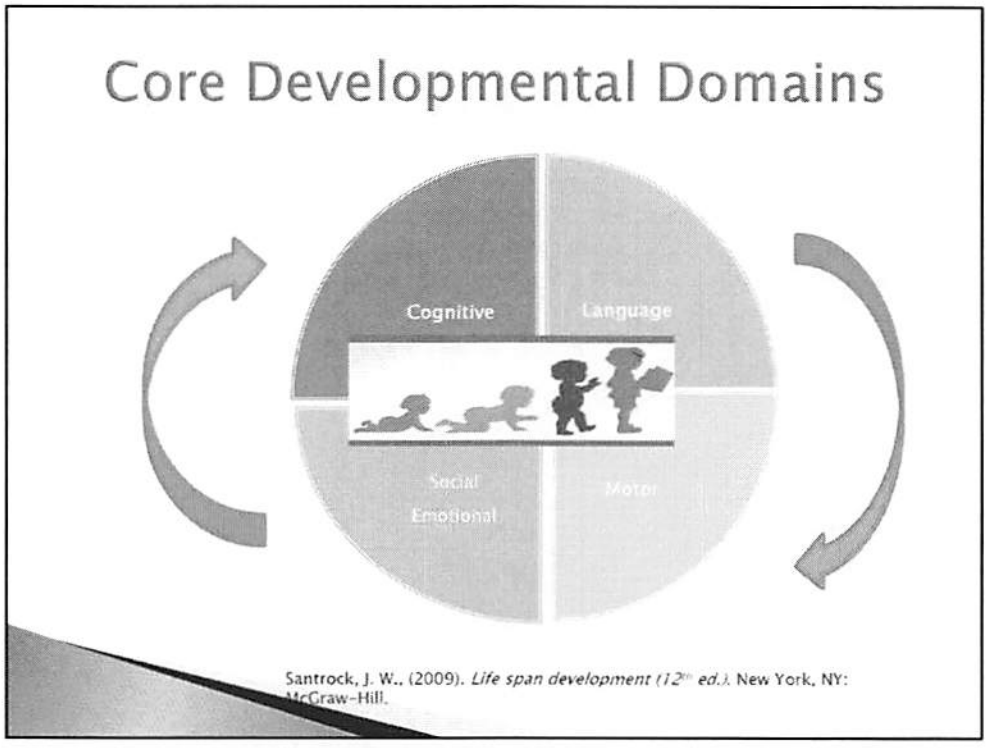
Present the questions to the group & discuss:

- **Question 1:** True
  - Literacy is linked to occupational opportunity; it facilitates reading of forms, directions, lists, labels, records, etc. **Some states use 4th grade reading failure rates to predict prison construction (Lyon, 2001)**

- **Question 2: False**
  - Pre-literacy skills develop as early as infancy, reading trajectories while malleable, are established as early as first grade

- **Question 3: False**
  - Literacy must be learned/taught- learning to read does not happen naturally. Unlike speaking, it is not acquired by being exposed to others who speak. Reading involves many parts of the brain working together; illiteracy can be generational.

(Nevills & Wolfe, 2009)



Today we will be discussing two of the four Core Developmental Domains: language and cognition and their relationship to **reading and school success.**

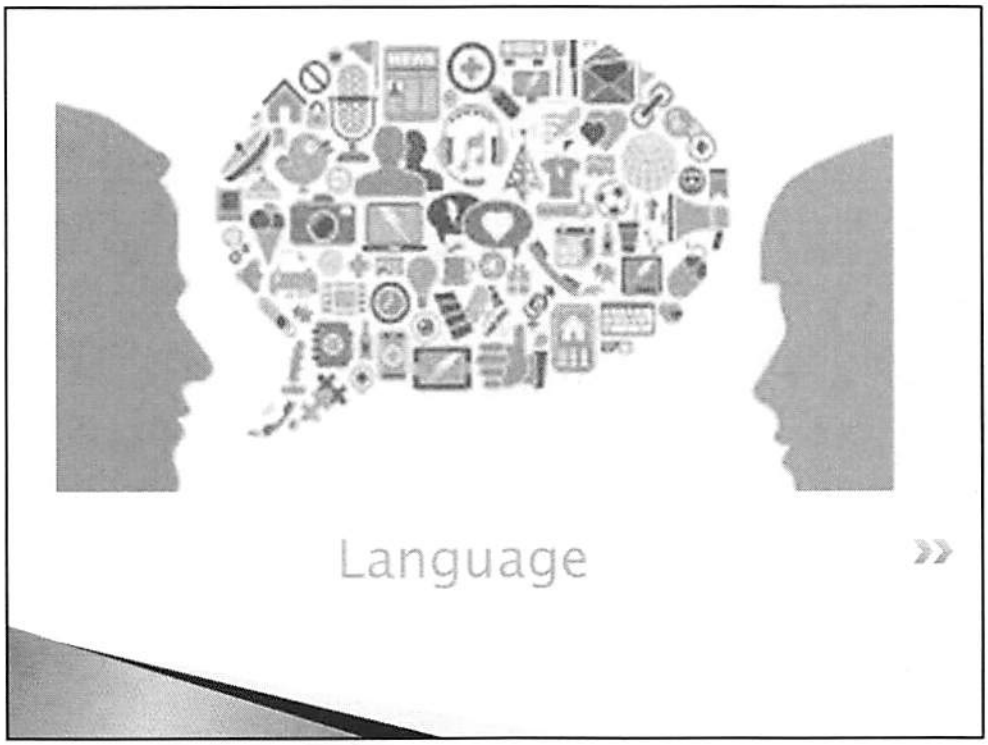
- **Cognition:** the ability think and reason/make decisions, remember, understand, attend, plan, synthesize and sequence (verbal and nonverbal information), attention, memory, auditory and visual processing, reasoning, and executive functions.
- **Language:** generally refers to one's listening and speaking ability. It includes using body language and gestures and involves a child's ability to understand what is heard/observed and the ability to express his/her thoughts.

- It is important to note that language is defined as a shared code for communication that facilitates the exchange of ideas.

- All developmental domains converge, interact and overlap; stages are sequential but not every child develops at the same rate.

- As school psychologists we use observations, interviews, document review, and formal and informal assessments to explain development. Our training includes learning about developmental theories (a set of ideas that explain phenomena and help us make predictions) that help us understand different aspects of development.

➢ Question: Think of your own siblings and children; what are some similarities and differences in their development?



- Children first learn language from their parents and caretaker: **Their competence in spoken language is a strong predictor of their reading ability.**

➢ **Question: How did your children learn to speak?**

- A child listens to the language around him/her; language emerges in infancy and develops through **exposure and responsiveness.**

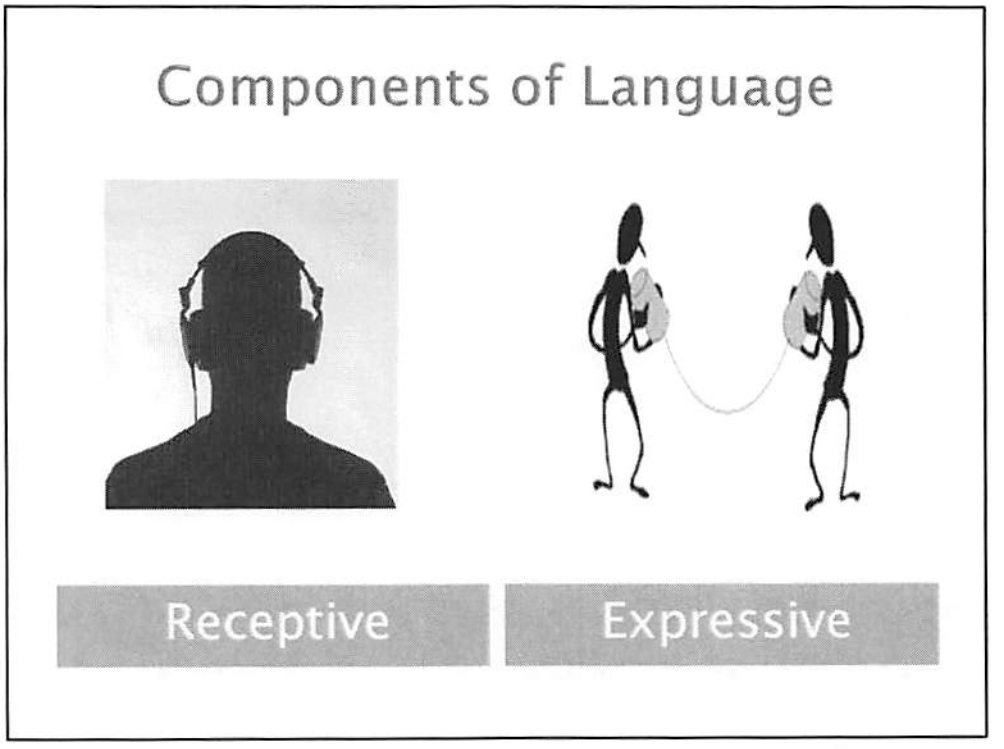
- Language development is shaped by the amount and type of input you receive.

- **Language is the foundation of literacy development** (we use language pathways to develop literacy skills).

- Cross-cultural uniformity of language milestones support biological predisposition for learning language. (Chomsky)

- All languages follow predictable rules; learning these rules are essential to reading. We will discuss these rules in an upcoming slide.

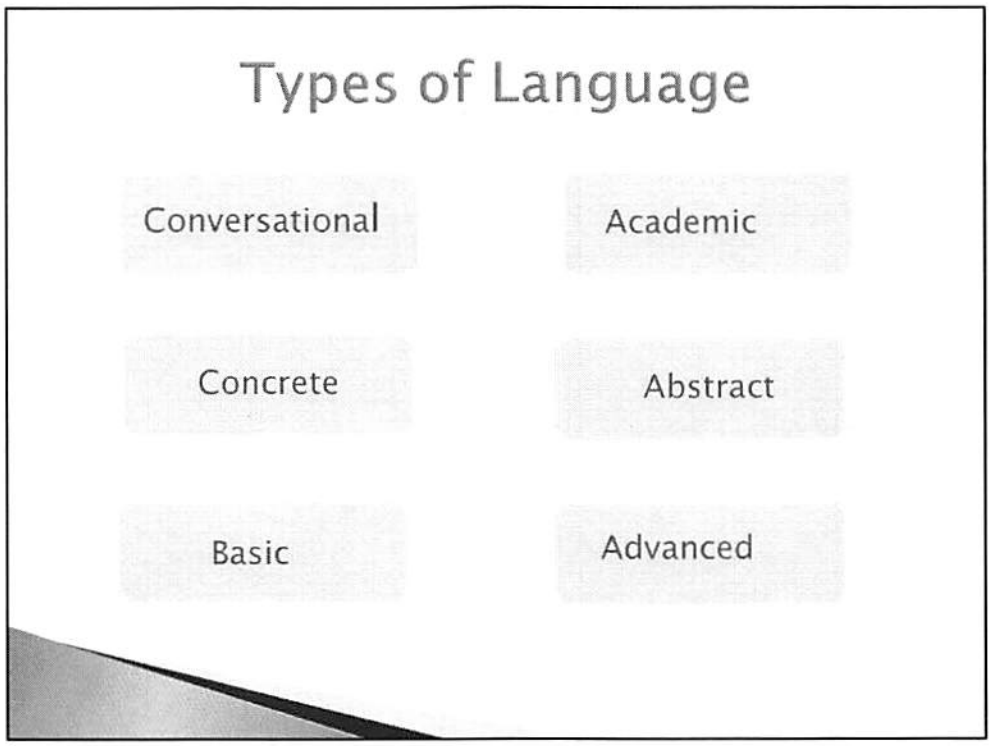
- **Language serves both adaptive and cognitive functions:** language is used in:
  - self-talk which is essential to self-regulation and pro-social behavior
  - facilitating metacognitive functions (thinking about thinking).
    (Source: Levine, 2002; Nevills & Wolfe, 2009; Santrock, 2009)



Two Components: Receptive Language and Expressive Language (both verbal and nonverbal).

- Language consists of socially shared rules for communicating, including listening, speaking, reading, and writing.
- Both receptive and expressive language are involved in all aspects of reading.
- **Words are used to construct thoughts; our thoughts are communicated with words.**

(Levine, 2002)



- Language has a biological and environmental basis: cross-cultural uniformity of language milestones/shared properties support biological predisposition for learning language. (Chomsky)

<u>Different Types of Language:</u>

- **Conversational**: BICS (Basic Interpersonal Communicative Skills); the language used in informal settings, tends to be concrete and consists of high frequency vocabulary.

- **Academic**: language related to learning; includes technical language related to concepts and ideas covered across the curriculum and encountered in text, often referenced out of context.

- **Concrete**: language derived from our senses; can you visualize/see, smell, hear or feel it? (perfume, noisy, soft)

- **Abstract** language that is not derived from our senses; you encounter these words in math, science and literature (sportsmanship, irony, elite).
    - **Abstract language** is difficult to visualize in the absence of a personal experience, metaphor or analogy.

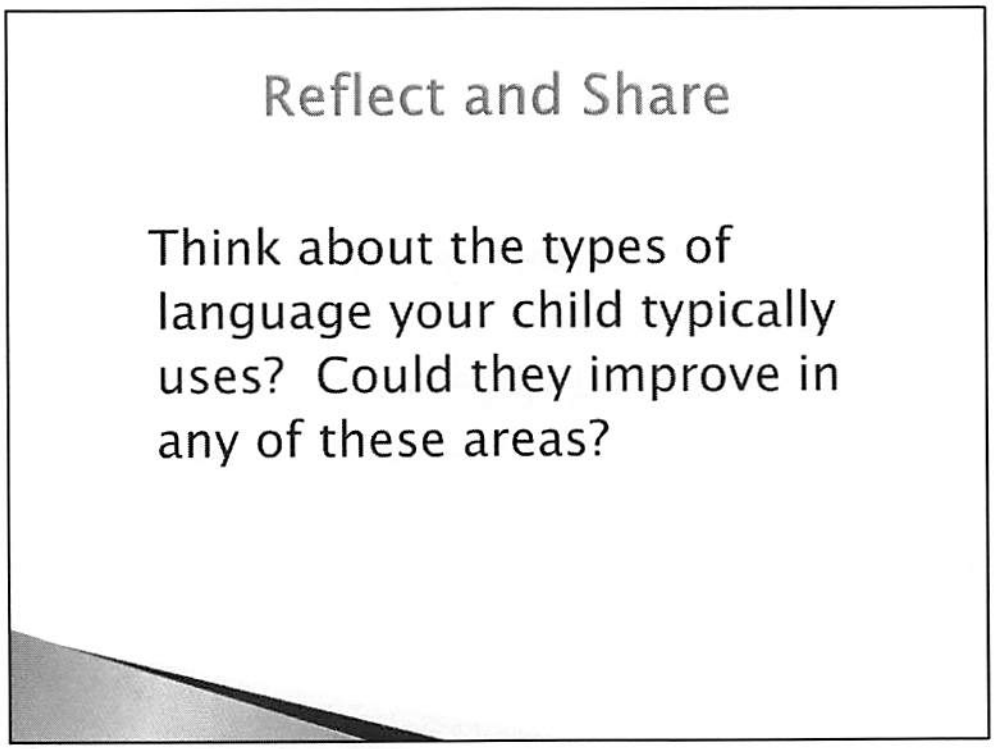
- **Basic** language refers to language encountered in elementary school; it is more

direct, applicable, and practical.

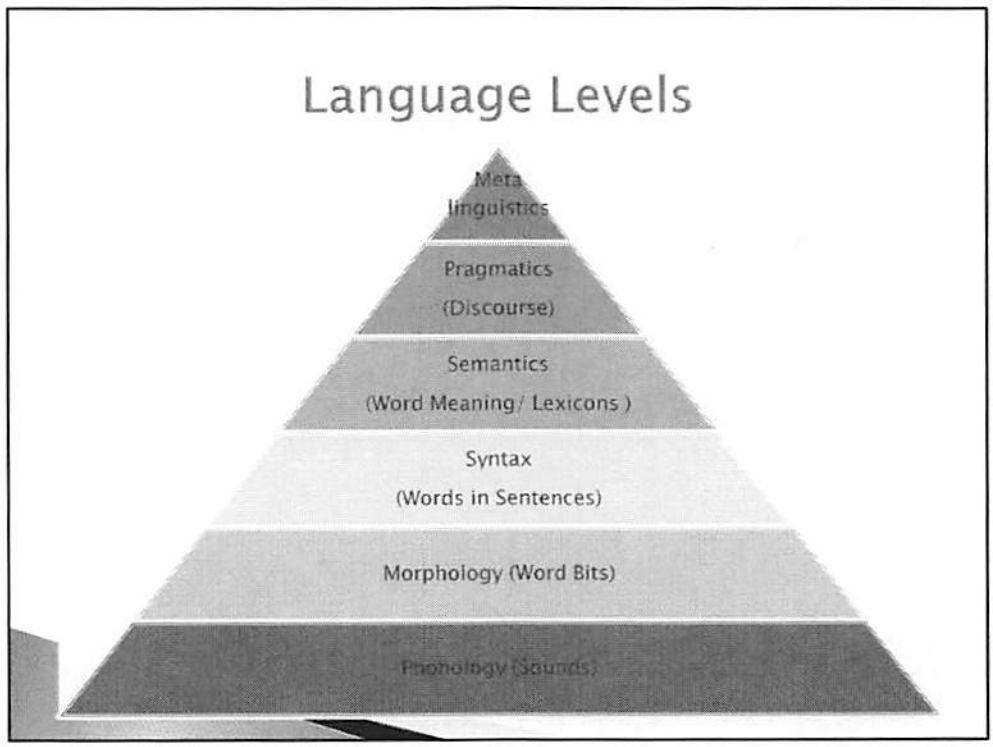
- **Advanced** language refers to the language of secondary education; terms become more technical, symbolic, abstract, ambiguous and inferential (poems, editorials). As per Dr. Elizabeth Wiig, this type of language is used as an " instrument for learning" (hypotenuse, isosceles, equilateral, scalene, right); it is developed through expertise and competence.

(Levine, 2002)

➢ **Question: Ask parents to provide examples of each:**
  - **Use language of employment as an example.**
  - **Consider medical terminology for examples of basic and advanced language.**



- **Question:** Why does it matter for children to become fluent in all types of language?



- **The brain is programmed to acquire language; we are born linguists.**
  - **Children will learn the language they are exposed to. Up until the age of 10-12 months, babies are able to discriminate any sound in spoken language. After this time they lose this ability and are only able to discriminate sounds within their environment (Blaustein & Kinniburgh, 2010)**

- Spoken language is hardwired in the brain; it has dedicated brain structures that serve this purpose. (Wernicke's & Brocca)

- All languages share some common characteristics and develop in a similar/predictable manner. **It is important for parents to be aware of language levels in order to assess development.**

- Progress in the different levels is not linear, rather it is a top to bottom approach. Students are developing syntax skills as they acquire more sophisticated vocabulary.

- It includes rules for what words mean, how to make new words, how to put words together, and what word combinations work best.

- **5 systems of rules**: phonology, morphology, syntax, semantics, and pragmatics:

Connect with reading and overall school success.

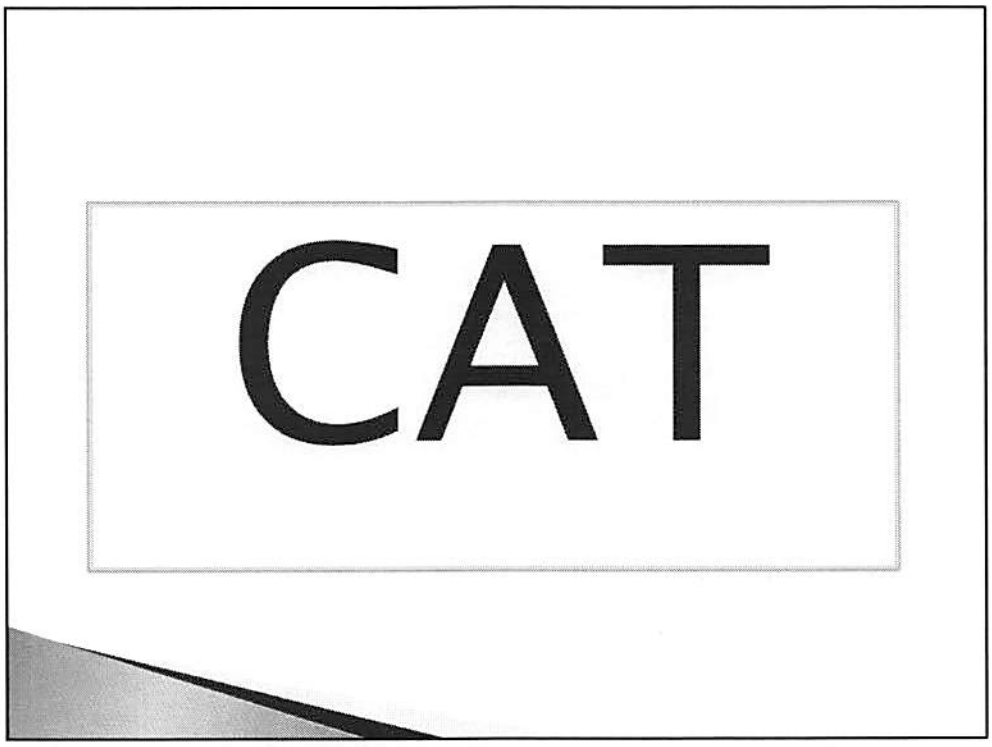
- **Form: phonology** (sound system of language), **morphology** (units of meaning involved in word formation/ root words, suffixes, prefixes) and **syntax** (how words are combined in phrases and sentences)

- **Content: semantics** and vocabulary- lexicon (meaning of words and sentences)

- **Use: pragmatics** (appropriate use of language in different contexts) involves all language beyond the sentence-level

- **Metalinguistic awareness:** (knowledge about language) allows children to think about their own language; children discuss sounds and word meanings– this facilitates construction of communication

(Levine, 2002; Santrock, 2009)



Activity: Present questions to group; discuss the importance of phonological development.

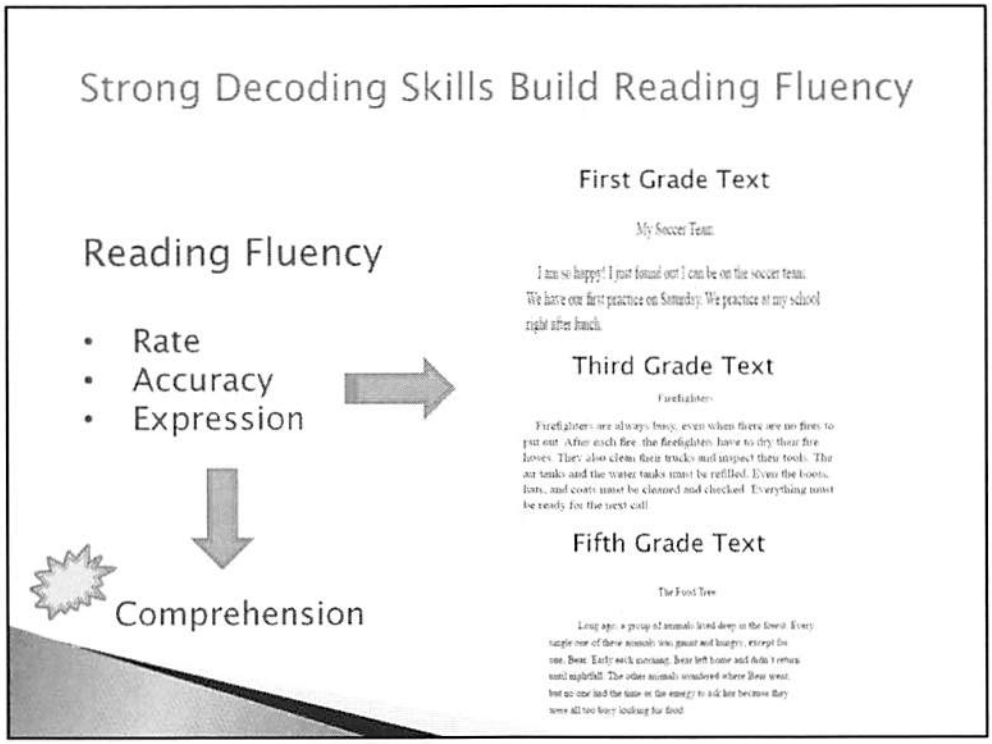
- How many sounds in the word CAT? = 3 phonemes
- What is the first sound? Second? Third?
- What is a word that rhymes with CAT?
- Drop the /c/ sound, add a /b/ sound; what does it say now?
- Replace the /c/ sound with /s/ sound
- Leave the /c/ sound and replace the /a/ sound with the /u/ sound
- These skills are typically mastered at the end of first grade; children who struggle to acquire these phonological skills are at-risk for reading difficulties.

**** Second language acquisition and the quality and quantity of instruction can impact when these skills are mastered.**

Optional Slide for Activity in Spanish

Activity: Present questions to group; discuss the importance of phonological development.

- How many sounds in the word = 4 phonemes
- How many syllables? 2
- What is the first sound? Second? Third?
- Replace /g/ sound with the /pl/ sound
- Replace /o/ sound with the /a/ sound
- What is a word that rhymes with gato?



- Decoding skills develop though awareness and practice of phonological skills, an understanding that words consist of sounds and that those sounds can be manipulated and retained in long-term memory.

- Skills in the previous slide are essential to early reading skills.

- **Reading fluency is** the bridge between word recognition and comprehension. When reading fluency is achieved, readers expend less energy on decoding text and can focus on the meaning of what they are reading. Researchers agree that students must attain fluency if they are to become independent readers. (Nevills & Wolfe 2009)

- Our elementary schools use the Dynamic Indicators of Basic Early Literacy Skills (DIBELS), a 1 minute measure used (3x a year or more), to track students' progress in reading fluency.

Ask the parents to think about the language rules (slide w/triangle) discussed; compare the paragraphs. How are they different? What factors should be considered?

- 30 words first passage

- 62 words second passage
- 64 words in last passage

- Consider the following for each of the passages on the previous slide:
  - vocabulary
  - topic
  - phonology
  - morphology
  - semantics
  - word order
  - pragmatics

➢ **Presenters...please note** that recommended oral reading rates for **DIBELS end of year are different than the Fontas & Pinell ones (see below).**

➢ While **DIBELS end of year** results may indicate a "green" level on print-out documents, the words per minute range is considered at the 40th percentile:

- **first grade** = 47+ words per minute
- **second grade** = 87+ words per minute
- **third grade** = 100+ words per minute
- **fourth grade** = 115+ words per minute
- **fifth grade** = 130+ words per minute

➢ Expected levels of proficiency for end of year (leveled reading) oral reading rates **(Fontas & Pinell):**

- **first grade** = 75-100 words per minute
- **second grade** = 90-120 words per minute
- **third grade** = 100-140 words per minute
- **fourth grade** = 120-160 words per minute
- **fifth grade** = 140-180 words per minute

Developmental Markers

- By age 7, children...
- increase their vocabulary to an average of 16,000 words
- can manipulate sounds in words
- use longer sentences
- understand 2-3 step directions
- begin to categorize their vocabulary

- By age 11, children...
- increase their vocabulary to an average of 40,000 words
- communicate in complete sentences and can follow multi-step directions
- use language to produce descriptions, definitions, and narratives that make sense
- learn appropriate way to: express their own opinions and ideas and join in conversations
- develop metalinguistic awareness and learn how to use language in culturally appropriate ways

Santrock, J. W., (2009). *Life span development (12th ed.).* New York, NY: McGraw-Hill.

- Children are able to categorize vocabulary by parts of speech.
    - By age seven, a child can match a noun to a noun. When provided with the word "dog", a 7 year-old might respond "cat" or "bird". Yet when provided with the same prompt, a younger child might respond by stating "barks".

- **Metalinguistic awareness:** (knowledge about language) allows children to think about their own language. Children can now discuss sounds and word meanings.

- Children develop pragmatics. They obtain knowledge of how/when to use language (context specific language). An adult example of this is: "shop talk". Children speak differently to adults and peers. Consider how they speak to their grandmother as opposed to their teachers.

Bilingualism

- Bilingual language development follows a similar developmental trajectory.
- Choice vs. Necessity
- Simultaneous vs. Sequential Bilingualism
- Ninety-two languages other than English are spoken in LAUSD.

http://www.asha.org/public/speech/development/34.html

<u>Brief points on Bilingualism:</u> (Second language acquisition would be best addressed in a separate workshop)

Parents should continue to build on their child's L1 (native language) as it will help to make the transition to English easier!

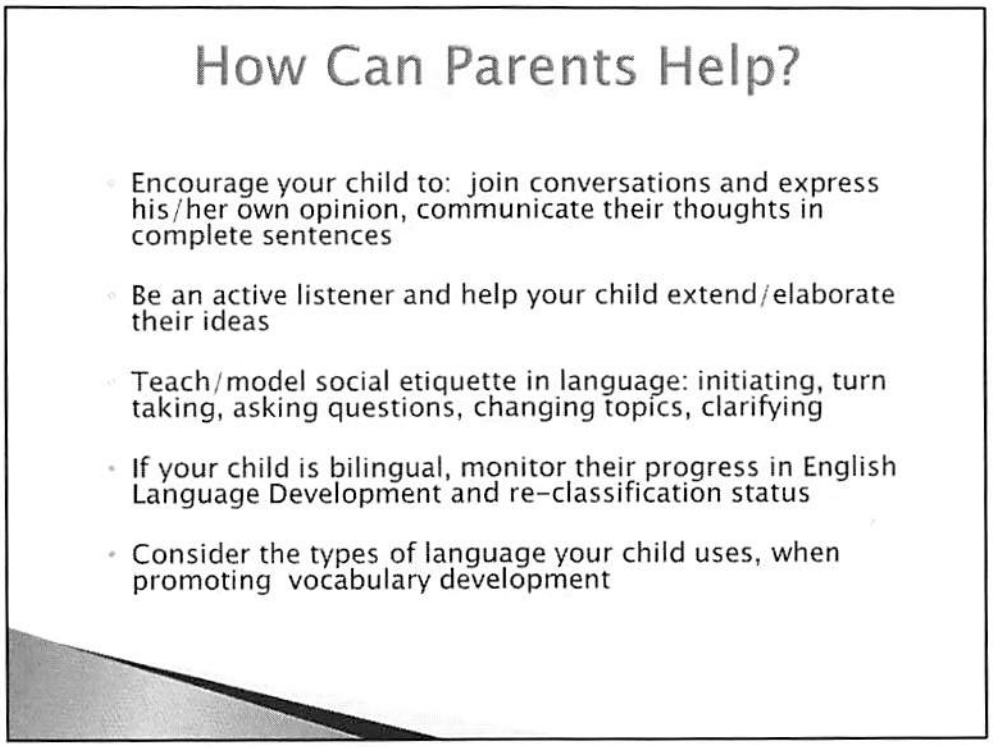
- Remember: <u>All languages share some common characteristics and develop in a similar/predictable manner.</u>
- Bilingual language development follows a similar developmental trajectory, **but will vary depending on when language is introduced and the amount and type of exposure.**
- Similar developmental trajectory: single words - sentences, receptive – expressive, **although vocabulary may be smaller.**
- Being bilingual can be a choice or necessity: Second language acquisition most common a necessity among LAUSD students.
- Developmental trajectory will vary depending on whether both languages are developing simultaneously or sequentially and on the <u>quantity</u> and <u>quality of exposure.</u>

- Research suggests that being bilingual is an asset.

- According to the National Center for Educational Statistics, more than one in 5 school-aged children (21%) speak a language other than English at home.

- As per LAUSD finger tip facts 2013-2014, there are 92 languages other than English spoken in LAUSD.
  Statistics from 2013-2014: **161,484** of **651,322** students spoke another language **(24.8%);** LAUSD K-12 students were learning English as a second language.

- **Please Note:**
  Presenters please consider inserting specific language demographics for your school.

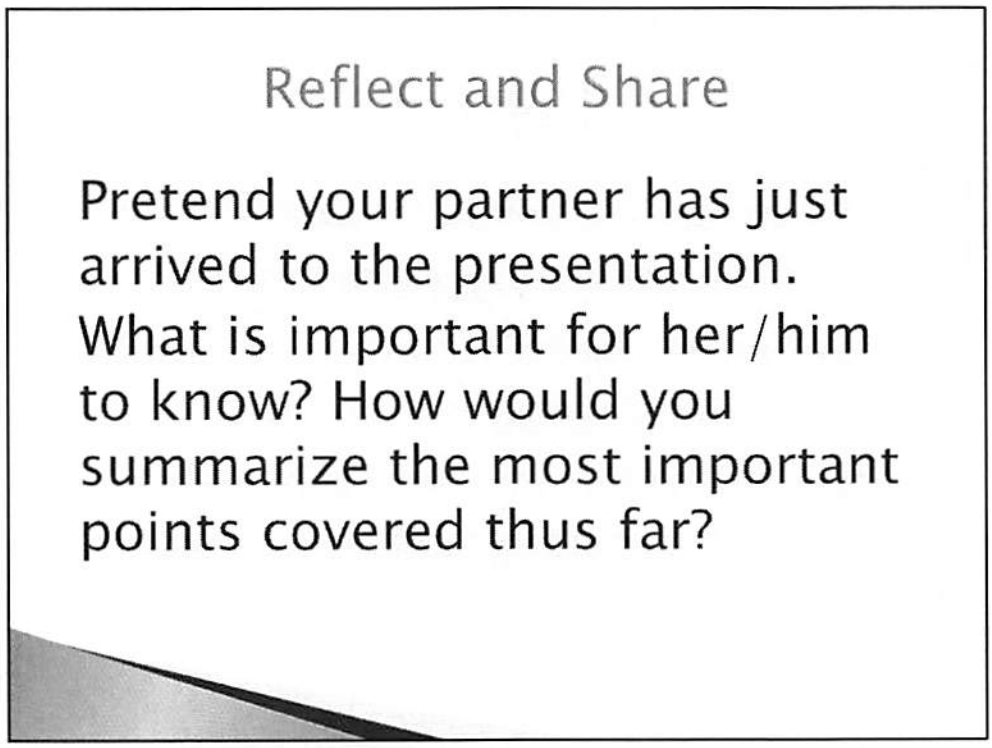


- Encourage your child to express their own opinion and allow them to disagree with your opinion. This does not mean you will change your opinion, but they will have a feeling of self-pride when listened to and not made to be embarrassed.

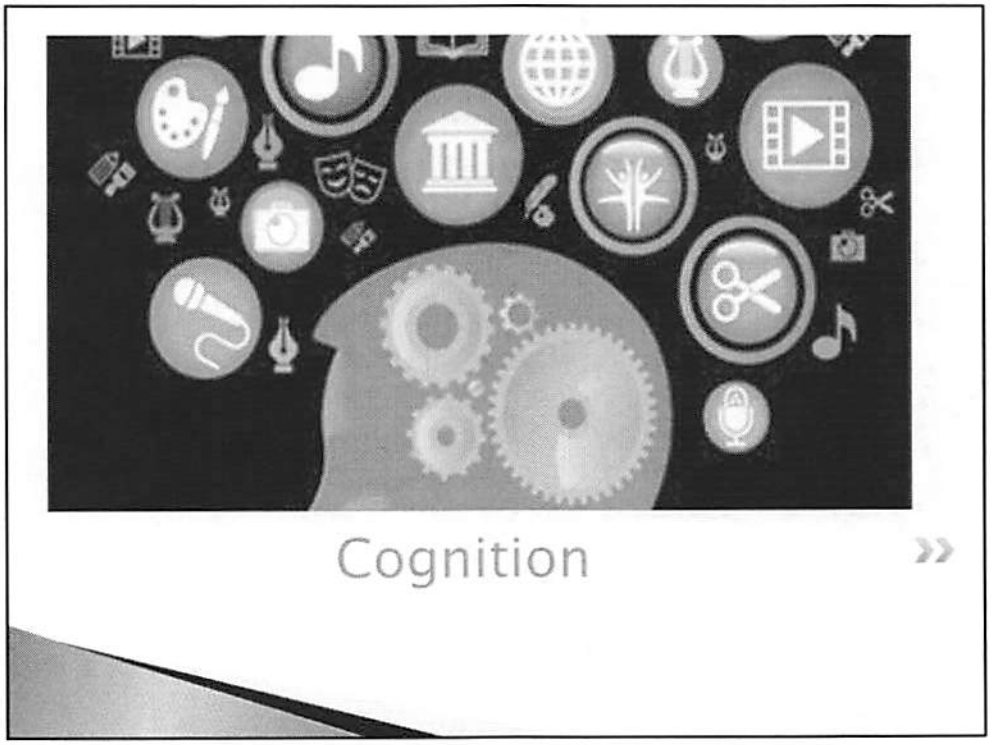
- Allow your child to vocalize their own ideas and embrace these ideas if the ideas are age-appropriate and are easy to take into consideration (i.e. a new way to wear your hair, a new piece of jewelry, a new meal to have for dinner).

- Allow children to join into your conversation(s) if the topics are age-appropriate for them. **It is important for** children to understand and learn the etiquette of holding a conversation, when to enter with their ideas/opinions and when to listen to other speakers. Correct vocabulary and pronunciation can be part of the conversation, when needed

- Bilingual children are expected to re-classify by the end of elementary school. Parents... track your child's progress and ask his/her teacher how you can help.



- Find a partner.
- One partner will be "A" the other "B".
- Partner B will summarize for A.
- Ask participants to share with the group.



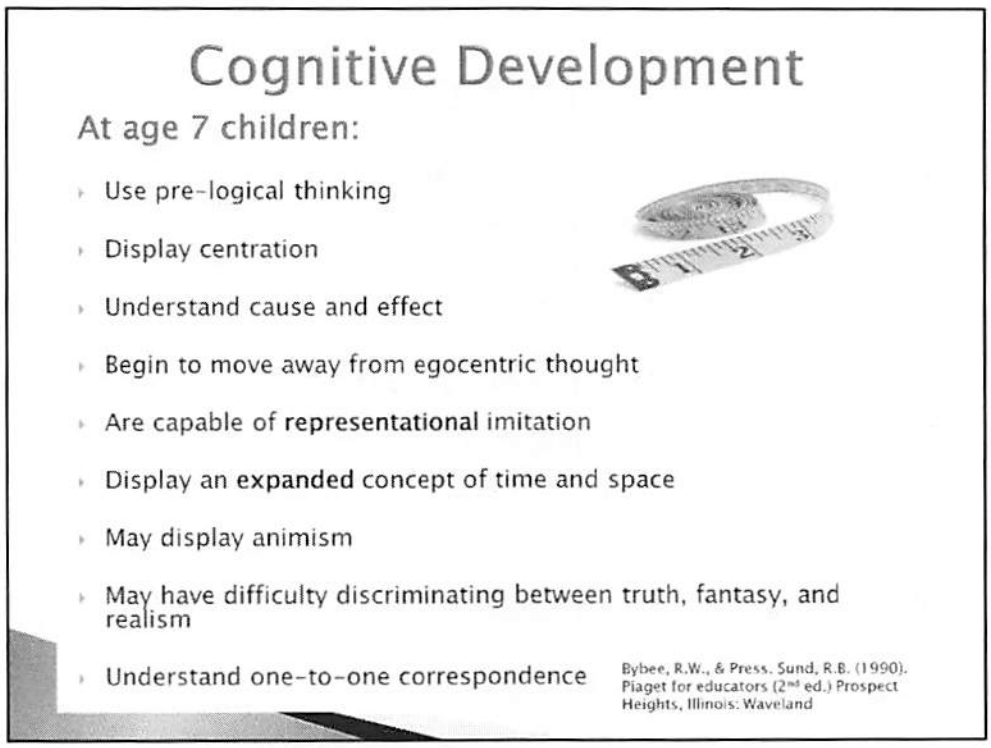
Cognition: the ability think and reason/make decisions, remember, understand attend, plan, synthesize and sequence (verbal and nonverbal information).

- Processes involved: attention, memory, auditory and visual, executive functions, and reasoning abilities.

- **According to Piaget,** learning occurs through **assimilation** (children take information and insert it into existing patterns) and **accommodation** (children change previously held ideas to fit new information/patterns).

- **Example:** During the sensory-motor stage a child will often bring objects to their mouth (assimilation). Children may eventually understand that a ball fits in the "toy category" and not "food category" through the process of accommodation.

- In the following slides we will look at how children make meaning.



Piaget's Preoperational Intuitive Thought Stage (ages 4-7): ***(Bullets represent ending characteristics for stage – age 7)***

- Pre-logical reasoning - they can reason in one direction but their arguments remain intuitive; children know what they know but not how they know it.

- Cause and effect example from Ordinal Scales:
    - **Question:** What happens to the sun when it's night? **Answer:** It goes behind the mountain to rest.

- Centration defined: the inability to focus on more than one aspect of a problem at a time (evident in a child's inability to conserve; the child will focus on the size of the container as opposed to the property of the liquid. Child can sort by one characteristic at a time.

- Concept of time – today, tomorrow, in the morning, at night...

- Conservation of identity – from a qualitative perspective: recognizes surface traits (i.e. I have short hair; Sandra's hair is long.).

- Representational imitation- using an object to represent an observed behavior (i.e. using a pencil as a wand).

- Animism- attributing living qualities to nonliving objects

- As per Ordinal Scales - Children at this stage display beginning logical reasoning; they use relevant concepts to explain cause and effect.

Piaget's Concrete Operations (ages 7-11):

- The child may have difficulty with hypothetical or purely verbal problems ; logic is based on concrete objects and events. (SCOSD)

- The child is less perception bound, but still relies on experience.

- By the age of 7, children can conserve substance, length, number and quantity.

- The child is able to understand more/cause and effect which, in turn, helps the child reason easier.

- Concrete level of understanding: It is raining today. We need our coats. Simple level of understanding is usually seen up through age 7.

- It is raining today. What do we need to stay warm and dry. This level relies more on cause/effect; more of an if/then and asks the child to come up with abstract answers. This is usually seen after age 8.

- Delayed gratification examples at this age: waiting for lunch time; waiting for the school party at the end of the week; waiting for everybody to finish dinner before dessert it served.
    - We expect delayed gratification to become less of a problem as the child grows older.
    - Sometimes the child demands the gratification while choosing not to allow the '"delay" to occur: "I want it now, not later"!!!

Cognitive Development

At age 11 children:

- Solve problems using factual knowledge
- Reverse their thinking
- Reason without the constraints of immediate perceptions
- Understand cause & effect in concrete problems
- Use practical imitation
- Understand conservation
- Classify objects by multiple attributes
- Coordinate the concepts of order and duration
- Organize events, objects, and situations in space & time

Bybee, R.W., & Press. Sund. R.B. (1990). Piaget for educators (2nd ed.) Prospect Heights, Illinois: Waveland

- As per Ordinal Scales - Children at this stage display beginning logical reasoning - use relevant concepts to explain cause and effect.
- Solve problems using **concrete** factual knowledge
- Reverse their thinking to revise or update conclusions (logical reversible thinking); they can retrace their steps and reverse operations (division and multiplication/addition and subtraction).
- Reason w/out the constraints of immediate perceptions
- Understand cause and effect in concrete problems
- Use practical imitation
- Understand that quantity remains constant even after it undergoes change in its appearance (conservation) and classify objects
- Coordinate the concepts of order and duration
- Organize events, objects, and situations in space and time

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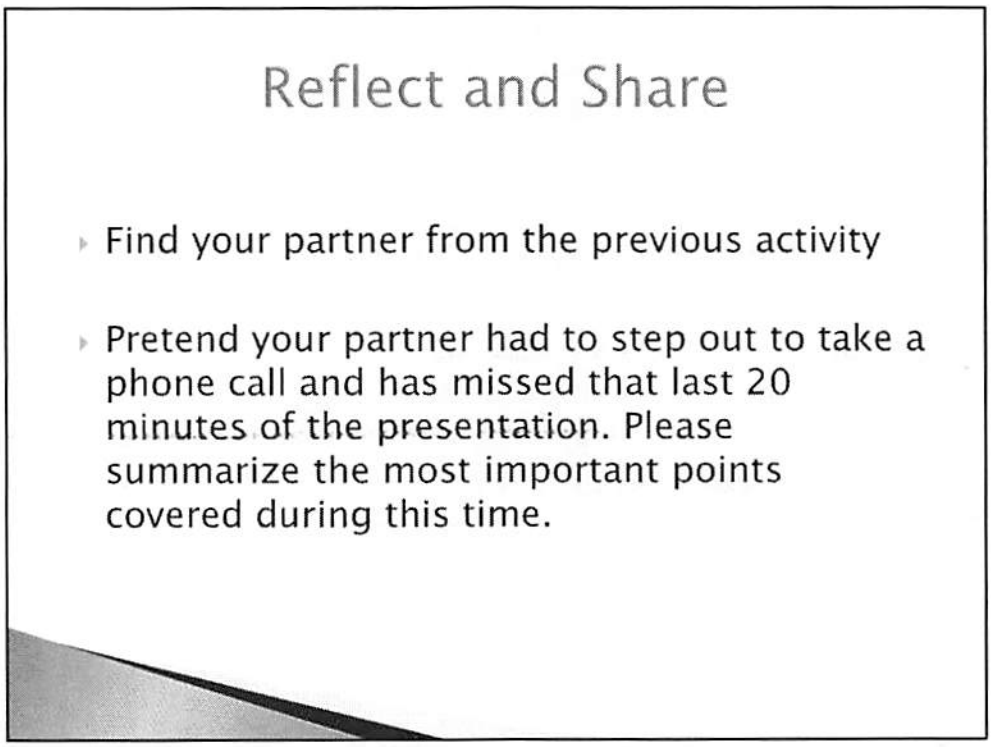
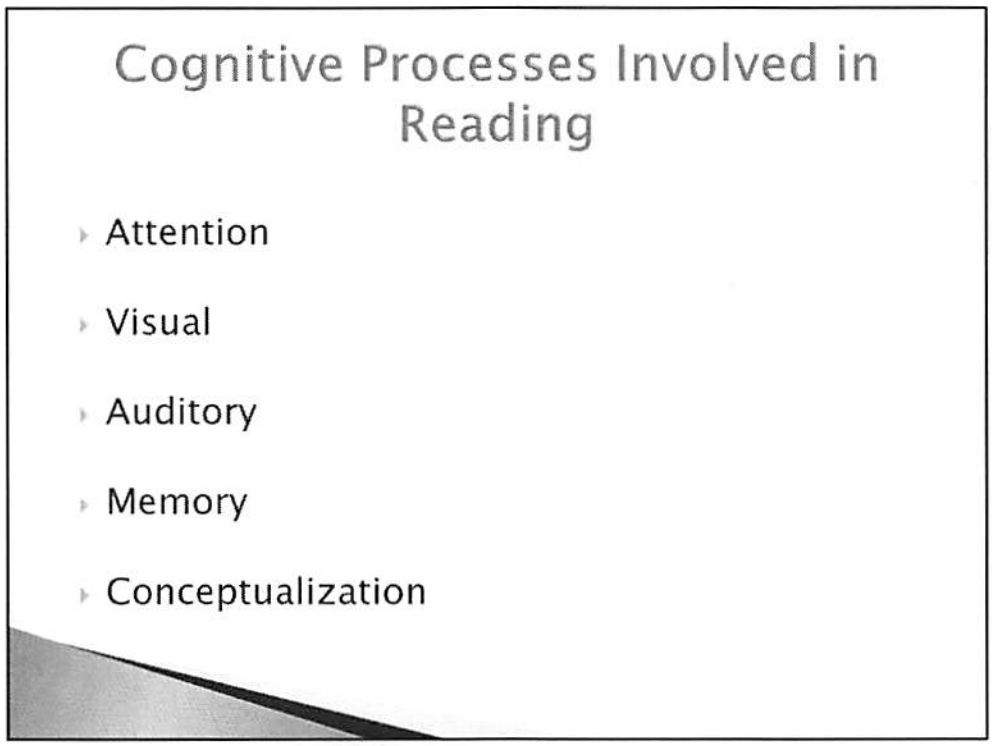


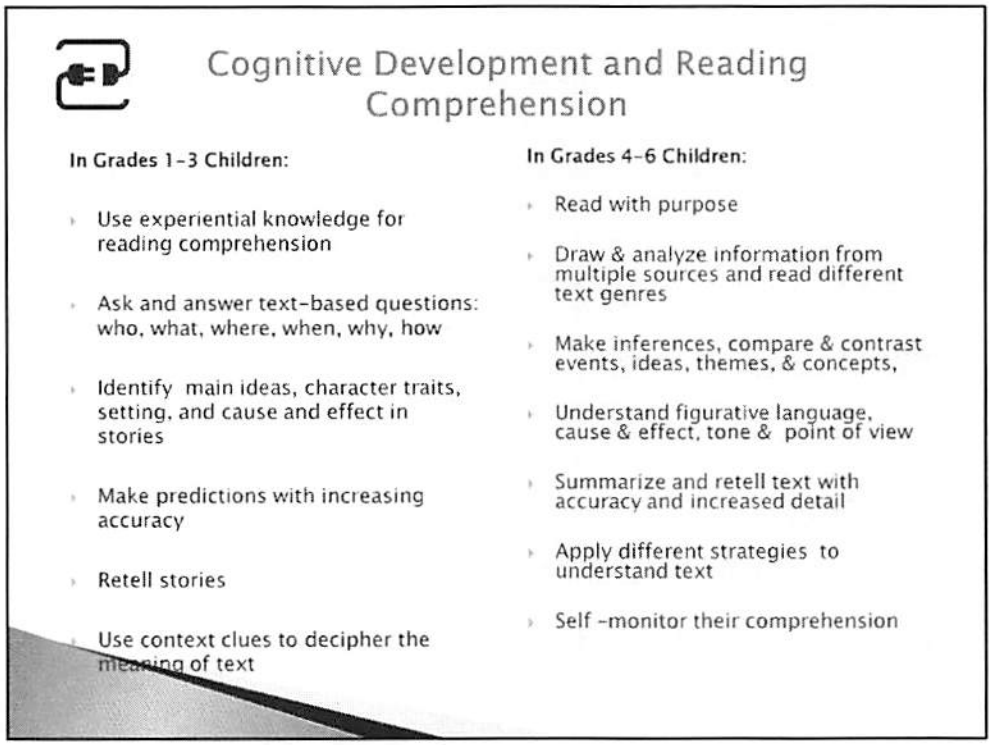
- Partner A will summarize for B.
- Ask participants to share with the group.
- Explain rationale for activity: reciprocal teaching important strategy for comprehension and retention of information/concept.



Broad Overview:

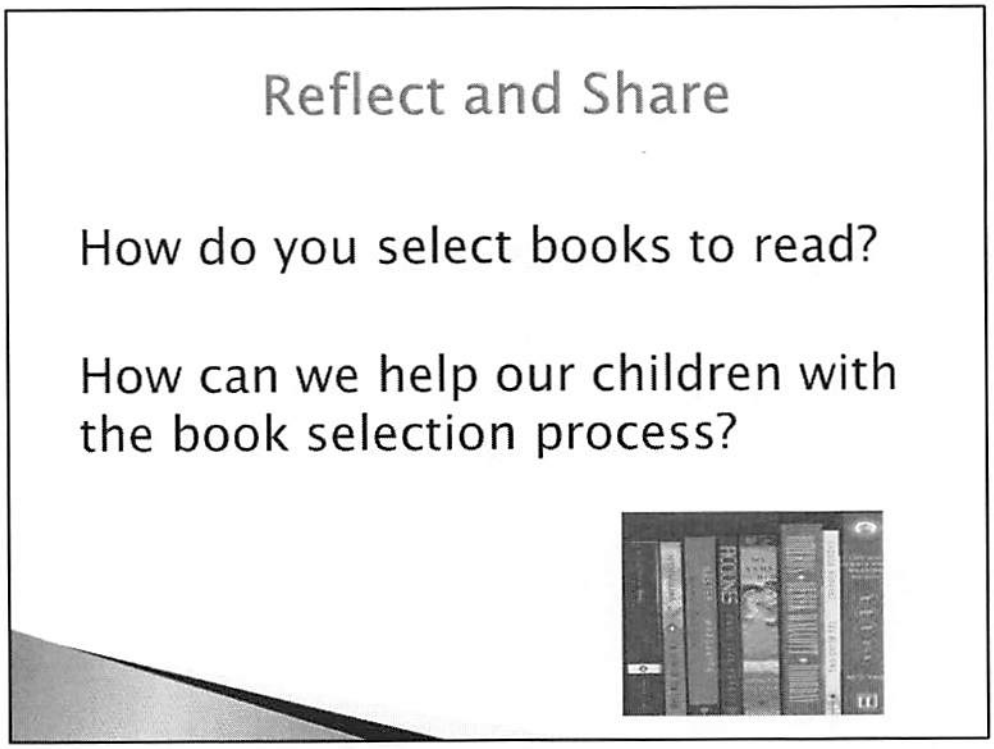
- Attention: selective and sustained for reading decoding, fluency, and comprehension.
- Visual: orthographic processing; the ability to make sense of visual features in letters/spelling patterns, visualization, and pattern recognition. This is a source of sensory input.
- Auditory : phonological processing and pattern recognition. This is a source of sensory input.
- Memory: short-term memory (for decoding), working memory, and long-term retrieval (for reading comprehension).
- Conceptualization: organization/categorization – making connections with previously stored information/ability to create mental models.
- Differences in cognitive development will determine how a child approaches academic tasks.

(Nevills & Wolfe, 2009)



- In grades K-3, students are learning to read.
- In grades 4-6 students are reading to learn; they are expected to read fluently and with comprehension.
- Cognitively, students in grades 1-3 are focused on the "what" of curriculum (i.e. What is multiplication?, What is the main idea?, etc.). This shifts in the upper grades when the focus is on knowing how or why they know what they know. Remember this distinction when asking exploratory questions.
- Students of all ages continue to build on foundational reading skills.

(Levine, 2002; Nevills & Wolfe, 2009; Santrock, 2009; Willis, 2006)



Discuss participant responses and review the following:

- **Interest Level:** high vs. low: was the book self-selected or assigned? How many times has the child read the book? Children are more likely to challenge themselves with reading material that is high-interest.

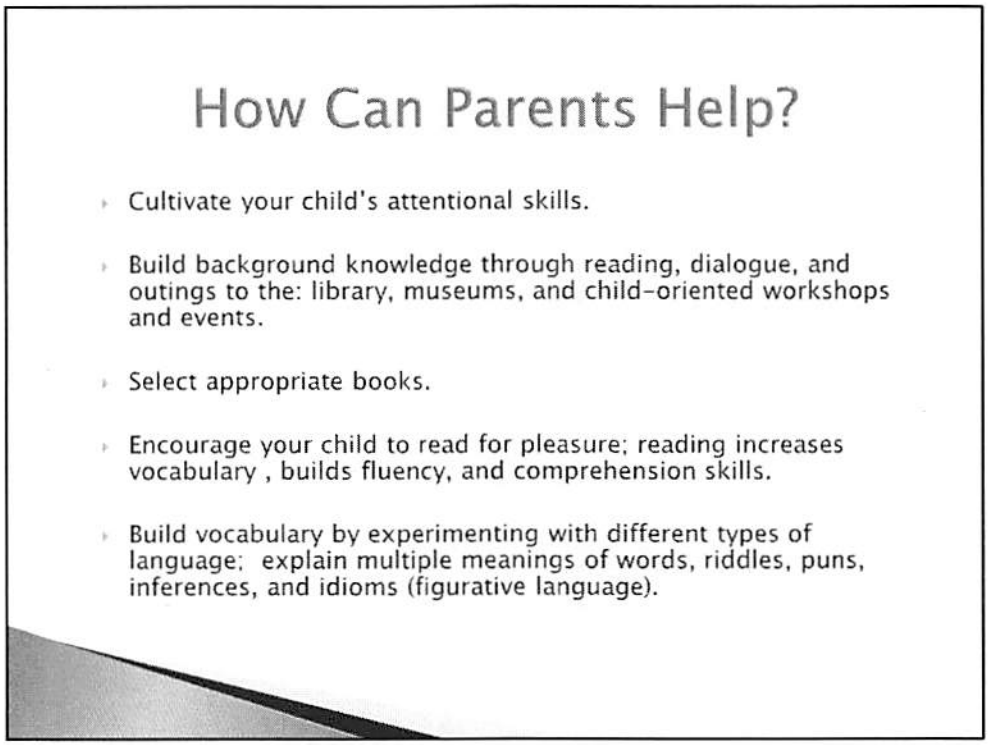
- **Purpose**- decoding/fluency building vs. story/meaning; children should be exposed to different types of books.

- **Readability:** for comfortable independent reading, it is recommended that children read books in which they can decode 95%-97% of the words and have 75% comprehension.

- Ask your child's teacher about their child's guided reading level if they have been assessed using **TRC (Text Reading Comprehension)** or on their **DIBELS assessments**; this can give you precise information on your child's reading level.

➢ **A note to Presenters -** Consider bringing in books to aid discussion.

(Levine, 2002; Nevills & Wolfe, 2009; Willis, 2006)



- Many parts of the brain must work together in order to develop reading fluency, however **sustained attention** underlies all aspects of reading. (Nevills, & Wolfe 2009)

- Create an environment that fosters a love for reading; keep books accessible and organized, choose high interest books, develop reading rituals/routines (bed time reading, Friday night library date, pajama story night with friends, holiday/themed reading, hot chocolate/tea and cookies), etc.

- All students in grades K-3 are required to read on a daily basis. Their school success is largely dependent on their ability to do so.

- Attention improves when children engage in high-interest tasks.

- Choosing the right book for your child can make a difference in how your child attends to reading.

- Reading comprehension is tied to vocabulary knowledge. Children need experience with multiple meanings of words, riddles, puns, inferences, idioms (figurative language); this is essential to both explicit and inferential comprehension.

(Levine, 2002; Nevills & Wolfe, 2009; Santrock, 2009; Willis, 2006)

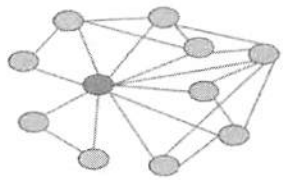
Building Vocabulary

elephant, giraffe, ostrich, hippopotamus

guitar, violin, harp, banjo, cello

banana, guava, grape, mango

beef, chicken, fish, pork



➢ **Activity:** How are these words related?

- (Building Vocabulary Through Semantic Networks)
  Words that share common properties can be activated at the same time; **the brain learns through association.**

- Building vocabulary involves making connections with existing knowledge.

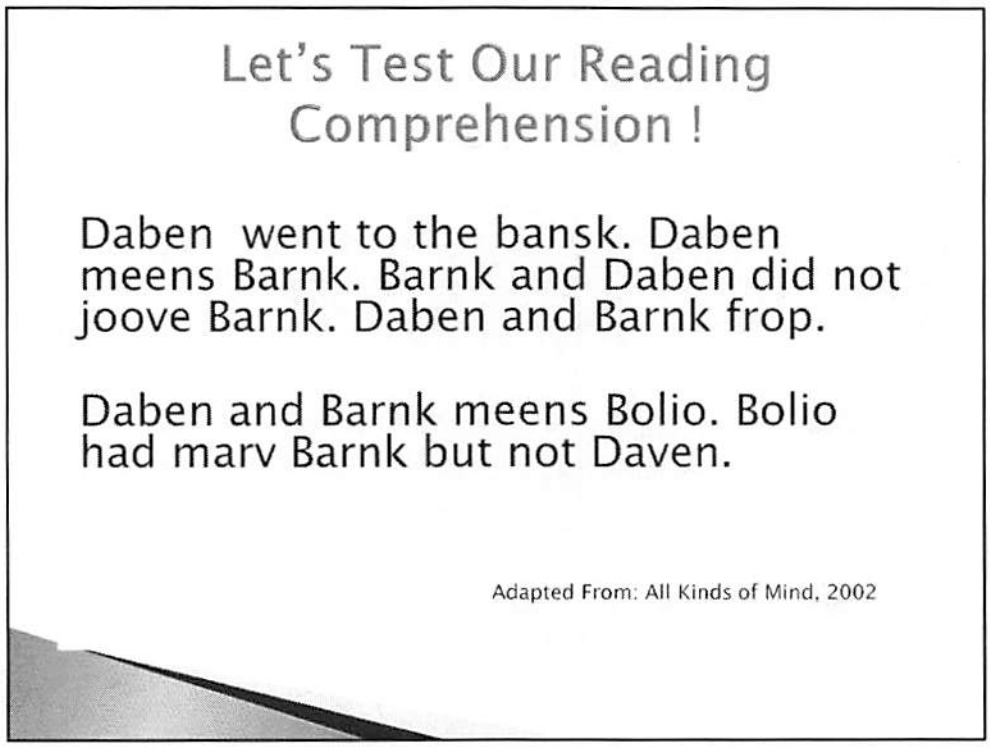
- Build vocabulary can be achieved by connecting new words with your child's prior knowledge. New vocabulary can be introduced through text that is approximately 2 levels above your child's current reading level by reading aloud and discussion.

- Children and adults require 12-20 exposures of a word before it becomes part of their long-term memory.

- Reading Comprehension is tied to vocabulary knowledge.

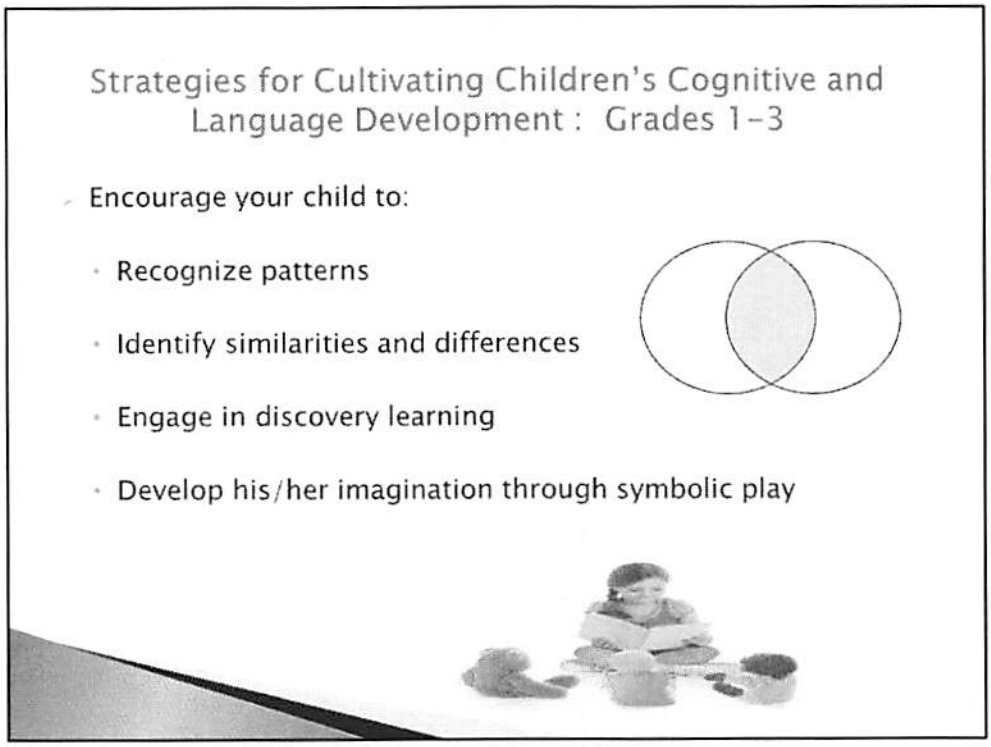
- Vocabulary develops through (varied and spaced) practice, engagement, and repeated exposure.

(Levine, 2002; Nevills & Wolfe, 2009; Santrock, 2009; Willis, 2006)



Reading Comprehension Simulation: Call on a participant to read aloud or read aloud to group

- Where did Daben go? To the bansk
- Does Daben joove Barnk? No
- Did Daben frop? Yes
- Are decoding skills enough?
- **Reading comprehension occurs when meaning is derived from text**
- Example underscores the importance of vocabulary development and selecting appropriate reading material for children: because the words above have no meaning to us, this activity becomes a decoding exercise/ Can connections be made?
- Reading comprehension is tied to vocabulary knowledge; children need experience with multiple meanings of words, riddles, puns, inferences, and idioms (figurative language).
  (Levine, 2002; Nevills & Wolfe, 2009; Willis, 2006)



- Recognize patterns: in colors, ideas, words, and stories: **learning occurs when a child can fit new information into an existing model.**

- Draw attention to similarities and differences between objects and experiences **(at the grocery store, with laundry, on walks).**

- Engage in discovery learning: **allow children to explore their environment; follow their lead.**

- Develop his/her imagination; encourage symbolic play. Experiment with different types of toys, encourage your child to use common objects (such a blanket to build a house), create structures with Tupperware containers, blocks, play dress up, a broomstick for a horse, etc.

- Develop attention to print by modeling and teaching through:

    - Book selection; finding just right book that addresses their readability level.
    - Interest
    - Content
    - Decodables for practice; this helps to reinforce skills.

- Visit the library, museums, and attend child-oriented workshops and events. (Bybee

& Sund, 1990; Nevills & Wolfe, 2009; Santrock, 2009; Willis, 2006)

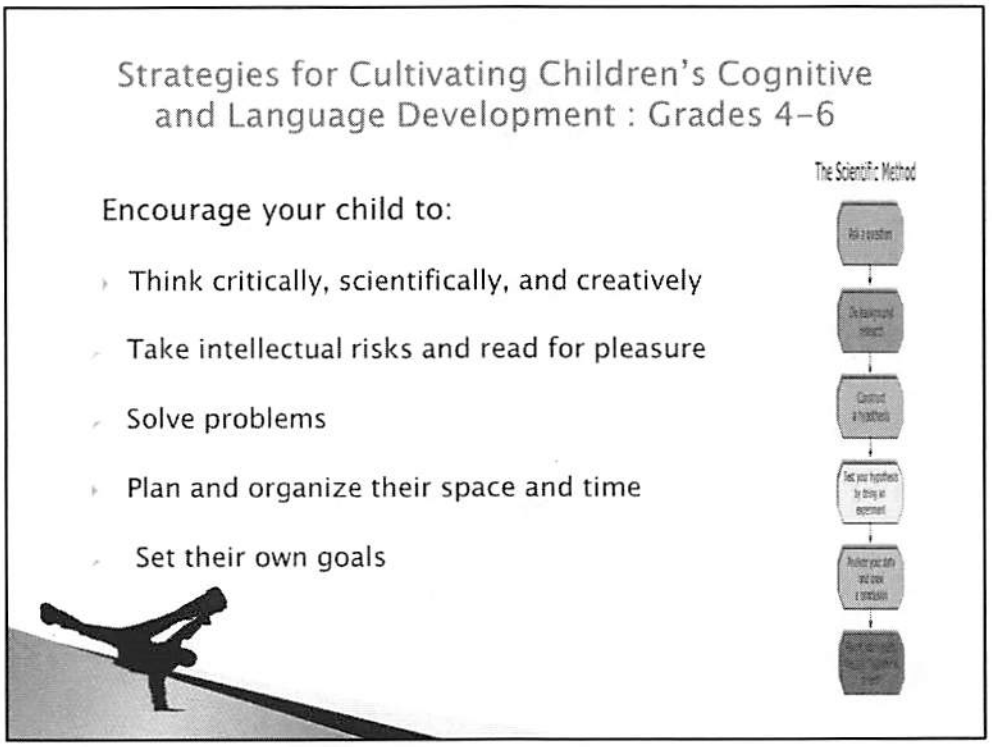
- Read simple stories or "pictures" with your child, asking "who," "what" or "where" questions about the pictures

- Simple chores: setting the table, sorting laundry, picking up their toys after they have played with the toys.

- Help your child develop an imagination: building a "blanket" tent for a picnic; make a structure with simple blocks, etc.

- Solve problems by presenting a challenge to the child: What do we need from the refrigerator to make cereal in the morning?; how do we make "toast?"; what do we need to do to help the plants grow in the garden?

- It is important for all adults in the home setting to be consistent with rules and expectations

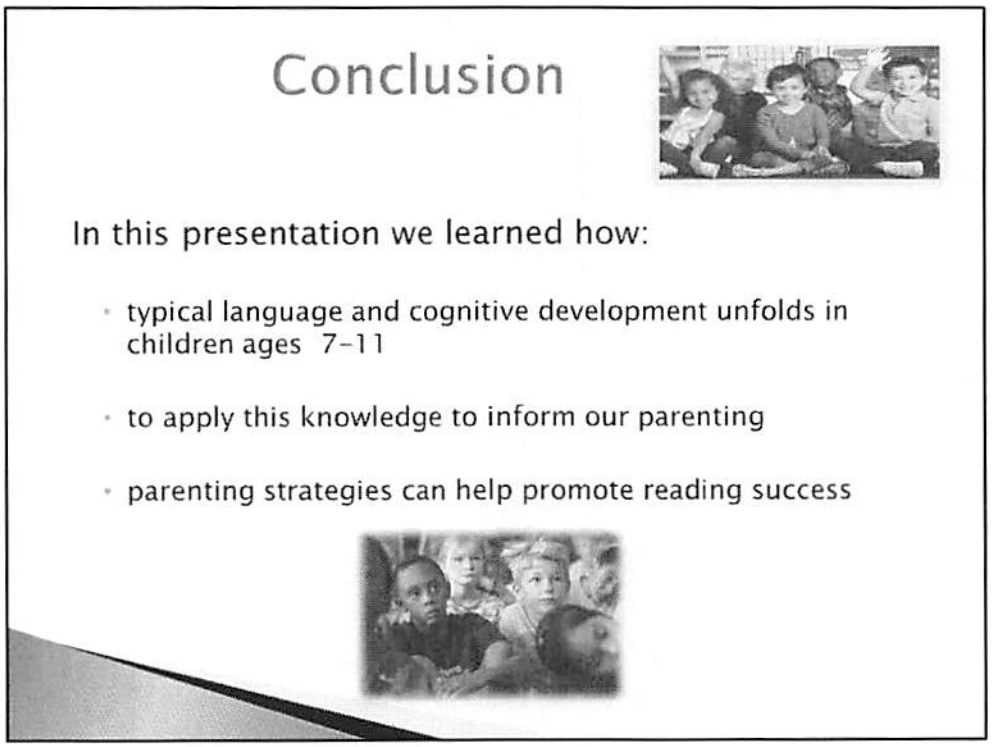


- **Critical thinking** includes evaluating evidence/weighing arguments.
- **Creative thinking** encompasses finding novel solutions to problems/ alternative ways of thinking.
- **Scientific thinking** looks for causal relationships, hypothesis development and testing of the hypothesis.
- Encourage intellectual risks by supporting time and effort on new projects, accepting/not fearing failure.
    - Build background knowledge through reading and dialogue.
- Solve problems; model and verbalize the process.

Use real-life application of reading to solve problems: read menus, steps in a ecipe, assembly instructions, etc.

(Bybee & Sund, 1990; Nevills & Wolfe, 2009; Santrock, 2009; Willis, 2006)

- Explore websites with parents, if time and internet access allows.
- Consider mentioning the following desk-side tools:
    - Dictionary
    - Thesaurus
    - The Big Book of Idioms
    - Timers
    - Markers/reading windows
    - Pencils/sharpeners



- We have learned that our children's thinking and reasoning skills are influenced by environmental, biological, and cultural factors. Cognition develops in stages through exposure, stimulation, and direct and indirect teaching. We have learned that we cannot expect our 5 year-old to be able to go to the grocery store with a list of 15 items, pay for them and come home with the correct change. We also understand that our 12 year-old is capable of understanding the concept of grocery shopping, can get to the store, buy the specific items and come home with change.

- We learned how language develops, the importance of talking with our children from birth, to include them in conversations, and model language.

- The hardest job we will ever have is that of being a parent. While it is hard, it also extremely satisfying and heart-warming to watch our children grow, flourish and become productive members of society.

References

American Psychological Association, Home//Psychology Topics// Parenting. Retrieved September18, 2014, from http://apa.org/topics/parenting/index.aspx

Bybee, R.W., & Press. Sund, R.B. (1990). *Piaget for educators* (2nd ed.). Prospect Heights, IL: Waveland.

Developmental Norms for Speech and Language. Retrieved October, 20, 2014, fromhttp://www.asha.org/SLP/schools/prof-consult/norms/

Levine, M. (2002). *A mind at a time. New York, NY: Simon & Schuster.*

References

Lyons, G. R. (2001). *Measuring success: Using assessments and accountability to raise student achievement.* Statement for the Subcommittee on Education Reform, Committee on Education and the Workforce, U.S. House of Representatives, Washington, DC. Retrieved February 2, 2015, from www.reidlyon.com/edpolicy/9.pdf.

Nevills, P., & Wolfe, P. (2009). *Building the reading brain: PreK-3 (2nd ed.).*Thousand Oaks, CA: Corwin Press.

Santrock, J. W. (2009). *Life span development (12th ed.).* New York, NY: McGraw-Hill.

Singer, D.G, & Revenson, A. (1996). *A Piaget primer: How a child thinks.* New York, NY: Penguin Books.

References

The Southern California Ordinal Scales of Development: Developmental Scale of Cognition. (1985) California State Department of Education. Portland, OR: Foreworks.

Thibault, J. P., & McKee, J. S. (1982). Practical parenting with Piaget. *Young Children,* 38 (2), 18-27.

Willis, J. (2006). *Research-based strategies to ignite student learning.* Alexandria, VA: Association for Supervision and Curriculum Development.

Willis, J. (2008). *How your child learns best: Brain-friendly strategies you can use to ignite your child's learning and increase school success.* Naperville, IL: Sourcebooks, Inc.

Questions/Discussion

Thank You for Your Attention!