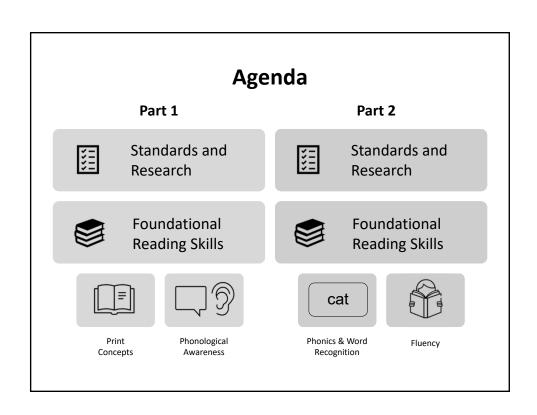
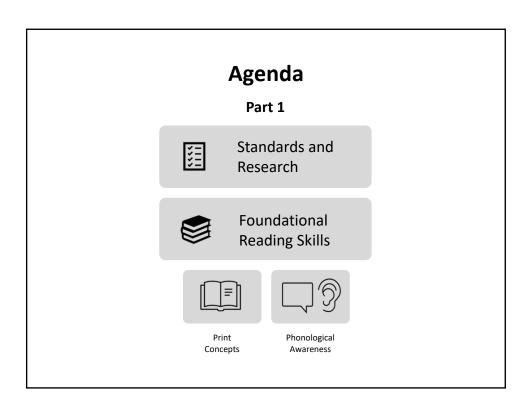
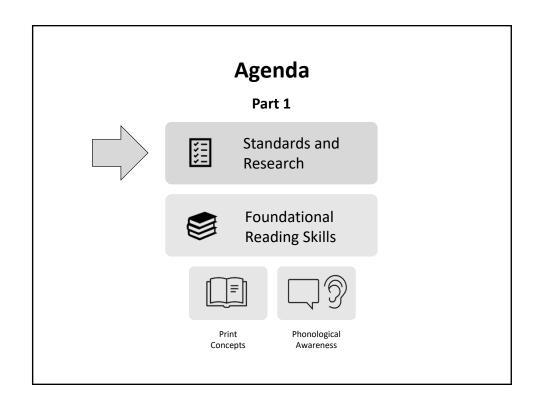
Foundational Reading Skills: Standards Tell Us What Research Tells Us How Part 1











Standards Tell Us What

Teachers are ... free to provide students with whatever tools and knowledge their professional judgment and experience identify as most helpful for meeting the goals set out in the standards.

Common Core State Standards





Research Tells Us How

Science of Reading









Comprehensive body of research encompassing decades of scientific knowledge Empirically supported research providing the information we need to gain a deeper understanding of how we learn to read

Empirically supported research providing what skills are involved, how they work together, and which parts of the brain are responsible for reading development

From this research, we can identify an evidence-based best practice approach for teaching foundational literacy skills

Institute of Multi-Sensory Education

Why is the science important?



- 20% of elementary school students struggle. (Moats, 2020)
- An additional 20% are considered at-risk.

 (Moats, 2020)
- Only 35% of 4th graders performed at or above proficient level.

(National Center for Education Statistics, 2019)

95% of students benefit from highly effective instruction. (Kilpatrick, 2015; Moats, 2020)

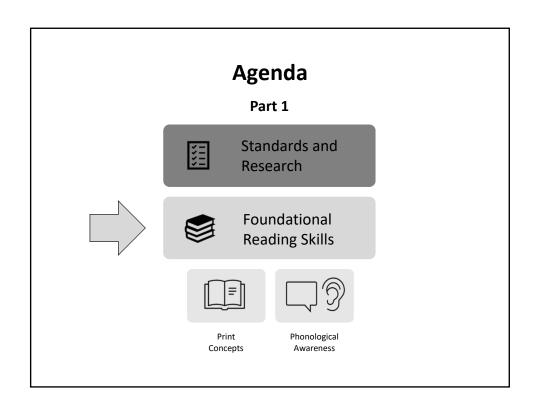
Research Tells Us How

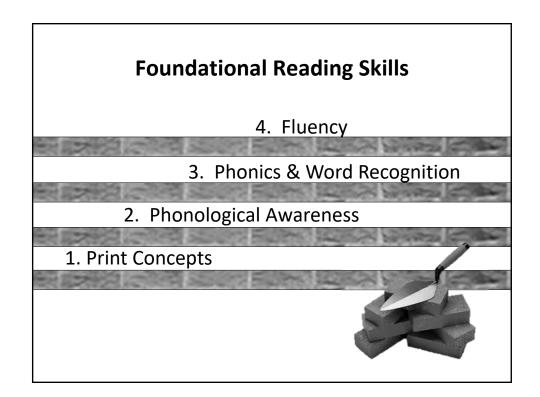
Structured Literacy

- Explicit
- Sequential
- Systematic
- Prescriptive
- Diagnostic
- Cumulative



Institute of Multi-Sensory Education





Why is it important to develop the foundational skills quickly?

Students who develop foundational skills quickly:

- •Are able to read materials.
- •Find reading rewarding.
- •Enjoy reading-related activities.
- •Decode and recognize words with automaticity and speed.
- •Are able to focus more on comprehension.
- •Are exposed to much more text.



What happens when students develop the foundational skills slowly?

Students who develop foundational skills slowly:

- •Are asked to read materials that are too difficult.
- •Find reading unrewarding.
- •May try to avoid reading-related activities.
- •Struggle to decode or recognize words.
- •Struggle with comprehension.
- •Are exposed to much less text.



The Downward Spiral of Reading Failure

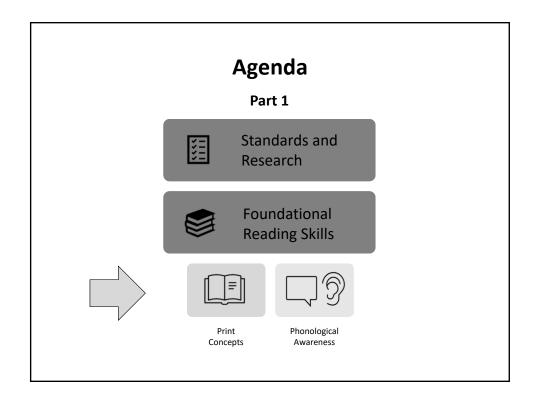


Difficulty learning to read words accurately and fluently

Less exposure to text—impacts language, vocabulary, and background knowledge

The Matthew effect phenomenon

Decline in motivation and interest in reading



What is it?



Print/Book Awareness



Letter Knowledge

Print Concepts

What do we know about book/print awareness?

Standards tell us:

Kindergarten and first grade students must demonstrate understanding of the organization and basic features of print.

Research tells us:

A child's understanding of print concepts successfully predicts future reading success (Pullen and Justice, 2003).







Print and Book Awareness Skills			
Functions of Print	 Print carries meaning. Print can be used for different purposes. Print corresponds to speech word for word. 		
Conventions of Print	 Print is print, no matter in what form it appears. Printed words are made up of letters (concept of word). Printed words are separated by spaces (word boundaries). Sentences in print are made up of separate words. Sentences start with capital letters and end with punctuation marks. Text is read from left to right with a return sweep to the next line. Lines of text are read from top to bottom of the page. When one page of text is read, the story continues on the following page. 		
Book Conventions	 A book has a front cover and a back cover. A book has a spine. A book is held right side up. A book has a title and a title page. A book has an author; some books have pictures created by an illustrator. A book has pages. The left page of a book is read before the right page. Pages are turned one at a time in a sequence from front to back. 		

(Justice and Pullen, 2003)

Print Concepts

What do we know about book/print awareness?

Research tells us:

- *Print referencing* is an effective way to teach print concepts (Justice and Ezell, 2004).
- Use just three to five print references during the reading of a storybook (Justice and Ezell, 2004).



What do we know about letter knowledge?

Standards tell us:

Kindergarten students must recognize and name all upperand lowercase letters of the alphabet.

Research tells us:

- Letter naming is one of the best predictors of reading success.
- Students must be able to identify letters of the alphabet in and out of sequence and with automaticity.



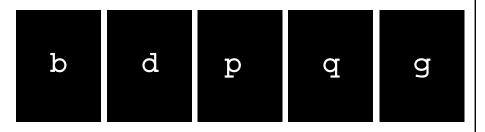
(Adams, 1990, Treiman, Kessler, & Pollo, 2006).

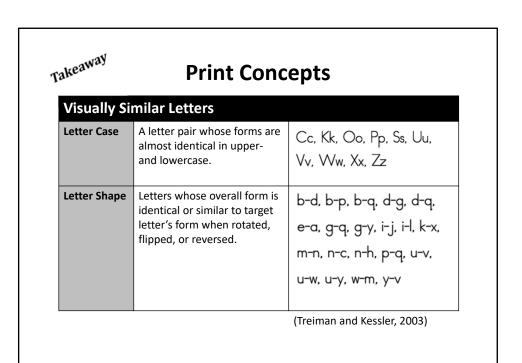
Print Concepts

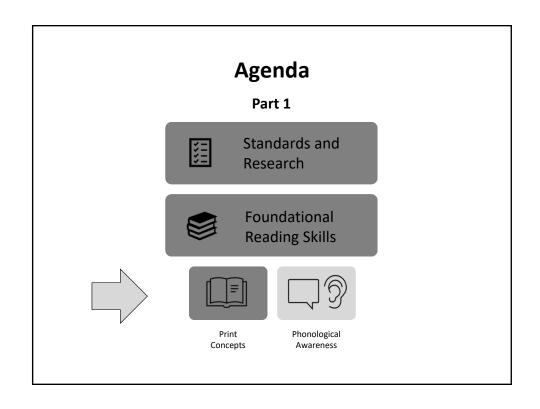
What do we know about teaching letter knowledge?

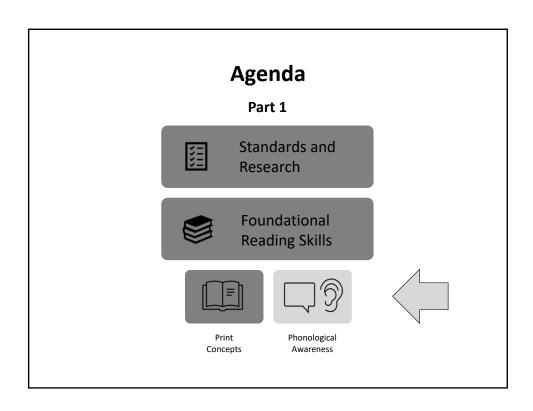
Research tells us:

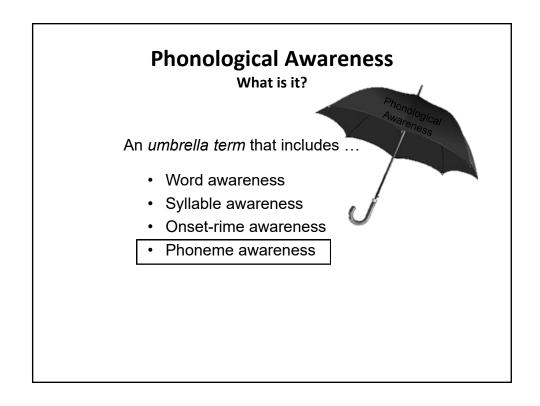
- Capitals letters are typically learned first.
- A lowercase letter that matches its capital is easier to learn (Treiman & Kessler, 2003).
- Lowercase letters with similar shapes cause confusion (Treiman, Kessler, & Pollo, 2006).











Phonological Awareness

What do we know about phonological awareness?

Standards tell us:

Kindergarten and first grade students must demonstrate an understanding of spoken words, syllables, and sounds (phonemes).

Research tells us:

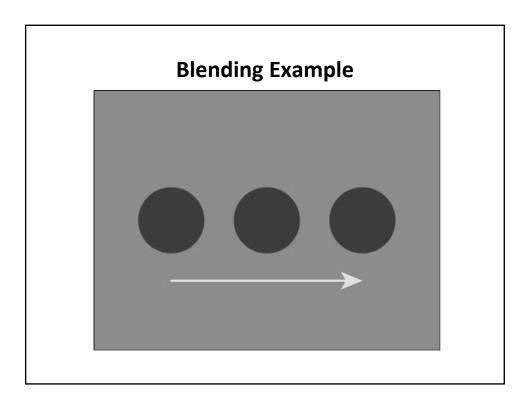
- Phoneme awareness is a strong predictor of long-term reading and spelling success (Put Reading First, 1998).
- Phonological awareness is one of the few factors that teachers are able to influence significantly through instruction

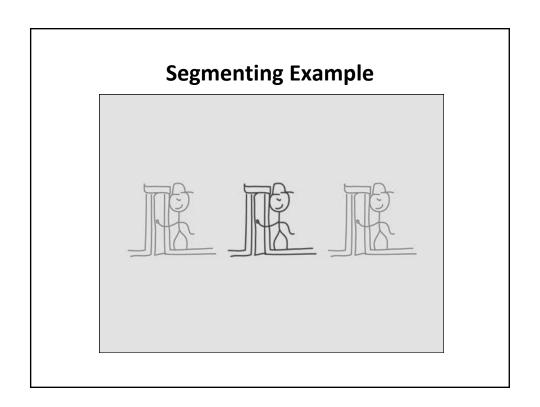


(Lane and Pullen, 2004).

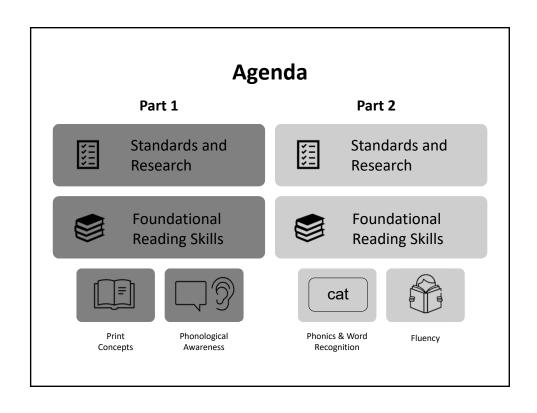
Takeaway Phonological Awareness What do we know about phonological awareness?

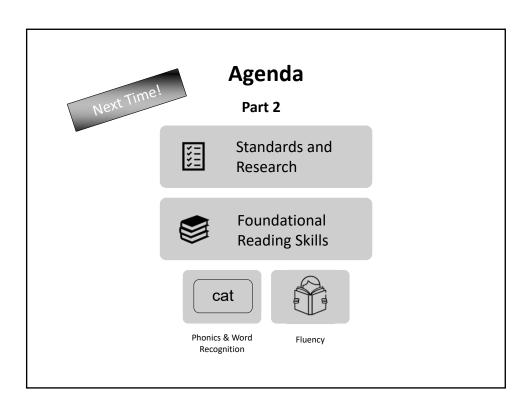
ress complex	Word Awareness	Syllable Awareness	Onset-Rime Awareness	Phoneme Awareness
Cess C	Sentence Segmentation		Rhyme Recognition	Isolation
			Rhyme Generation	Identification
\ \ ×			Categorization	Categorization
	Blending	Blending	Blending	Blending
	Segmentation	Segmentation	Segmentation	Segmentation
ב ב	Deletion	Deletion	Deletion	Deletion
iviole collibiex				Addition
Ž				Substitution













PRINT AND BOOK AWARENESS SKILLS CHECKLIST			✓	✓	✓	✓
Functions of Print	Frinc carries incaming.					
	Print can be used for different purposes.					
	Print corresponds to speech word for word.					
Conventions of Print	Print is print, no matter in what form it appears.					
	Printed words are made up of letters (concept of word).					
	Printed words are separated by spaces (word boundaries).					
Sentences in print are made up of separate words.						
	Sentences start with capital letters and end with punctuation marks.					
	Text is read from left to right with a return sweep to the next line.					
	Lines of text are read from top to bottom of the page.					
	When one page of text is read, the story continues on the following page.					
Book Conventions	A book has a front cover and a back cover.					
	A book has a spine.					
	A book is held right side up.					
	A book has a title and a title page.					
	A book has an author; some books have pictures created by an illustrator.					
	A book has pages. The left page of a book is read before the right page.					
	Pages are turned one at a time in a sequence from front to back.					

VISUALLY SIMILAR LETTERS

Letter Case	A letter pair whose forms are almost identical in upper- and lowercase.	Cc, Kk, Oo, Pp, Ss, Uu, Vv, Ww, Xx, Zz
Letter Shape	Letters whose overall form is identical or similar to target letter's form when rotated, flipped, or reversed.	b-d, b-p, b-q, d-g, d-q, e-a, g-q, g-y, i-j, i-l, k-x, m-n, n-c, n-h, p-q, u-v, u-w, u-y, w-m, y-v

Phonological Awareness Skills

Less Complex → More Complex

X	Word Awareness	Syllable Awareness	Onset-Rime Awareness	Phoneme Awareness
Less Complex	Sentence Segmentation Tap one time for every word you hear in the sentence: I like cookies.		Rhyme Recognition Do these two words rhyme: ham, jam? (yes)	What is the first sound in fan? (/f/) What is the last sound in fan? (/n/) What is the middle sound in fan? (/a/)
			Rhyme Generation Tell me a word that rhymes with <i>nut</i> . (cut)	Identification Which word has the same first sound as car: fan, corn, or map? (corn)
			Categorization Which word does not belong: mat, sun, cat, fat? (sun)	Categorization Which word does not belong? bus, ball, house? (house)
	Listen as I say two small words: rain bow. Put the two words together to make a bigger word. (rainbow)	Put these word parts together to make a whole word: rock•et. (rocket)	Blending What word am I saying? /b/ /ig/? (big)	*Blending What word am I saying /b//ĭ//g/? (big)
	Segmentation Clap the word parts in rainbow. (rain•bow) How many times did you clap? (two)	Segmentation Clap the word parts in rocket. (roc•ket)	Segmentation Say <i>big</i> in two parts. (/b/ /ig/)	*Segmentation How many sounds in big? (three) Say the sounds in big. (/b/ /ĭ/ /g/)
	Deletion Say rainbow. Now say rainbow without the bow. (rain)	Deletion Say pepper. Now say pepper without the /er/. (pep)	Deletion Say mat. Now say mat without the /m/. (at)	Deletion Say spark. Now say spark without the /s/. (park)
nplex ←				Addition Say park. Now add /s/ to the beginning of park. (spark)
More Complex				The word is mug. Change /m/ to /r/. What is the new word? (rug)

^{*}Integrated instruction in phoneme segmenting and blending provides the greatest benefit to reading acquisition (Snider, 1995).

Adapted from Lane and Pullen (2004)

CONSONANT PHONEMES

Continuous Sounds*		/f/ • /l/ • /m/ • /n/ • /r/ • /s/ • /v/ • /w/ • /y/ • /z/ • /a/ • /e/ • /i/ • /o/ • /u/
	A stop sound is a sound that can be pronounced for only an instant. Avoid adding /uh/.	/b/• /d/ • /g/ • /h/ • /j/ • /k/ • /p/ • /t/

^{*}Blending words with continuous sounds is easier than blending words with stop sounds.