Literacy **how**Empower teaching excellence.

Knowledge to Practice: Bringing the Science of Reading into the Classroom

Margie Gillis, Ed.D., CALT

President, Literacy How and Research Affiliate, Haskins Labs

New Jersey IDA Conference October 14, 2022

Literacy **how**Empower teaching excellence.

Our Mission is to

EMPOWER TEACHERS to ensure that every child learns to read by third grade.

> Our model is research based. Our approach is values driven.

2

Our Core Values

guide our intentions, actions, and character.

Passion

3

Lifelong Learning **Professionalism** Collaboration **Empowerment** Accountability

Literacy is the language of opportunity.

Children are at the heart of all we do. We believe that every child has the right to read.

We know that 95% can be taught to read.

We believe that teachers-not programs or productsteach students to read, write and spell.

So we empower teachers with the best ways to teach.

Why does Literacy How exist?

- 95% of children can be taught to read (Torgesen, 2004)
- However, 65% of the Nation's 4th graders read below grade level (http://nces.ed.gov/nationsreportcard/naepdata/)
- Teacher prep programs continue to dismiss the 'Science of Reading' (Joshi et al., 2009; Brady et al., 2009; Cunningham et al., 2009; Spear-Swerling & Zibulsky, 2014, NCTQ Teacher Prep Reviews, Ed Week Survey, 2021)
- Teacher knowledge and use of effective literacy instruction strategies can override student disadvantages

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This year, for the first time since the National Assessment of Educational Progress tests began tracking student achievement in the 1970s, 9-year-olds lost ground in math, and scores in reading fell by the largest margin in more than 30 years. READING Score change between 2020 and 2022 Largest score drop in reading since 1990 https://www.nationsreportcard.gov

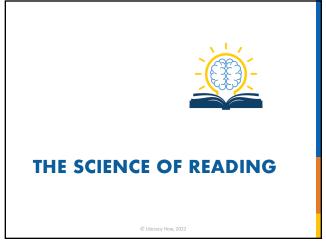
Learner Outcomes

- Describe the Structured Literacy approach and explain why it is important for students with reading difficulties and beneficial to all students
- Know what the core components of comprehensive literacy are and explain why oral language is at the core
- Identify some instructional activities that are used to teach the core components of comprehensive literacy

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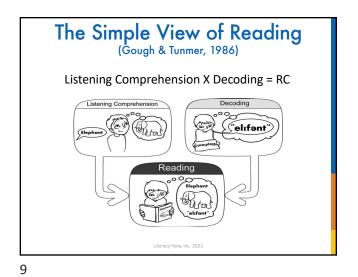
The science of reading is a vast, interdisciplinary body of *scientifically-based* research* about reading and issues related to reading and writing.

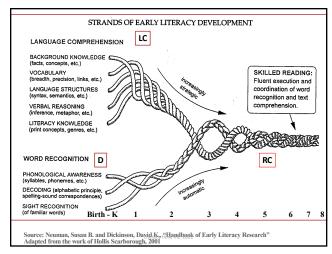
- conducted over the last five decades across the world,
- derived from thousands of studies conducted in multiple languages.
- culminated in a preponderance of evidence to inform
 - how proficient reading and writing develop;
 - why some have difficulty;
 - how we can most effectively assess and teach and, therefore, improve student outcomes through prevention of and intervention for reading difficulties.

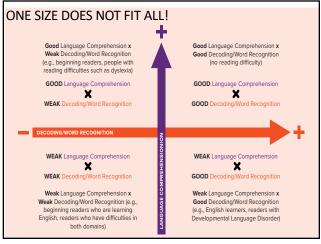
The Reading League

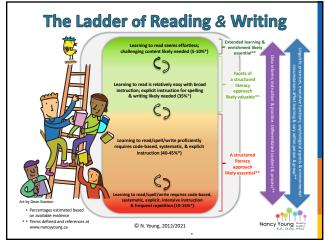
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The Reading Brain

"Each new reader comes to reading with a 'fresh' brain -one that is programmed to speak, see, and think, but not read. Reading requires the brain to rearrange its original parts to learn something new." (Maryanne Wolf)

"Teaching reading is rocket science."

(Louisa Moats)

All students need to know the structure of English — that is, our language is based on an alphabet (phonemic) and meaning (morpho). English is *morphophonemic*.

So that means that **All teachers** need to know the structure of English AND how to teach that knowledge to their students

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How Do Children Learn to Read?

- The answer is the same for all children.
- The emphasis of instruction will differ depending on where the child is in the developmental progression.
- The emphasis will also depend on the strengths and weaknesses of the individual child.

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13

Learning to read is a process that requires the mastering of a series of developmental stages in response to environmental input, starting with language processing in utero and ending with proficient reading years later.

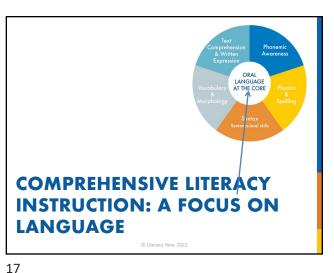
Jeanne Chall, Stages of Reading Development, 1983

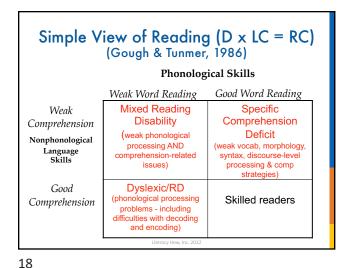
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Effective Reading Instruction for Students with Reading Difficulties

- The foundation of reading is oral language.
- Students with the 3 different profiles will need a different instructional focus depending on their diagnostic assessment data.
- · While some students with reading difficulties have comprehension strengths, they do not find reading enjoyable so they do not practice applying those comprehension skills to what they read. As a result, vocabulary and reading comprehension often suffer....
- which means, all components of reading instruction may need to be addressed.

Louise Spear-Swerling, 2015

Students with Reading Difficulties: A Continuum of Severitythat requires a continuum of instruction Tier 3 Tier 1 ...and increasing amounts of teacher knowledge and expertise Highest

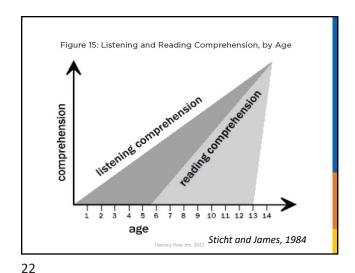
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Oral Language Development

- Students with weak oral language proficiency struggle with academic skills such as reading fluency and reading comprehension.
- In each of the stages of language acquisition, the student's *receptive language* is generally better than his or her *expressive language*

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21



Reading-Related Oral Language Skills

Why are oral language skills important to literacy?

- You must be able to understand language at an oral level in order to be expected to understand it at the text level.
- Knowing words is key to learning to read.
- Difficult to learn to read words if you do not know words (i.e., what they mean; what they represent).
- If students can only understand a 6-word sentence orally, they will struggle with a 12-word sentence in a book.

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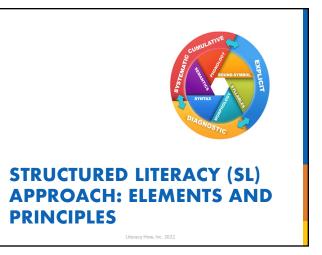
Structured Literacy Instruction



IDA Knowledge and Practice Standards

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Elements of Structured Literacy



Structured Literacy is characterized by the provision of systematic, explicit instruction that integrates listening, speaking, reading, and writing and emphasizes the structure of language across the speech sound system (phonology), the writing system (orthography), the meaningful parts of words (morphology), the relationships among words (semantics), the structure of sentences (syntax), and the organization of spoken and written discourse.

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Structured Literacy

- **1. Phonology** the study of the sound structure of spoken words
- 2. Orthography the writing system of a language (sound-symbol and vowel patterns)
- **3. Morphology** the study of units of meaning (morphemes)
- 4. Semantics language at the word level and beyond
- 5. Syntax –sentence structure/word order
- 6. Discourse how language and text are organized at the passage level and beyond

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Structured Literacy
7 Principles of Instruction

Directly Teach Skills and Concepts
At skills and concepts are deficitly taught in manageable of instruction of instruction of instruction of instruction of instruction.

Sequence of Instruction
Concepts and skills are directly taught in a logical progression from more basic concepts to more difficult expression from more basic concepts to more difficult expression.

Hands-on and Engaging
Students are actively engaged in the learning. They are expected to respond to pointed questions and demonstrate skills acquisition.

Deliberate Practice
Students are provided with deliberate massed and spaced practice.

Corrective Feedback
Students are provided with immediate corrective feedback.

Diagnostic and Responsive
Students are provided with immediate corrective feedback.

Diagnostic and Responsive
Students are given many opportunities to apply what they have learned to read connected text with expression to acquire meaning and knowledge.

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What Is Structured Literacy?

Structured Literacy is an approach* to reading instruction where teachers carefully structure important literacy skills, concepts, and the sequence of instruction, to facilitate children's literacy learning and progress as much as possible. This approach to reading instruction can be beneficial not only for students with reading disabilities, but also for other at-risk students including English learners and struggling adolescents (Baker et al., 2014; Gersten et al., 2008; Kamil et al., 2008; Vaughn et al., 2006).

* An approach uses a problem-solving process, with data at the center, to ensure that instruction is individualized for the needs/profiles of the students.

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IDA Brief

Balanced Literacy/Typical Literacy Practices

 Students are encouraged to use word analogies and pictures or context to identify words.

Instruction is focused on:

- Shared reading (e.g., the teacher reads aloud to students and asks questions about the text),
- Guided reading (e.g., students read texts at their current ability level and discuss them with the teacher in homogeneous groups), and
- Independent reading (e.g., students self-select books to read on their own).

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30

31

The "Multiple Cueing Systems" (MSV) Model of Reading

- Based on the work of Goodman (1976), Clay (1994), and others
- Proposes that children learn to read by using these 3 cues to read words:
 - 1. Semantic cues (Meaning)
 - 2. Syntactic cues (Sentence structure)
 - 3. Graphophonic (i.e., letter sounds)cues (Visual)
- When children come to a word they cannot read, they are encouraged to first use the picture, next use the sentence context, and last, use partial letter cues rather than looking carefully at the word and applying phonics skills

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How do good readers use context?

- Good readers do not overrely on context to aid decoding.
- They do not skip words.
 They read every word in a text, smoothly from left to right.
- They make meaning as they read along because they have developed automatic word recognition via (repeated) decoding.
 - Rayner & Pollatsek (1989)
- Good readers do use context to aid comprehension, e.g., to figure out unfamiliar word meanings or multiple meanings of
- They do use context to confirm word-reading accuracy.

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32 33



What is Phonemic Awareness?

Phonemic Awareness is a **metalinguistic** skill and is the most advanced level of phonological awareness. It refers to the ability to identify and manipulate speech sounds in words. A person with full phoneme awareness can process all of the individual speech sounds in spoken words, including blends.

Three aspects of phonemic awareness:

- Segmenting taking a word apart: cat = /k//a//t/
- Blending putting sounds together: /s/ /t/ /o/ /p/ = stop
- Manipulation moving, deleting, or adding a sound

37

Research tells us PA instruction should:

- Be systematic and explicit, incorporating previously taught material into subsequent locals
- Use **engaging** activities that give the child an active role in discovering the sounds
- Provide concrete representation of sounds (blocks, mouth pictures, etc.)
- Link directly to letters of the alphabet asap to be most effective
- Be delivered in small groups to be most effective.

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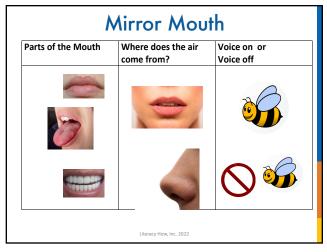
Developing phonemic awareness is critical for reading in English because it:

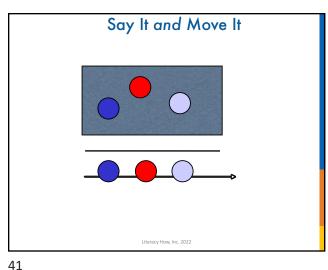
- supports an understanding of the alphabetic principle (sound/symbol correspondences),
- helps with mapping sounds onto letters to decode and spell words,
- helps students recognize decoded words faster when they are seen again,
- sharpens awareness of word pronunciation for vocabulary learning, and
- facilitates reading accuracy.

Ashby et al, 2022

38

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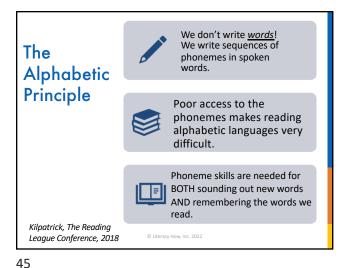
Focus on Phonemic Awareness When...

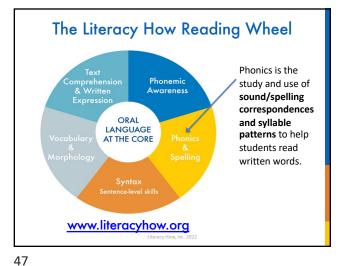
- Younger students have difficulty segmenting and blending sounds in words (DIBELS Phonemic Segmentation Fluency)
- Older students read words inaccurately, leave out and/or misrepresent sounds in their spelling (word inventory, dictation, written response)

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42 43







English Orthography Complex but Rule-governed

'It is true that the English writing system is complex, and many words violate typical letter-sound mappings. However, learning phonics will still take a child a long way: More than 80% of monosyllabic words are completely regular and, for those that are not, a "partial decoding" will often bring a child close to the correct pronunciation, which can then be refined using oral vocabulary knowledge.'

Castles, Rastle, and Nation, 2018

48

English's Orthography: Underlying Language Systems

- 1. The phonemes and syllables in spoken words
- 2. The graphemes used to spell each phoneme
- 3. The conventions governing the spellings of sounds in **specific positions** in a syllable
- 4. Other patterns or conventions of letter sequencing
- 5. Morphology
- 6. The **grammatical role** that a word plays in a sentence.

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How Children Learn to Associate Letters with Spoken Language

"...the most appropriate way to learn this mapping is governed **not** by pedagogical philosophy but by the nature of the writing system the child needs to learn."

Ending the Reading Wars, Castles, Rastle, and Nation (2018)

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49

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Simple Patterns First: Short Vowel Gestures

"Interventions that combine explicit and systematic instruction yield the highest outcomes across content areas."

National Center on Intensive Intervention



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Impact of Phonics Instruction

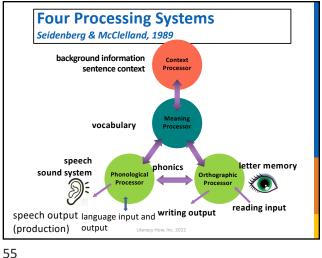
'These results are consistent with the view that explicit teaching of phonics assists all children to access text material relatively early in reading instruction and that this explicit instruction is **particularly vital for some children** (e.g., C. E. Snow & Juel, 2005).'

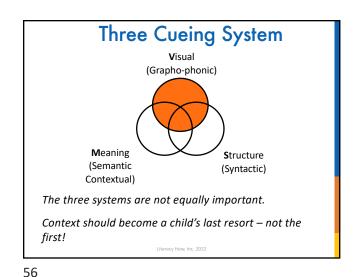
Key ingredient of a successful phonics program is that it is systematic.

Castles, Rastle, and Nation, 2018

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51 53





Print-to-Speech

- Look at the word **FISH**
- What letter does the word begin with?
- What sound does the letter F make?



Decoding (deconstructing)

Speech-to-Print



- Look at this picture. What is it?
- What sound does your mouth make when you say the word fish?
- · What letter do we use to spell the sound **/f/**?

Encoding (constructing)

57 58

Decoding-Encoding Relationship

"While decoding words requires turning written symbols into speech (print-to-speech); encoding involves transposing speech into writing (speech-to-print). They are synergistic. Each reinforces the other."

Herron and Gillis, 2020

Structured Literacy Typical Literacy Practices Practices Spelling skills are taught Spelling is often not taught in explicitly and systematically an explicit or systematic with prerequisite skills taught manner. Students may learn first and with instruction in word lists in which words common spelling rules (e.g., exemplify no particular phonics rules for adding endings). pattern or spelling rule. Spelling instruction reinforces Spelling program may be and extends what students completely distinct from learn in decoding. decoding program with different words in the two programs. Spear-Swerling, 2019

59

Reading and Spelling

- Two sides of the same coin (Ehri, 2000)
- Reading requires **recognition** of letter sequences while spelling requires recall of the letter sequences.
- "Learning to spell requires complete and accurate word memories" (Moats, 2022).
- "Reading ... is possible even if word memories are not fully specified" (Moats, 2022).
- Many people can read multisyllabic words accurately and automatically but may not be able to spell them.

Orthographic Mapping

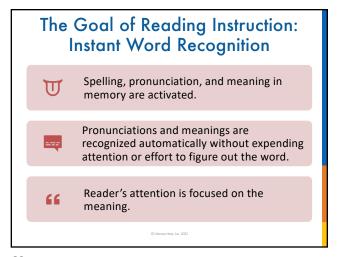
The process readers use to store written words for immediate, effortless retrieval. It is the means by which readers turn unfamiliar written words into familiar, instantaneously accessible sight words.

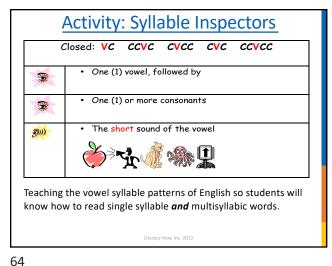
This explains how readers build a sight vocabulary.

David A. Kilpatrick, 2015

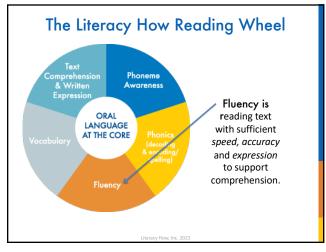
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14 Literacy How, Inc.





С	a	p				cap	
t	a	p				tap	
t	i	p				tip	
t	i	ck				tick	
S	i	ck					
s	t	i	ck				
S	t	u	ck				
S	t	o	ck				
S	t	О	p				
s	t	О	m	p			



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What It Takes to Be a Fluent Reader

- Accuracy (know the spelling patterns)
- Automaticity (recognize and apply the patterns in words instantly – i.e., less than one second)
- Phrasing (group the words in grammatical entities – i.e., elaborated noun phrases, prepositional phrases, verb + adverb phrases)
- Intonation (read it as though you're telling someone a story or conveying information)

67

A beautiful apple tree in my back yard was covered with blossoms during the spring.

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Structured Literacy
Practices

Oral text reading with a teacher is included in lessons.

Partner reading and independent reading may be emphasized more than oral text reading with a teacher.

Spear-Swerling, 2019

Literacy
Practices

Partner reading and independent reading may be emphasized more than oral text reading with a teacher.

Structured Literacy Practices	Typical Literacy Practices
Beginning readers usually read decodable texts (texts largely controlled to specific phonics patterns that have been explicitly taught) that facilitate learning to apply phonics skills in reading texts.	Beginning readers usually read leveled and predictable texts (texts in which words are predictable based on sentence structure, repetition, or pictures) that do not easily lend themselves to application of phonics skills.
Literac	of phonics skills. y How, Inc. 2022 Spear-Swerling, 2019

Teaching with the Text in Mind **Code-to-Text Match** Lesson-to-Text Match The foundation of · Decodable text decodable text maps on to what has been taught. Explicit scope and • Each lesson provides sequence opportunities to practice Most of the words reading the patterns to build follow the scope and Accuracy sequence Automaticity Reading connected text builds fluency

70 71

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What is Morphology and Why Study It?

morphe = form -logy = to study

Morphology: The study of meaningful units of language and how those units are combined in words.

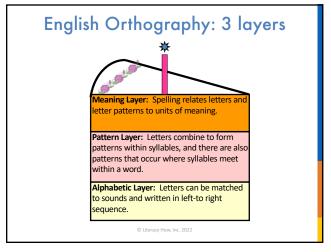
- · Increases vocabulary
- · Supports decoding
- · Aids spelling

Involves the ability to manipulate and combine morphemes (metalinguistic).

Knowing morphemes can help us figure the meanings of thousands of words!! © Literacy How, Inc. 2022

76

How many? Syllables Morphemes dogs unlike elephant humorous wiped biodegradable



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hill

A base word, also known as a free morpheme, can stand alone and affixes can be added to it. It is often of Anglo Saxon origin.

cow two field

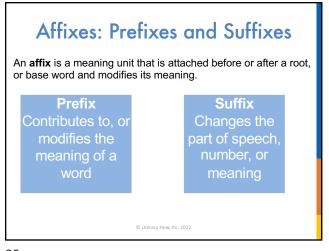
A root came into English from another language.

A root, also known as a bound morpheme, cannot stand alone and is used to form families of words with related meanings:

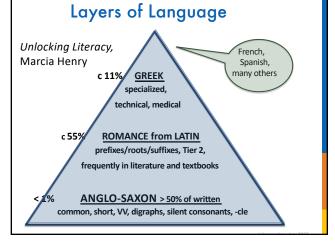
inspect spectator disrespect

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79



80



Suffix	Word	Part of Speech
	educate	verb
-S	educate s	verb verb
-er/or	educat e or	verb noun
-ed	educat e ed	past tense verb
-ing	educat e ing	present tense verb
-ed	educat e ed	noun adjective
-tion	education	verb → noun

81 82

Structural Analysis

- 1. Underline the base or root.
- 2. Box the prefixes and suffixes.
- 3. Think about/discuss the meaning of each word part.
- 4. Define the whole word by thinking about the meaning of each part and putting those meanings together to figure out the meaning of the whole word.

retro spect ive

Morphological Problem Solving

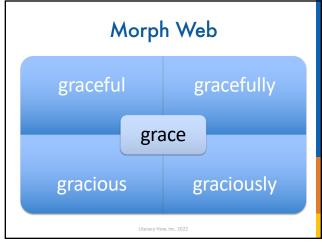
- retro- I've heard that part of the word before in other words, like retro clothes. I'm thinking retro might mean in the old days or before?
- 2. spect- means like to see, like inspect (look at)
- 3. They looked at the **retrospective** slideshow? So, it means they probably saw pictures from before, like from when they were little

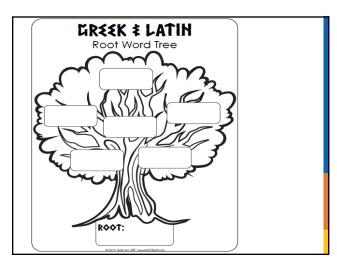
That fits the meaning and makes sense!



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83





85 86

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Improving Morphological Awareness

Roots: form, port, struct, tract

Prefixes: re, trans Suffixes: ed, ing, s PA Review

87

What is the suffix in *transformed*? The prefix? The root?

Change the prefix in transformed to /re/
Change the suffix in reformed to /s/
Change the root in reforms to /port/
Change the suffix in reports to /ed/

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Vocabulary refers to the body of words and their meanings that students must understand to comprehend text.

Vocabulary refers to the body of words and their meanings that students must understand to comprehend text.

Vocabulary Reading Wheel

Text
Comprehension & Written Expression

Phonemic Awareness
Expression

ORAL LANGUAGE AT THE CORE & Spelling
Spelling
Syntax
Sentence-level skills

Semantics

"The semantic system refers to all that is involved in the conceptual meanings conveyed by words and sentences that help us understand our world."

This includes:

- the way words refer to specific objects and concepts
- the way words and their referents can be understood in their contexts
- · understanding words with multiple meanings
- understanding metaphorical expressions
- · the role of background knowledge/content schema
- · word relationships

Tales of Literacy for the 21st Century, Maryanne Wolf

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Connecting the Meaning of Words

- The runaway **bear** entered the tent without warning and ate the camper's supper.
- The person on the other end of the phone said, "Bear with me a little while longer before doing anything rash".
- The man could bear it no longer; it was unbearable!

Adapted from, *Tales of Literacy for the 21st Century*, Maryanne Wolf

90 92

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Principles of Effective Vocabulary Instruction

- Present word(s) using child-friendly definitions.
- Draw attention to orthographic (spelling) and phonological (sound) representation.
- Engage students in repeated use of word(s) in different contexts.
- Teach words in categories.
- Make the word meaning visual.

Semantic-Contextual Information

"I desperately searched for the crimson bow and knew immediately it was your boat."

Tales of Literacy for the 21st Century, Maryanne Wolf

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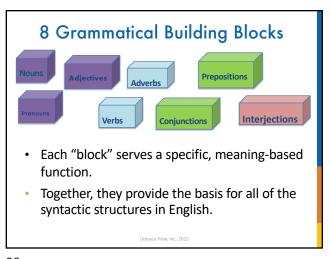
Syntax

- Sentence structure: words, phrases and clauses (independent and dependent)
- The set of principles that dictate the sequence and function of words in a sentence in order to convey meaning
- · Includes grammar, sentence variation, and mechanics of language

"If a reader can not derive meaning from individual sentences that make up a text, that is going to be a major obstacle in text-level comprehension."

Syntax is the bridge between word reading fluency and text comprehension. Phrasing and Prosody Word Reading Text Fluency Comprehension Accuracy and **G**rammar Constructing Automaticity Meaning Vocabulary

97 98



Sentence Expansion

Namer + Action

My dog herds.

How many? What kind? Which one?

A shaggy dog with the brown and white coat herds.

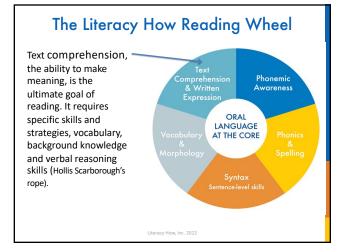
Where? How? When?

A shaggy dog with the brown and white coat herds inside the fence with a back and forth motion every afternoon.

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99

101



Text Comprehension

"...reading comprehension is not a single entity that can be explained by a unified cognitive model. Instead, it is the orchestrated product of a set of linguistic and cognitive processes operating on text and interacting with background knowledge, features of the text, and the purpose and goals of the reading situation.'

Castles, Rastle, and Nation, 2018

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103 104

Processes vs. Products

One of the major findings in reading comprehension with instructional implications is the distinction between **reading processes** and **products**.

"Distinguishing between products and processes is important because the two are causally related: Reading processes lead to reading products."

McNamara & Kendeou, 2011

106

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Mental Model

A mental representation that is created from information in the real, or an imagined, world – i.e., a gist representation of what the comprehender has read (or heard)

The reader's mental model is developed as the text progresses and may include information derived from inferences and from background knowledge, as well as what is explicitly stated in the text itself.

Oakhill, Cain, and Elbro, 2015

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105

5 Big Ideas that Shape Comprehension Instruction



- Text Structure (macrostructuretext's framework)
- Background Knowledge
- Coherence (microstructurelanguage used to drive the text along)
- Inference
- Reading/ Writing Connection

Gillis and Eberhardt, Professional Learning Series, 2018

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Reading-Writing Connection

- The Mental Model includes surface level understanding (the gist of the text).
- Teachers help students focus on the grist by asking questions during reading.
- The process of writing deepens students' understanding of the texts that they are asked to read.



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107 108

Deep Reading

"Deep reading processes underlie our abilities to find, reflect, and potentially expand upon what matters when we read. They represent the full sum of the cognitive, perceptual, and affective processes that prepare readers to apprehend, grasp, and assimilate the essence of what is read – beyond decoded information, beyond basic comprehension, and sometimes beyond what the author writes or even intends."

Wolf, 2016

Literacy How, 2018

Motivation to Read

"One clear and achievable means of maximizing motivation is to ensure that children have solid basic skills and consider being "a reader" a key part of their identities."

Castles, Rastle, and Nation, 2018

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109

Expert Teaching is the Treatment

"One of the most important conclusions from research is that for children with learning problems, learning is hard work. A corollary to this finding is that for their teachers, instruction is very hard work and requires an enormous amount of training and support. Children who have difficulty learning to read or completing mathematics problems will likely not benefit from 'more of the same' but require an alternative method of teaching to assist their learning."

Semrud-Clikeman, 2005

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margiegillis@literacyhow.com

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111 112

Literacy How, Inc. 24