Science of Reading Implementation: Indiana's Priorities for Early Literacy

Indiana Department of Education
Literacy Center

@EducateIN

LITERACY CENTER STAFF

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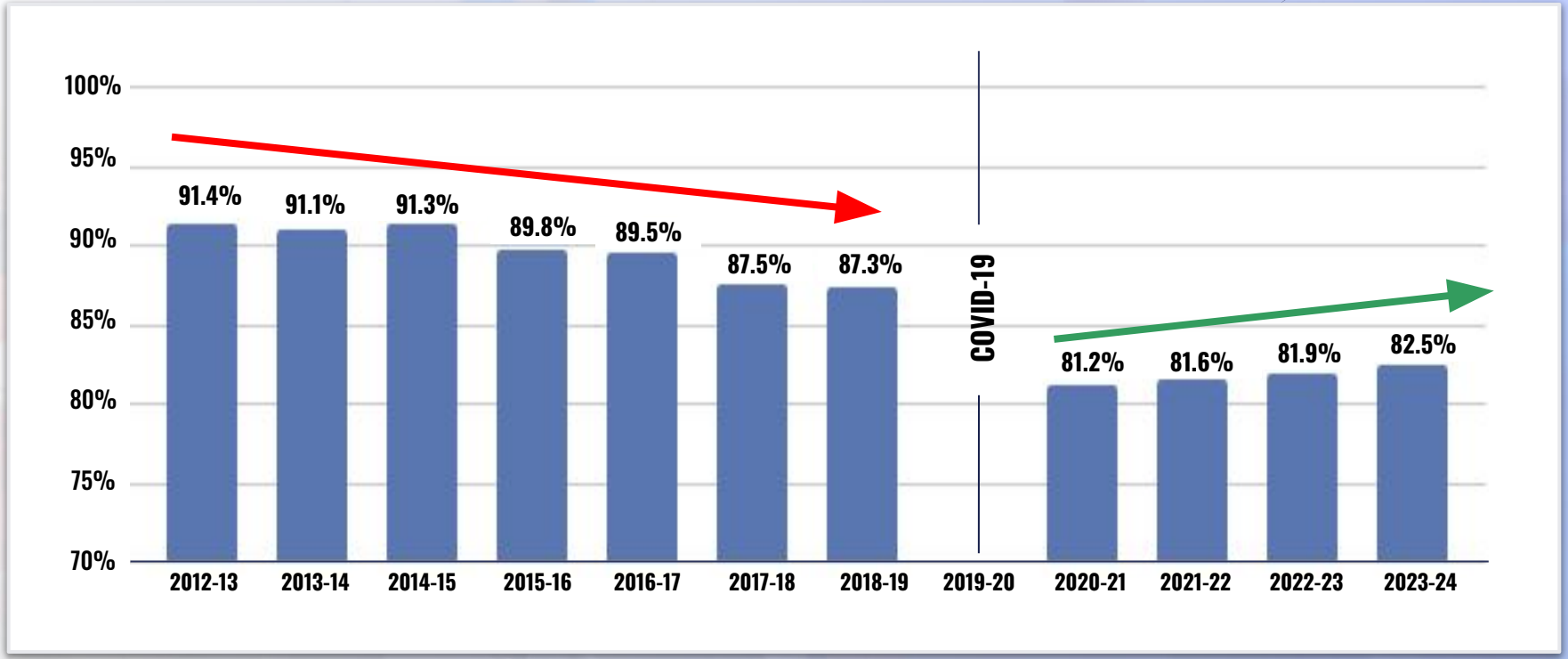
TODAY'S AGENDA

- Current Literacy Data & Priorities
- Overview of the Science of Reading
- Scarborough's Reading Rope
- Connection to the Library
- Additional SOR Resources and Training

IREAD RESULTS: LONGITUDINAL PROFICIENCY RATE



LITERACY: CURRENT DATA

Statewide, proficiency rates for students **increased 0.6 percentage points,** the *largest single-year increase* since the assessment began in 2013.

- Students who pass the IREAD assessment by third grade are roughly **35% more likely** to graduate high school.
- Currently, **one in five** Indiana third grade students is not proficient in key literacy skills. 2022 NAEP Results for Reading
  - **33%** of Indiana fourth graders scored at or above proficiency
  - **31%** of eighth graders scored at or above proficiency
- ***Achievement gaps persist*** for our **most at-risk students.**

KEY PRIORITIES FOR EARLY LITERACY

1. Offer opportunity and support for Science of Reading implementation throughout Indiana schools.
2. Facilitate high-quality, ongoing, data-driven professional development for educators.
3. Increase access to quality literacy interventions, remediation, and enrichment for all students.

Indiana's Priorities for Early Literacy

HISTORIC LITERACY INVESTMENT

Announced August 2022

$60 million from Lilly Endowment to IDOE +
$26 million from IDOE (ESSER II) +
Up to $25 million from Lilly Endowment to teacher prep programs

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= **$111 million combined investment**

Goal: Achieve a passage rate of **95%** on IREAD by 2027.

....Plus an additional $60 million during the 2023 legislative session, increasing the state's historic literacy investment to over **$170 MILLION**!

RECENT LEGISLATIVE SESSION HIGHLIGHTS

- ✔ Statewide **definition** of science of reading
- ✔ Science of reading **approved curriculum list**
- ✔ Science of reading **grant fund** to support schools in implementation
- ✔ Science of reading **curriculum for future teachers** in educator prep programs
- ✔ A new **early literacy endorsement**
- ✔ **Achievement grant** to reward schools/teachers for improving students' foundational reading skills
- ✔ **Literacy support plans** for elementary schools with less than 70% IREAD passage
- ✔ **State Preferred Universal Screener** for students in grades K-2
- ✔ **IREAD administered in grade two** to inform earlier measures of reading proficiency and intervention needed

Overview of Science of Reading Research

GUIDING QUESTIONS

Take a moment to reflect on the question, “What defines a skilled reader?”

Respond in the chat!

SCIENCE OF READING DEFINITION: IC 20-18-2-17.5

'**Science of reading**' means **a vast, interdisciplinary body of scientifically based research** that:

a vast, interdisciplinary body means:

- More than 50 years of research from multiple fields including:
  - cognitive psychology,
  - developmental psychology,
  - education,
  - implementation science,
  - linguistics,
  - neuroscience, and
  - school psychology.

Scientifically-based research means:

- Experimental or quasi-experimental design
- Detailed description of study methods
- Published in a peer-reviewed journal

SCIENCE OF READING DEFINITION: IC 20-18-2-17.5

IC 20-18-2-17.5: '**Science of reading**' means a vast, interdisciplinary body of scientifically based research that: requires the **explicit, systematic** inclusion of the following five essential components: phonemic awareness, phonics, fluency, vocabulary, comprehension;

Explicit Instruction: Instruction that involves direct explanation in which concepts are explained and skills are modeled, without vagueness or ambiguity (Carine, 2006). The teacher's language is concise, specific, and related to the objective, and guided practice is provided.

Systematic Instruction: A carefully planned sequence of instruction that is thought out and designed before activities and lessons are planned, maximizing the likelihood that whenever children are asked to learn something new, they already possess the appropriate prior knowledge and understanding to see its value and to learn it effectively.

SCIENCE OF READING DEFINITION: IC 20-18-2-17.5

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- how proficient reading and writing develop;
- why some students have difficulty with reading and writing; and
- how to effectively assess and teach reading and writing to improve outcomes for all students;

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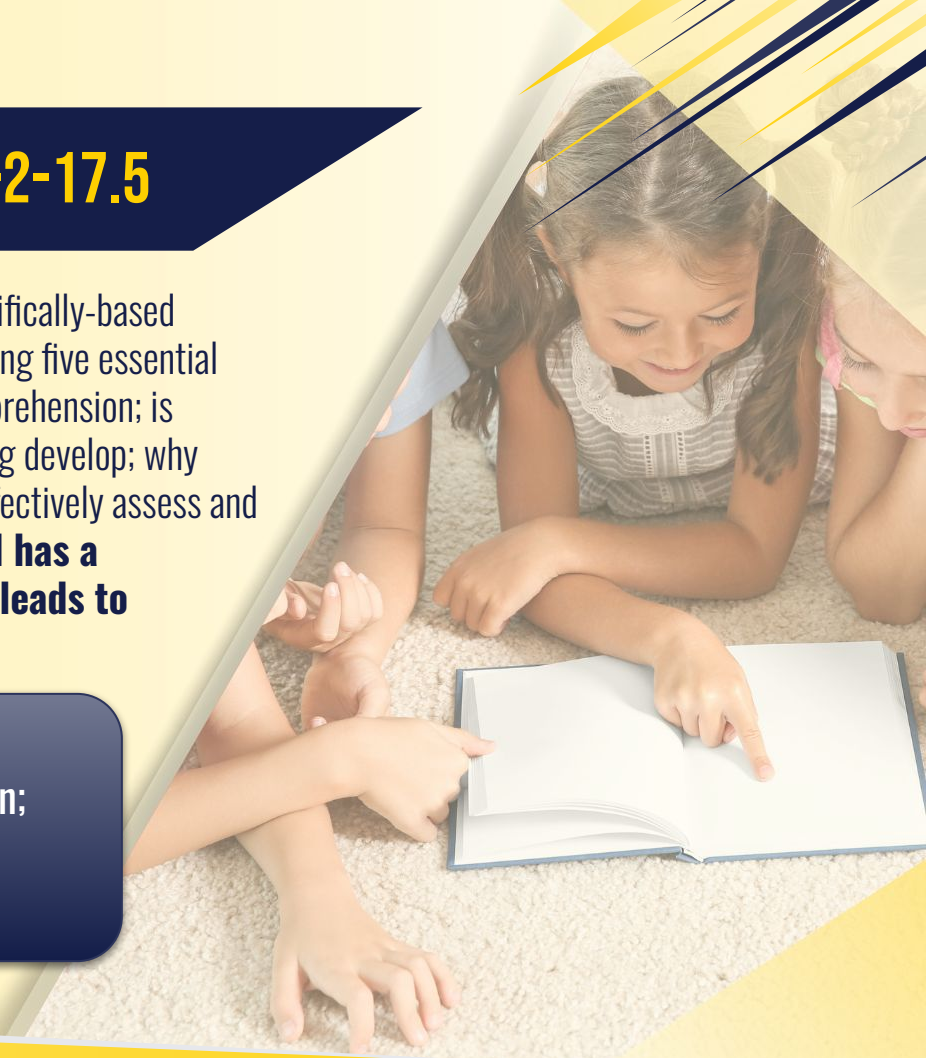
- phonemic awareness,
- phonics,
- reading fluency,
- vocabulary development,
- oral language skills,
- reading comprehension;
- writing and spelling.



DEFINING THE SCIENCE OF READING

The Science of Reading IS:	The Science of Reading is NOT:
Based on science & research	A curriculum
Word recognition & language comprehension skills	Only phonics
Good for all students	A one-size fits all approach

TRL, 2022

DYSLEXIA DEFINITION: IC 20-18-2-3.5

"'Dyslexia' means a specific learning disability that: is neurological in origin and characterized by difficulties with accurate fluent word recognition; and poor spelling and decoding abilities; typically results from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction; may include problems in reading comprehension and reduced reading experience that can impede the growth of vocabulary and background knowledge; and may require the provision of special education services after an eligibility determination is made in accordance with 511 IAC 7-40."

The land in Montana is expensive.

The land in Montana is expansive.

Science of Reading Anchors

SIMPLE VIEW OF READING

Gough and Tunmer, 1986

CONNECTION TO ESSENTIAL COMPONENTS

Phonemic Awareness | Phonics | Vocabulary | Comprehension

Fluency

Gough and Tunmer, 1986

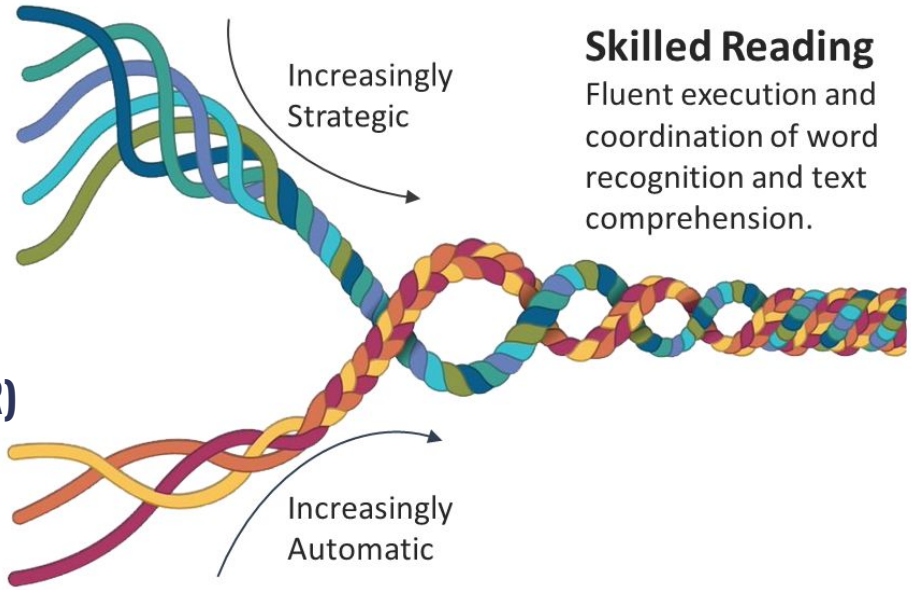
SCARBOROUGH'S ROPE

Language Comprehension (LC)

- facts, concepts, etc — Background Knowledge
- breadth, precision, links, etc — Vocabulary Knowledge
- syntax, semantics, etc — Language Structures
- inference, metaphor, etc — Verbal Reasoning
- print concepts, genres, etc — Literacy Knowledge

Word Recognition (WR)

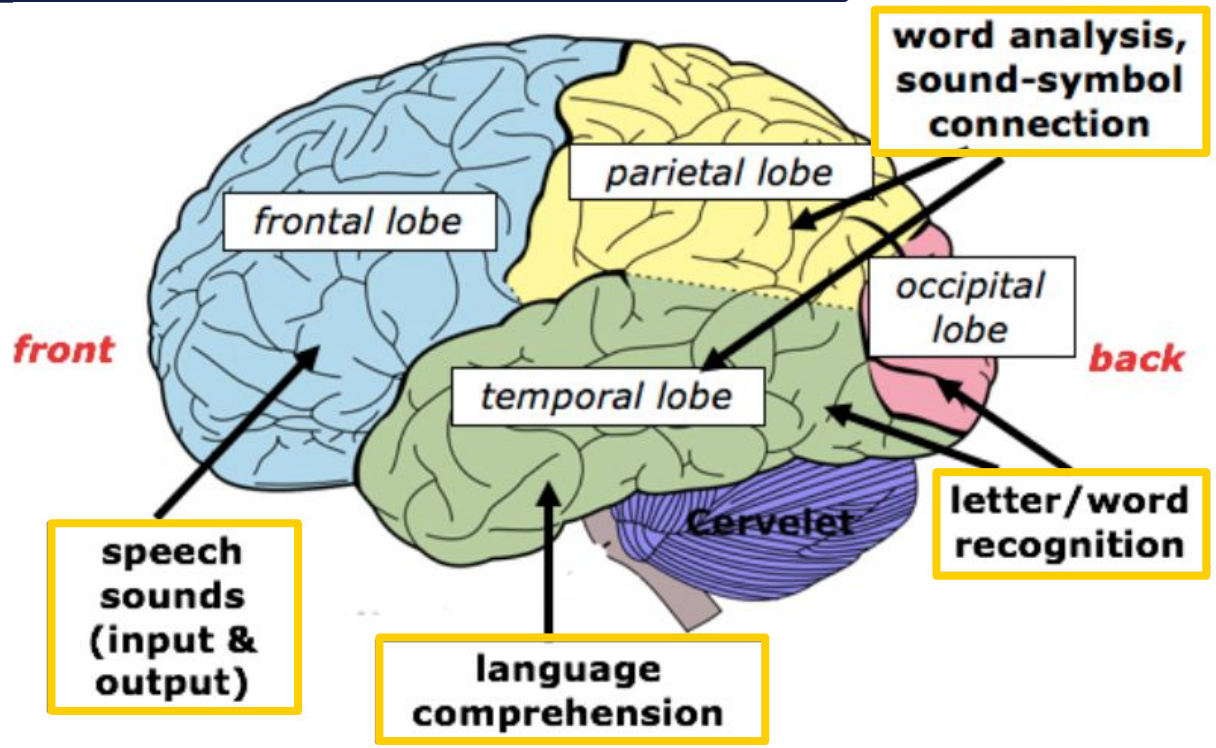
- syllables, phonemes, etc — Phonological Awareness
- spelling-sound correspondence — Decoding (and Spelling)
- of familiar words — Sight Recognition



Skilled Reading
Fluent execution and coordination of word recognition and text comprehension.

Scarborough, H. 2001. Connecting early language and literacy to later reading (dis)abilities: Evidence, theory, and practice. Pp. 97-110 in S. B. Neuman & D. K. Dickinson (Eds.) *Handbook of Early Literacy.* NY: Guilford Press.

THE READING BRAIN



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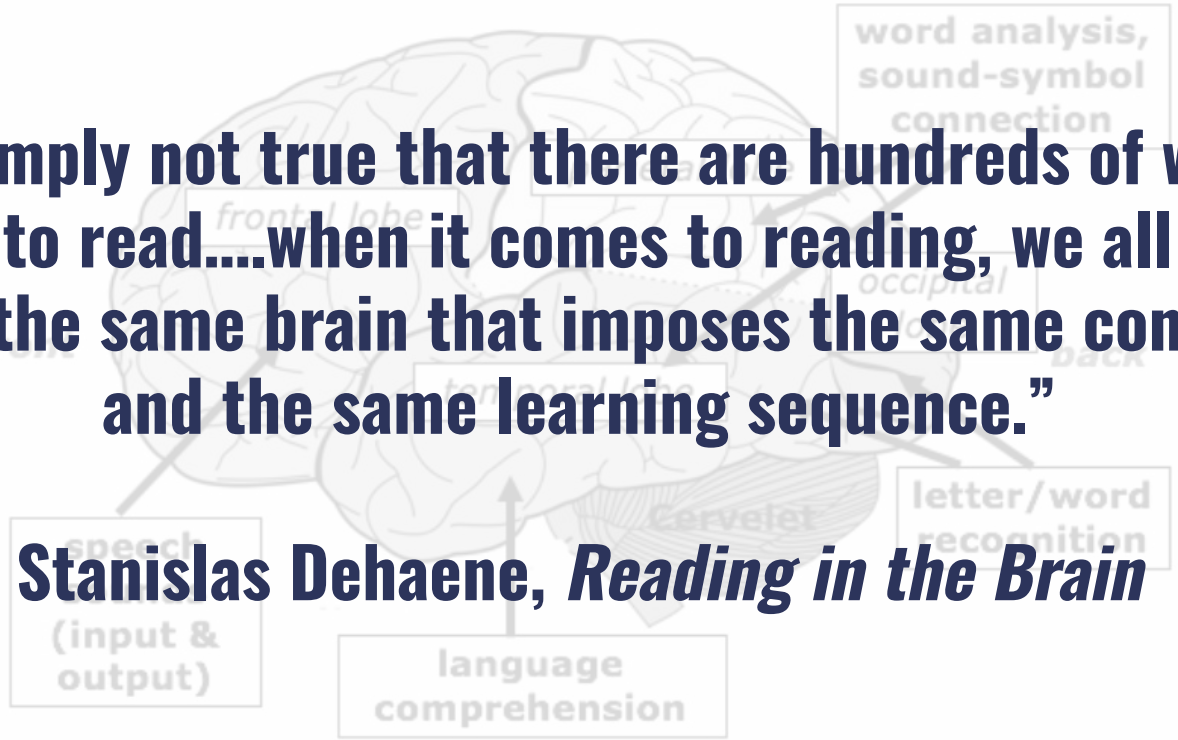
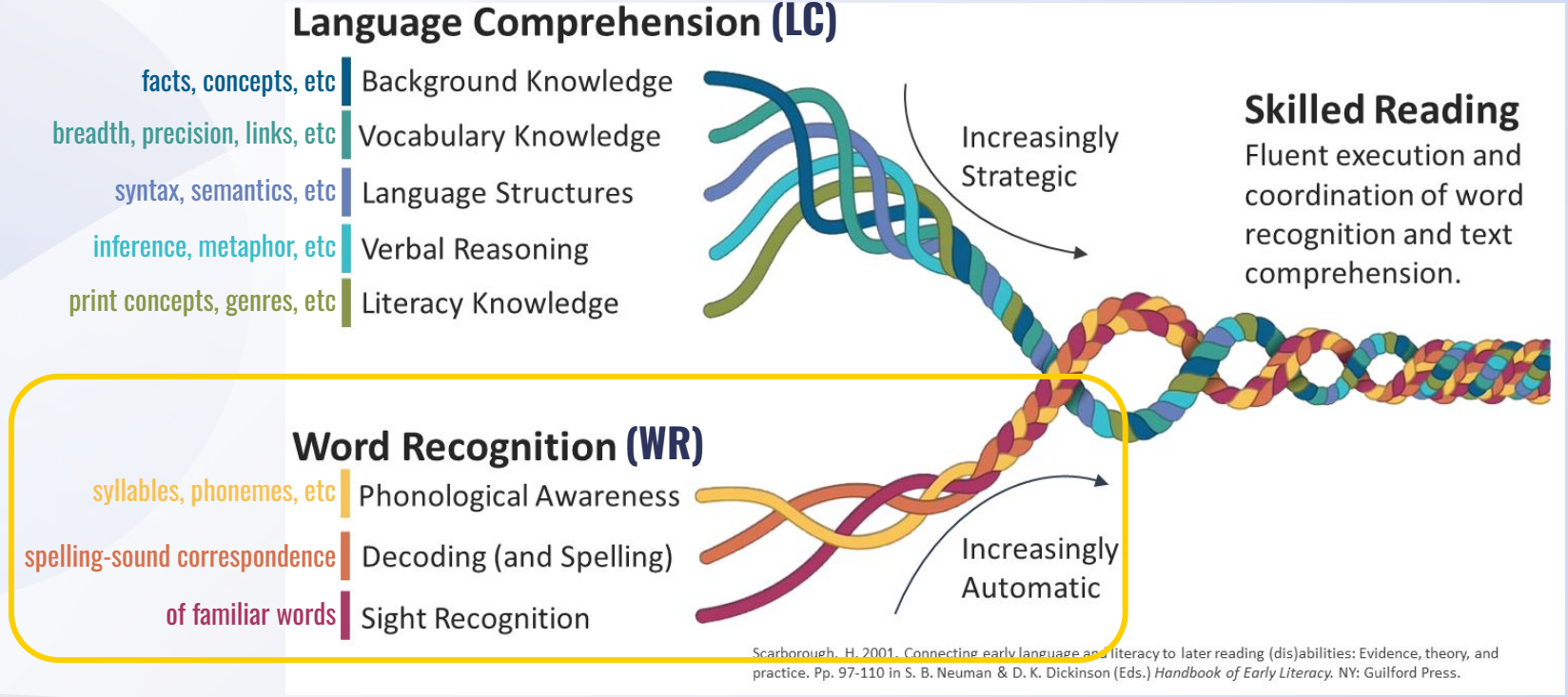


“It is simply not true that there are hundreds of ways to learn to read....when it comes to reading, we all have roughly the same brain that imposes the same constraints and the same learning sequence.”

Stanislas Dehaene, *Reading in the Brain*

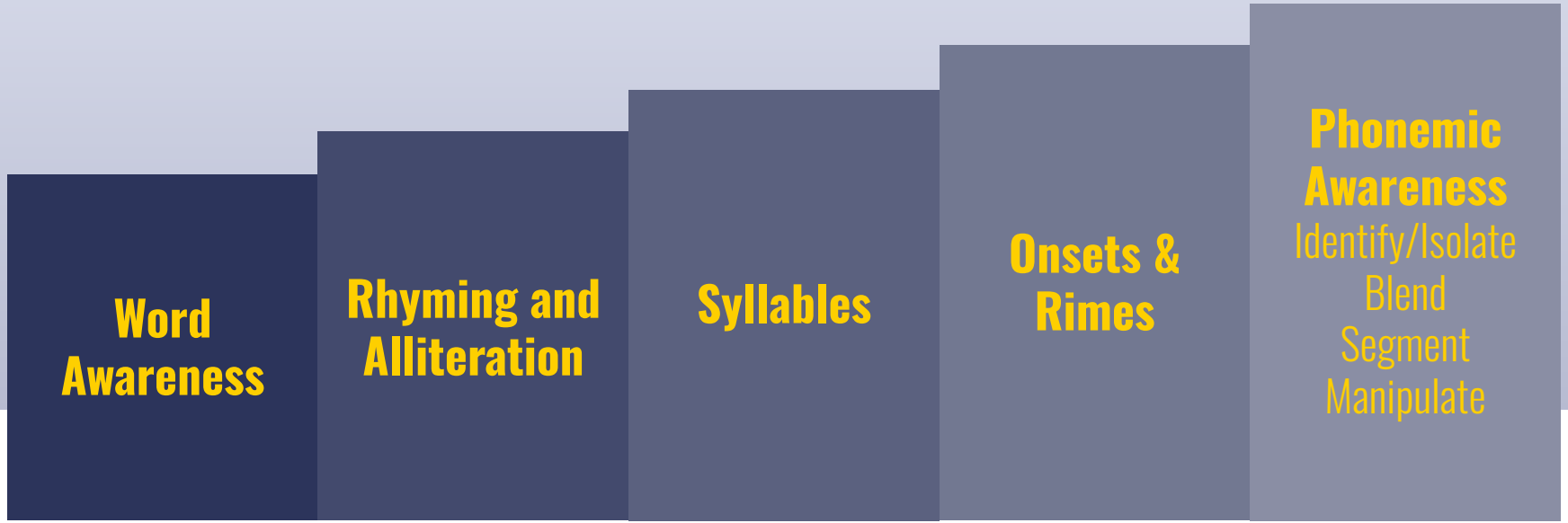
Scarborough's Reading Rope

SCARBOROUGH'S READING ROPE



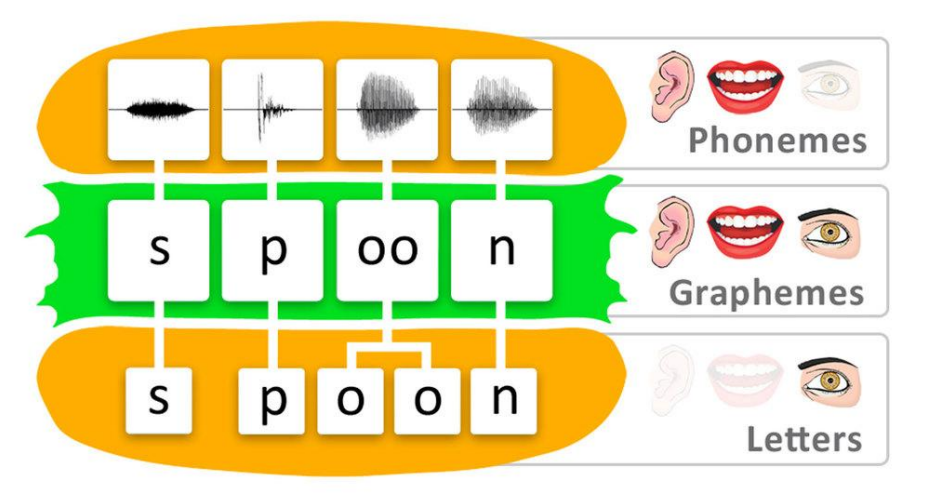
PHONOLOGICAL AWARENESS SKILLS

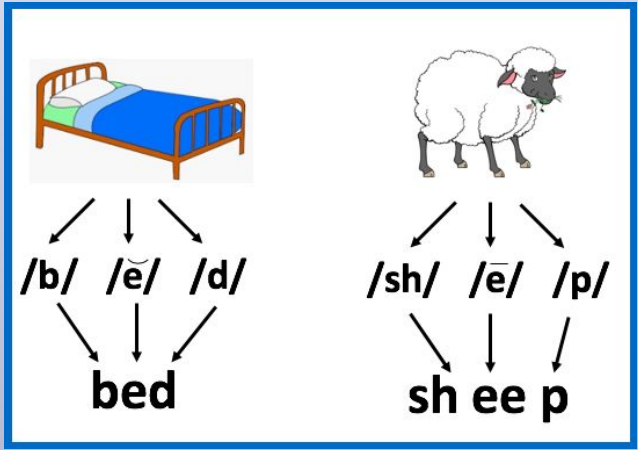
LESS COMPLEX → MORE COMPLEX



WORD RECOGNITION: DECODING

Alphabetic Principle, Spelling-Sound Correspondences





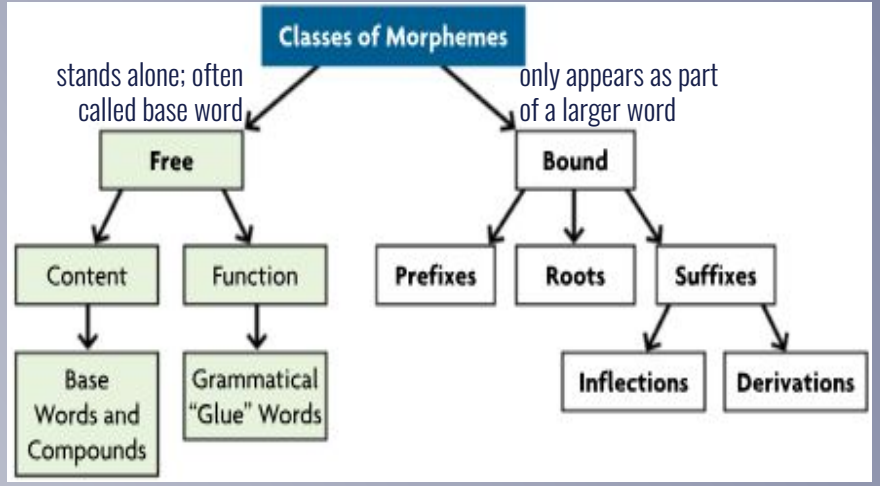
DECODING: SYLLABLE TYPES

C L O V E R

Closed	Consonant le	Open	Vowel Team	Silent e	R Controlled
cat egg hitch cup ask	table bubble staple circle	she baby hi go	team coin snow play	rate pine clove like	car fern shirt burn horn

DECODING: MORPHOLOGY

- Morphology is the study of meaningful units of language, called morphemes, and how they are combined in forming words.
- Helping students decode inflectional endings (such as -ing, -s, -es) is the beginning of morphology.



WORD RECOGNITION: SIGHT RECOGNITION

Of Familiar Words

Key Considerations:

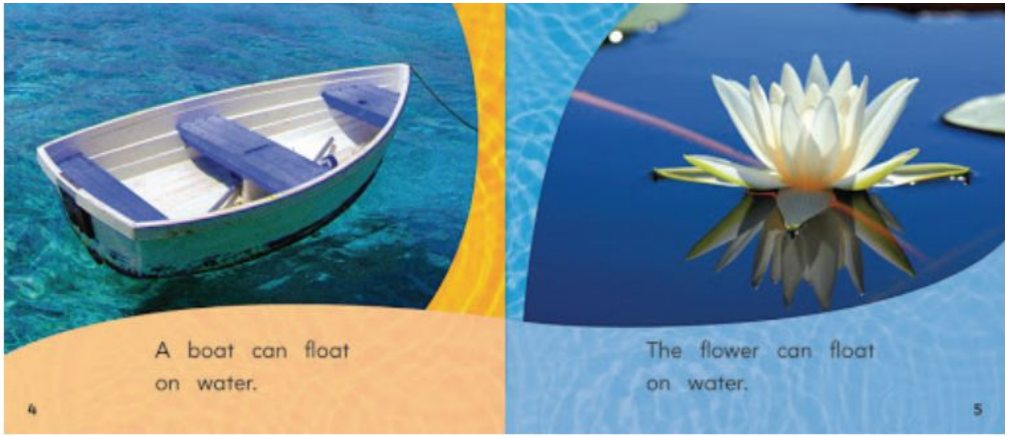
- Sight word recognition is foundational to fluent reading.
- Any word (not sight words or high frequency words) whose pronunciation, spelling, and meaning are linked in long-term memory such that it is recognized automatically, effortlessly, and unconsciously when seen in print.
- Words that can be recognized efficiently at a glance. **Note: The goal is that all words eventually become sight words.**
- Learning to automatically recognize irregular and regular words makes them sight words that can support fluency development.

THREE-CUEING MODEL

IC 20-26-12-24.5 (B): "three-cueing model" refers to the three-cueing model of reading that uses meaning drawn from the context, pictures, or syntax as the primary basis for teaching word recognition.

In practice, this may look like:

- Does it look right?
- Does it sound right?
- Does it make sense?



SCARBOROUGH'S ROPE

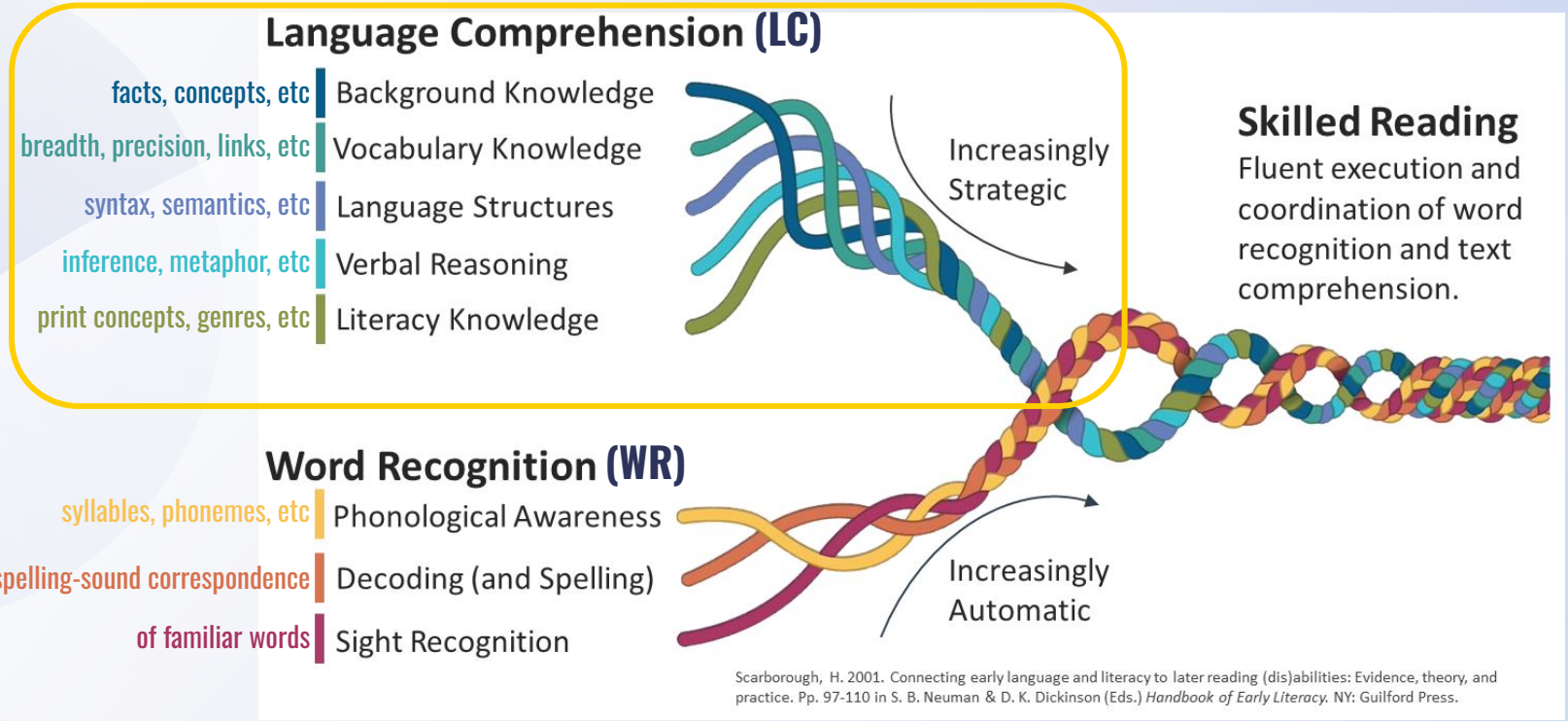


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Table 1

The [redacted] Passage From Bransford and Johnson (1972), and the Spatial Layout Used in Experiment 1

[redacted]

The procedure is actually quite simple. First you arrange items into different groups. Of course one pile may be sufficient depending upon how much there is to do. If you have to go somewhere else due to lack of facilities that is the next step; otherwise, you are pretty well set. It is important not to overdo things. That is, it is better to do too few things at once than too many. In the short run, this may not seem important but complications can easily arise. A mistake can be made as well. At first, the whole procedure will seem complicated. Soon, however, it will become just another facet of life. It is difficult to foresee any end to the necessity for this task in the immediate future, but then, one never can tell. After the procedure is completed one arranges the materials into different groups again. Then they can be put into their appropriate places. Eventually they will be used once more and the whole cycle will have to be repeated. However, that is part of life.

BACKGROUND KNOWLEDGE

Write down the essential ideas from the passage.
Try to recall as accurately as possible.

02:00

BACKGROUND KNOWLEDGE

Table 1
The "Washing Clothes" Passage From Bransford and Johnson (1972), and the Spatial Layout Used in Experiment 1

Washing Clothes

The procedure is actually quite simple. First you arrange items into different groups. Of course one pile may be sufficient depending upon how much there is to do. If you have to go somewhere else due to lack of facilities that is the next step; otherwise, you are pretty well set. It is important not to overdo things. That is, it is better to do too few things at once than too many. In the short run, this may not seem important but complications can easily arise. A mistake can be made as well. At first, the whole procedure will seem complicated. Soon, however, it will become just another facet of life. It is difficult to foresee any end to the necessity for this task in the immediate future, but then, one never can tell. After the procedure is completed one arranges the materials into different groups again. Then they can be put into their appropriate places. Eventually they will be used once more and the whole cycle will have to be repeated. However, that is part of life.

LANGUAGE COMPREHENSION: BACKGROUND KNOWLEDGE

Facts, Concepts, Etc.

Key Considerations:

- Readers rely on background knowledge to attend to and make sense of what they are reading.
- Comprehension relies on background knowledge and vocabulary.
- Prior knowledge and background knowledge are different.
- Content area learning strengthens students' literacy development.
- Building knowledge is especially important for readers who are still relying heavily on word decoding rather than rapid word recognition.

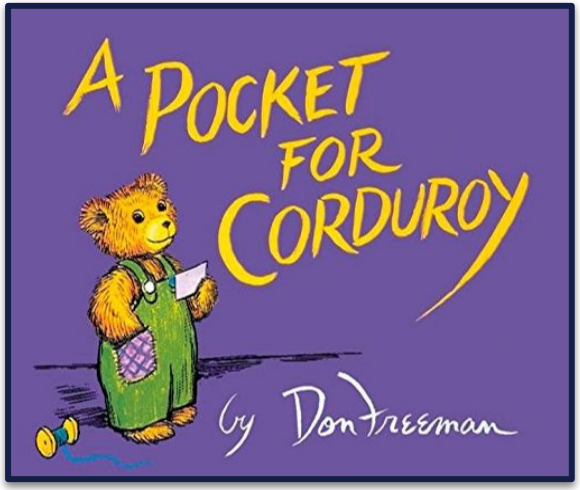
LANGUAGE COMPREHENSION (LC): VOCABULARY KNOWLEDGE

Breadth, Precision, Links, Etc.

Key Considerations:

- A wide and varied vocabulary increases the likelihood of success in reading.
- A strong depth knowledge base allows for flexibility.
- Knowing the different senses of the word and using context to support comprehension.
- Vocabulary instruction that provides knowledge deeper than how a word is used in only one context.
- Vocabulary instruction is directly related to background knowledge and content area learning.

VOCABULARY KNOWLEDGE: SIMPLE ROUTINE

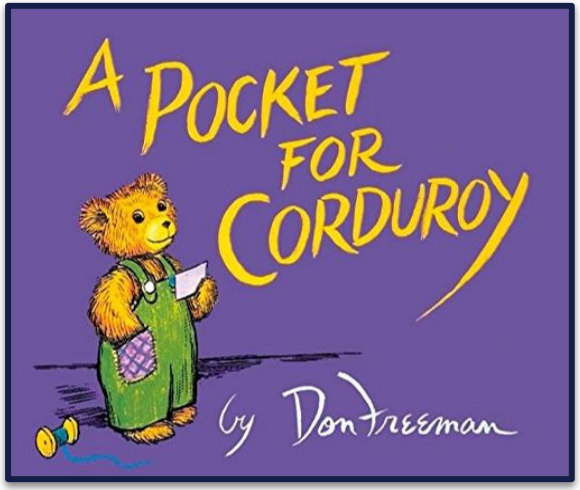


Step 1

Read book to students and stop to explain the word, as needed.

Example: *A Pocket for Corduroy*

VOCABULARY KNOWLEDGE: SIMPLE ROUTINE

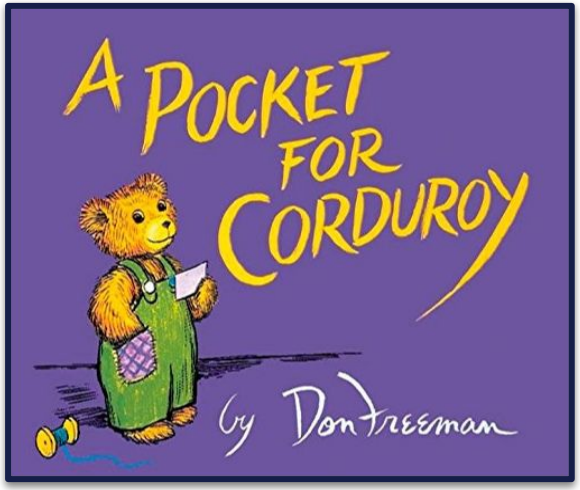


Step 2

Contextualize the word.

Example: “In the story, Lisa was reluctant to leave the laundromat without Corduroy.”

VOCABULARY KNOWLEDGE: SIMPLE ROUTINE

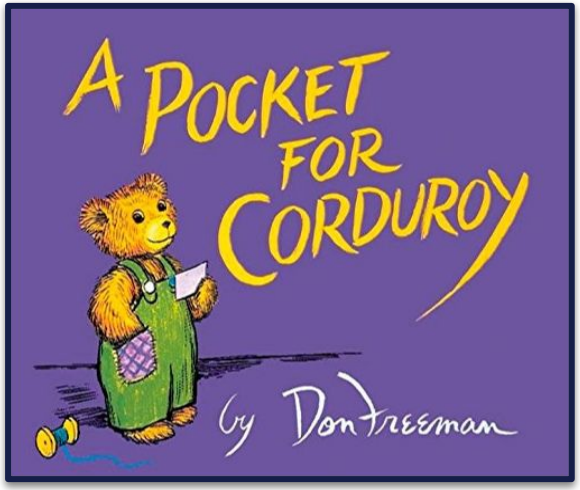


Step 3

Have the student repeat the word to create a phonological representation.

Example: "Say the word with me."

VOCABULARY KNOWLEDGE: SIMPLE ROUTINE

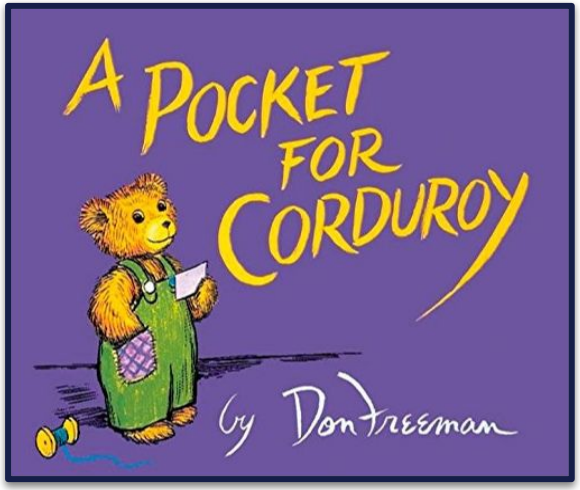


Step 4

Explain the meaning of the word using student-friendly definitions.

Example: "*Reluctant* means you are not sure you want to do something."

VOCABULARY KNOWLEDGE: SIMPLE ROUTINE

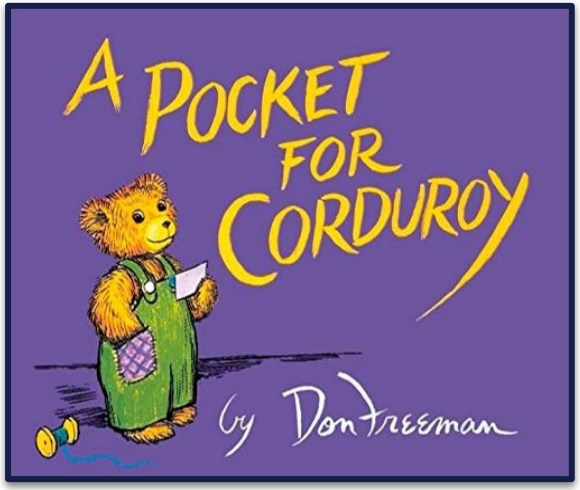


Step 5

Provide examples in other contexts.

Example: "Someone might be reluctant to eat food they have never tried before, or someone might be reluctant to ride a rollercoaster because it looks scary."

VOCABULARY KNOWLEDGE: SIMPLE ROUTINE

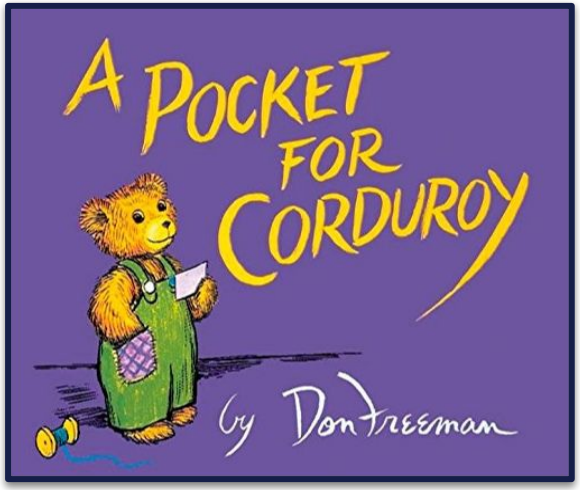


Step 6

Students provide examples.

Example: "Tell me about something you would be reluctant to do. Try to use reluctant when you tell about it. You could start by saying something like... I would be reluctant to _____."

VOCABULARY KNOWLEDGE: SIMPLE ROUTINE



Step 7

Students repeat the word again to reinforce its phonological representation.

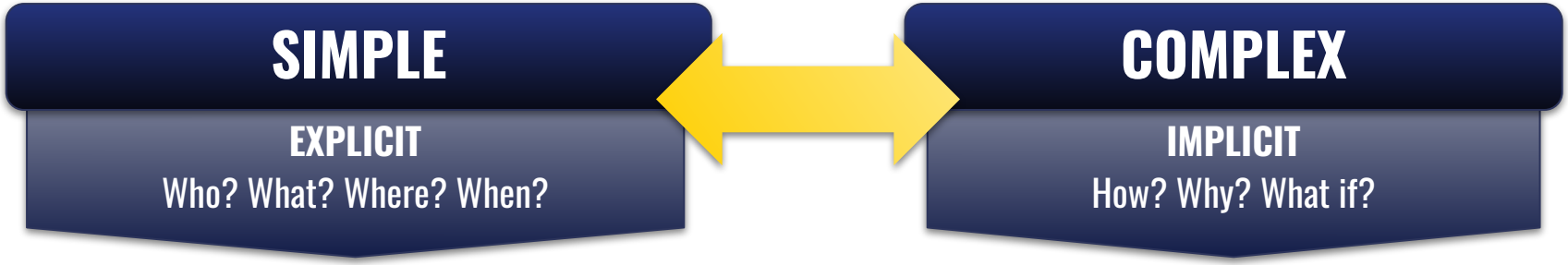
Example: “What’s the word we have been talking about?”

Syntax, Semantics, Etc.

Key Considerations:

- Written syntax, sentence structure and text structure.
- Semantics is the meaning of words. As students gain awareness of syntax, they can begin to study the meaning of the words in addition to the order.
- Syntax and sentence structure helps students clarify meaning within and between sentences.
- Understanding how sentences are formed and how they convey meaning is critical to our ability to comprehend while we read.
- Close relationship between syntactic awareness and reading comprehension

VERBAL REASONING: SIMPLE TO COMPLEX



RESPONSES:

- Recall facts, events, and names
- Focus on information in the text
- Rephrase text that has just been read

RESPONSES:

- Move away from what can be seen on the page
- Analyze and elaborate information
- Focus on thinking about what has been read and prior knowledge (making inferences)
- Make connections

Print Concepts, Genres, Etc.

Key Considerations:

- Knowledge that print conveys meaning and it is in specific ways to support reading and writing.
- Recognizing that genres have different purposes, structures, organizational patterns, and ways to communicate ideas.
- Knowing the organization of different text types gives students an established understanding for a topic and can anticipate the information that will be presented in the text.

Additional Science of Reading Resources and Training

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"JUST RIGHT" BOOKS

TOO HARD

- Are there five or more words on a page that I don't know, or am unsure of?
- Is this book confusing and hard to understand by myself?
- When I read it aloud, does it sound choppy and slow?

If most of your answers were "yes," this book is too hard. You should wait awhile before you read this book. Give the book another try later, or **ask an adult to read the book to you**.

"JUST RIGHT"

- Do I understand what I am reading?
- Do I know almost every word?
- When I read it aloud, can I read it smoothly?
- Do I think the topic will interest me?

If most of your answers were "yes", this will be an easy book to read independently by yourself.

LIBRARY COLLECTIONS

- Audio Books
  - "Talking Books" (NLS)
  - hoopla/Libby/OverDrive
  - Learning Ally
- E-Books
- Decodable Books
  - Flyleaf Publishing
  - Scholastic Acorns & Branches Series
- Graphic Novels
- Hi-Lo Books
  - *Capstone Publishing*
  - *High Noon Books*
  - *Orca Book Publishing*
  - *Saddleback Educational Publishing*

GUIDING QUESTIONS

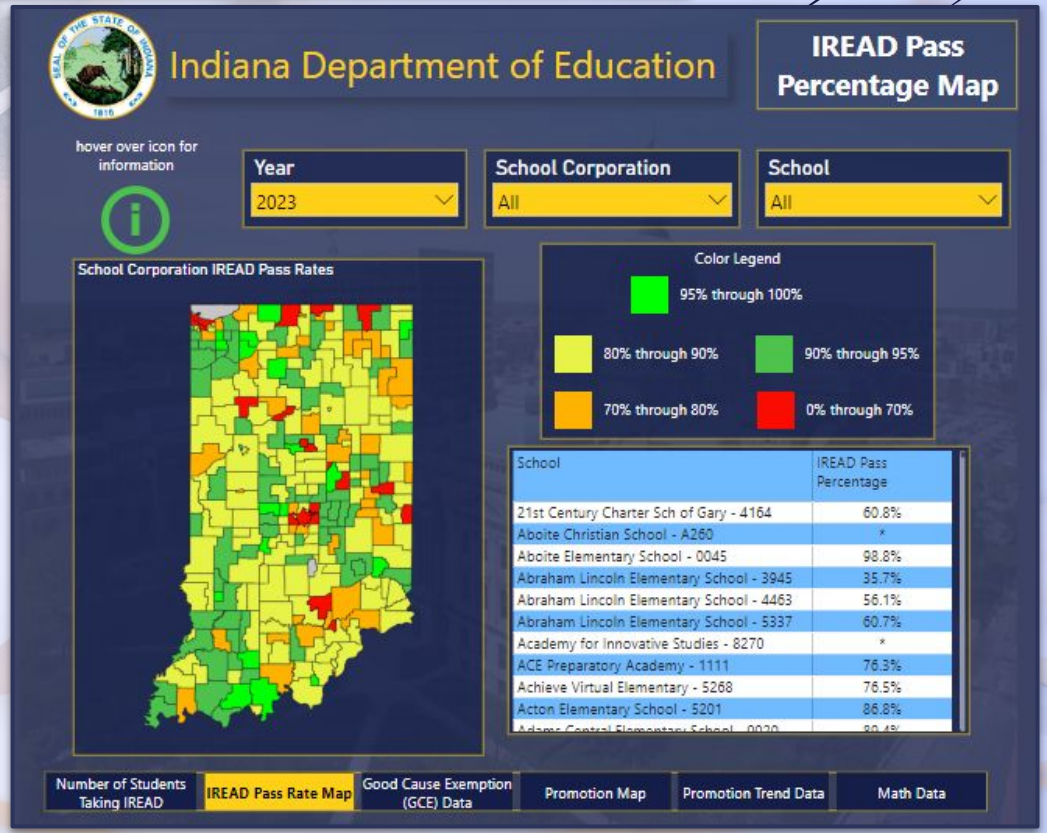
Take a moment to reflect and share with your colleagues:

1. How can I apply this information to best support families who come into the library for resources/ support?

2. What is one thing you can commit to implementing in your own practice?

INDIANA'S LITERACY DASHBOARD

2023-2024 school year data coming soon!



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SCIENCE OF READING MODULE COURSE

In **partnership with Marian University**, IDOE leveraged funding to develop a **professional development course for the Indiana Learning Lab** focused on science of reading.

- 6 modules centered around what the science of reading is and how it informs the application of evidence-aligned instructional practices using a structured literacy approach through effective teaching and assessing foundational reading skills.
- Self-paced course will take approximately 20-25 hours to complete.

MARIAN UNIVERSITY
Indianapolis ®

LearningLab

INCREASING ACCESS TO BOOKS IN THE HOME

The Dolly Parton Imagination Library provides **every participating child** from birth to age five with **access to one free book per month.**

- **$6 million investment** - in collaboration with the **Indiana State Library**

LearningLab

SCAN ME

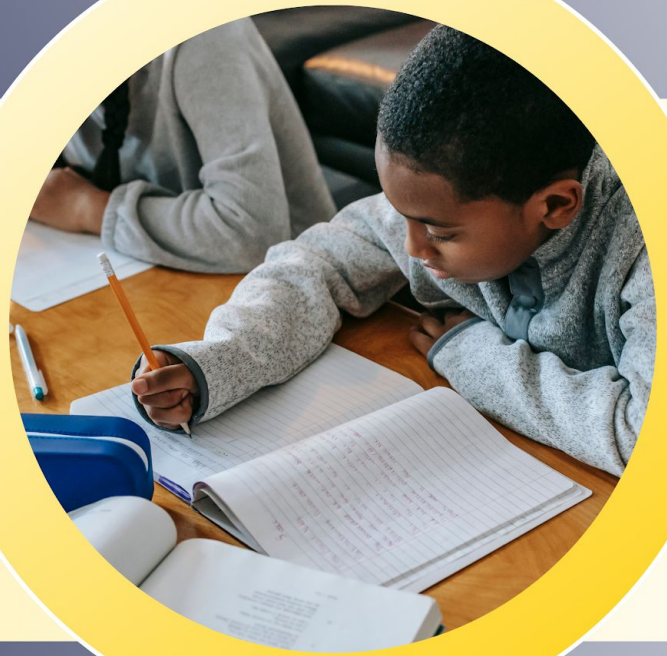
- Curated collection of **trainings** related to the science of reading research.
- Expert **speakers** (e.g., authors, university professors)
- Hub of **vetted content** related to ways of supporting **parental involvement** over child academic achievement

TUTORING GRANTS FOR INDIANA FAMILIES

Indiana Learns provides funding for **FAMILIES** for math and reading tutoring that occurs outside of the normal school day.

- Provides qualifying families **$1,000 per child**.
- Over **20,000 students** have enrolled.
- Nearly **180,000 hours of tutoring** have been provided.

QUESTIONS?



IDOE'S LITERACY CENTER: CONTACT INFORMATION

INLitCenter@doe.in.gov

IDOE's Literacy Development Webpage

Do you want to receive weekly updates?

SCAN ME

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THANK YOU!