

# What's Knowledge Got To Do With It?

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Office of Elementary Education and Reading  
Division of Literacy

[mdek12.org](https://mdek12.org)



MISSISSIPPI  
DEPARTMENT OF  
EDUCATION

Fall 2024



## VISION

To create a world-class educational system that gives students the knowledge and skills to be successful in college and the workforce, and to flourish as parents and citizens



## MISSION

To provide leadership through the development of policy and accountability systems so that all students are prepared to compete in the global community



1

**ALL** Students Proficient and Showing Growth in All Assessed Areas



2

**EVERY** Student Graduates from High School and is Ready for College and Career



3

**EVERY** Child Has Access to a High-Quality Early Childhood Program

**EVERY** School Has Effective Teachers and Leaders

4



**EVERY** Community Effectively Uses a World-Class Data System to Improve Student Outcomes

5



**EVERY** School and District is Rated “C” or Higher

6



- Understanding *The Acquisition of Reading*
- Debunking *The Comprehension Myth*
- Revealing *The Comprehension Truth*
- Determining *The Critical Role of Knowledge*
- Internalizing Instructional Implications of Knowledge
  - Building Background Knowledge
- Utilizing Knowledge Building Curriculum

# The Acquisition of Reading

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Comprehension

Fluency

Vocabulary

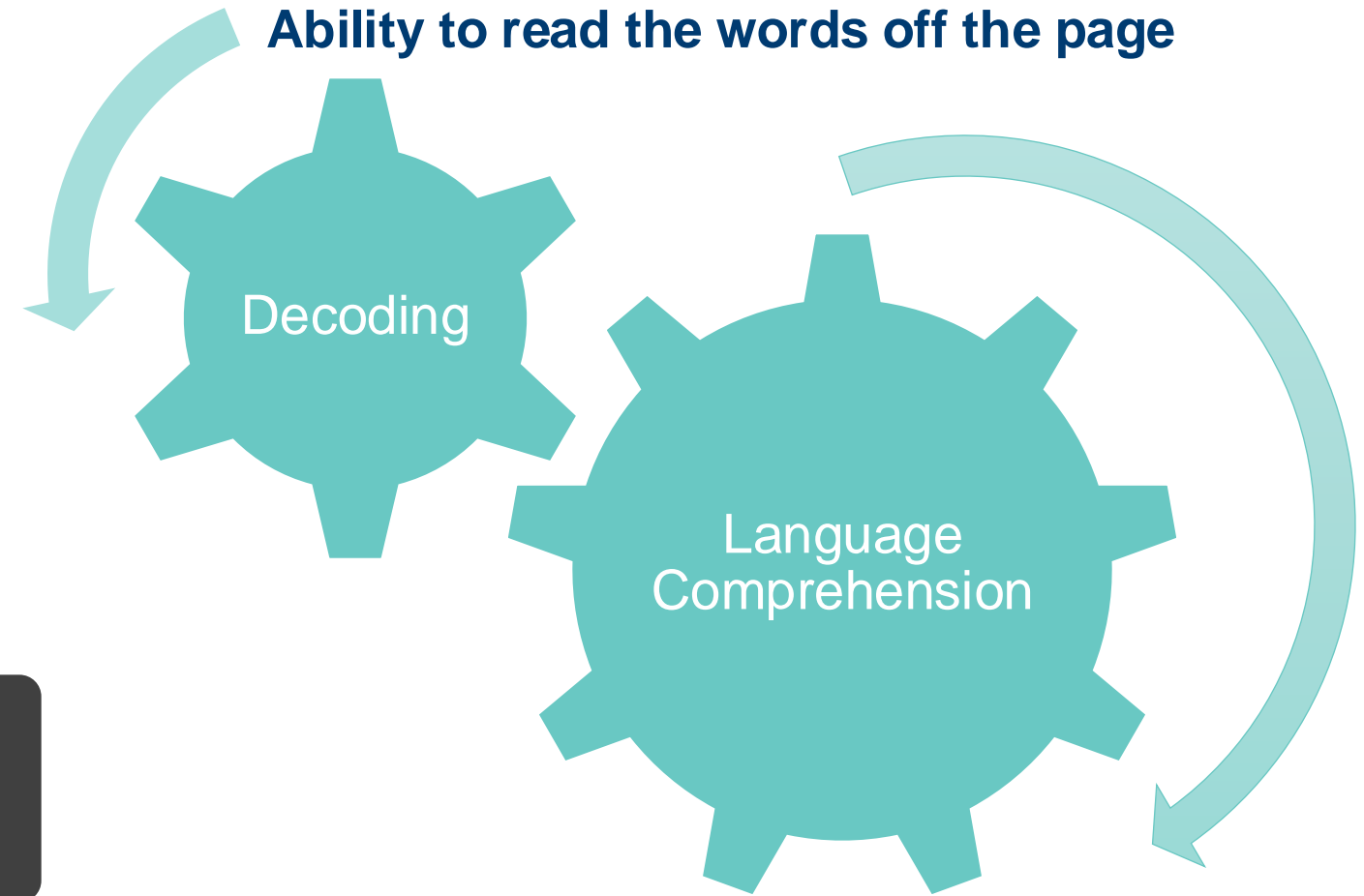
Phonics

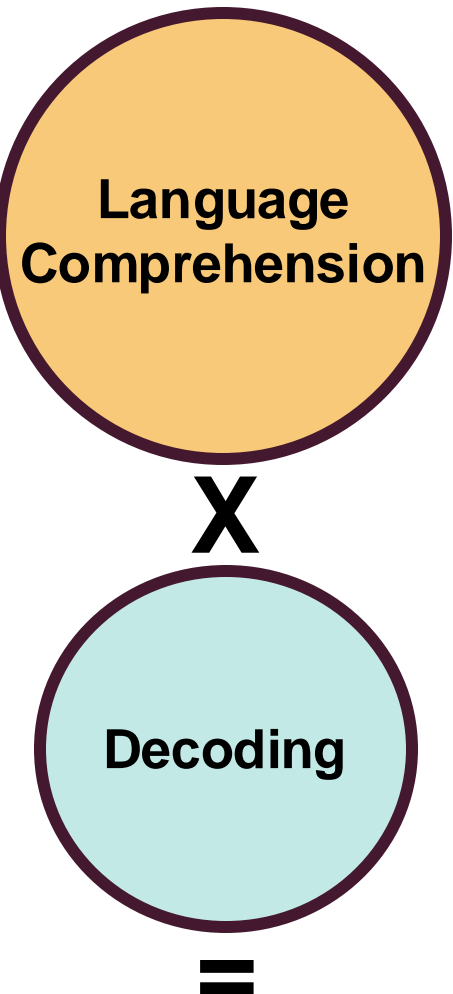
Phonological Awareness

## Discuss:

Should each of the **5 components** of reading be taught for mastery in isolation or concurrently?

Why or why not?





## LANGUAGE COMPREHENSION

**BACKGROUND KNOWLEDGE**  
(facts, concepts, etc.)

**VOCABULARY**  
(breadth, precision, links, etc.)

**LANGUAGE STRUCTURE**  
(syntax, semantics, etc.)

**VERBAL REASONING**  
(inference, metaphor, etc.)

**LITERACY KNOWLEDGE**  
(print concepts, genres, etc.)

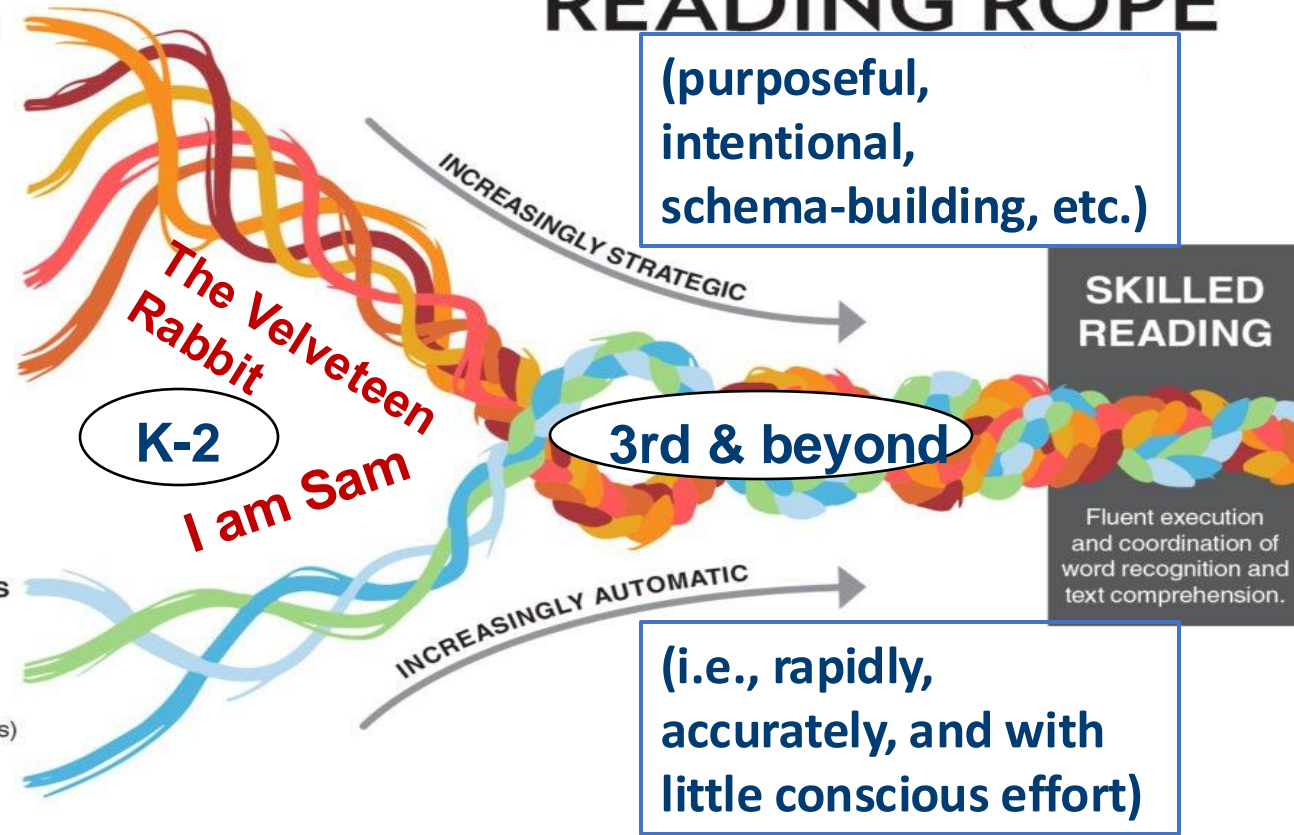
## WORD RECOGNITION

**PHONOLOGICAL AWARENESS**  
(syllables, phonemes, etc.)

**DECODING**  
(alphabetic principle,  
spelling–sound correspondences)

**SIGHT RECOGNITION**  
(of familiar words)

## SCARBOROUGH'S READING ROPE



(purposeful, intentional, schema-building, etc.)

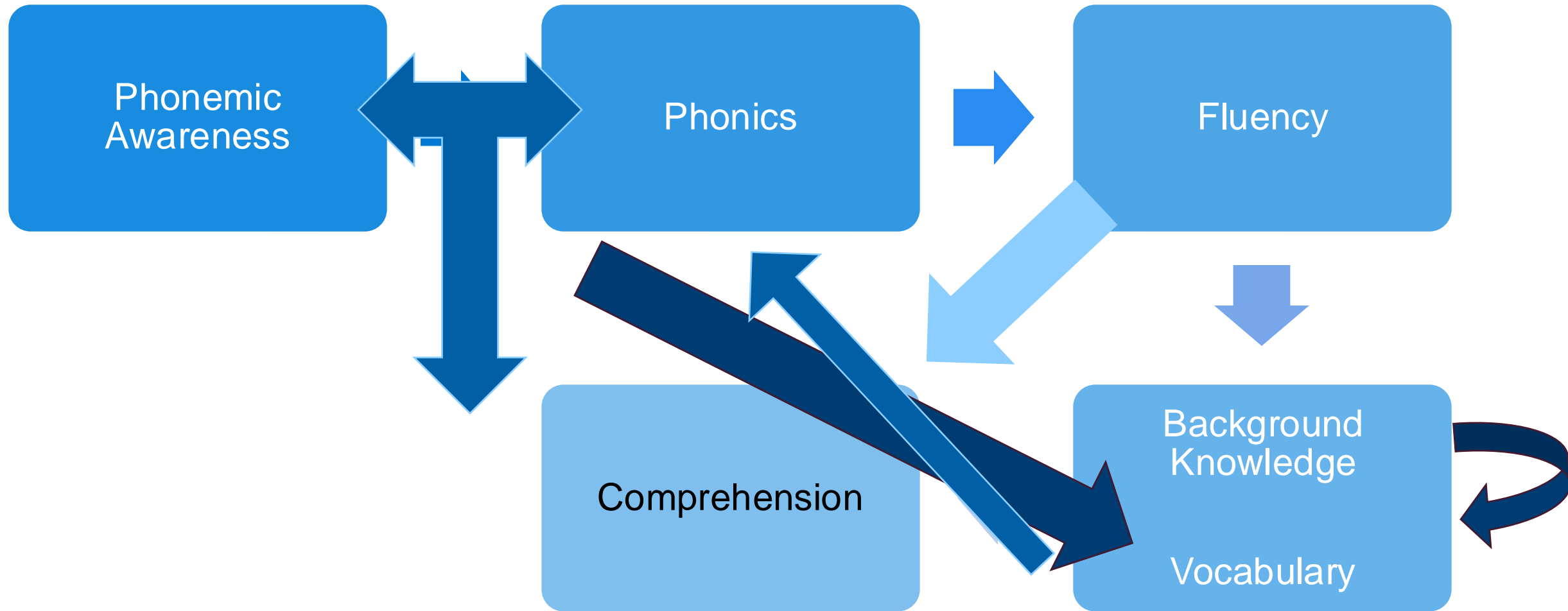
**SKILLED READING**  
Fluent execution and coordination of word recognition and text comprehension.

The fluent execution and coordination of word recognition and text comprehension.

(i.e., rapidly, accurately, and with little conscious effort)

*Reading comprehension is the ability to process written text, understand its meaning, and to integrate with what the reader already knows.*





One strand often affects the growth of the other.

The science of reading is a vast **body of research** about reading and issues related to reading and writing. The science of reading has culminated in a vast quantity of evidence to inform how **proficient reading and writing develop**, **why some have difficulty**, and **how we can most effectively assess and teach**.

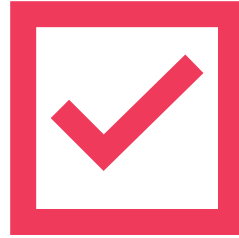
## Science of Reading: Research (1970s)

Simple View of Reading  
- Formula: Reading Comprehension in the product (1986)

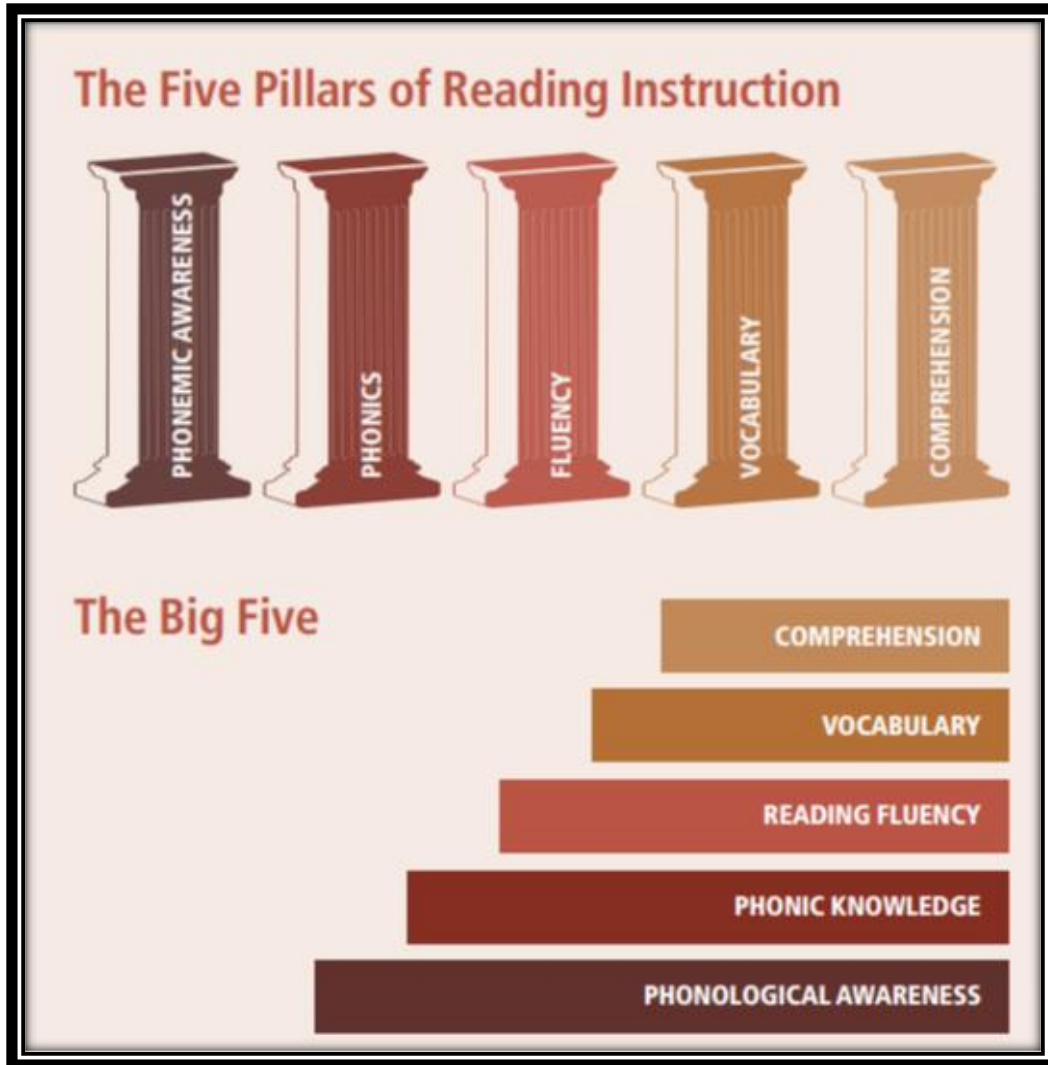
Scarborough's Rope –  
Components: Visual Metaphor for skill reading (2001)

Structured Literacy –  
Approach (TODAY)

# The Myth



Why have we come to think of comprehension as a skill?



Examine these graphics.

- How might this be **confusing** as it relates to **comprehension**?
- What does instruction look like when components are taught in **individual silos**?
- Turn and talk with a neighbor to discuss your thoughts.

**Rethinking How to Promote Reading Comprehension**

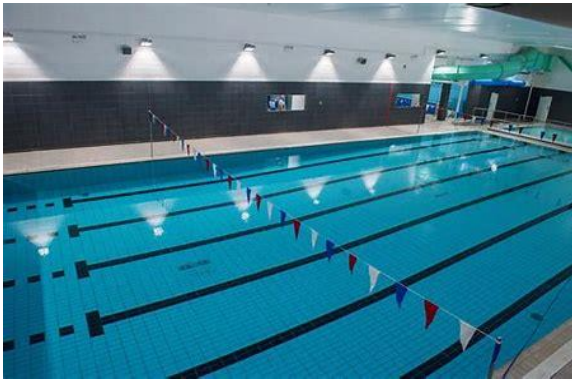


- There was a shift in focus to models of reading that argued **meaning was contained within the text and the reader's job was to extract it.**
- Knowledge took too much time to teach, and it made more sense to **focus on skills that could be taught quickly and applied across topics.**
- Considering comprehension alongside skill-like aspects of reading **distracted us from the role of knowledge.**

Catts, H. W. (2021, December 8)

Discuss the following with your table and be prepared to share:

If you teach a student to swim in a small pool, name all the places where that skill can be transferred.



# Swimming is a skill.

## A Hurricane Is a Big Storm

by ReadWorks



Hurricanes are big storms that move toward land. Hurricanes

Hurricanes are spinning storms with a clear eye. The weather is calm in the eye.

People can stay safe during a hurricane if they stay inside when the storm arrives. They should stay inside when the storm arrives.

## Watch the Tennis Ball

by ReadWorks



Tennis is a sport. Players use a racket to hit a small ball. The ball moves through the air. The player swings the racket.

When the racket and ball meet, they collide. The ball and racket push on each other. The ball changes direction. It flies through the air.

The racket keeps moving. It does not fly through the air. Why? The player is holding it.

## Activity: Turn and Talk

15

Discuss the following scenario with your table and be prepared to share:

If a student can find the main idea of the first passage, can you assume that they can find the main idea of the second passage?

*Award-winning, EdTech nonprofit organization. ReadWorks. (n.d.). <https://www.readworks.org/>*

# Comprehension is not a skill.

***"It is hard to find the “main idea” of a piece of writing if you aren’t really understanding any of the ideas.***

*Is a kangaroo rat large like a kangaroo or small like a rat?*

*How does a rainforest feel when you are wearing a wool uniform like the English schoolboys did in Lord of the Flies?*

***Prior knowledge can transform a poor reader into a capable one and a poor writer into a fascinating one."***

Amplify





- Has been **reduced** to one of the "pillars" of reading;
- Has been **assumed to be a skill** one learns and can then apply in different contexts;
- Has been taught using strategies such as *"find the main idea"*, *"make a prediction"*, or *"monitor your comprehension"*, leads to the belief that it should be taught in the same manner as the other pillars.

“...**reading comprehension isn't a skill at all** and time spent “*practicing*” it is **counterproductive** because of the opportunity cost:

it's time not spent learning *history, science, literature, art, and music, and other* subjects that build the **common knowledge base** that mature literacy rests upon.”

Robert Pondiscio © 2020 The Thomas B. Fordham Institute

# The Truth

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How should we view a more accurate and complex model of comprehension?

- Several lines of inquiry have recognized the **true complexity of reading comprehension** for some time. Nearly 20 years ago, this complexity was captured by the RAND Reading Study Group.
- The federally funded group was charged with developing a research agenda to address pressing issues in literacy. As part of their 2002 report, **they conceptualized reading comprehension as a combination of factors within three different categories: the reader, the text, and the activity of reading.**



- The *reader* possesses a set of cognitive abilities (attention, memory, and reasoning), language knowledge and skills, motivations and interests, prior knowledge and background knowledge that is applied to the task of reading.
- Readers vary tremendously in these factors and this variability impacts their comprehension.



- Students encounter texts with different genres—such as narrative, descriptive, expository, or persuasive texts that vary in subject matter/topic and level of complexity.
- Students should be exposed to a volume of text to gain understanding of various topics
- Access to text varies (digital, printed, type of device)



- The activity refers to the task or purpose of reading.
- We seek to comprehend for a specific reason; i.e. to prepare for a test, evaluate the strengths of an argument, learn the rules of a game, or enjoy a magazine article or book.
- Each purpose requires unique knowledge and skills that must be acquired to be successful.

"Taken together, it is easy to see how any one individual may have **multiple levels of comprehension ability** depending upon what they are reading and why they are reading it.

As a result, **comprehension cannot be reduced to a single notion** because it is not a single ability."

Catts, H. W. (2021, December 8)



# The Role of Knowledge

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What have we overlooked?

## Prior Knowledge:

- Existing knowledge and experiences; what you already know
- Based on personal experiences, education, and past learning
- Forms a foundation for new learning
- May be incomplete or outdated

## Importance:

- Provides a starting point

## Application in Learning:

- Connects new information to existing concepts

## Background Knowledge:

- Actively seeking and acquiring new information to enhance your understanding
- Research, study, exploration, and exposure to new concepts
- Fills gaps in prior knowledge
- Requires time and effort; may challenge existing beliefs
- Includes domain knowledge (knowledge specific to a defined field)

## Importance:

- Ensures continuous growth and adaptability

## Application in Learning:

- Expands the scope of understanding

## Conclusion:

- *Balancing Act:* Effective learning often involves a combination of both strategies
- *Continuous Process:* Building background knowledge is a lifelong journey

## Takeaway:

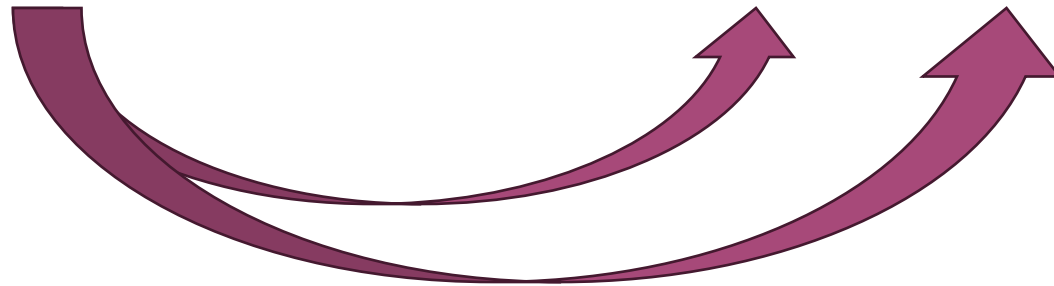
- *Embrace Prior Knowledge:* Acknowledge what you know
- *Seek Growth:* Actively pursue opportunities to build your background knowledge

- **Construction:** the reader uses knowledge of vocabulary and syntax to make meaning
- **Integration:** the reader integrates words and sentences by linking previous information using cohesive ties to create a text base
- **Metacognition:** the reader monitors the processes to ensure meaning makes sense; if meaning does not make sense, the reader applies strategies to correct comprehension

Kintsch, W. (1995)

Readers use knowledge of vocabulary and syntax to make meaning

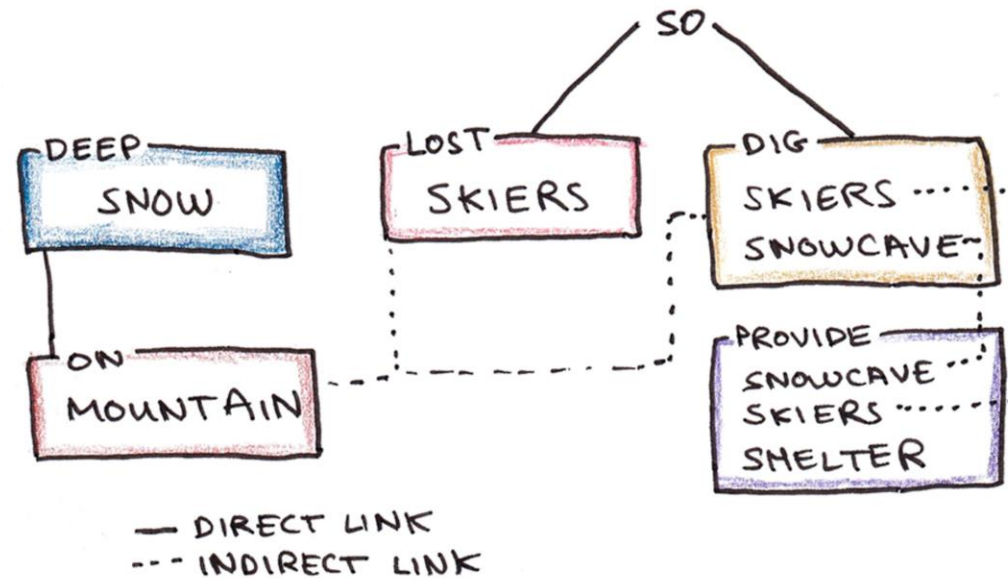
**They are flying planes.**



Young, S. (2022)

Readers create a series of connections between the different parts of the text

**The snow was deep on the mountain. The skiers were lost, so they dug a snow cave which provided them shelter.**



Young, S. (2022)

Readers create a series of connections between the different parts of the text and what they already know about the content.

**The snow is deep.** Interpretation: deep snow

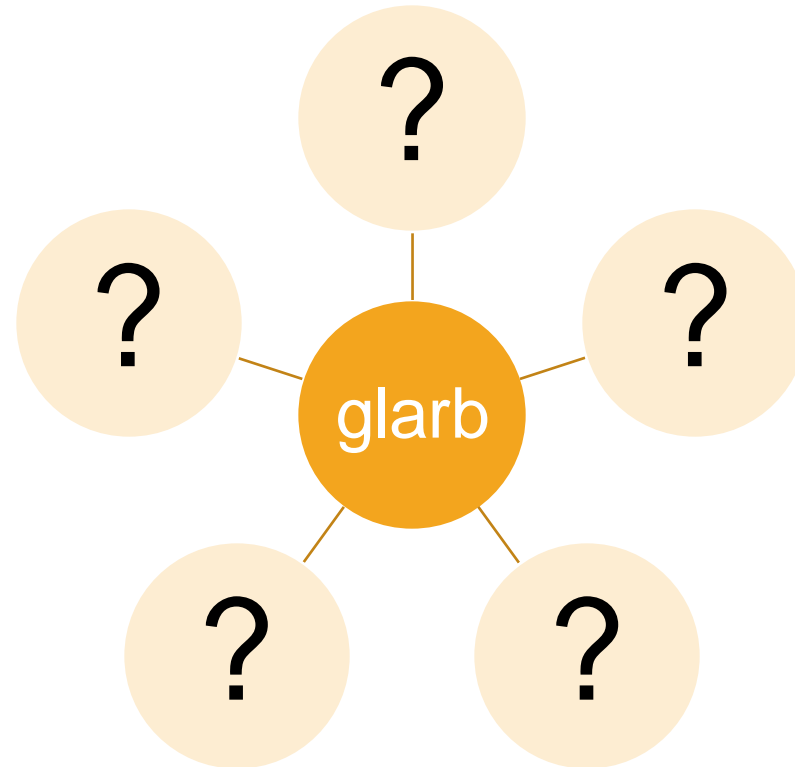
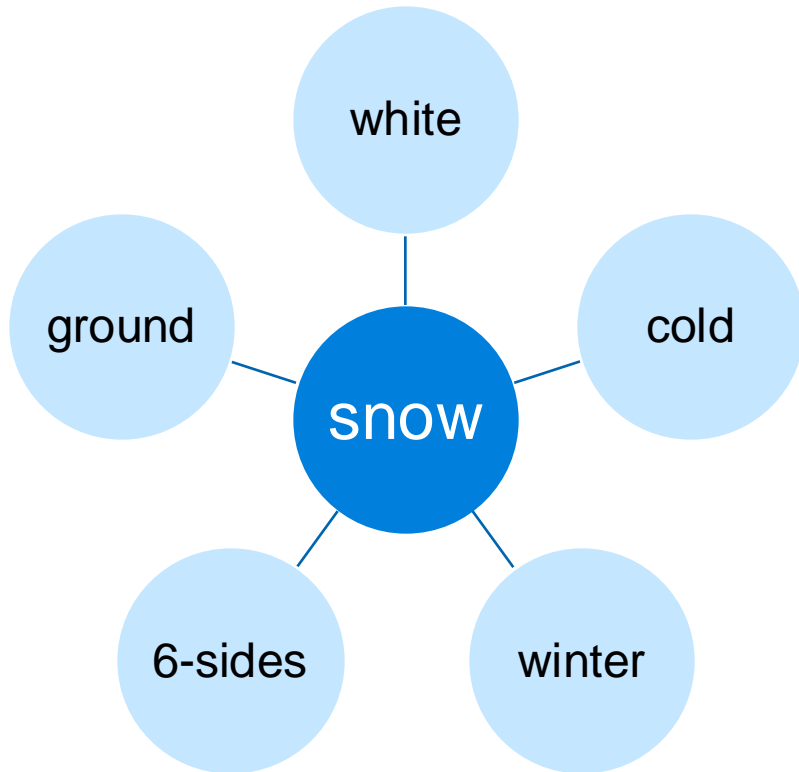
**The glarb is snarf.** Interpretation: snarf glarb

*What is the difference between the two examples?*

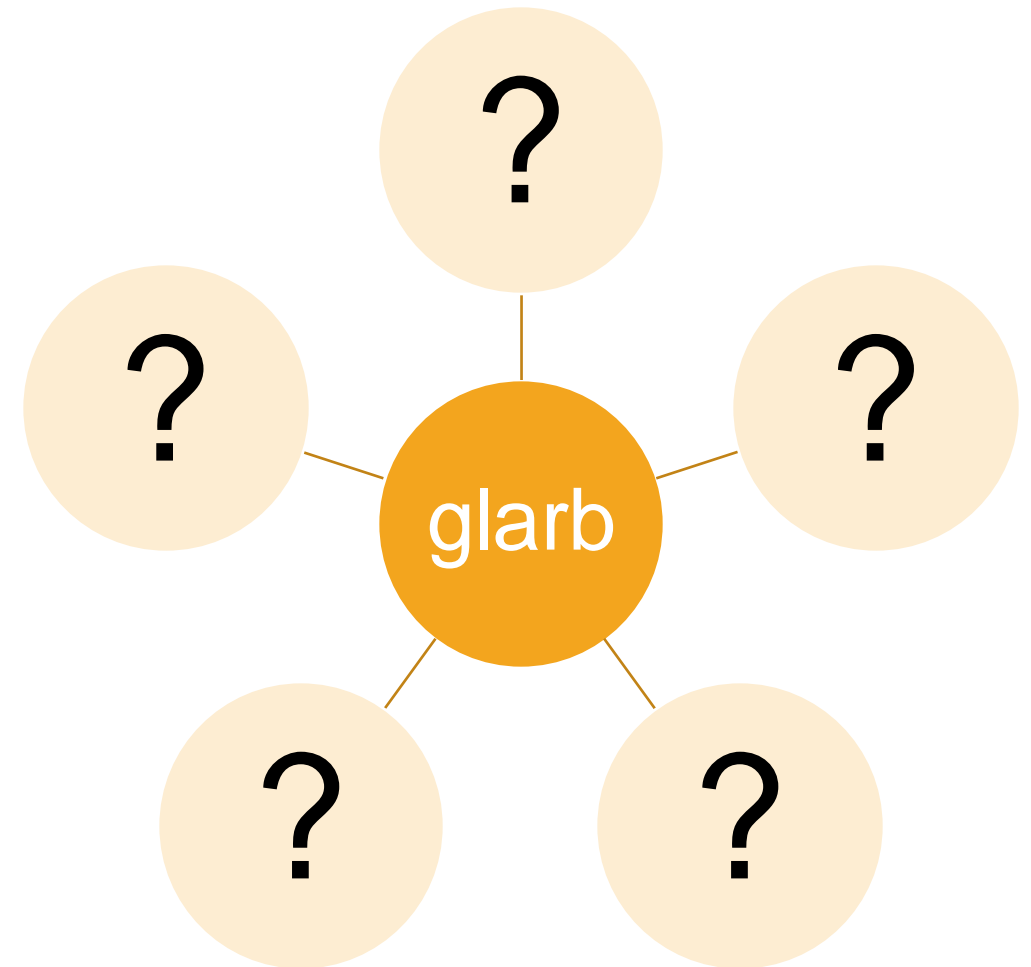
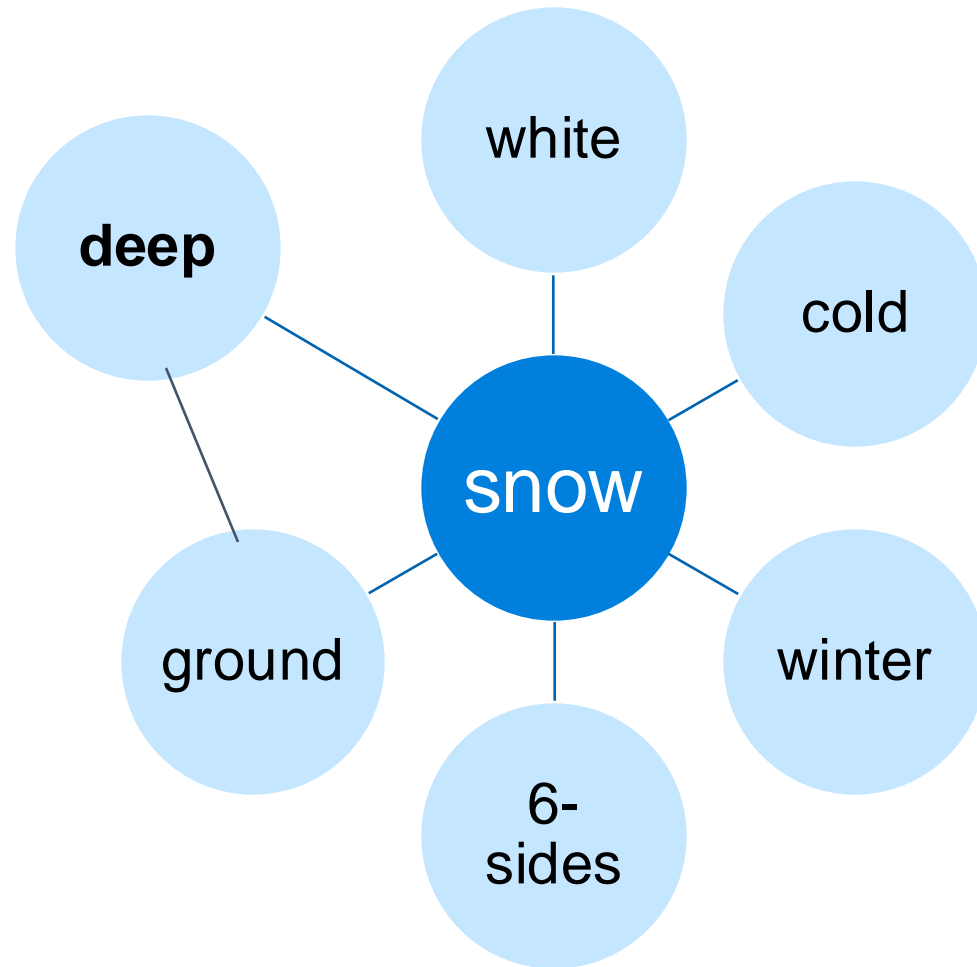
Young, S. (2022)



# What gives words their meaning?



Young, S. (2022)

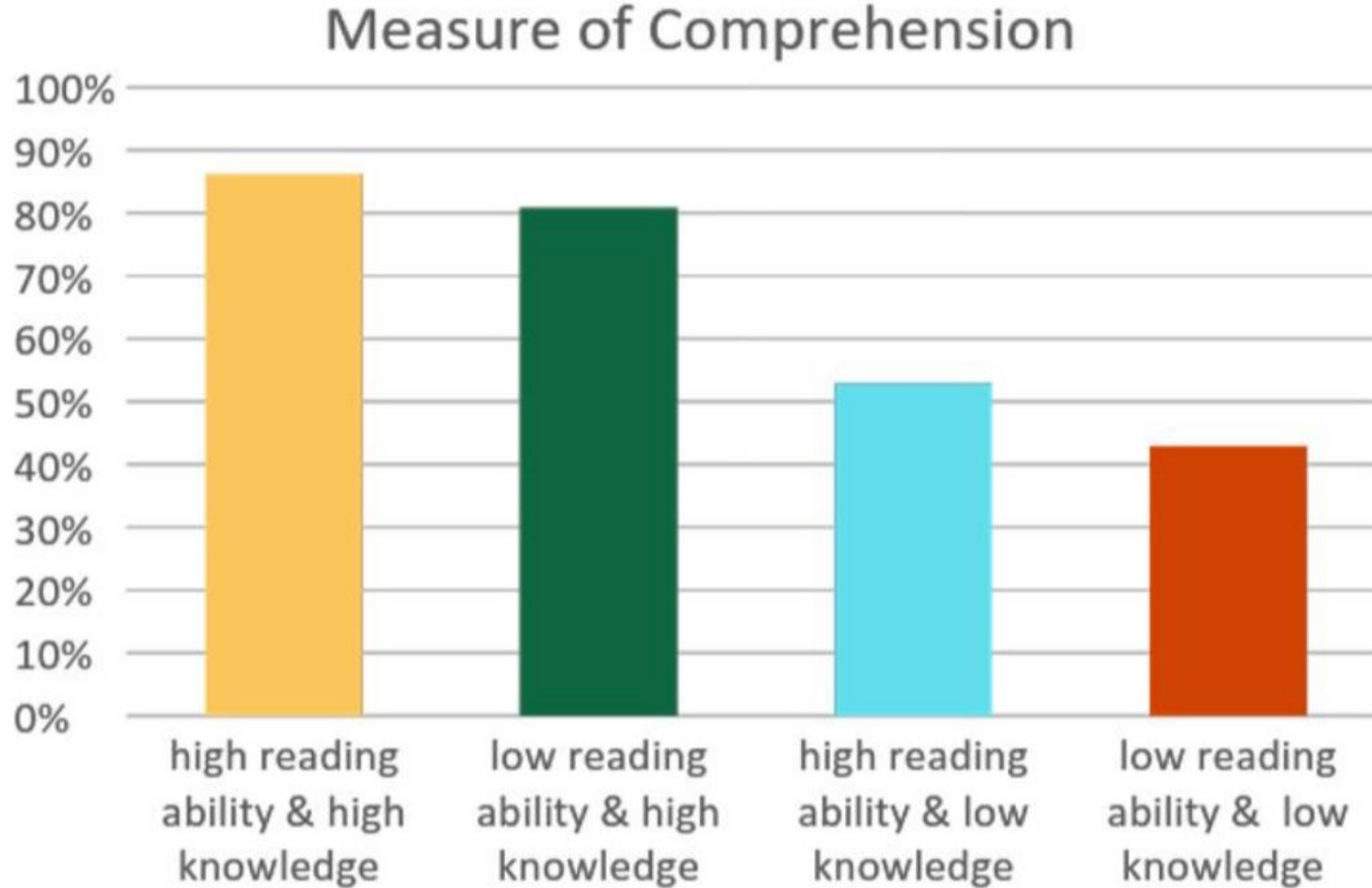


Young, S. (2022)

**They are flying planes.  
They recently graduated  
from flight school.**



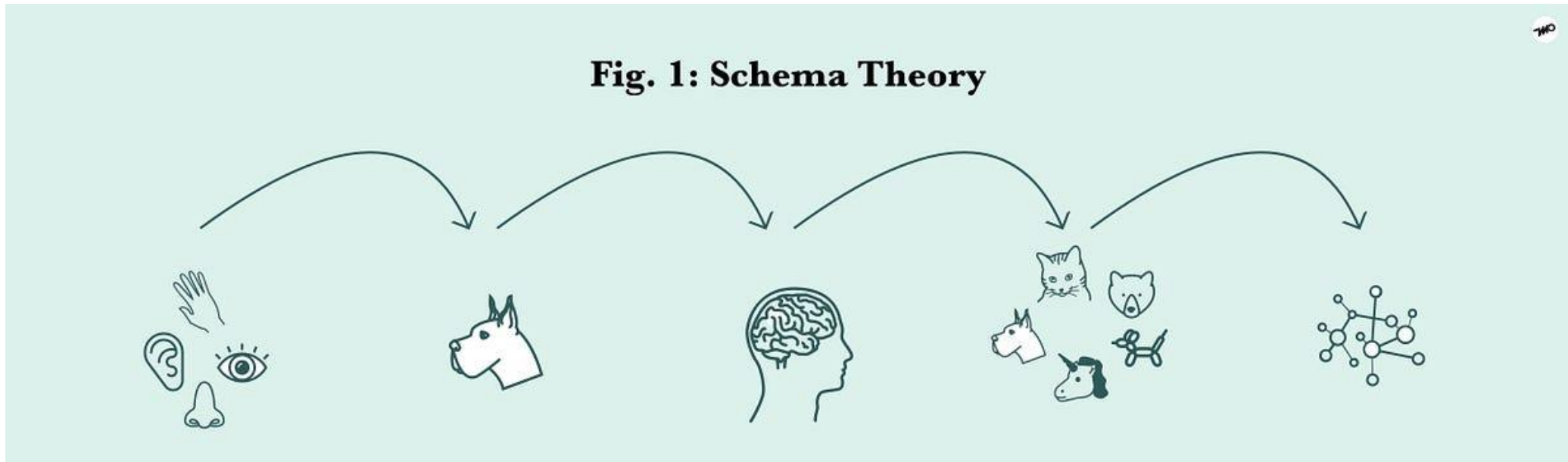
Young, S. (2022)



Recht, D. & Leslie, L. (1988)



**Schema:** mental framework (past experiences, reactions) used to organize, process, and store information



(Oliver, 2019)

- The term "schema" was first used in psychology with the meaning of **"an active organization of past reactions or experiences."** It assumes that written text does not carry meaning by itself.
- Rather, **a text only provides directions for readers as to how they should retrieve or construct meaning from their own previously acquired knowledge.**
- The Theory of Schema can be used to help guide students to comprehend a text from the global point of view. Therefore, the roles of Schema Theory in comprehension cannot be ignored.

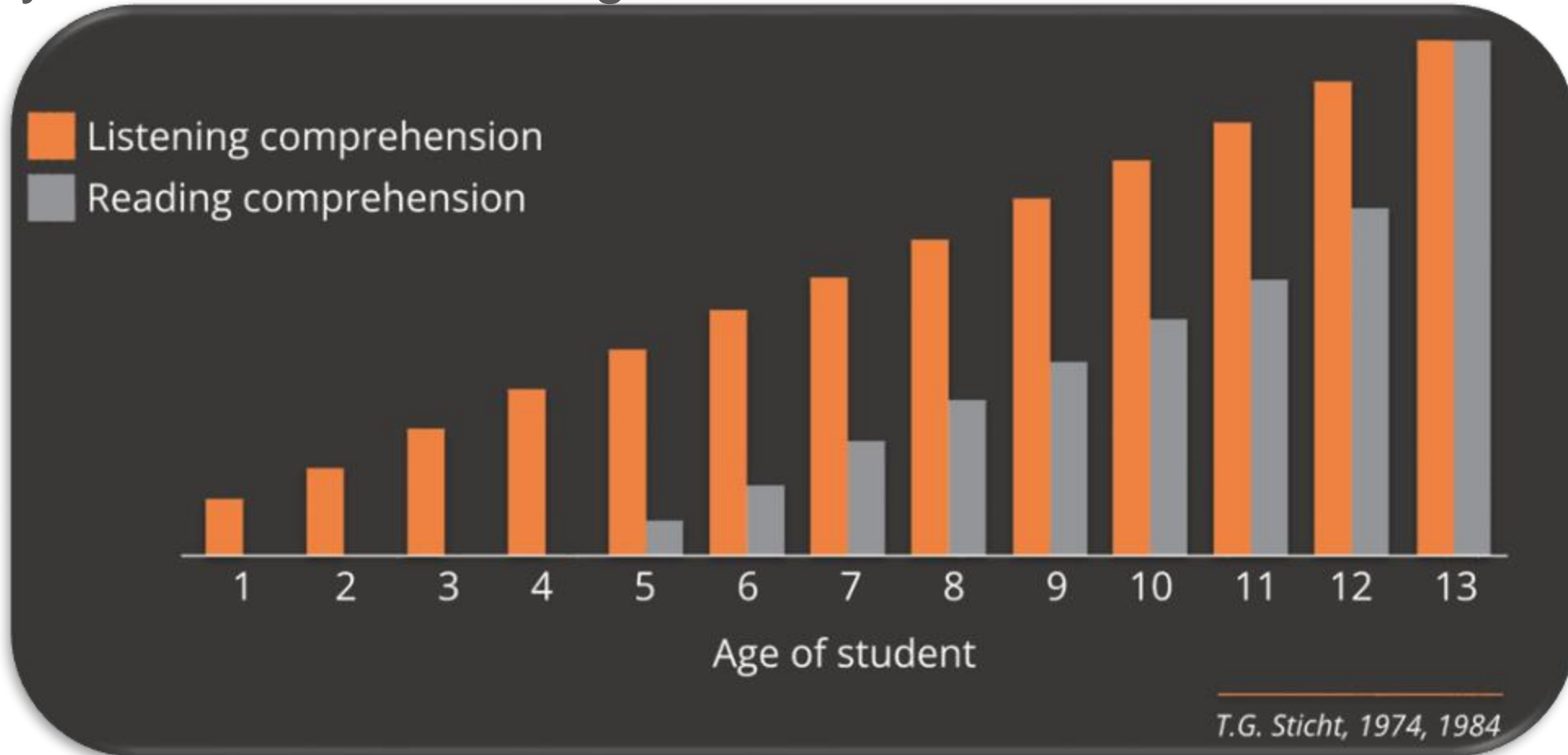
# Knowledge and Comprehension

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Why is knowledge so critical for comprehension?



"We do not *age out* of read alouds. If we did, the audiobook industry would not be thriving." - Miller



It provides a framework for organizing incoming information and guides us as we read through a text.

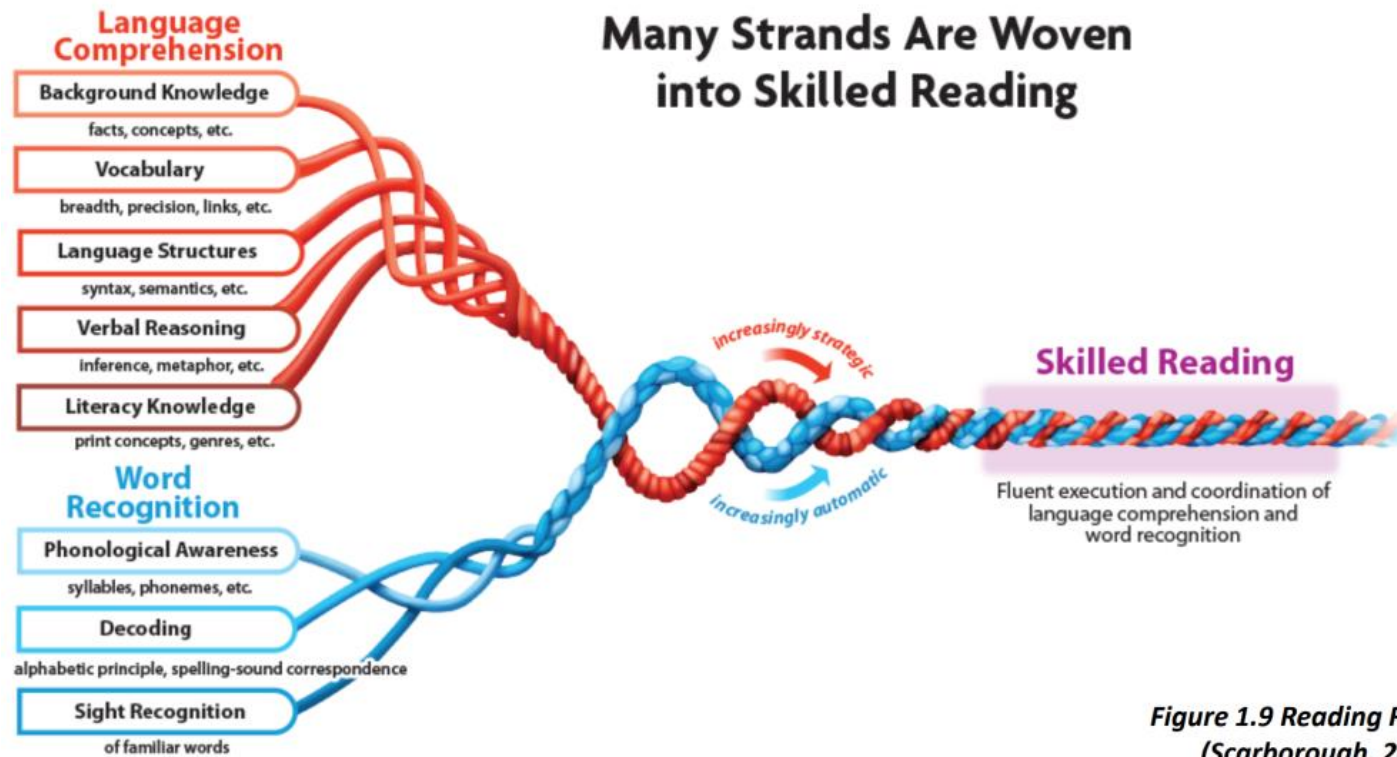


Figure 1.9 Reading Rope (Scarborough, 2001)

Background knowledge allows us to make inferences and fill in information that is not explicitly provided.

- Deep Knowledge
- Think Critically
- Respond Thoroughly



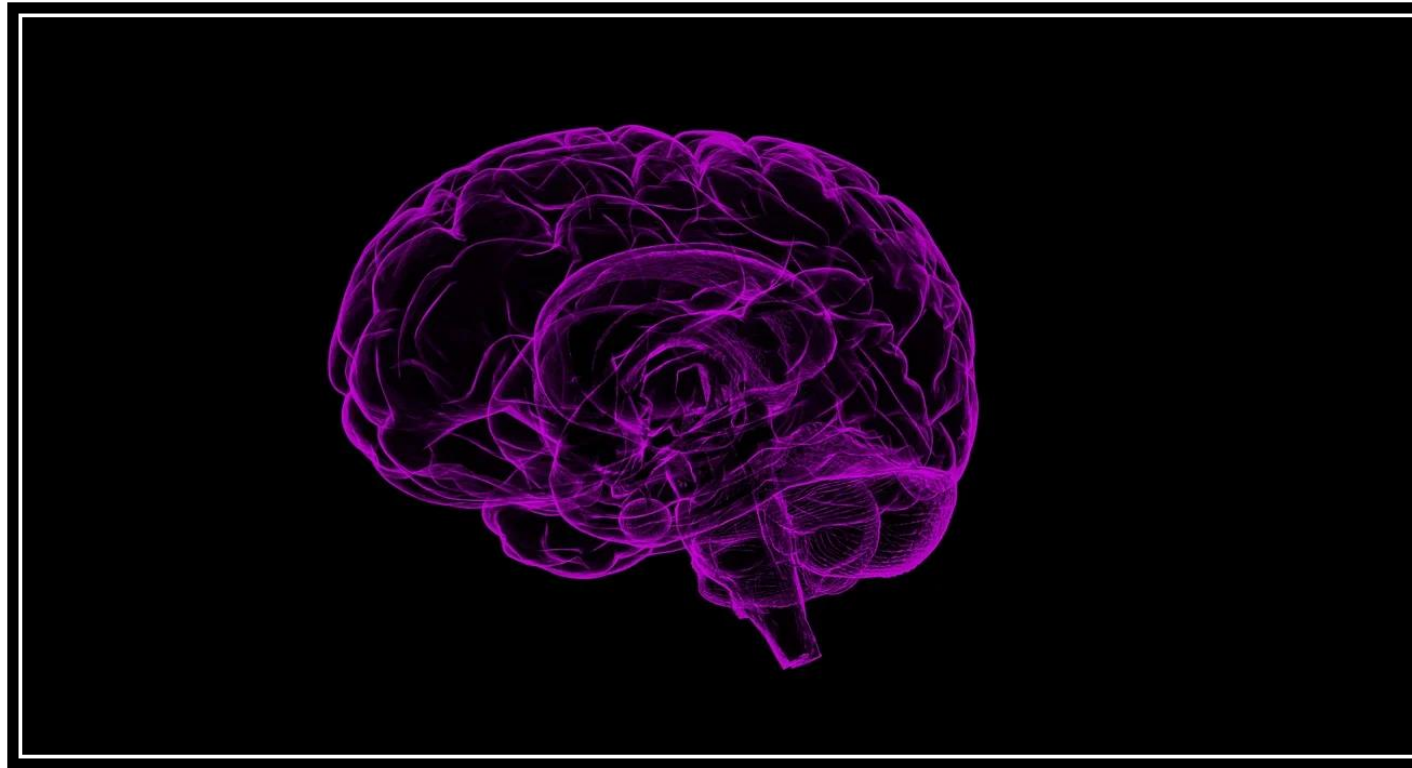
1. Importance of discovering a female mummy and the role of women
2. Significance of mummification in ancient society

Knowledge also enables us to more easily recognize which of the multiple meanings of a word is appropriate for the context.



**The remarkably preserved woman was buried with symbols of power.**

Knowledge also allows us to make the most use of our working memory, where much of our thinking takes place.



### The Comprehension Myth



[The Power of Knowledge \(amplify.com\)](https://www.amplify.com)

"Start by putting your material on the bat as close to the center as possible, then turn your wheel on at full speed. After adding water often enough to keep the material glossy, adjust it until it's barely wobbling, then cone it up and center it further. Cone down and then open the material. Lower your wheel speed to halfway and start pulling the walls. Compress the floor, and then start shaping. When you're happy with your shape, use your wire tool to remove it from the bat, and set it aside to start drying before you trim, glaze, and fire it."

- Which words confused you? Why?
- What helped you to understand?
- What strategies did you use?
- Did this take longer than someone with background knowledge?



# Implications for Instruction

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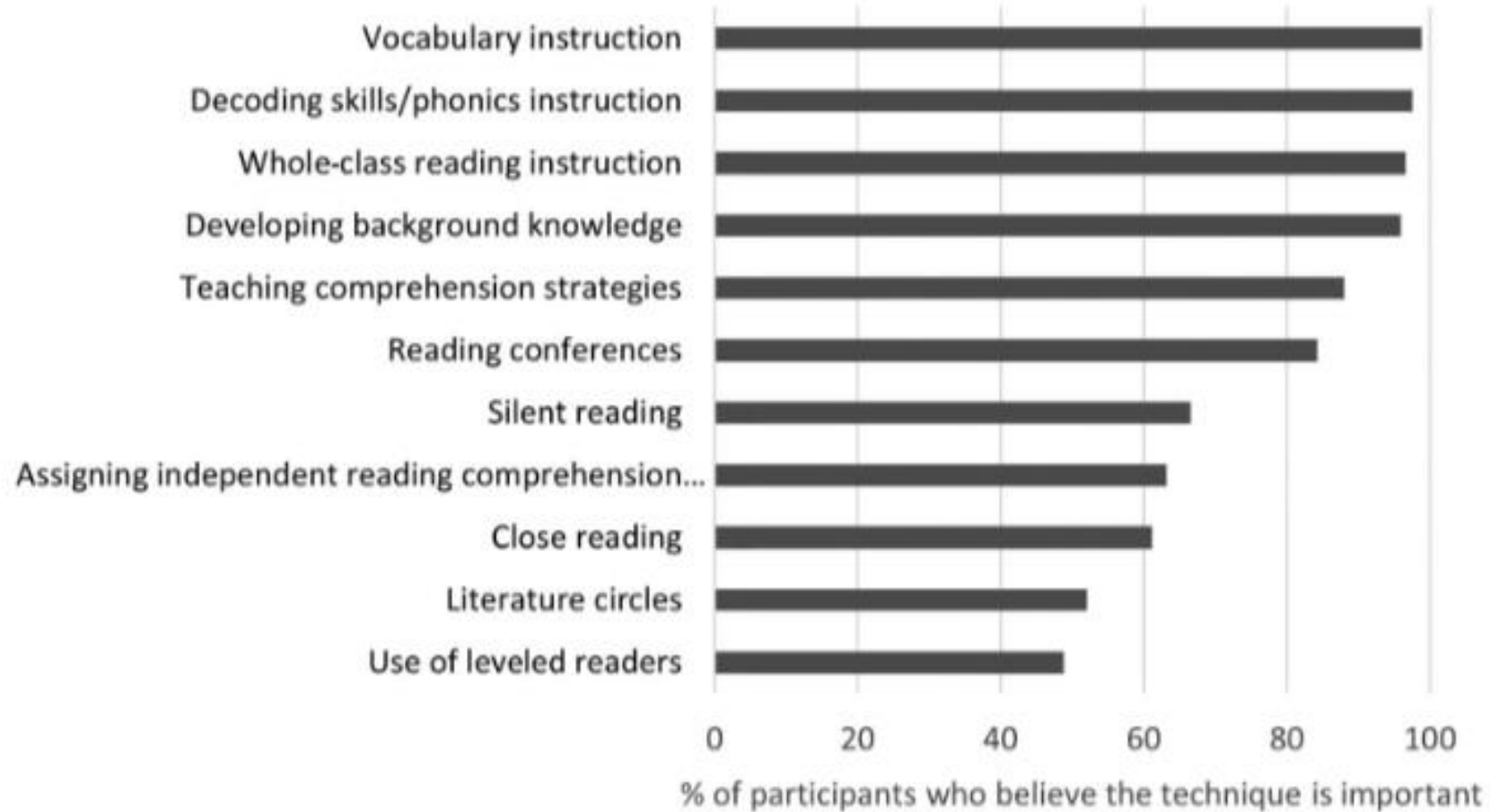
How should educators build background knowledge?



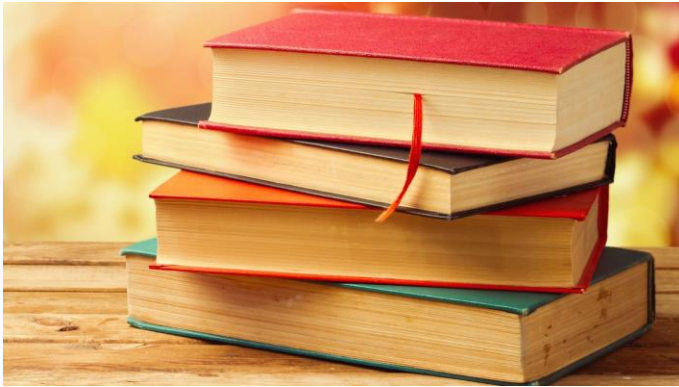
"Building background knowledge that is both **deep** and **broad** is needed to lay the foundation for comprehension and for **further knowledge acquisition.**"

Catts, H. W. (2021, December 8)





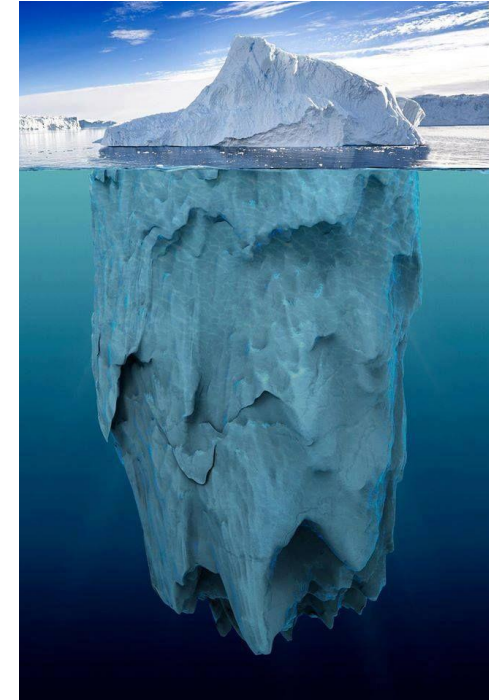
What students read matters.



Students should learn what they read.



Students need extended time in a topic.

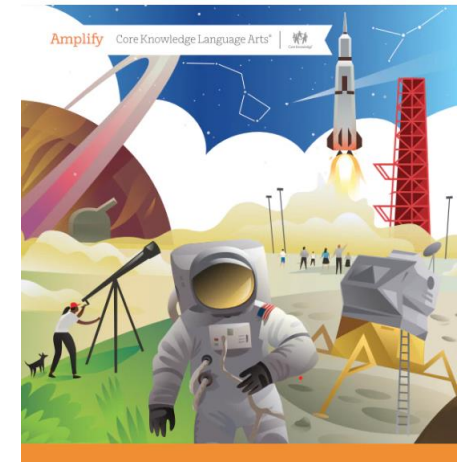
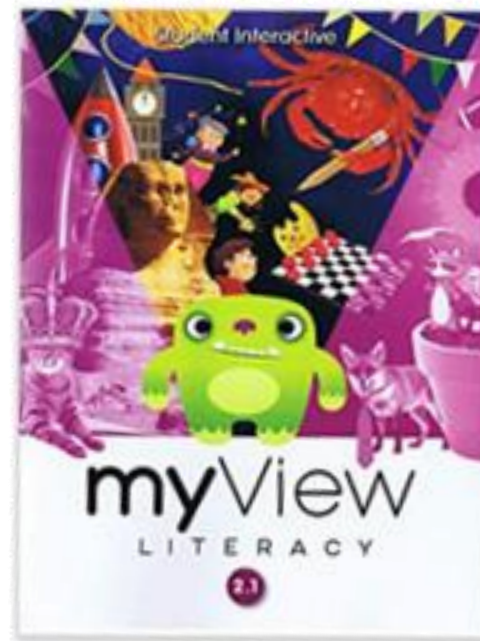
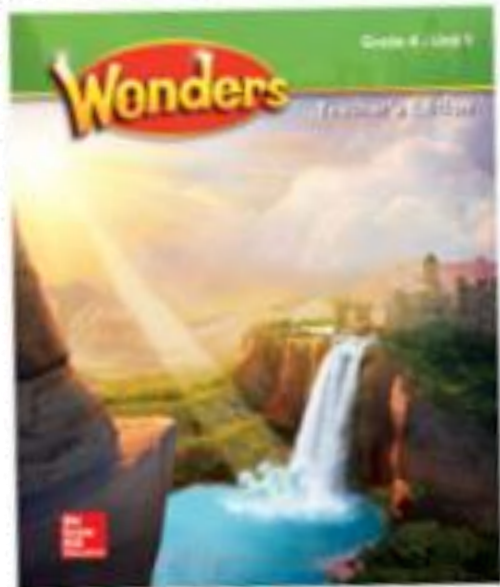


- Themed Topics (knowledge-rich curriculum)
- Virtual or Real-Time Experiences
- Authentic Artifacts
- Vocabulary Connections

***"Systematically build the knowledge that will become background knowledge. Use a curriculum grounded in topics that build on one another."***

Amplify Staff | September 18, 2023

Encourage topic-focused, knowledge-building reading through High Quality Instructional Materials (HQIM).



Knowledge 6 Teacher Guide | Grade 1  
Astronomy

# Knowledge-Building Curriculum

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Does my curriculum build knowledge?

## Coherent Development of Related Knowledge

### Plants



### Ecology



### Geology



*“At the one low-income school in the study, the gains were large enough to eliminate altogether the achievement gap associated with income.”*

- Income-based achievement gaps were eliminated.
- Tests scores significantly improved with the knowledge-building curriculum.



[Research Studies - Core Knowledge Foundation](#)

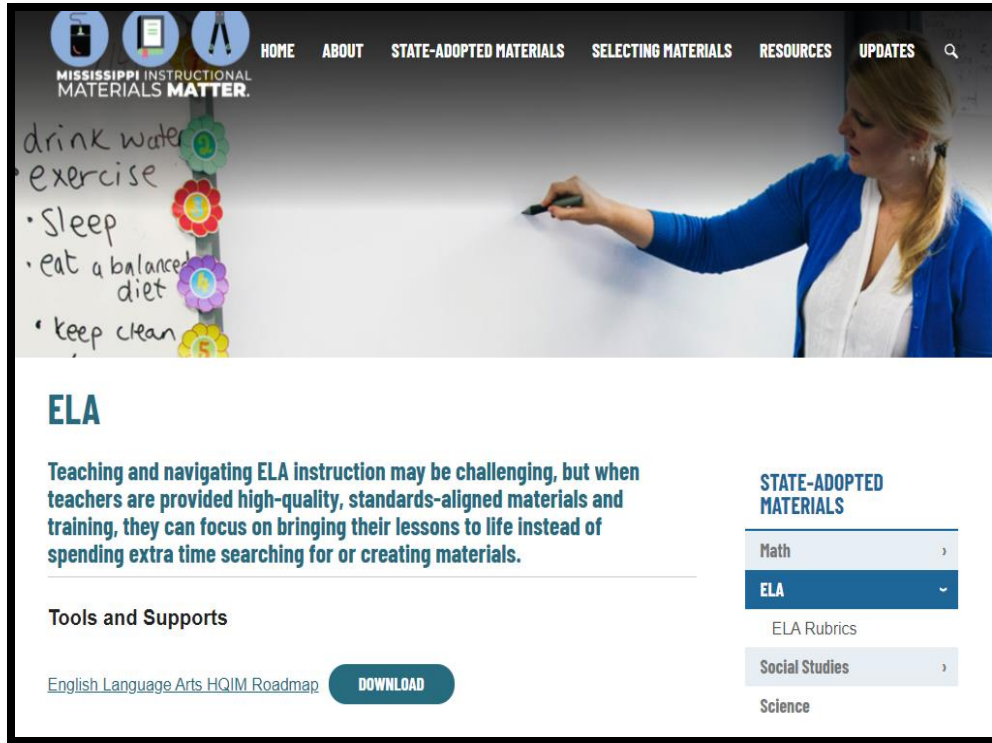
Robert Pondiscio, Senior fellow at the Thomas B. Fordham Institute



Instructional materials matter to Mississippi teachers. With high-quality instructional materials, Mississippi teachers can bring lessons to life and inspire their students to learn and grow.



**MISSISSIPPI** INSTRUCTIONAL  
MATERIALS **MATTER.**

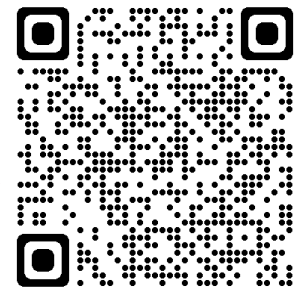


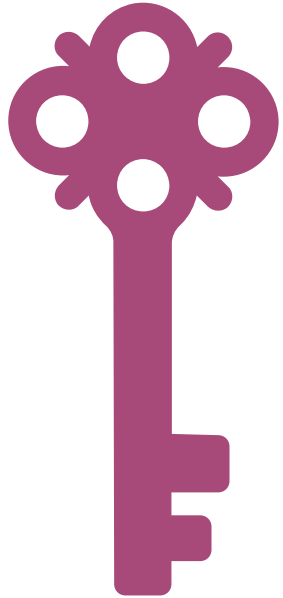
Mississippi defines **High-Quality Instructional Materials** as materials that

- are **aligned** with the Mississippi College- and Career- Readiness Standards,
- are **externally validated**,
- are **comprehensive**, and
- include **engaging** texts (books, multimedia, etc.), problems, and assessments.

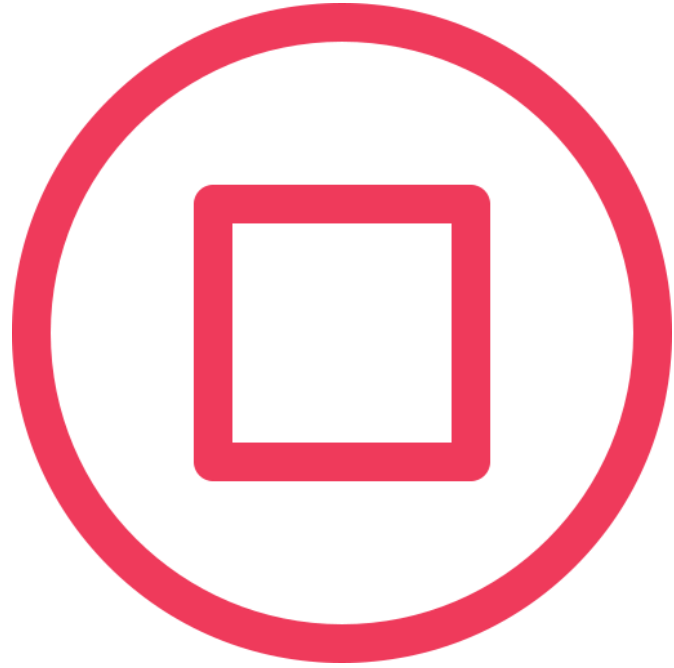
<https://msinstructionalmaterials.org/>

Scan to access





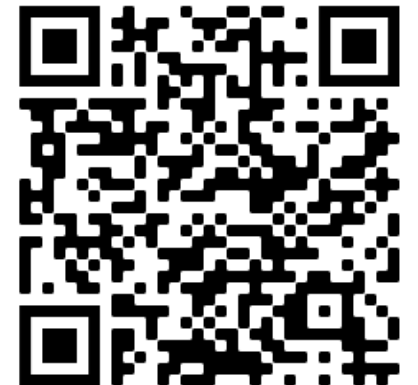
- Strands of the Reading Rope should be addressed concurrently for students to become skilled readers.
- Comprehension cannot be reduced to a single notion, because it is not a single ability.
- Chief among the factors influencing reading comprehension is background knowledge.
- Students need an extended amount of time in a topic.





If you have questions,  
please email [askacoach@mdek12.org](mailto:askacoach@mdek12.org)

The "*Ask A Literacy Coach*" button is also available on the MDE 'resources for teachers' page.





Ric. (2023, March 16). *What is Scarborough's reading rope model? - braintrust tutors*. Braintrust. <https://braintrusttutors.com/what-is-the-reading-rope/>

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*Award-winning, EdTech nonprofit organization*. ReadWorks. (n.d.). <https://www.readworks.org/>

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[https://doi.org/10.1044/2023\\_lshss-22-00118](https://doi.org/10.1044/2023_lshss-22-00118)

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Episode 208

# No More "Strategy of the Week": Connecting Comprehension Instruction Back to the Book



MELISSA  
& LORI  
LOVE  
LITERACY

The central graphic features a blue background with white text. At the top, it says "Episode 208". Below that is the main title "No More 'Strategy of the Week': Connecting Comprehension Instruction Back to the Book". In the center is a rounded rectangular video frame showing three women smiling and talking. At the bottom right of the graphic is a logo for "MELISSA & LORI LOVE LITERACY".

# Office of Elementary Education and Reading <sup>68</sup>

## Division of Literacy

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