



The Science of Reading

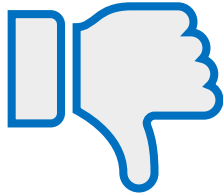
Introduction:

Understanding the Simple View of Reading



Literacy Challenges: What the Data Show

Kids who do not develop good word recognition skill in first grade begin to **dislike reading**.



They struggle to read **increasingly difficult texts** as they pass from grade to grade.



They **read less** than their classmates who are strong decoders.



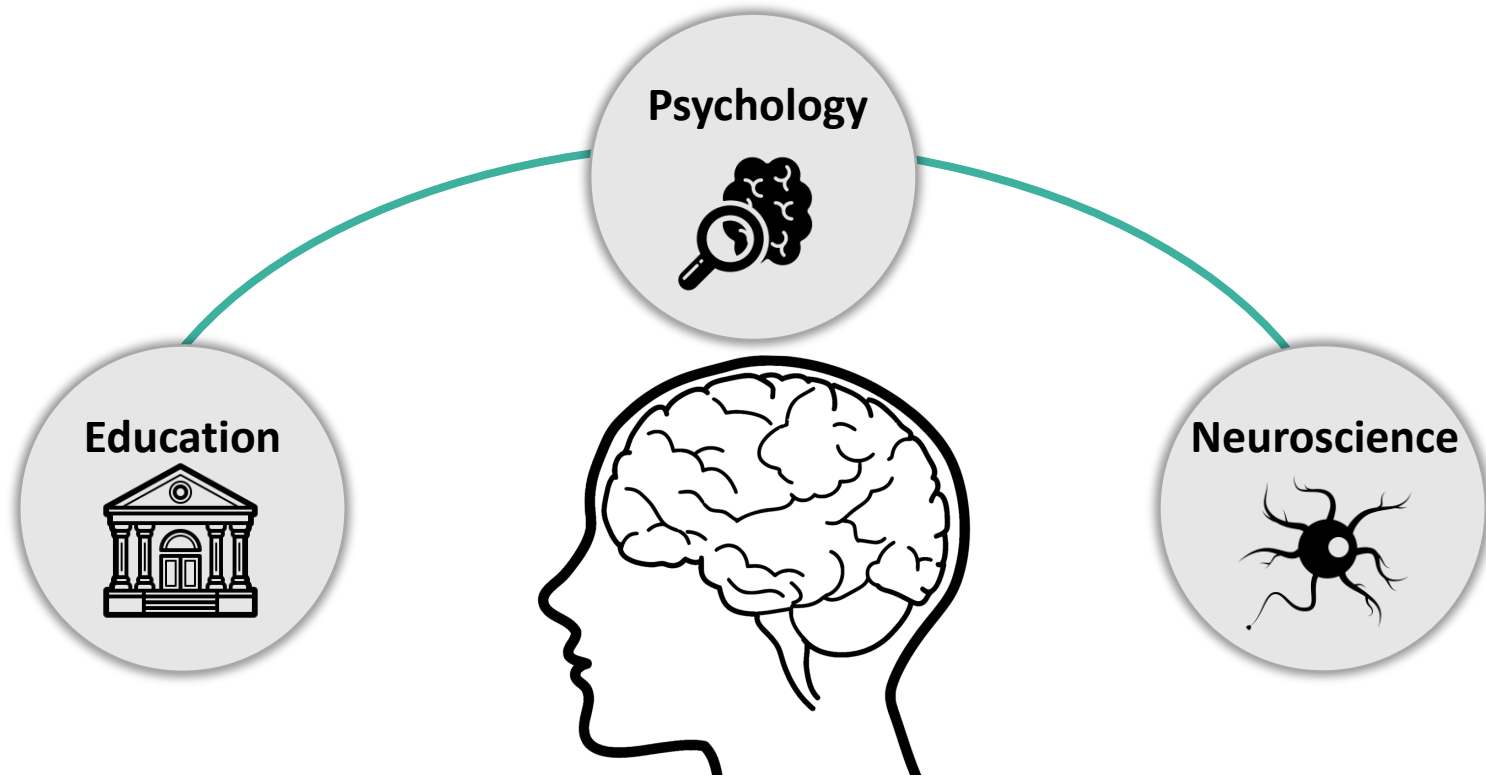
They do not gain as much **vocabulary, background knowledge, and information** about texts.

Source: <https://...>

The Science of Reading

How can teachers address these challenges? The answer lies in the science!

Research from multiple fields—education, psychology, and neuroscience—confirms a key set of ideas about how people learn to read and the teaching practices that support these ideas.



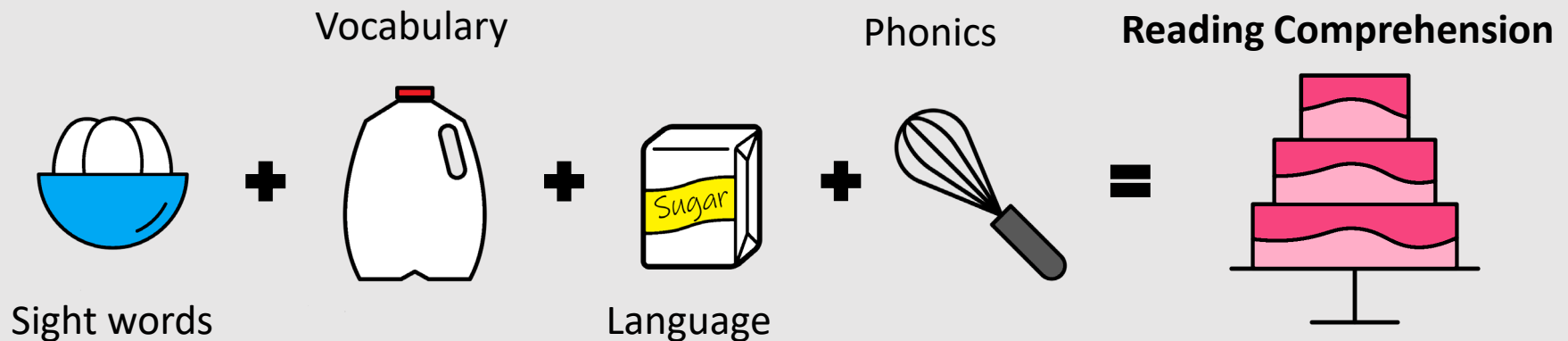
These evidence-based ideas and teaching practices are referred to as **“the science of reading”**

Thought Exercise: Learning to Read

What goes into a person's ability to comprehend written text?

Represent reading as a conceptual model: Draw a simple equation or recipe that ends in "reading comprehension."

Example: Jane's Reading Comprehension Recipe



The Simple View of Reading



Decoding



**Language
Comprehension**



**Reading
Comprehension**

(Gough and Tunmer, 1986)

Defining Reading Comprehension



Decoding



Language
Comprehension



**Reading
Comprehension**

Reading Comprehension: Understanding & interpreting information within a text. It results from decoding efficiently & having the ability to understand language.

Defining Decoding



Decoding



Language
Comprehension



Reading
Comprehension

Decoding: Using knowledge of the written symbol system (especially letter-sound relationships and patterns in spelling) to translate print into speech.

Some Key Parts of Decoding



Aa 

Decoding

**Phonological
Awareness**



Phonics



**Language
Comprehension**



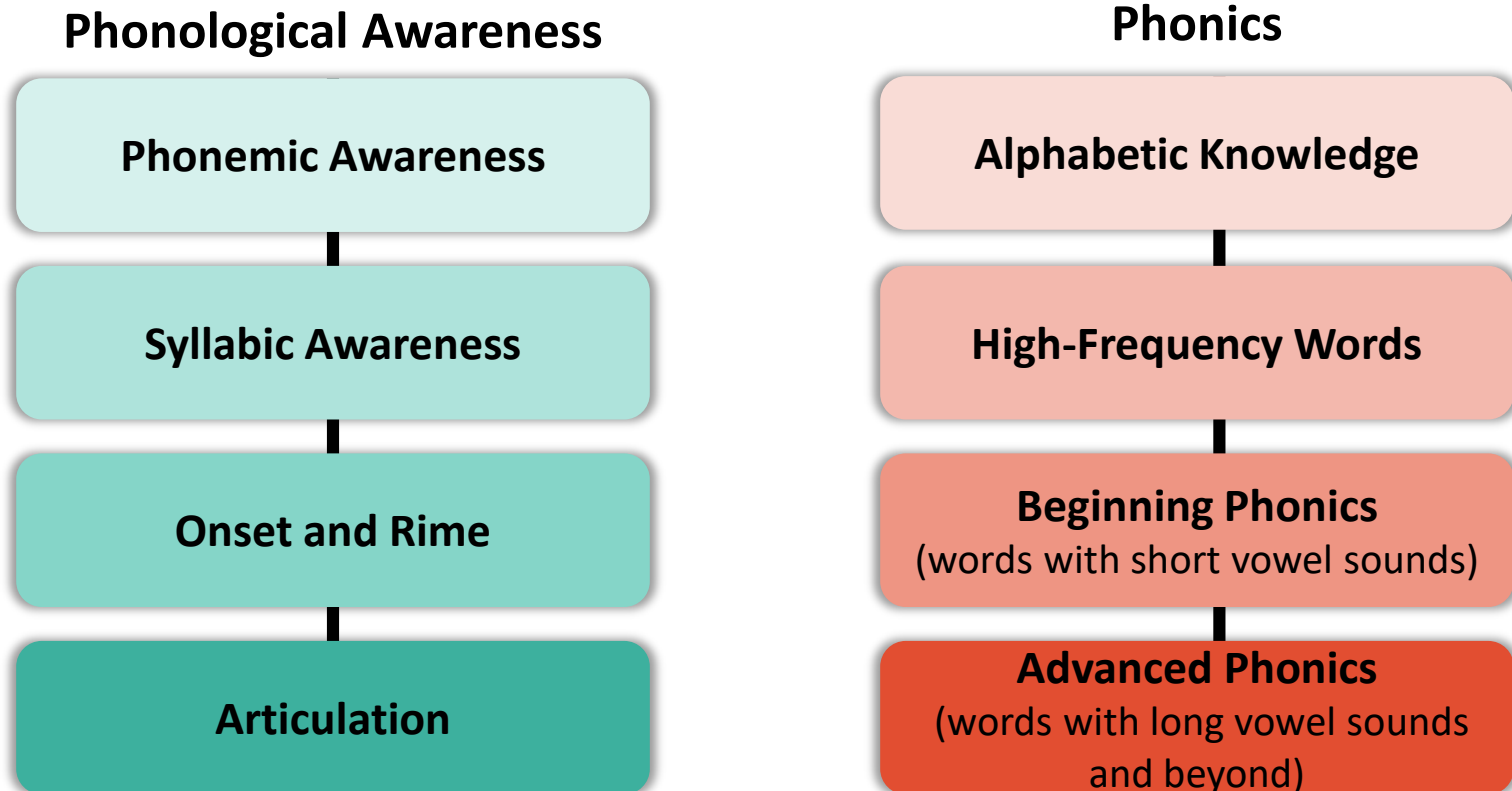
**Reading
Comprehension**

Phonological Awareness: the awareness of the sounds of spoken language.

Phonics: the process of applying rules to the way letters work together to make sounds.

Breaking Down Decoding

The two main components of **decoding**, phonological awareness and phonics, can be broken down even more into targeted skill areas.



Defining Language Comprehension



Decoding



**Language
Comprehension**



Reading
Comprehension

Language Comprehension: The ability to express and comprehend spoken language through development of vocabulary and knowledge of word parts and uses.

Keys to Language Comprehension



Decoding

Language
Comprehension

Reading
Comprehension

Oral Language: the system through which we use spoken word to express knowledge, ideas, and feelings.

Oral Language



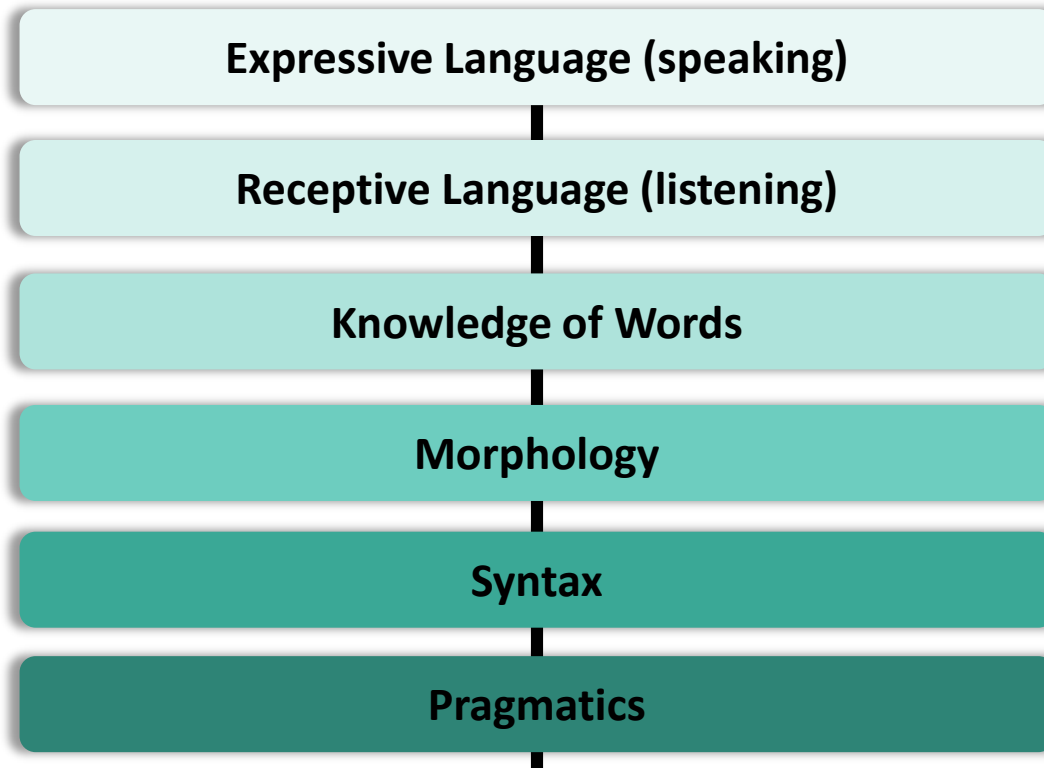
Vocabulary

Vocabulary: the body or collection of words and word phrases used in a particular language.

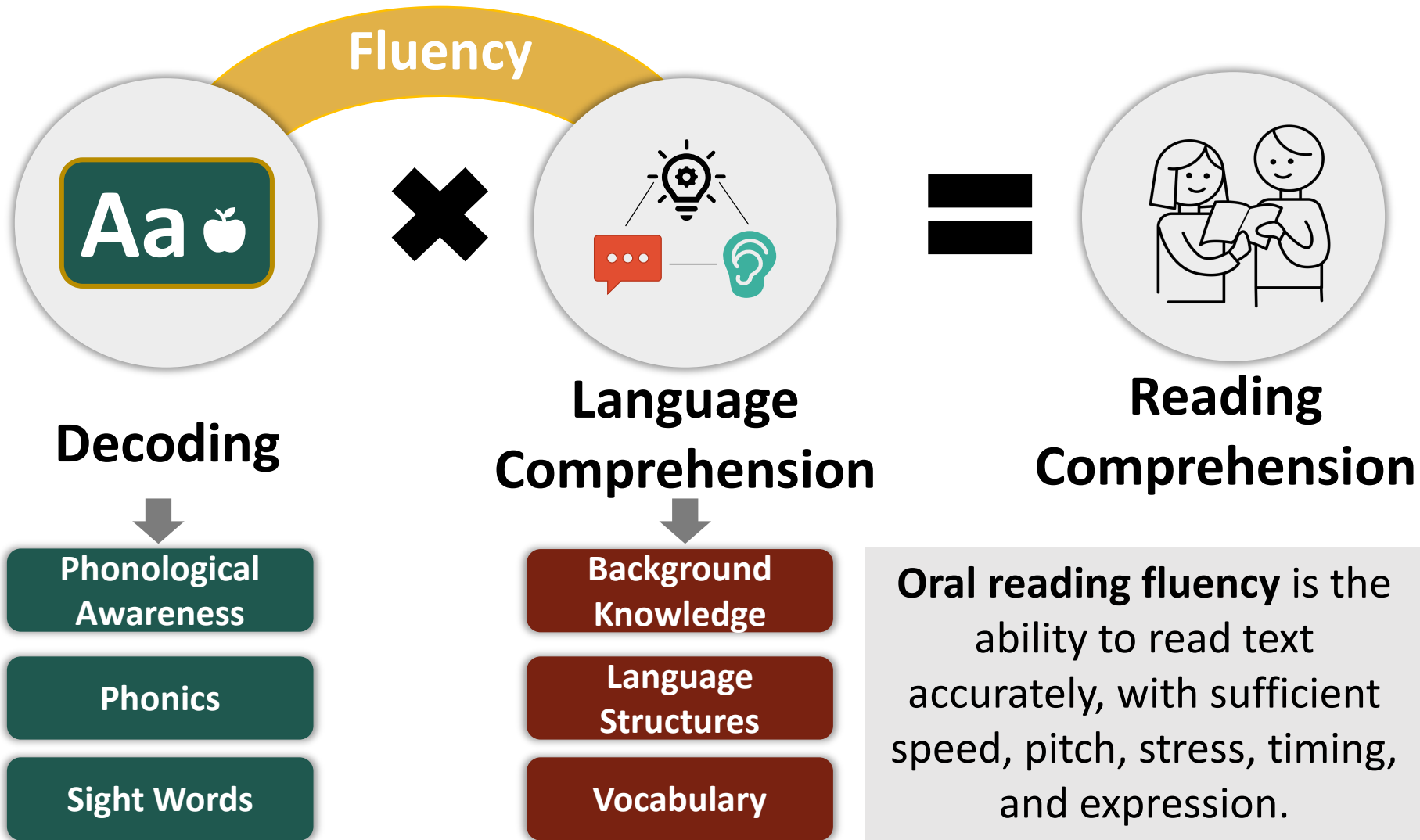
Breaking Down Language Comprehension

The two main components of **language comprehension**, oral language and vocabulary, can be broken down even more into targeted skill areas.

Oral Language & Vocabulary

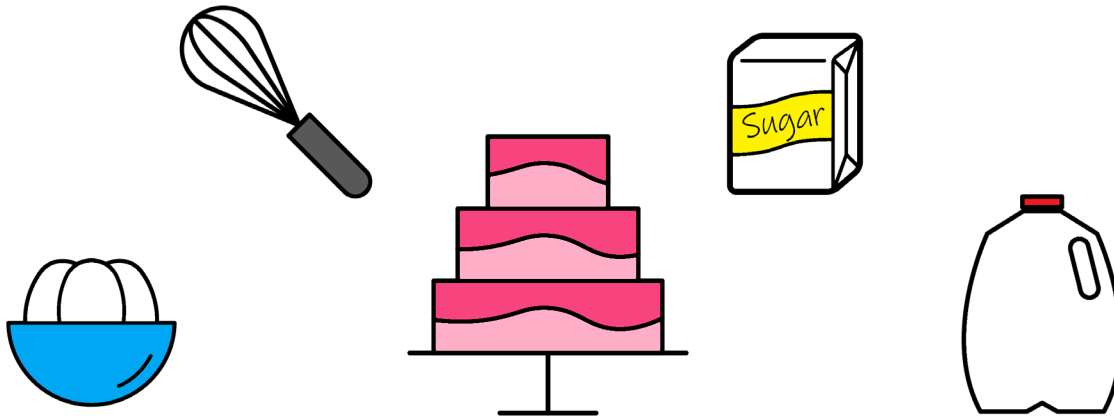


What About Fluency?



Making a Skilled Reader

Remember Jane's reading recipe?
Just as her ingredients made a cake, all the elements within
the simple view of reading come together
to make a skilled reader.



Each Element is Critical to Success

The Scarborough Rope Model

Language Comprehension



Background Knowledge

Vocabulary

Language Structures

Verbal Reasoning

Literacy Knowledge

Word Recognition



Sight Recognition

Decoding

Phonological Awareness

Reading Comprehension

Skilled Reading:

Fluent execution and coordination of word recognition and text comprehension.

increasingly strategic

increasingly automatic



Source:

<https://dyslexiaida.org/scarboroughs-reading-rope-a-groundbreaking-infographic/>

Self-Reflection

How does your original drawing compare to the simple view of reading?

- Is there anything in the simple view that is not in your original drawing?
- What about components that are in your drawing but not in the simple view?
- In what areas of these models would you like to learn more ?

If you had to summarize the simple view of reading for a colleague, what would you say?

Myths and Misconceptions #1



Learning to read is a natural process.



Learning to understand *spoken language*: a natural process.

Learning to *read*: requires skilled, systematic teaching.

Source: <https://www.readingrockets.org/article/ten-myths-about-learning-read>

Myths and Misconceptions #2



Children develop phonemic awareness by learning to read rather than the other way around.



Overwhelming evidence indicates that phonemic awareness is a key building block of early reading.

Source: <https://www.readingrockets.org/article/ten-myths-about-learning-read>

Myths and Misconceptions #3



Skilled reading requires using syntactic and semantic cues to guess words; good readers make many mistakes as they read text.



Good readers rely heavily on the information contained within words themselves (letter/word cues) to read words quickly and automatically. Context is used only to grasp word meaning.

Source: <https://www.readingrockets.org/article/ten-myths-about-learning-read>

Myths and Misconceptions #4



A “balanced” literacy curriculum is ideal for teaching children to read.



The majority of children need systematic phonics instruction to establish early decoding skills and ongoing, skilled, and multifaceted teaching to continue to develop as readers.

Source: <https://www.readingrockets.org/article/ten-myths-about-learning-read>

Key Contrasts

Balanced Literacy

- Emphasis on use of context clues for word recognition
- Phonics instruction sometimes confined to whole group or through mini-lessons in guided reading
- Skills instruction organized around leveled text or trade books
- Assessment sometimes limited to informal reading inventory without a clear picture of early literacy skills gaps

Structured Literacy

- Normed and criterion-referenced assessments used to identify specific skills gaps
- Phonics instruction follows a logical scope and sequence
- Systematic, sequential, explicit phonics instruction using synthesis (combining single letter sounds)
- Direct instruction for mastery of the code while supporting vocabulary and comprehension through read-alouds and guided reading

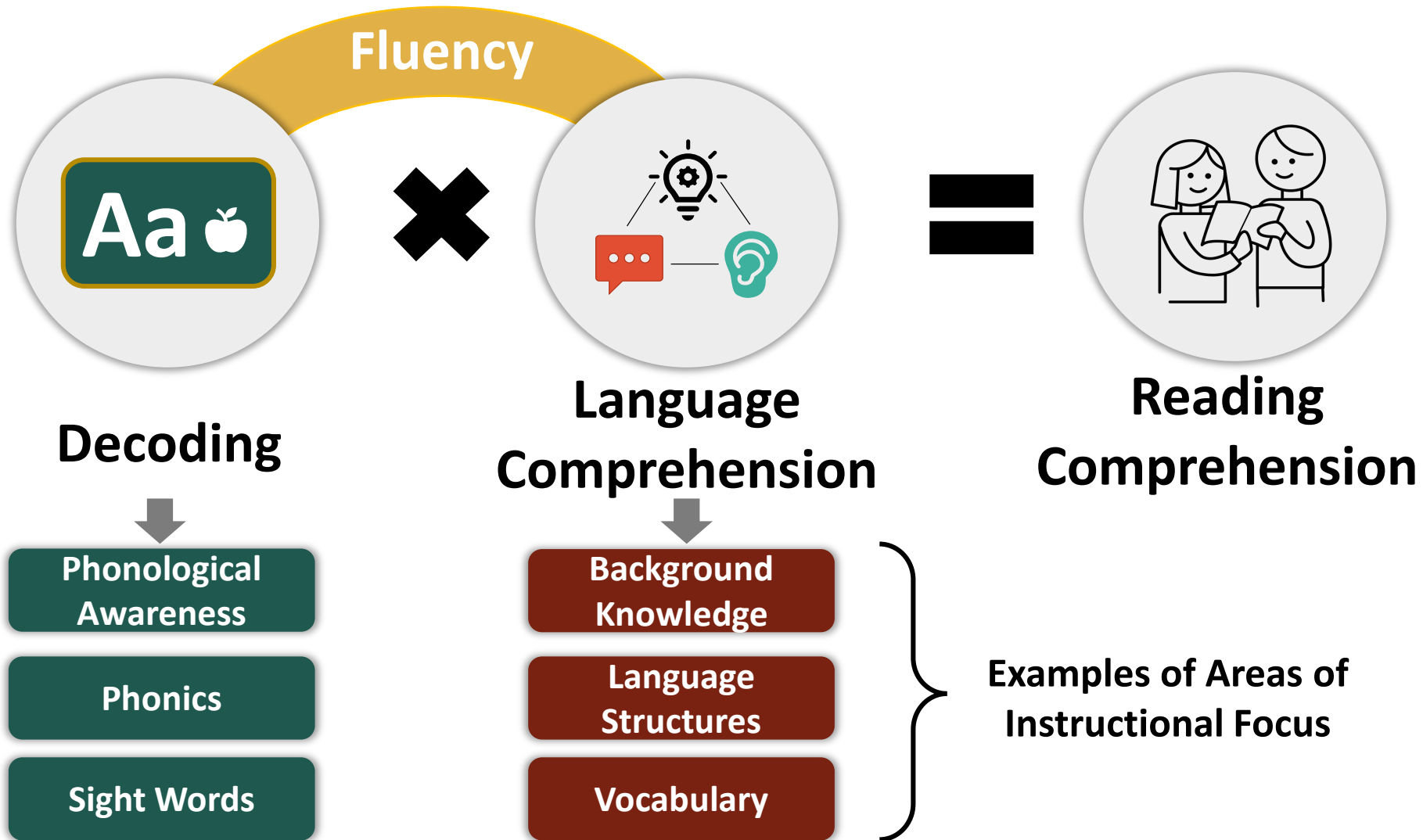
Source: The Barksdale Reading Institute

Early Readers Need Literacy Instruction That Is...

- **Systematic** → following a daily routine (for example, built into a lesson plan aligned to the simple view of reading)
- **Sequential** → with logical and developmental progression (for example, short vowels before vowel blends);
- **Explicit** → naming and modeling skills for students (for example, “now we will sort words ending in -tion”); and
- **Cumulative** → building on concepts and skills previously learned, moving from simple to complex

Source: ReadingUniverse.org

Determining Skill Gaps in Students



Sources

- The Simple View of Reading:

Gough, P. B., & Tunmer, W. E. (1986). Decoding, reading, and reading disability. *Remedial and special education, 7*(1), 6-10.

- International Reading Association Literacy Glossary:

<https://www.literacyworldwide.org/get-resources/literacy-glossary>

- Scarborough's Reading Rope:

Scarborough, H. S. (2001). Connecting early language and literacy to later reading (dis)abilities: Evidence, theory, and practice. In S. Neuman & D. Dickinson (Eds.), *Handbook for research in early literacy* (pp. 97–110). New York, NY: Guilford Press.

(Also appears at: <https://dyslexiaida.org/scarboroughs-reading-rope-a-groundbreaking-infographic/>)

- Ten Myths about Learning to Read:

<https://www.readingrockets.org/article/ten-myths-about-learning-read>

- Barksdale Reading Institute: <https://msreads.org/>