

The Science of Reading

The Basics

There are so many pieces to the Science of Reading that it can be difficult to know where to start. Here are a few highlights about what the Science of Reading IS and what it IS NOT. This knowledge will help you on your journey to teaching all children, including those with diverse needs and cultural backgrounds, to read.



What it IS

A Collection of Research Research, over time, from multiple fields of study using methods that confirm and disconfirm theories on how children best learn to read. 	Teaching Based on the 5 Big Ideas Phonemic Awareness - The ability to identify and play with individual sounds in spoken words. Phonics - Reading instruction on understanding how letters and groups of letters link to sounds to form letter-sound relationships and spelling patterns. Fluency - The ability to read words, phrases, sentences, and stories correctly, with enough speed, and expression. Vocabulary - Knowing what words mean and how to say and use them correctly. Comprehension - The ability to understand what you are reading.	Ever Evolving There is new research and evidence all the time. As populations, communities, and approaches evolve, so should practice. 
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What it IS NOT

A program, an intervention, or a product that you can buy. The Science of Reading could be considered an approach to teaching reading that is based on decades of research and evidence. It is NOT a specific program. 	Phonics-based programs that drill phonics skills. Phonics is an integral part of teaching reading based on science, but it is just one of the five big ideas that should be taught so all children can learn to read. 	Complete and no more study needs to be done. As with any science, it is never complete. We can always know more. More study happens all the time and researchers, teachers, and families can work together to bring the best research into classrooms. 
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SCARBOROUGH'S READING ROPE (2001)*

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)

The Many
Strands
Woven into
Skilled
Reading

INCREASINGLY STRATEGIC

INCREASINGLY AUTOMATIC

**SKILLED
READING**

Fluent execution
and coordination of
word recognition
and language
comprehension.

Scarborough's Reading Rope helps to show the many reading skills that must be woven together across the two broad areas of Word Recognition and Language Comprehension.

*What is the Reading Rope? (n.d.). *Braintrust Tutors*. March 16, 2023
<https://braintrusttutors.com/what-is-the-reading-rope/>

Science of Reading principles

Evidence on effective literacy instruction continues to develop and instructional approaches must incorporate new scientific findings.

1

Science-based reading instruction is a matter of equity and supports *all* children.

2

Learning to read and write is not natural and must be taught systematically, explicitly, and cumulatively.

3

Proficient reading requires word recognition and language comprehension, while proficient writing requires transcription and composition skills.

4

Reading and writing are mutually-reinforcing processes that should be taught through integrated instruction.

5

Background knowledge and vocabulary are critical to both reading comprehension and writing composition.

6

Literacy relies on language as its primary system: Instruction must develop both oral and written language.

7

Reading comprehension is a series of cognitive processes that are employed during and after reading.

8

Universal screening and progress monitoring are critical to gather the data needed to target instruction and measure effectiveness.

9

Literacy instruction in any language must be based on that language's unique features.

10

Honoring the home language, culture, and community experiences of *all* students supports positive, long-term outcomes.