The Science of Reading

Introduction: Understanding the Simple View of Reading
Kids who do not develop good word recognition skill in first grade begin to dislike reading. 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://dyslexiaida.org/move-on-when-reading/](https://dyslexiaida.org/move-on-when-reading/)
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

Sight words + Vocabulary + Language + Phonics = Reading Comprehension
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.
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

Decoding

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

**Phonological Awareness**
- Phonemic Awareness
- Syllabic Awareness
- Onset and Rime
- Articulation

**Phonics**
- Alphabetic Knowledge
- High-Frequency Words
- Beginning Phonics (words with short vowel sounds)
- Advanced Phonics (words with long vowel sounds and beyond)
Defining Language 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

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

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**
- Expressive Language (speaking)
- Receptive Language (listening)
- Knowledge of Words
- Morphology
- Syntax
- Pragmatics
Oral reading fluency is the ability to read text accurately, with sufficient speed, pitch, stress, timing, and expression.
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.

Source:
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?
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
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
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

Decoding
- Phonological Awareness
- Phonics
- Sight Words

Language Comprehension
- Background Knowledge
- Language Structures
- Vocabulary

Fluency

Examples of Areas of Instructional Focus

Reading Comprehension
Sources

• The Simple View of Reading:

• International Reading Association Literacy Glossary:
  https://www.literacyworldwide.org/get-resources/literacy-glossary

• Scarborough’s Reading Rope:
  (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/