An Introduction to the Science of Reading

FOIL Fall Conference

November 2, 2023

www.FLDOE.org
Session Objectives

• Define the Science of Reading.

• Describe the Simple View of Reading and Scarborough’s Reading Rope and how they demonstrate how children learn to read.

• Explain how the Simple View of Reading and Scarborough’s Reading Rope work together to build understanding of how children learn to read.

• Identify practical ways language comprehension and word recognition can be incorporated into the classroom.
What is the Science of Reading?

Laura Stewart, author and national director for The Reading League, presents the Science of Reading as a vast, interdisciplinary body of scientifically based research about reading and issues related to reading and writing. The Science of Reading includes research in the areas of:

- psychology
- neuroscience
- linguistics
- education
Science of Reading: The Basics

**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.

**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.
Simple View of Reading

The Simple View of Reading shows that reading comprehension (RC) is not the sum of the two components, language comprehension (LC) and word recognition (WR), but rather the product of the two components. If either one is weak, reading comprehension is diminished.
What is the Simple View of Reading?

“The Simple View of Reading”

Simple View of Reading and Reading Difficulties

All reading difficulties fall into 3 categories.

- Weaknesses in Word Recognition
- Weaknesses in Language Comprehension
- Weaknesses in Both
Scarborough’s Reading Rope

Language Comprehension
- Background Knowledge
- Vocabulary Knowledge
- Language Structures
- Verbal Reasoning
- Literacy Knowledge

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

Word Recognition
- Phonological Awareness
- Decoding (and Spelling)
- Sight Recognition

Increasingly Strategic
Increasingly Automatic

A Closer Look: What is Scarborough’s Reading Rope?
Instructional practice should be intentionally influenced by the word recognition and language comprehension strands of the Reading Rope.
## Strengthening The Reading Rope Instructionally

<table>
<thead>
<tr>
<th>Background Knowledge</th>
<th>Vocabulary</th>
<th>Language Structures</th>
<th>Verbal Reasoning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literacy Knowledge</td>
<td>Phonological Awareness</td>
<td>Decoding</td>
<td>Sight Recognition</td>
</tr>
</tbody>
</table>
Students have been reading about plants and pollination during their Living Things Unit of Study. A teacher is about to read aloud *Give Bees a Chance*. The teacher asked students to think about what they already know about bees based on the texts, photographs and videos they have engaged with thus far. Students were then asked to share with a shoulder partner. The teacher then circulates the room listening to student responses.

Students are reading a text and the teacher has them pause at the word *tarnish*. The teacher asks the students to think about the word's meaning. The students respond that they do not know what the word means. The teacher has two paper clips. One was shiny and the other was not. The teacher has the students analyze the difference and holds up the tarnished paper clip. The teacher says, "This paper clip is tarnished." The teacher then has the students reread the sentence with the word tarnish and discuss with their table team what it means in the context of the text.

During the writing block, the teacher is circulating and helping students with the editing stage of the writing process. With one student, the teacher is calling attention to subject-verb agreement.

Students are rereading text and identifying examples of figurative language. They are then going to use figurative language in their own writing.

Students are working on analyzing a piece of poetry. They are looking at each stanza and discussing the meaning of each stanza and how it applies to the poem as a whole.

The teacher is saying word pairs and asking students to listen carefully to the sounds within the words. The students are to give a thumbs up if the words rhyme and a thumbs down if the words do not rhyme.

Students are working on closed syllables. Their specific focus is consonant, vowel, consonant (CVC) short vowel sounds. They are using Elkonin boxes and letter tiles for phoneme-grapheme correspondences.

Students then apply their knowledge to an accountable text (a decodable reader) that has CVC short vowel words as well as learned high frequency words.

Students are working independently to read and respond to a text. The teacher stops next to a student to listen in to the reading. The student’s reading is effortless. Unfamiliar words are decoded with automaticity.
Putting It All Together

The SCIENCE of READING
Evidence for a New Era of Reading Instruction

By Laura Stewart, author and national director for The Reading League
Reflection/Wrap Up
www.FLDOE.org