The Science of Reading — Part 1

Reading Comprehension Overview
Objectives

- Define the elements of reading comprehension
- Identify ways teachers across content areas can develop students’ comprehension skills
- Focus on a critical research-based approach: explicit comprehension instruction
- Identify next steps for learning more and systematically improving instruction together
Section One

Revisiting the Simple View of Reading
Myth or Truth?

Children don’t need to “learn to read” beyond third grade.

Myth: Children don’t need to “learn to read” beyond third grade.

Truth: Some children will have mastered the components of the simple view of reading by third or fourth grade, but others will not. All students can benefit from reading comprehension support as they master the simple view of reading and beyond.
The Simple View, Revisited

Decoding  \( \times \)  Language Comprehension  \( = \)  Reading Comprehension

(Gough and Tunmer, 1986)
Looking Beyond the Simple View

Learning to Read
The simple view:
Decoding $x$
Language
Comprehension =
Reading
Comprehension

Reading to Learn

Looking to Learn
So, What Is “Reading to Learn”? 

Reading comprehension is “the process of simultaneously constructing and extracting meaning through interaction and engagement with print”

—RAND Reading Study Group, 2002

• Understand text’s meaning
• Think for yourself about meaning
How to Remove a Ceiling Fan and Prepare for a New One

Follow these steps to prep for a new ceiling fan.

Instructions

Step 1

Turn off power to the existing fan or light at the main fuse or circuit box, and use a circuit tester to verify the power is off. Place the wall switches for the fixtures in the off position. For help, watch our DIY Basics video: What’s in My Breaker Box?

If the location has dual-switch wiring — one switch controls the fan and a separate switch controls the light — label the wires so you’ll know which ones should go to the new fan.
Section Two

Elements of Reading Comprehension: Unpacking the RAND Reading Comprehension Model
The boundaries of what it means to comprehend a text are clear: You either comprehend it, or you don’t.

Myth: What it means to comprehend a text is clear: You either comprehend it, or you don’t.

Truth: Reading comprehension is a complex task made up of several components, including the sociocultural context for reading. Strong reading teachers understand all the pieces that drive comprehension to have the best possible picture of if and how their students really, fully understand.
Elements of Reading Comprehension

Context(s) for Reading
- Dominant Language
- Ethnicity
- Home Environment
- Socioeconomic Status

Text
- Complexity
- Levels of Meaning
- Length
- Structure & Cohesion
- Clarity & Coherence

Activity
- Task, Purpose, & Products

Reader
- Decoding Skill
- Background Knowledge
- Vocabulary
- Verbal Reasoning
- Purpose
### Turn and Talk

<table>
<thead>
<tr>
<th>TEXT</th>
<th>READER</th>
<th>ACTIVITY</th>
<th>CONTEXT(S) FOR Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Complexity</td>
<td>• Decoding Skill</td>
<td>• Task</td>
<td>• Dominant Language</td>
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<tr>
<td>• Levels of Meaning</td>
<td>• Prior/Background Knowledge</td>
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Pause & Reflect: Which parts of the elements of reading comprehension are you most familiar with? Which parts are less familiar?
Key Takeaway: Teachers who understand what a student knows already can add critical background information to help students understand each text.
Key Takeaway: When a student is likely to be less familiar with a text’s vocabulary, teachers should add explicit study of words critical to understanding the text.
By adolescence, readers’ skills and range of prior knowledge is even more varied than in primary grades. Secondary teachers must be even more adept at differentiating reading instruction to meet the needs of subgroups and individual students with diverse prior knowledge, vocabulary, and skills.

Pause & Reflect: What steps can you take to understand a reader’s prior knowledge? What steps can you take to teach vocabulary explicitly to students with varied prior knowledge and vocabularies?
The Text: Structure

Key Takeaway: Teach how text structures work across similar texts and strategies to interpret them.
Cohesion:
The way that a text fits together based on grammatical and linguistic devices such as sentence structure, connective words, etc.

Coherence:
How a text makes sense based on the way that ideas in the text follow from one to the next.

Key Takeaway: Teach students micro-comprehension strategies to help them make clear connections between parts of sentences and in between sentences. More on this later!!
Text Readability vs. Complexity

What’s the difference and why does it matter?

Readability

✓ Quantitative measure
✓ Multiple formulas exist
✓ Usually considers factors like:
  • Word length
  • Word frequency
  • Sentence length

Complexity

✓ Quantitative and qualitative measure
✓ Usually considers factors like:
  • Readability
  • Style
  • Theme
  • Visual support and layout
✓ Reader and task also matter

Key Takeaway: Determine the readability and complexity of a text before you assign it to gain a better understanding of how difficult it will be for a student or students.
The Text: Key Idea

As students progress through grade levels, the texts that they encounter are increasingly challenging and content-specific.

The more expert teachers are in the features of those texts and what makes them complex, the better they can support students to comprehend their reading.

Pause & Reflect: What steps can you take to understand the features of the texts you assign? How readable and complex are the texts you typically assign in your class?
# Activity: What’s the Purpose?

<table>
<thead>
<tr>
<th>Surface—Literal</th>
<th>Text-Based—Inferential</th>
<th>Deeper—Situational</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What does it say?</strong></td>
<td><strong>What does it mean?</strong></td>
<td><strong>What do I think?</strong></td>
</tr>
<tr>
<td>At the surface level where information is explicitly stated in the text</td>
<td>At the text or structural level where information within the text must be pieced together to infer new meaning.</td>
<td>At the reasoning level where information from background knowledge or other sources is linked to information in the text to infer new meaning</td>
</tr>
<tr>
<td><em>What, where, when?</em></td>
<td><em>How?</em></td>
<td><em>Why?</em></td>
</tr>
<tr>
<td>Involves sequencing and details</td>
<td>Involves understanding author’s word choice and word meaning</td>
<td>Involves reasoning and assumptions using evidence from the text</td>
</tr>
<tr>
<td>Relies on accurate decoding and serves as a critical foundation for higher levels</td>
<td>Relies on a grasp of syntax and grammar; provides a foundation for higher levels</td>
<td>Relies on critical and analytical skills for deepest understanding and application of knowledge beyond the text</td>
</tr>
</tbody>
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Adapted from: www.readinguniverse.org
The Activity: Key Idea

Challenges arise when readers’ purposes are mismatched with what’s been asked of them by a teacher or their lack of motivation to read.

To increase student engagement and motivation, teachers must be clear about what type of reading they’re asking students to do and share why that purpose for reading is valuable.

Pause & Reflect: How explicit are you when you explain the purpose(s) for reading in your class? How could you share reading purposes more explicitly with students?
## Affirming Motivation & Purpose: Classroom Practices

<table>
<thead>
<tr>
<th>Motivations</th>
<th>Teacher Practices</th>
<th>Student Reasons to Read</th>
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<tr>
<td>Interest/Intrinsic Motivation</td>
<td>Relevance (selecting or allowing students to select relatable texts)</td>
<td>I enjoy this material. It’s fun. I can relate.</td>
</tr>
<tr>
<td>Ownership</td>
<td>Offering Choice</td>
<td>I chose it. It matters to me. It belongs to me.</td>
</tr>
<tr>
<td>Self-Efficacy</td>
<td>Supporting Success (providing targeted praise)</td>
<td>I can do it well. I enjoy being successful.</td>
</tr>
<tr>
<td>Social Interaction with Peers</td>
<td>Collaboration</td>
<td>I can do it with others. I enjoy relating to my peers.</td>
</tr>
<tr>
<td>Mastery</td>
<td>Thematic Units</td>
<td>I want to understand. I like to learn new things.</td>
</tr>
</tbody>
</table>
Turn and Talk

• What do you typically know about your readers before starting a text with them?
• What do you know about the text itself?
• What about the demands of the activity?

Brainstorm 2–5 ways that you could...
1. Learn about the reader before starting a unit/skill/reading activity
2. Learn more about the text itself
3. Clarify the demands of each activity
Sources


- See: https://www.readinguniverse.org/copy-of-vocabulary


- See: www.readinguniverse.org