

What Works Clearinghouse Practice Guide on *Providing Reading Interventions for Students in Grades 4–9*

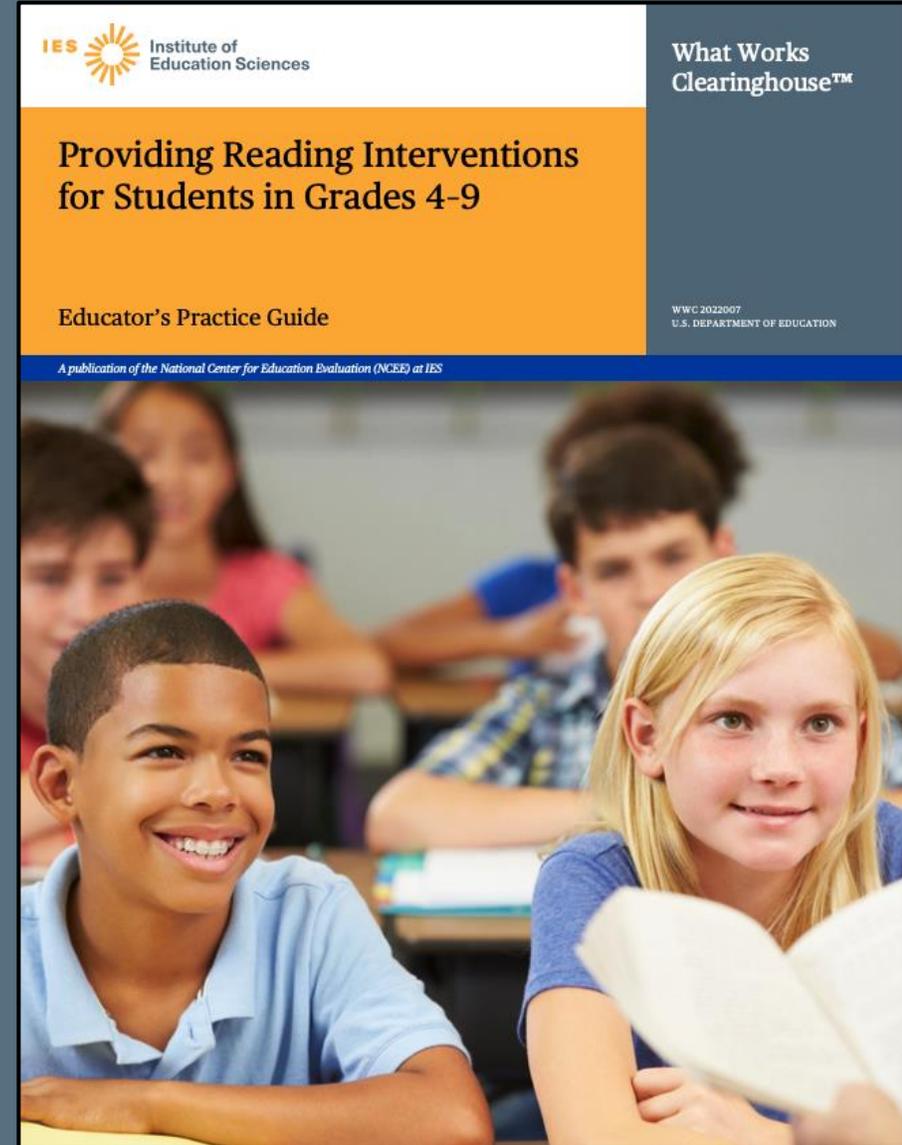
Kim St. Martin, Ph.D.

Panel Member

MiMTSS TA Center, Director

Michigan Department of Education

Introduction



What Works Clearinghouse (<https://ies.ed.gov/ncee/wwc/>)

The screenshot shows the IES WWC What Works Clearinghouse website. At the top left is the logo "IES WWC What Works Clearinghouse" and a "MENU" button. At the top right is a search bar with a "Go" button. Below the header is a green banner with the text "Select topics to Find What Works based on the evidence". The main content area features a grid of 12 topic icons: Literacy (book icon), Mathematics (math symbols icon), Science (flask icon), Behavior (person icon), Children and Youth with Disabilities (hand icon), English Learners (globe icon), Teacher Excellence (teacher icon), Charter Schools (school icon), Early Childhood (Pre-K) (ABC block icon), K-12 Kindergarten to 12th Grade (graduation cap icon), Path to Graduation (graduation cap icon), and Postsecondary (classroom icon). Below the grid are four colored boxes with descriptions: a purple box for "Practice Guides" (evidence-based recommendations), a red box for "Intervention Reports" (summaries of research), a green box for "Reviews of Individual Studies" (summaries of individual studies), and a dark blue box for "Data From Study Reviews" (downloadable data).

Panel of Reading Experts

- Sharon Vaughn (Chair), *University of Texas at Austin*
- Michael J. Kieffer, *New York University*
- Margaret McKeown, *University of Pittsburgh*
- Deborah K. Reed, *University of Iowa*
- Michele Sanchez, *Ysleta Independent School District, El Paso, Texas*
- Kimberly St. Martin, *MiMTSS TA Center, Michigan Department of Education*
- Jade Wexler, *University of Maryland*

Who Might Find This Guide Useful

- Educators providing reading intervention or those who oversee MTSS in reading
- Special educators, teachers, intervention teachers, reading specialists and coaches, and trained volunteers
- School, district, or state personnel involved in adopting intervention curricula
- And parents/caregivers seeking to help children

Levels of Evidence

- **Strong:** There is consistent evidence that meets WWC standards and indicates that the practices improve outcomes for a diverse student population.
- **Moderate:** There is some evidence meeting WWC standards that the practices improve student outcomes, but there may be ambiguity about whether that improvement is the direct result of the practices or whether the findings can be replicated with a diverse population of students.

There is also a **Minimal** level of evidence, which was not needed for this guide.

Recommendations and corresponding levels of evidence

Practice recommendation	Level of evidence		
	Minimal	Moderate	Strong
1. Build students' decoding skills so they can read complex multisyllabic words.			✓
2. Provide purposeful fluency-building activities to help students read effortlessly.			✓
3. Routinely use a set of comprehension-building practices to help students make sense of the text.			✓
4. Provide students with opportunities to practice making sense of stretch text (i.e., challenging text) that will expose them to complex ideas and information.		✓	

Recommendation 1: Multisyllabic word reading

Build students' decoding skills so they can read complex multisyllabic words.

Level of Evidence: Strong

Recommendation 1: *Build students' decoding skills so they can read complex multisyllabic words.*

How-to Step 1: *Identify the level of students' word-reading skills in the intervention group and teach vowel and consonant letter-sounds and combinations, as necessary.*

How-to Step 2: *Teach students a routine they can use to decode multisyllabic words.*

How-to Step 3: *Embed spelling instruction in the lesson.*

How-to Step 4: *Engage students in a wide array of activities that allow them to practice reading multisyllabic words accurately and with increasing automaticity.*



Example: Routines to Decode Multisyllabic Words

Example 1.1. Teacher demonstrating how to identify prefixes, suffixes, and vowel combinations to decode a multisyllabic word

The teacher refers to the following steps that are posted in the classroom:

1. Look for prefixes and suffixes. Circle prefixes and suffixes in the word.
2. Underline the remaining single vowels and vowel or vowel-consonant combinations.
3. Loop under each word part as you say it.
4. Say the whole word by blending the parts together, making it into a word you recognize.

Teacher: Today we are going to learn a routine for breaking longer words into parts so we can easily sound them out. In this routine there are four steps. In the first step, we circle the prefixes and suffixes in the word. The first word is unreasonable. I am going to circle un- because it is a prefix and -able because it is a suffix. Remember un- means not and -able means capable of being.

unreasonable

Teacher: In Step 2, I am going to underline the vowel sounds that are left. I am going to underline ea and o. I am doing this because each syllable has a vowel sound.

unreasonable

Teacher: In Step 3, I am going to use my pencil to loop under each word part as I say it: un rea son able. Now, in Step 4, I am going to blend the parts together: unreasonable. Unreasonable means not capable of reason or explanation.

unreasonable

The teacher follows the same procedure for two more examples, *misinform* and *salamander*. In the word *misinform* the single vowel, *i*, and the *r*-controlled combination, *or*, are underlined. The teacher reminds students that *mis-* means wrong and that the word *inform* means to tell someone. *Misinform* means to tell someone something wrong. In the word *salamander* the three single vowels, *a*, and the *r*-controlled combination, *-er* are underlined. Note that *-er* is not a suffix in the word *salamander*. "Salamand" is not a word on its own. Therefore, *-er* in *salamander* is not circled. The teacher explains that a salamander is an amphibian that looks like a lizard.

misinform
salamander

Example 1.2. Teacher working with students to apply a routine to identify syllables and sound out unfamiliar words

The teacher posts the steps of the routine on the board before providing an explanation:

1. Underline single vowels and vowel or vowel-consonant combinations.
2. Count the number of vowel sounds to determine how many syllables are in the word.
3. Break the word into parts, with every syllable having a vowel sound in it.
4. Blend each part together to form a word you recognize.

Teacher: Today we are going to learn a routine for breaking words into parts and sounding them out. In this routine there are four steps. In the first step, we underline single vowels and vowel combinations. Remember, a lot of the time two vowels together sound as one. The first word is unreasonable. I am going to underline the u, the ea, the o, the a, and the e.

unreasonable

Teacher: Now we will count the number of vowel sounds to determine how many syllables are in the word unreasonable. Count them with me.

Teacher and student: 1... 2... 3... 4... 5.

Teacher: So how many syllables are in this word?

Student: Five!

Teacher: Yes, we have five vowels or vowel combinations, so we have five syllables. In Step 3, I am going to use a slash mark to break the word into parts so that every syllable has a vowel sound in it. For the word unreasonable, we broke the word into these parts: un/rea/son/a/ble.

un/rea/son/a/ble

Teacher: Now let's blend the parts together.

Together the group, reads un reas on a ble, and then blends the sounds to read *unreasonable*. The teacher tells students the word *unreasonable* means not capable of reason or explanation.

The teacher works with the students in applying the same routine for two more words, *misinform* and *salamander*.

mis/in/form
sal/a/mand/er



Example: Activities to build students' automaticity with word reading.

1. As a warm-up provide practice in vowel combinations in the multisyllabic words that students are going to encounter in a word list or section of text for the session.
2. Read a list of high-frequency prefixes and suffixes aloud as a group (in unison or by taking turns).
3. Ask students to underline prefixes and suffixes in each word in a word list, and then read the prefixes and suffixes aloud as a group (in unison or by taking turns).
4. Ask students to write words by adding a prefix and/or a suffix to a base word.
5. Ask students to read a list of words once with their partner, noting any words students have difficulty reading. Then ask them to try to read more words correctly when they read the list to their partner a second time.
6. Read a list of words (up to 20 words) aloud as a group (in unison or by taking turns).
7. Time students as they read a list of words. Ask them to read the list again to meet or beat their previous time.
8. Dictate words for students to spell that contain the targeted prefixes and suffixes or sounds in the lesson.
9. Read sentences containing multisyllabic words aloud as a group (in unison or by taking turns) or with the teacher reading first and then the students reading next.
10. Ask students to read the passage containing the words they are learning at least twice.

Source: Toste et al. (2019).



Obstacle: A few of my students can read multisyllabic words pretty effortlessly but perform poorly on reading tests because of weak vocabulary and difficulties in comprehension.

- These students need additional work on language and vocabulary development. Therefore, teachers should minimize decoding and fluency instruction and maximize comprehension instruction.
- When possible, group these students in an intervention that focuses on oral language and reading comprehension.
- Activities should include experiences that increase world knowledge and word knowledge and provide ample opportunities to engage students in meaningful discussion about the text they are reading.

Activity 1.0

- Consider the interventions accessible to adolescents (upper elementary, middle, and high school).
- What elements of Recommendation 1 are embedded into intervention supports?
- How could core subject area teachers (or elective teachers when using text) integrate Recommendation 1 into their classes to help students generalize the strategies to decode multisyllabic words?

Recommendation 2: Fluency building

Provide purposeful fluency-building activities to help students read effortlessly.

Level of Evidence: Strong

Recommendation 2: *Provide purposeful fluency-building activities to help students read effortlessly.*

How-to Step 1: *Provide a purpose for each repeated reading.*

How-to Step 2: *Focus some instructional time on reading with prosody.*

How-to Step 3: *Regularly provide opportunities for students to read a wide range of texts.*



Example: Activities to provide students a different purpose for reading a passage.

Example 2.1. Questions that provide students with a purpose for reading a passage

Examples of questions for which answers are evident:

- What happened in the passage you just read?
- What did you learn about _____?
- What were the first two things that happened in this section?

Example 2.2. Interventionist asking a small group of students to read a paragraph on issues related to poverty and feeding a family

Teacher: *Scan the paragraph and underline any words you can't read or don't understand.*

The teacher briefly reviews any words in the passage that the students identified, as well as any that the teacher deemed difficult, including proper nouns. The teacher pronounces each word, asks students to repeat the pronunciation, and provides a short, clear definition or explanation.

ssage silently and explain what the passage is about to your

to their reading partner to explain what the passage is about.

will be to answer questions about the text that are listed on read the paragraph aloud. If you are the second reader, read they get stuck on a word by saying the word and asking inue reading the rest of the paragraph.

estions 1 and 2. Then it is time for the second reader to read the passage while the first reader assists. After the second reader is done, answer questions 3 and 4.

The following questions are on the board:

1. *Who is going to the market in this story?*
2. *How did the main character get to the market?*
3. *How long did it take to get there?*
4. *How was the main character able to feed their family?*

The teacher and students briefly discuss the students' answers to the questions after questions 1 and 2 and after questions 3 and 4. The teacher asks students to read the sentences that helped them answer the questions. The teacher clarifies any misconceptions.

Source: Toste et al. (2019); Vaughn et al. (2016).



Obstacle: It is hard to find materials that include the words or patterns the students are learning, relate to subject-area topics, are age-appropriate, and increase in difficulty.

- Often published programs contain word lists and passages for fluency instruction. If a published program is not available, choose words and passages from a variety of sources, including subject-area textbooks, novels, newspapers, or electronic resources, that emphasize the sound patterns, words, or content of the lesson.
- Schedule time during grade-level or department meetings to collect and develop materials to address the skills you are teaching. Over time you will have materials that span a wide range of topics and vary in difficulty.

Activity 2.0

- Consider the interventions accessible to adolescents (upper elementary, middle, and high school).
- What elements of Recommendation 2 are embedded into intervention supports?

Recommendation 3: Comprehension building

Routinely use a set of comprehension-building practices to help students make sense of the text.

Level of Evidence: Strong

Parts of Recommendation 3: *Routinely use a set of comprehension-building practices to help students make sense of the text.*

Part A: Build students' world and word knowledge so they can make sense of the text.

Part B: Consistently provide students with opportunities to ask and answer questions to better understand the text they read.

Part C: Teach students a routine for determining the gist of a short section of text.

Part D: Teach students to monitor their comprehension as they read.

Recommendation 3, Part A: *Build students' world and word knowledge so they can make sense of the text.*

How-to Step 1: Develop world knowledge that is relevant for making sense of the passage.

How-to Step 2: Teach the meaning of a few words that are essential for understanding the passage.

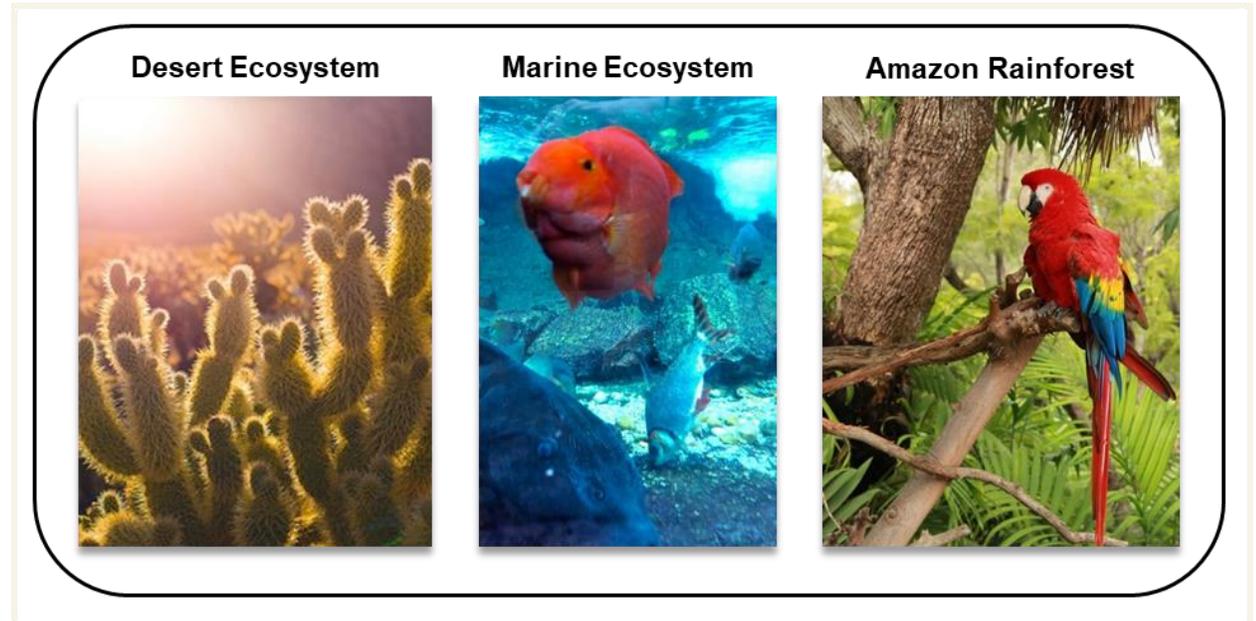
How-to Step 3: Teach students how to derive meanings of unknown words using context.

How-to Step 4: Teach prefixes and suffixes to help students derive meanings of words.

How-to Step 5: Teach the meaning of Latin and Greek roots.

How-to Step 1: *Develop world knowledge that is relevant for making sense of the passage.*

- Provide a brief 3- to 5-minute introduction on the topic before reading to help students develop knowledge that might help them understand what they are reading.
- Another way to prepare students for reading about a topic is to present a short 2- to 4-minute video clip, podcast, or brief informational lecture with illustrations.



Source: The Meadows Center for Preventing Educational Risk (2015).



Obstacle: *There are so many words my students do not know. Working on word knowledge could take up the entire lesson.*

- Focus on words that are essential to understanding the passage and those that students will encounter frequently in their readings.
- If not knowing the meaning of a particular word becomes a barrier to understanding the text, quickly provide the meaning of the word and continue reading.
- Show students how to use dictionaries and thesauruses.

Recommendation 3, Part B: *Consistently provide students with opportunities to ask and answer questions to better understand the text they read.*

How-to Step 1: Explicitly teach students how to find and justify answers to different types of questions.

How-to Step 2: Provide ample opportunities for students to collaboratively answer questions.

How-to Step 3: Teach students to ask questions about the text while reading.



Example: Types of questions.

Question type	Description
Right There Question	The information needed to answer the question is considered “right there” because often the words in the question and the words used to answer the question are in the same sentence. This type of question can also be referred to as a text-dependent question.
Think and Search Question	The information needed to answer the question is in different parts of the text so the student needs to “think and search” to figure out the answer. This type of question can also be referred to as a text-dependent question.
Author and Me Question	To answer the question, the student must connect information in the text with information they learned or read previously. This type of question can also be referred to as an inferential question.

Source: [corestandards.org](https://www.corestandards.org); Raphael and Au (2005); Ritchey et al. (2017); Vaughn, Cirino, et al. (2010); Vaughn, Wanzek, et al. (2010).



Example: Question stems for students to use when asking questions about the text.

Who is (are) _____?

What happens (happened) when _____?

What is (was) _____?

Why did (does) _____?

How do (does) _____?

How do _____ and _____ compare?

What can you say about _____?

What would happen if _____?

Source: Anderson and Krathwohl (2001).

Recommendation 3, Part C: *Teach students a routine for determining the gist of a short section of text.*

How-to Step 1: *Model how to use a routine to generate gist statements.*

How-to Step 2: *Teach students how to use text structures to generate gist statements.*

How-to Step 3: *Work collaboratively with students to generate gist statements.*



Example: Routine for generating a gist statement.

1. Identify and mark the most important person (referred to as the *who*), place, or thing (referred to as the *what*) in a section of text.
2. Mark and then list the important information about the most important person, place, or thing.
3. Synthesize or piece together the important information to formulate a gist statement.
4. Write the gist statement in your own words.
5. Check that the gist statement includes all the important information in a short, complete sentence that makes sense.



Example: Types of text structures and related questions that help identify the gist.

Problem/solution text structures are used to describe a problem and how it was solved.

Question: *What is the problem? What is the solution?*

Cause/effect text structures are used to explain how one thing or event led to or caused another thing or event to happen.

Question: *What happened? What happened as a result?*

Compare/contrast text structures are used to explain how topics are alike or different.

Question: *How are the topics the same? How are they different?*



Obstacle: *Students get tired of generating gist statements day after day.*

- Including a variety of activities can be helpful. After spending some time devoted primarily to learning how to generate a gist statement, spend time on other areas of comprehension, such as word knowledge or asking and answering questions.

Recommendation 3, Part D: *Teach students to monitor their comprehension as they read.*

How-to Step 1: Help students determine when they do not understand the text.

How-to Step 2: Teach students to ask themselves questions as they read to check their understanding and figure out what the text is about.

How-to Step 3: Provide opportunities for students to reflect on what they have learned.



Example: Possible questions students can ask themselves as they read.

First, I ask myself: *What was that section of text about? What is happening in this section?*

Then I ask myself:

1. If I am not sure what this section is about, I ask: *Are there any words I cannot read or do not understand? Are there any phrases or sentences that do not make sense? Should I reread that section carefully?*
2. If a word or phrase doesn't make sense, I ask: *How am I going to figure out what that word or phrase means?*
3. If I am not sure what this section is about but it reminds me of something, I ask: *What else do I know about this topic?*
4. If I think I know what this section is about, I ask: *What are the main points so far? Do I need to reread and mark the main points so that I can remember them?*



Obstacle: *My students are reticent to share what they did not understand.*

- Helping students feel comfortable sharing when they are not understanding what they are reading may take time.
- Some students may not feel comfortable at first. They may want to hide their confusion, or they may not be accustomed to identifying when they are stuck.
- Repeatedly and gently, encourage students to share when they need help and remind them that you are there to help.

Activity 3.0

- Consider the interventions accessible to adolescents (upper elementary, middle, and high school).
- What elements of Recommendation 3 are embedded into intervention supports?
- How could core subject area teachers (or elective teachers when using text) integrate Recommendation 3 into their classes to increase understanding of the discipline-specific text?

Recommendation 4: Stretch text

Provide students with opportunities to practice making sense of stretch text (i.e., challenging text) that will expose them to complex ideas and information.

Level of Evidence: Moderate

Recommendation 4: Provide students with opportunities to practice making sense of stretch text (i.e., challenging text) that will expose them to complex ideas and information.

How-to Step 1: Prepare for the lesson by carefully selecting appropriate stretch texts, choosing points to stop for discussion and clarification, and identifying words to teach.

How-to Step 2: Provide significant support as the group works through a stretch text together.

How-to Step 3: After students demonstrate comfort with reading stretch texts with the group, provide students with electronic supports to use when independently reading stretch text to assist with pronunciation of difficult words and word meanings.

How-to Step 1: *Prepare for the lesson by carefully selecting appropriate stretch texts, choosing points to stop for discussion and clarification, and identifying words to teach.*

- Consider texts that are at the upper range or somewhat above the upper range of students' independent reading levels.
- Sequence the stretch text passages so that the difficulty and passage length gradually increase.
- Choose texts related to topics students are studying in their subject-area classes when possible, rather than isolated passages or excerpts from the subject-area textbooks.
- Look for texts that are engaging and that discuss interesting ideas or perspectives.

How-to Step 1 (continued): *Prepare for the lesson by carefully selecting appropriate stretch texts, choosing points to stop for discussion and clarification, and identifying words to teach.*

- Before the lesson begins, read through the text to choose logical points to stop for group discussion.
- Also create a list of difficult multisyllabic words, proper nouns, and essential words to discuss before and during reading.



Example: Teacher preparing to read a short section from a grade-level text about noted novelist Louise Erdrich.

First excerpt: The teacher marks the following sections and words before beginning to read with the group. This is grade level material for the English language arts class.

Stop points and discussion starters:

- Stop after paragraph 1 – *What is this paragraph about?*
- Stop after paragraph 2 – *What was the purpose of the boarding schools for Native Americans?*
- Stop after paragraph 3 – *What happened in her novel LaRose that was disturbing?*
- Stop after paragraph 4 – *What are some positive aspects of her novels? What do you think the author means when describing people who fall in between being wise and thoughtless at the same time?*



Example (continued): Teacher preparing to read a short section from a grade-level text about noted novelist Louise Erdrich.

Proper nouns:

- Pulitzer Prize
- Louise Erdrich
- Ojibwe
- Bureau of Indian Affairs
- Native American

Multisyllabic words using previously taught word-reading skills:

- frequently
- reservation
- attended
- assimilate
- traditions

Essential words:

- novel
- reservation
- assimilate
- boarding school

How-to Step 2: *Provide significant support as the group works through a stretch text together.*

- Work through stretch texts as a group with teacher support, rather than assigning stretch texts to students to work on independently or with a partner.
- Before reading, help students understand that stretch text activities will be very difficult at times.
- Explain to them that all readers (including their teachers) read material that includes words that are difficult to read or understand, or about topics for which they lack relevant world knowledge.

How-to Step 2 (continued): *Provide significant support as the group works through a stretch text together.*

- Explain (and then remind them often) that, as in athletics or learning to play a musical instrument, readers need to challenge themselves to build their skills.
- Explain that the goal is to keep trying to make sense of challenging texts together, so students develop the habit of sticking with difficult passages.

How-to Step 3: After students demonstrate comfort with reading stretch texts with the group, provide students with electronic supports to use when independently reading stretch text to assist with pronunciation of difficult words and word meanings.

- Over time, students will demonstrate increased comfort in working with stretch texts.
- In addition to providing students with challenging text to grapple with in a supportive small-group setting, students can work with stretch texts during independent reading using electronic supports available on tablets, laptops, and other devices.
- Most of these devices include electronic dictionaries that can help students understand difficult words. Some devices may contain software that reminds students about their knowledge of word parts to help discern a word's meaning.



Obstacle: *Stretch text is just too frustrating for my students. They tend to give up far too easily.*

- Remind students that this challenging task is just one part of their lesson and that they will be guided and fully supported throughout the lesson.
- Begin with very brief 1- to 2-sentence stretch texts and then build up to longer selections.
- Also, consider engaging students prior to reading by reminding them that the text is very difficult and that they likely will not be able to read it with ease. Yet, they will see improvement with practice.

This presentation contains a few examples from the practice guide.

The full practice guide and supporting materials provide more details and are available on the What Works Clearinghouse website (<https://ies.ed.gov/ncee/wwc/PracticeGuide/29>).

Submit questions and requests via email to the WWC Help Desk at Contact.WWC@ed.gov.

Thank you

Kim St. Martin

kstmartin@mimtss.org