



The Importance of Knowledge Building in *Magnetic Reading*

With the last decade's focus on skills and standards as a way to comprehend text, there has been a shift away from the content of the texts students read. That is, there has been too much emphasis on how to find a main idea and not enough on what that main idea tells students about the world. Readers better comprehend text when they do understand the topic they're reading about than when they don't. This is one of the most self-evident things we can say about reading. But why is this true? Do students *learn* from texts if they already know the topic they're reading about? If we can't give students texts on every topic, what can we accomplish with a knowledge-building approach?

Starting with the first question, readers comprehend text more when they understand the subject. If they have some background knowledge about the topic, they don't have to work as hard to make meaning from new vocabulary and ideas. Not only can they understand more words and ideas than they would if they were unfamiliar with a topic, but they have more working memory available to retain what they're reading and learning about (Graesser, Singer, & Trabasso, 1994). Readers without background knowledge may remember things, but they are more likely to remember peripheral things—what we call “colorful details”—than important information (Miller & Keenan, 2009). Readers with knowledge about a topic are also able to make more inferences when they're reading (Cervetti & Hiebert, 2005; Rapp, van den Broek, McMaster, Kendeou, & Espin, 2007). That is, when they encounter something they don't know in the text, they fill in the gaps by connecting to things they do know. We do this automatically when our brain supplies an unfamiliar word's meaning with context, and we do it intentionally when we make a prediction about what a character might do next based on what we know about them. Finally, readers with background knowledge are more likely to persist when they encounter difficult text than those without it (McNamara & Kintsch, 1996). Readers with background knowledge are more engaged.

SESSION 6 PUT IT TOGETHER
LESSON 19

Respond to the Focus Question

Why have people used energy from different sources?

Reread/Think
Choose one text from the lesson to reread with a partner.

TEXT: What makes it Go?

What is one source of energy that people use, and how have they used it? Why have people used energy from that source?

- People use wind to generate electricity.
- people use wind because it's renewable

Talk
Share what you learned from the text you reread. Use the sentence frames to

SESSION 5 PRACTICE

Reread/Think

4. How does the diagram on page 378 help the reader understand paragraph 5?

- It shows the steps organic waste goes through to become fuel.
- It shows the amount of organic waste needed to make biogas.
- It shows how long it takes to make biogas with organic waste.
- It shows how often the big tank is filled with organic waste.

Write
How do details from both the text and the diagram help you understand how waste is turned into fuel? Use at least **one** example from the text and **one** from the diagram to support your response.

The text gives details about the process of turning waste into fuel, but the diagram shows pictures of each step in the process. For example, the text explains that waste is taken to a plant where it is broken down by bacteria. The diagram shows a photo of food waste connected to a photo of a huge tank where bacteria breaks down the waste. That helps me picture the waste, the tank, and the relationship between those two things.

WRITING CHECKLIST

I answered the question.

I used at least one example from the text and one from the diagram.

I used correct spelling, punctuation and capitalization.

If readers already know about the topics they're reading about, are they learning by reading texts about the same topics? If they read new connected texts on a topic, they almost certainly are. Think of it as context and layering. In Grade 5, *Magnetic Reading* has a unit titled "Underground Railroad." In the first lesson in the unit, there are two texts that introduce slavery without mentioning the Underground Railroad. These texts will give students information about the kidnapping of people from West Africa, Southern plantations, the Three-Fifths Compromise, abolitionists, and the Civil War. This is all important context to build because, while most fifth graders know the words *underground* and *railroad*, "Underground Railroad" would be incomprehensible without some background information. The layering comes in the next lessons in which students will read numerous passages about the Underground Railroad. In informational texts and first accounts, they will learn about figures such as William Still, Harriet Tubman, and Frederick Douglass. They will also read stories depicting journeys through the freedom road. Students will learn new facts like names, dates, and places, and they'll gain insights into people's experiences and perspectives, which will also deepen their knowledge base.

Which brings us to the final question: If we can't give students texts on every topic, what can we accomplish with a knowledge-building approach? There are two answers to that question. First, we can give students texts on some carefully chosen, engaging topics full of rich content and vocabulary, and that's a start. But remember, the goal isn't just to learn new information. The more students know about a topic, the more they will retain, the harder they'll engage with difficult text, and the better they will make connections—which all adds up to thinking deeply while reading. So it's not just that by reading these connected texts students will learn new things, although they will. It is that by reading these texts, their ability to think deeply about a challenging topic will improve. At its best, this is what we mean by knowledge building.



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