

## Knowledge Building with a Model Lesson

### *Why build knowledge with model lessons?*

Lessons that exemplify high-quality literacy instruction are anchored in complex grade-level text. A high-leverage, evidence-based strategy to support students in accessing complex text is to anchor that text in a conceptually coherent set of resources that build needed knowledge and vocabulary. This work is particularly critical for students not yet reading at grade level.

### *What is included in a knowledge-building model lesson?*

Each knowledge-building model lesson includes a close-reading model lesson paired with a short set of knowledge-building resources and tasks. Educators can engage in knowledge building with any close-reading lesson, so long as this lesson is centered on a complex grade-level text and series of text-specific oral and/or written tasks.

The knowledge-building resources follow [similar guidance](#) for more extensive text sets, but on a much smaller scale. The selection of resources follow a quad text set model developed by Comprehensive Reading Solutions and based on the article by Sarah Lupo and colleagues, "[Building Background Knowledge Through Reading: Rethinking Text Sets.](#)" In a quad text set model, three to five texts are selected that help students develop knowledge critical to the complex text at the center of the close-reading lesson. Each of these supplemental texts is paired with a lightweight text-dependent task to support students' comprehension and knowledge-building work.

### *How might a teacher use a knowledge-building model lesson?*

Educators can use the knowledge-building resources in the order indicated in the "Quad Text Set with Text-Dependent Tasks" table to help build knowledge and vocabulary when engaging with a close-reading model lesson. Implementing these knowledge-building texts and tasks can be done in a variety of ways; they are lightweight enough to be done either during short portions of class or as homework. For example:

- If completed as homework, the partner portion of each task can be completed in class.
- If the whole class (or majority of students) has little to no knowledge of the topic under study, the text set could be used in whole-class instruction.
- If there are just a few students who have little to no knowledge of the topic of study, the text set could be used in small groups with teacher guidance.

This list is not meant to be exhaustive. Educators should use their judgement about student needs to determine how best to use the resources.

## Building Knowledge with a Close Reading Lesson “My Mother, the Scientist”

This set of resources is designed to build knowledge in support of the close-reading lesson on ["My Mother, the Scientist"](#) by Charles Hirshberg©, available on [achievethecore.org](http://achievethecore.org).

### I. Anchor Text

“My Mother, the Scientist” by Charles Hirshberg

Lexile: 1010L-1200L

Grade: 7

### II. Knowledge and Language Demands

- The language demands are relatively complex due to its use of academic language (e.g., ecstatic, emulate, transient) and domain-specific vocabulary related to the field of sciences (e.g., Geophysical, theoretical physics, aurora borealis, infrared radiation, magnetosphere). Some of the definitions for academic language are provided in the context of the text while the domain-specific language does not have such definitions within the text.
- The knowledge demands are somewhat complex; the text explores women’s struggle for professional equality in the 1950s and 1960s and the advanced nature of geophysical science.

### III. Quad Text Set with Text-Dependent Tasks

The table below details the knowledge-building resources to use in support of the close-reading lesson: what text to use, in what order to use it, details about the text, and a text-dependent task to support knowledge building. The resources are listed below in their suggested order for use. Task directions have been written in student-facing language and teacher notes added in italics when necessary. Links to full task descriptions have been provided when possible

Title	Resource Type	Lexile Level	Summary	Task
<a href="#">"Women in Science: Reflecting with Dr. Joan Feynman"</a>	Blog	1210-1400L	The story of Joan Feynman, a woman who inspired change.	<p><u>3 - 2 - 1</u></p> <p>Read the text. After reading the blog, jot responses to the following:</p> <ul style="list-style-type: none"> <li>• 3 new things you learned</li> <li>• 2 questions you have from the reading</li> <li>• 1 key term from the passage.</li> </ul> <p>With a partner, discuss your responses. Write a new 3 - 2 -</p>

				1 that reflects both of your best thinking.
<u>"Why Are There Still So Few Women in Science?"</u>	Article	1100L-1200L	This article describes the challenges that women in science face in their education and professional career.	<p><i>Teacher preparation: Since this article is long, divide into chunks depending on the size of the class. Assign each small group a chunk to read and share.</i></p> <p><u>Annotation of Text</u> and Ten-Word Summary First, read your assigned section of the text independently. As you read, annotate the text to identify the main idea and key details of your section.</p> <p>With your group, reread your assigned section of the text and share your annotations. As a group, determine the most important information from the section of the text.</p> <p>Then, create a single, ten-word (or fewer) sentence that summarizes the main idea and key details. Be prepared to share the sentence with the rest of the class.</p> <p>As each group shares their sentence, take notes so that you will have a summary of the reading.</p>
<u>"The Sun is always Shining on Joan Feynman"</u>	Blog with video	1010L-1200L	NASA blogger integrates the field of science into the story of Joan Feynman.	<p>Ten-Word Summary With a partner, read the blog.</p> <p>Then, write a ten-word summary of the blog.</p> <p>Share your summary with another partner group. Revise your summary as needed.</p>
<u>"My Mother, the Scientist"</u>	Anchor Text	1210L-1400L	Biographical story about scientist Joan Feynman and the challenges she faced in a male-dominated profession.	See the text and sequence of tasks provided in the close-reading model lesson <a href="#">here</a> .