TEACHING NOTES

Book title: Potato Clocks and Solar Cars: Renewable and Nonrenewable Energy

Series: Fusion: Physical Science

We all use energy every day. But can we get energy from a potato? How do people make energy? Which energy sources are renewable and which sources are nonrenewable? In Potato Clocks and Solar Cars, *readers will answer all these questions and more by exploring various sources of energy, such as fossil fuels, nuclear energy, solar energy, wind energy, hydroelectric energy, and biomass energy.*

Text Structure: Question and Answer

Explain that one way authors organize a text is to first ask a question and then provide the answer. Tell students to turn to page 10. Point out the question *Are there other ways to use our own energy?,* and have students read the paragraph beneath it to find the answer. *(We can use our energy by walking from place to place.)* Draw a two-column chart on the board. Label the left column *Question.* Label the right column *Answer.* Demonstrate how to record this question and its answer in the appropriate columns. As students continue to read, have them record questions and answers, as well as their own questions, in the graphic organizer reproducible. *(Question: Where does energy come from?(p. 4); answer: much of the world's energy comes from fossil fuels.)* After reading, guide students in finding resources they can use to answer any question the book did not address. Tell students that page 31 provides additional resources they might use to answer their questions.

Text Feature: Charts

Call students' attention to the chart on page 8. Explain that charts can be found in nonfiction texts to give readers a visual understanding of the content. Model to students how they can interact with the chart as they read by pointing out titles, pictures, arrows, and other symbols or words. Explain to students how these components are used in the chart. Ask: What does this chart show you? *(The chart compares the different aspects or features of fossil fuels.)* Tell students that this type of chart is repeated throughout the book. This way readers can learn about the same features of a number of different energy sources. Have students study these charts as they read the book. Then ask them to review the comprehensive chart on page 29 that compares all of the sources. Ask students to describe how this chart is different from the smaller charts throughout the book. *(This chart is organized differently. The energy sources are listed in the left column instead of the features. The features are listed in the top row instead of "yes" or "no.")*

Comprehension Strategy: Visualizing

Explain that when readers visualize as they read, they are better able to connect with the text, draw conclusions, and recall what they read. Read aloud the text on page 22, and model describing your mental picture.

> ***Think Aloud:***
> "When the text says, *We can also get energy from falling water,* I form a mental image of what that looks like. In my mental picture, I see a powerful river rushing toward a waterfall. I can see how the falling water passes through the dam to make electricity."

Have students turn to page 24 and read the first paragraph in the section "Ocean Energy." Ask students to turn to a partner and describe the mental pictures they form as they read this text. Then ask: What words in the text helped you form that picture? As students suggest key words, write them on the board.

Word Study: Prefix *non-*

Have students locate the word *nonrenewable* on page 8. Remind students that a prefix or suffix attaches to a base word and changes its meaning. Point out to students that the base word for *nonrenewable* is *renew.* Ask students to identify which prefix has been added to the base word. *(non-)* Explain that the prefix *non-* means "not." Tell students that we now know that *nonrenewable* means "not renewable." Then ask students to name other examples of words that are formed by adding the prefix *non-.* Record their examples on the board, and discuss how adding *non-* changes the meanings of the base words.

Writing and Responding: List

Have students make a list of the different kinds of renewable and nonrenewable energy sources from the text. Then have students list which sources of energy are clean and which sources are safe *(Clean sources of energy include people energy, nuclear energy, solar energy, wind energy, hydroelectric energy, tidal energy, and geothermal energy; safe sources of energy include fossil fuels, people energy, nuclear energy, solar energy, wind energy, biomass energy, hydroelectric energy, tidal energy, and geothermal energy)*. Encourage students to think about these sources of energy and which sources they would prefer to use in their community.

Indicates a graphic organizer is linked to this activity.

NAME