

## TEACHING NOTES

**Book title:** Shattering Earthquakes

**Series:** Awesome Forces of Nature

*What causes earthquakes? What is a fault line? How are aftershocks different than tremors? Shattering Earthquakes gives a thorough overview of what happens during earthquakes and examines what can be done to prevent, prepare for, and respond to them. The book also provides case studies of damaging earthquakes that occurred in Mexico City, San Francisco, Iran, and the United Kingdom.*



### Text Structure: Description

Have students turn to pages 4 and 5. Discuss how the descriptive language on these pages helps the reader to visualize and understand earthquakes. On the board, draw a concept web similar to the reproducible graphic organizer. Label the center *Earthquakes*. As you read the text aloud, encourage students to point out words and phrases that help students better understand what an earthquake is like. Point out that many of these words and phrases appeal to one or more of the five senses. After reading, write one example of descriptive language in an outer circle (*rumbling sound*). Then, depending on your students' abilities, have them complete the web either individually, in small groups, or as a whole class activity.



### Text Feature: Photographs and Captions

Have students turn to page 7 to view the photograph and read the caption. Ask students to describe what they see in the photograph (*It looks as if there's a crack in the land*). Explain to students that a photograph can get us thinking about a subject. Model for students what one might learn from the photograph and caption.

**Think Aloud:**

"This photograph helps me to visualize how the movement of Earth's plates creates a fault line. It looks as if two parts of the land have rubbed against each other. Also, I can tell this fault continues for miles, further than can be captured by a photograph."

As students continue to read, remind them to view the photographs and read the captions to better understand the text.



### Comprehension Strategy: Questioning

Remind students that active readers ask themselves questions while reading. Asking questions clarifies information and gives readers a purpose for reading on. Ask students to read the section titled *What Happens in an Earthquake* on page 12. Then model how to ask relevant questions.

**Think Aloud:**

"The text says that earthquakes usually do the most damage at the epicenter. What is an epicenter again? I better look that term up. The text also describes damage to buildings, power lines, gas pipes, roads, and bridges. I wonder where the safest place might be for people who are caught in an earthquake? Asking these questions helps me understand what I read. Now I will read on to see if the book answers my questions."



### Word Study: Word Parts

Write the word *seismograph* (p. 22) on the board. Tell students that looking at a word's parts can help them to decipher its meaning. Explain that the word part *-graph* comes from the Greek language and means "drawn or written." The word part *seismo-* comes from the Greek word *seismos* and means "earthquake." Then ask students to guess the meaning of *seismograph* from its word parts. Confirm the word's definition in the glossary on p. 30. As an extension, direct students to use this technique to determine the meaning of the words *seismology* and *seismologist*. Explain that the suffix *-logy* refers to a field of study and the suffix *-ologist* describes a person who studies something. Have students use what they know about each word part to determine the meaning of the words.



### Writing and Responding: Poster

Have students reread pages 6 and 7 and use the information to create a poster that explains what causes earthquakes. The poster should include graphics and text. If possible, have photographs and books available with more diagrams of plate tectonics. Encourage students to work together to locate information and illustrate their posters.

 Indicates a graphic organizer is linked to this activity.

NAME \_\_\_\_\_

