NAME DATE CLASS

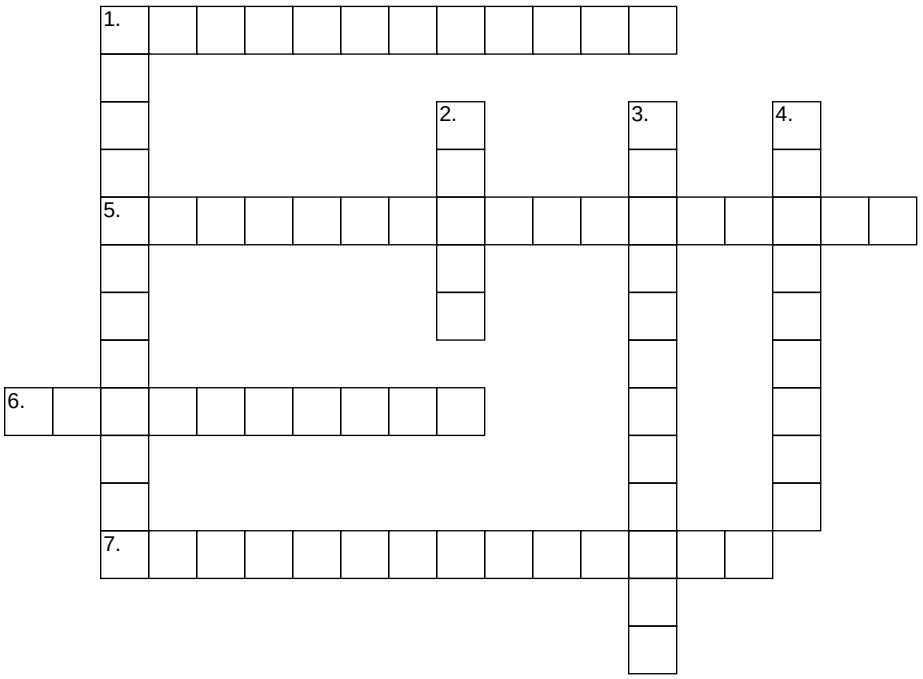
Chapter 9

STUDY GUIDE

Text Pages 241–251

Earthquake Information

Solve the crossword puzzle by using the clues provided.



Across

1. These move by giving particles a circular motion and are generated by energy that travels outward from the epicenter. (2 words)

5. This is the name for the boundary between Earth's crust and the upper mantle. (2 words)

6. Area where no seismic waves are detected (2 words)

7. These move through Earth by causing particles to move at right angles to the waves' direction. (2 words)

Down

1. These are forms of energy that are produced at an earthquake's point of origin and travel outward. (2 words)

2. This is the point in Earth's interior where the energy of an earthquake is released.

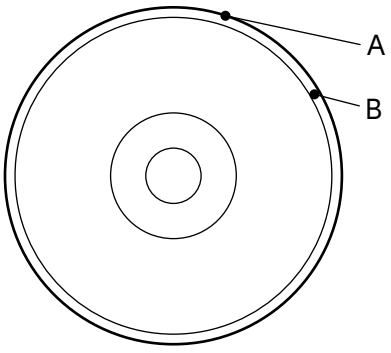
3. These cause particles to move back and forth in the same direction the waves are moving. (2 words)

4. This is the point on Earth's surface directly above an earthquake's point of origin.

Identify points A *and* B *on the illustration. One is the epicenter of an earthquake, and one is the focus.*

A. _____

B. _____



NAME DATE CLASS

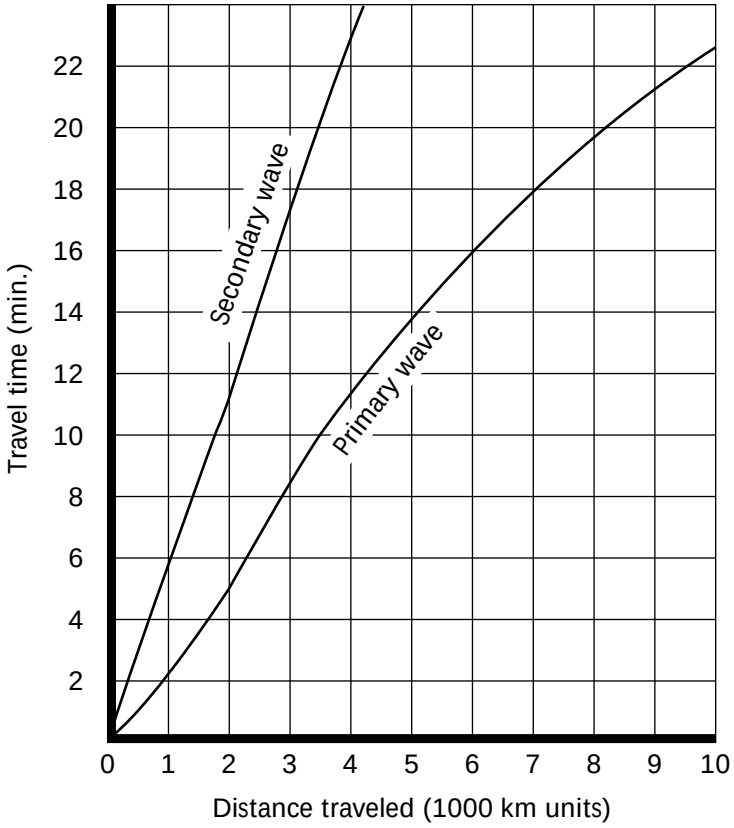
Chapter 9

REINFORCEMENT

Text Pages 241–251

Earthquake Information

The graph below shows travel time in minutes and distance traveled for primary and secondary waves. Primary and secondary waves start at the same time but do not travel at the same speed. Study the graph. Use the graph to help answer the questions that follow.



1. How long does it take for a primary wave to travel 2000 kilometers? _____

2. How long does it take for a secondary wave to travel 2000 kilometers? _____

3. How far does a secondary wave travel in 10 minutes? _____

4. How far does a primary wave travel in 10 minutes? _____

5. What happens to the time difference between primary and secondary waves as the distance traveled gets longer? _____

_____

6. Suppose a primary and secondary wave both travel a distance of 4000 kilometers before they are picked up by a seismograph. Which wave will arrive first? _____

7. How much time lag at 4000 km will there be between these two waves? _____

8. Suppose both a primary and secondary wave start together and travel for 5 minutes. Which wave will travel farther? _____