

# Directed Reading Chapter 8 Section 1

## Section: What Are Earthquakes?

1. What is seismology?

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\_\_\_\_\_

2. The scientists who study earthquakes are called \_\_\_\_\_

### WHERE DO EARTHQUAKES OCCUR?

3. Where do most earthquakes take place?

\_\_\_\_\_

\_\_\_\_\_

4. Giant pieces of Earth's thin, outermost layer are called

\_\_\_\_\_

5. When tectonic plates move and slip past each other, they cause

\_\_\_\_\_ in Earth's crust.

6. Why do earthquakes occur along faults?

\_\_\_\_\_

\_\_\_\_\_

### WHAT CAUSES EARTHQUAKES?

Match the correct definition with the correct term. Write the letter in the space provided.

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|---|------------------------|
| _____ 7. rock deformation that is like a stretched rubber band and leads to earthquakes         | a. deformation         |
| _____ 8. change in the shape of rocks in response to stress                                     | b. plastic deformation |
| _____ 9. sudden return of elastically deformed rock to its undeformed shape                     | c. elastic deformation |
| _____ 10. rock deformation that is like a piece of molded clay and does not lead to earthquakes | d. elastic rebound     |

Directed Reading Chapter 8 Section 1 *continued*

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11. What causes rock deformation?

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12. What occurs when more pressure is applied to a rock than it can withstand?

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13. During elastic rebound, energy is released that travels as seismic waves. What do the seismic waves cause?

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**FAULTS AT TECTONIC PLATE BOUNDARIES**

- \_\_\_\_\_ 14. Places where a large number of faults are located are
- a. convergent zones.
  - b. divergent zones.
  - c. earthquake zones.
  - d. boundary zones.

**Match the correct definition with the correct term. Write the letter in the space provided.**

- |   |                      |
|---|----------------------|
| _____ 15. occurs where two plates slip past each other      | a. divergent motion  |
| _____ 16. occurs where two plates push together             | b. convergent motion |
| _____ 17. occurs where two plates pull away from each other | c. transform motion  |

18. Where do most earthquakes happen?

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**Directed Reading Chapter 8 Section 1 *continued***

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31. How are surface waves different from body waves?

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**Match the correct definition with the correct term. Write the letter in the space provided.**

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| _____ 32. wave of energy that travels through Earth, away from an earthquake in all directions | a. S wave       |
| _____ 33. seismic wave that causes particles of rock to move in a back-and-forth direction     | b. seismic wave |
| _____ 34. seismic wave that causes particles of rock to move in a side-to-side direction       | c. P wave       |