

## Chapter Review

# Earthquakes

### Part A. Vocabulary Review

**Directions:** After each statement is a bold-faced term that has been scrambled. Complete each statement by unscrambling the term and writing it on the line provided.

1. When stress causes rocks to break, vibrations called \_\_\_\_\_ are produced.  
**eequaraskht**
2. When tension forces pull rocks apart, a \_\_\_\_\_ occurs. **manlor lauft**
3. \_\_\_\_\_ waves cause particles in rocks to move at right angles to the direction of the waves. **sandcorey**
4. The \_\_\_\_\_ of an earthquake is the point of Earth's surface above the focus.  
**rentpiece**
5. The measure of energy released by an earthquake is the earthquake's \_\_\_\_\_.  
**gaindumet**
6. A scientist who studies earthquakes is a \_\_\_\_\_. **moistgiesosl**
7. At a \_\_\_\_\_, the rocks above the fault surface are forced up and over the rocks below the fault surface. **servere taluf**
8. The \_\_\_\_\_ of an earthquake is the point in Earth's interior where energy is released. **scouf**
9. By studying seismic wave information, a scientist discovered the boundary between Earth's crust and its upper mantle, which is called the Moho \_\_\_\_\_.  
**dustointinyic**
10. A \_\_\_\_\_ is a seismic sea wave that can cause great devastation. **natsium**
11. Most destruction in an earthquake is caused by \_\_\_\_\_ waves. **farceus**
12. An instrument called a \_\_\_\_\_ is used to record seismic waves from earthquakes. **gameshipors**
13. A fault between two plates that are moving sideways past each other is called a \_\_\_\_\_ fault. **kirest-plis**
14. \_\_\_\_\_ waves cause particles in rocks to move back and forth in the same direction as the waves. **marryip**
15. Earthquakes generate energy waves called \_\_\_\_\_. **cimesis savew**
16. Once their elastic limits are reached, rocks break and move along surfaces called \_\_\_\_\_. **staful**

**Chapter Review (continued)**

17. The \_\_\_\_\_ is an area where no seismic waves are detected.  
washod enoz
18. Seismologists use the \_\_\_\_\_ to describe the magnitude of earthquakes. itcerhr elacs
19. A reverse fault is often found at \_\_\_\_\_ plate boundaries. gonerentcov
20. The Modified Mercalli scale describes the \_\_\_\_\_ of an earthquake using the amount of damage in a specific location. itneisnyt

**Part B. Concept Review**

**Directions:** Name the type of stress depicted in each figure and the kind of fault that results from the stress.

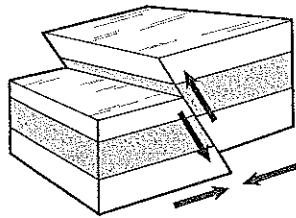


Figure 1

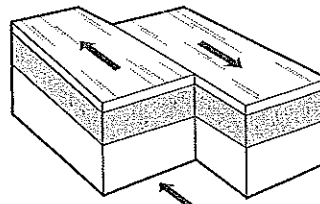


Figure 2

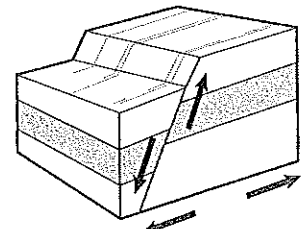


Figure 3

Stress

Fault

- |             |          |          |
|-------------|----------|----------|
| 1. Figure 1 | a. _____ | b. _____ |
| 2. Figure 2 | a. _____ | b. _____ |
| 3. Figure 3 | a. _____ | b. _____ |

**Directions:** Answer the following questions on the lines provided.

4. How have seismic wave studies helped scientists determine the structure of Earth's interior?

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5. List two ways you can make your home safer during an earthquake.

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## Chapter Test (continued)

### Skill: Concept Mapping

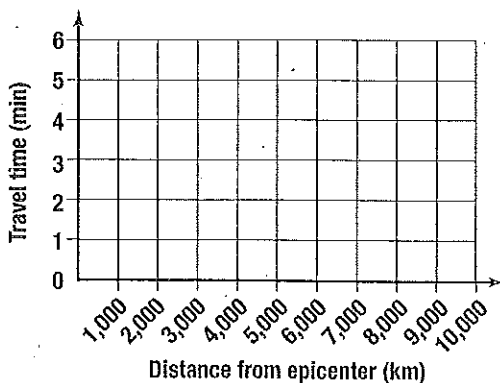
**Directions:** The following sentences appear in a concept map about tsunamis. Number the following sentences 1 to 3 in the order in which they would occur.

- \_\_\_\_\_ 7. The water along the shoreline moves rapidly toward the sea, exposing a large portion that is normally underwater.
- \_\_\_\_\_ 8. A tsunami crashes on shore, forming a towering crest up to 30 m high.
- \_\_\_\_\_ 9. An earthquake causes a very long ocean wave over its focus.

### Skill: Making and Using Graphs

**Directions:** The table below shows distances and travel times for primary and secondary seismic waves. Use the data in the table to graph the travel times and distances on the graph. Then use the graph to answer the questions.

Distance	Time (minutes and seconds)	
	Primary Wave	Secondary Wave
1,000 km	0 min 40 s	1 min 20 s
2,000 km	1 min 15 s	2 min 10 s
4,000 km	2 min 0 s	3 min 25 s
6,000 km	2 min 25 s	4 min 10 s
8,000 km	2 min 40 s	4 min 45 s
10,000 km	2 min 45 s	5 min 10 s



10. What is the difference between the travel times for primary and secondary waves  
 a. at 1,500 km? \_\_\_\_\_ b. At 7,500 km? \_\_\_\_\_
11. What happens to the difference in travel times as the distances increase?  
 \_\_\_\_\_  
 \_\_\_\_\_

**Chapter Test (continued)****III. Applying Concepts**

**Directions:** Match the following terms with the items that are most closely related to each description.

- |                                  |  |
|----------------------------------|--|
| _____ 1. liquefaction            | a. buildings with flexible, circular moorings        |
| _____ 2. seismic-safe structures | b. an intensity-VII earthquake                       |
| _____ 3. modified Mercalli scale | c. stops secondary waves                             |
| _____ 4. Richter scale           | d. a magnitude-5 earthquake                          |
| _____ 5. liquid outer core       | e. buildings collapse as soil beneath becomes liquid |

**IV. Writing Skills**

**Directions:** Answer the following questions on the lines provided.

1. How do seismologists locate the epicenter of an earthquake?

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2. Why would securing gas appliances help make your home more earthquake-safe?

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3. How were scientists able to use seismic information to develop a model of Earth's interior?

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