

# Brainpop—Earthquakes

Name:

Period:

Watch the Brainpop on earthquakes, then answer the questions below.

\_\_\_\_\_ 1. Place the following layers in sequence from outermost to innermost: core, lithosphere, mantle

- a. lithosphere - mantle - core
- b. mantle - core - lithosphere
- c. core - mantle - lithosphere
- d. lithosphere - core - mantle

\_\_\_\_\_ 2. Which part of Earth is broken up into tectonic plates?

- a. core
- b. lithosphere
- c. mantle

\_\_\_\_\_ 3. Which of the following is a true statement about tectonic plates?

- a. all tectonic plates are located at Earth's core
- b. they're located approximately 10 meters below the surface of the ocean
- c. they're located in the molten layer beneath Earth's crust
- d. all of Earth's landmass rests on tectonic plates

\_\_\_\_\_ 4. Place the following in sequence from highest to lowest temperature: lithosphere, mantle, core

- a. core - lithosphere - mantle
- b. mantle - core - lithosphere
- c. core - mantle - lithosphere
- d. lithosphere - core - mantle

\_\_\_\_\_ 5. What can you infer from the fact that tectonic plates are always moving around?

- a. new volcanoes form every few years
- b. the shape and location of the continents have changed over time
- c. tectonic activity probably caused the last ice age
- d. earthquakes will continue long after hurricanes and tsunamis have stopped

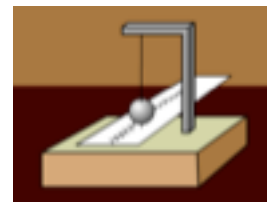
\_\_\_\_\_ 6. What's the main cause of most earthquakes?

- a. pressure from within Earth's crust
- b. hurricanes
- c. human activity
- d. changes in temperature within Earth's mantle

\_\_\_\_\_ 7. Why are surface waves more destructive to buildings than the initial seismic wave in an earthquake?

- a. it creates more sustained motion on the surface
- b. it reaches the surface faster
- c. it reaches deeper below the surface
- d. it travels farther from the epicenter

\_\_\_\_\_ 8. What is the name of the piece of equipment geologists use to measure the strength of an earthquake?



- a. a Richter scale
- b. a barometer
- c. an electrograph
- d. a seismograph

\_\_\_\_\_ 9. In the phrase, "The Richter scale measures the potency and duration of seismic events," what does "potency" mean?

- a. speed
- b. strength
- c. type
- d. time

\_\_\_\_\_ 10. Which city is most likely to experience a strong earthquake?

- a. Los Angeles
- b. Chicago
- c. New York
- d. Miami

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Complete the sentences below by filling in the blanks with the correct words. *Not all of the words from the word bank will be used.*

boundary    core    crust    earthquake    fault    left    lithosphere    location  
 mantle    pressure    Richter scale    right    seismograph    seismic    shape  
 shift    surface    tectonic    volcano

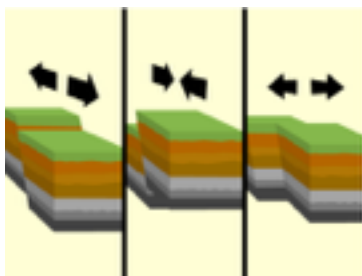
1. Earth's  \_\_\_\_\_ is broken up into about 12 major tectonic plates.
2. The active boundary between plates is a .
3. Rocks crack and shift when \_\_\_\_\_  from moving plates becomes too great.
4. A  \_\_\_\_\_ measures and records earthquakes.
5. \_\_\_\_\_  \_\_\_\_\_ waves are the slowest and most damaging, capable of crumbling buildings.
6. \_\_\_\_\_  \_\_\_\_\_ waves are detected first because they move so fast.
7. S waves move at  \_\_\_\_\_ angles to the direction of movement.

Now write all of the letters from the boxes in the following spaces (they do not need to spell anything yet).

\_\_\_\_\_

Unscramble these letters to complete the sentence below:

A kind of scale used to measure the amount of seismic energy released by an earthquake is called a \_\_\_\_\_ scale.



Look at the drawing to the left from the Brainpop. Write a caption for this diagram that explains what the picture is about.