

## NOTES HANDOUT: Earthquakes

name: \_\_\_\_\_

1. Most earthquakes happen along plate boundaries. What causes earthquakes in these areas?

**“Stick and Slip”** - As plates move past each other they get \_\_\_\_\_. Movement (an earthquake) happens when \_\_\_\_\_

2. Explain what the “focus” and “epicenter” of an earthquake are.

**Focus:** \_\_\_\_\_

**Epicenter:** \_\_\_\_\_

3. Why do earthquakes along the San Andreas tend to be shallow (focus is near the surface), whereas those along the west coast of South America are often very deep?

The San Andreas is a \_\_\_\_\_ plate boundary.

There is no \_\_\_\_\_.

4. What are the forces that cause the Earth to move?

A. \_\_\_\_\_ in the mantle + \_\_\_\_\_ and \_\_\_\_\_ cause \_\_\_\_\_ or \_\_\_\_\_

B. \_\_\_\_\_ : The \_\_\_\_\_  
\_\_\_\_\_

5. Earthquakes send out seismic waves. What is a wave? Give several examples.

\_\_\_\_\_  
\_\_\_\_\_

6. List and describe the three basic types of earthquake waves.

**A. Primary (P-wave)**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## B. Secondary (S-wave)

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## C. Surface Wave

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7. Explain what each of the following is.

**Seismometer (electronic; modern) /Seismograph (mechanical; older)**

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**Seismogram**

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8. What is meant by the word “magnitude” (as it is used with earthquakes) and how is it measured?

**Magnitude** is a measure of \_\_\_\_\_

**Richter Scale** (no longer used by scientists) was based on two things: (seismographic data)

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The \_\_\_\_\_ **Scale** (this is the one used today) is also based on seismographic data **AND** . . .

- 1) amount of movement along a fault: How far did it move?
- 2) area of rupture: How much land was moved?
- 3) strength of the rock that slipped: How rigid was the rock that moved?

**Assignment for Honors Students:** Go to Benson’s website @ [www.bengalfrosh.com](http://www.bengalfrosh.com), select Unit 7. Scroll down and select the link titled **Virtual Earthquake Exercise**. Follow the instructions. You do not have to print out anything, nor do you need send an email to Benson. It will not be graded, but it will be covered on the next test.