

# Ch 19 Earthquakes

## Section 1 Guided Reading

*Scan Section 1 of your text. Write two questions that come to mind from reading the headings and figure captions.*

1. \_\_\_\_\_

2. \_\_\_\_\_

*Use your text to define the following terms*

3. fracture \_\_\_\_\_

\_\_\_\_\_

4. stress \_\_\_\_\_

\_\_\_\_\_

5. strain \_\_\_\_\_

\_\_\_\_\_

6. elastic deformation \_\_\_\_\_

\_\_\_\_\_

7. plastic deformation \_\_\_\_\_

\_\_\_\_\_

8. fault \_\_\_\_\_

\_\_\_\_\_

9. seismic wave \_\_\_\_\_

\_\_\_\_\_

10. primary wave \_\_\_\_\_

\_\_\_\_\_

11. secondary wave \_\_\_\_\_

\_\_\_\_\_

12. focus \_\_\_\_\_

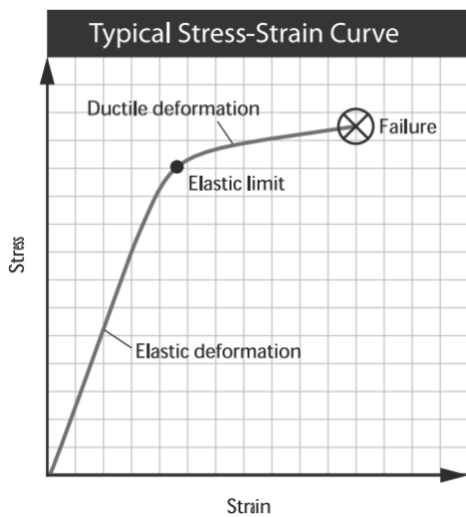
\_\_\_\_\_

13. epicenter \_\_\_\_\_

**Identify** the three kinds of stress that can act on Earth's rocks. Explain how each type of stress affects rocks.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

**Describe** what happens to a rubber band as it is stretched at each point or segment on the stress-strain curve.



**Elastic deformation—**

**Elastic limit—**

**Plastic deformation—**

**Failure—**

4. According to the graph, how does strain respond to an increase in stress?

\_\_\_\_\_

\_\_\_\_\_

5. How does elastic deformation affect a material? Is the effect reversible?

\_\_\_\_\_

\_\_\_\_\_

6. What happens to a material during ductile deformation?

\_\_\_\_\_

\_\_\_\_\_

Compare the different types of faults, and their characteristics by completing the table below.

<b>Type of Fault</b>	<b>Reverse fault</b>		
<b>Cause</b>		<b>horizontal tension</b>	
<b>Movement along fault</b>			

Differentiate between P-waves, S-waves, surface waves, both P- and S-waves, both S- and surface waves, or all three waves. Place each of the following characteristic in the Venn diagram below.

- are body waves
- move up and down
- are seismic waves
- pass through Earth's interior
- cause rocks to move at right angles to the wave
- squeeze and pull rocks in the same direction as the waves
- move back and forth
- travel along Earth's surface
- move in two directions as they pass through rock

