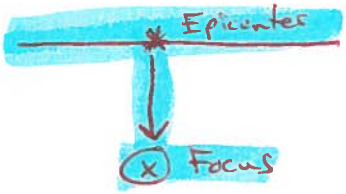
Name What happens when the focus or magnitude changes

Features Of Earthquakes (p. 304 – 311)



I. Seismic Waves

p. 304

1. Define the term seismic waves.

Seismic Waves – vibrations that travel through Earth carrying the energy released during an earthquake

2. Define the term focus.

Focus – point at which a rock under stress breaks + triggers an earthquake

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* SLINKY * DEMO

3. Match the seismic wave with the correct definition.

1. A. - Primary Waves
2. B. - Secondary Waves
3. C. - Surface Waves

A. Move back & forth in same direction of the wave

B. Move at right angles to the direction of wave

C. Move in a rolling and swaying motion

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4. Define the term epicenter.

Epicenter – point on the surface directly above the focus (Bobber in water)

II. Locating An Epicenter

p. 306

1. Rate the seismic waves according to velocity. (1 = Fastest; 3 = Slowest)

1 - Primary Waves (travels through solids, liquids, gases / like a sound wave)

2 - Secondary Waves (travels through solids / 2 X slower / like a light wave)

3 - Surface Waves (slowest / waves on surface)

2. Define the term seismograph.

Seismograph – device that records the ground movements caused by seismic waves

3. How does a seismograph record seismic wave activity?

p. 307

1. Consists of a rotating drum of paper + pendulum pen
2. Drum vibrates + stationary pendulum pen records event

Name _____

p. 308

4. **The closer an earthquake, the ~~greater~~ less the time between the arrival of the P-Waves and the arrival of the S-Waves.**

Circle One : True **False**

5. **Geologists use circles to find the epicenter of an earthquake.**

1. What does the center of each circle represent.

A particular seismograph's location

2. What does the radius of each circle represent.

Distance from seismograph to the epicenter

III. Basic Structure Of Earth

p. 309

1. **Complete the following table.**

Layer Of Earth	Types Of Matter	Minerals Present	Thickness
Inner Core	Dense Solid	Nickel, Iron	700 miles (1,216 km)
Outer Core	Liquid	Nickel, Iron	1,400 miles (2,220 km)
Lower Mantle (Asthenosphere)	Weak Rock (Taffy-like)	Silicon, Oxygen, Magnesium, Aluminum, Iron	1,300 miles (2,225 km)
Upper Mantle (Lithosphere)	Solid Rock		400 miles (660 km)
Crust	Solid, Liquid, Gas	Mainly Silicon + Oxygen	3 – 40 miles (5 – 60 km)

Produces magnetic field of Earth.

p. 310

2. **Define the term shadow zone.**

Shadow Zone – area of Earth between 105° and 140° from the earthquake focus where no waves are detected

3. **What happens when P-Waves and S-Waves come into contact with a liquid?**

P-Waves = Slowed + bent (not stopped)

S-Waves = Stop (not transmitted)

4. **Define the term Mohorovicic discontinuity.**

Moho Discontinuity - division between crust + upper mantle

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Seismic waves speed up as they pass through this region.