

212 Earthquakes Vocab

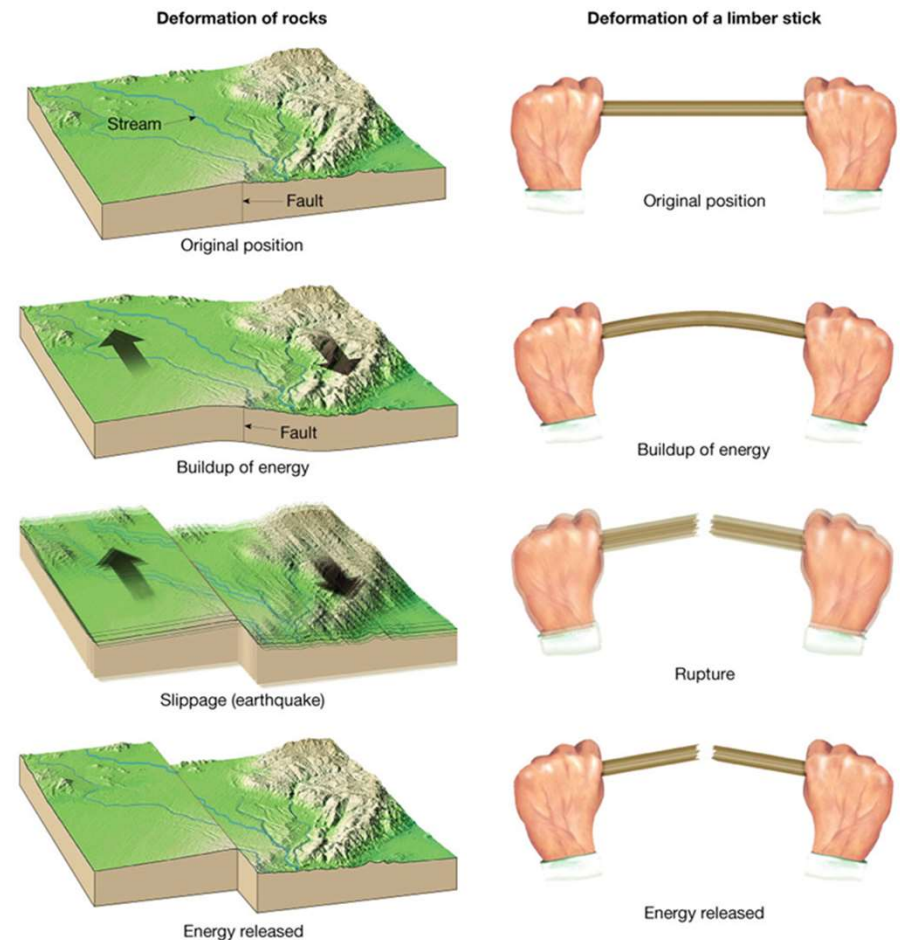
Key Term	Definition	Definition in your own words	Sketch of Key Term

Key Terms

- Earthquake
- Elastic rebound theory
- Aftershock
- Focus
- Epicenter
- Seismic Wave
- Seismic Magnitude
- Seismograph
- P-wave
- S-wave

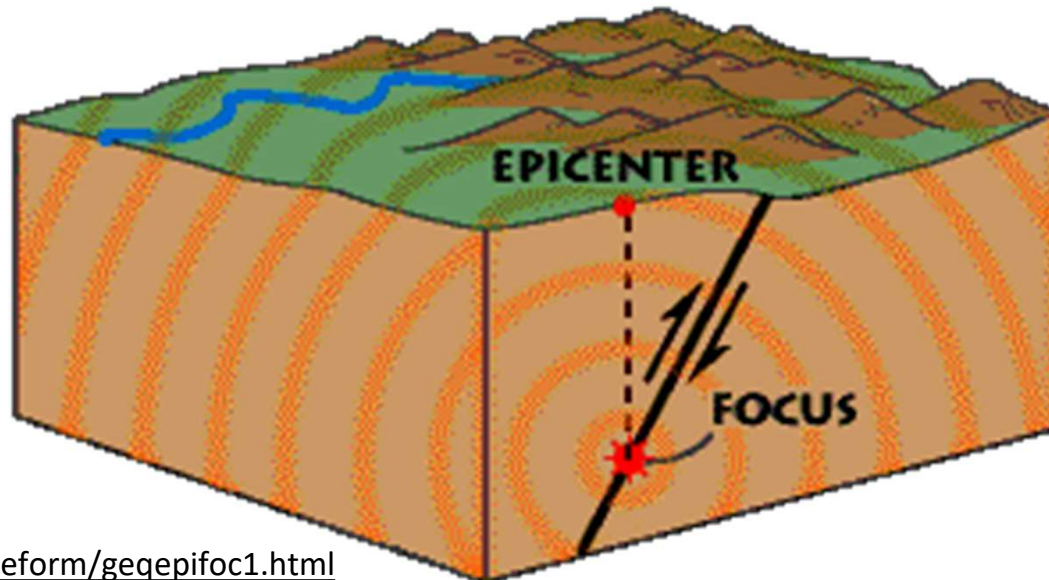
Earthquakes

- An **EARTHQUAKE** is the shaking of the surface of the Earth
- Earthquakes happen anywhere the crust is suddenly shifting and moving...**Elastic Rebound**
- An **aftershock** is a smaller quake as the crust adjusts to the main quake and shock



Earthquake Epicenter and Focus

- **Epicenter**-The point on the Earth's surface located directly above the **focus** of an earthquake.
- **Focus**-The location where the earthquake begins. The ground ruptures at this spot, then seismic waves radiate outward in all directions.



<https://geomaps.wr.usgs.gov/parks/deform/geqepifoc1.html>

What are Seismic Waves?

- Seismic waves are the vibrations from earthquakes that travel through the Earth
 - They are the waves of energy suddenly created by **rock fracture** in the earth or an explosion.
 - They are recorded on seismographs

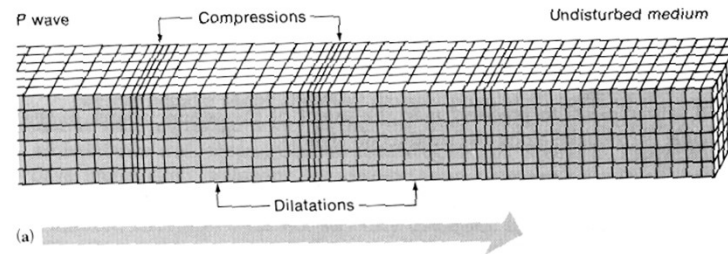
Types of Seismic Waves

- Body waves- P waves and S Waves
 - Travel through the earth's interior
- Surface Waves
 - Travel along the earth's surface - similar to ocean waves

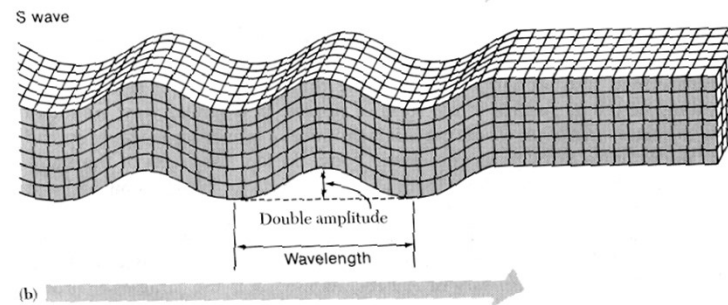
Seismic Waves

Body waves

P

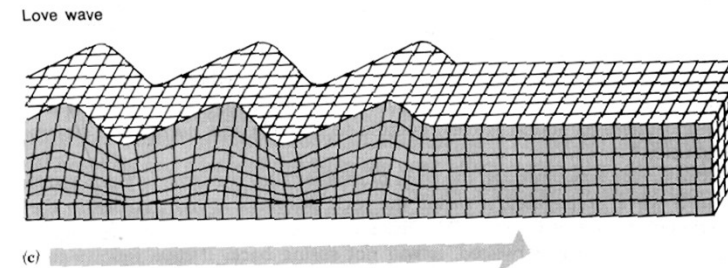


S



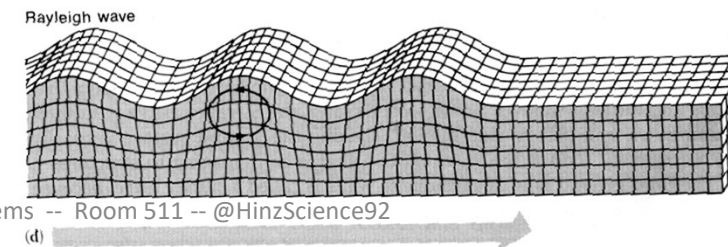
Surface Waves

Love



“Ground Roll”

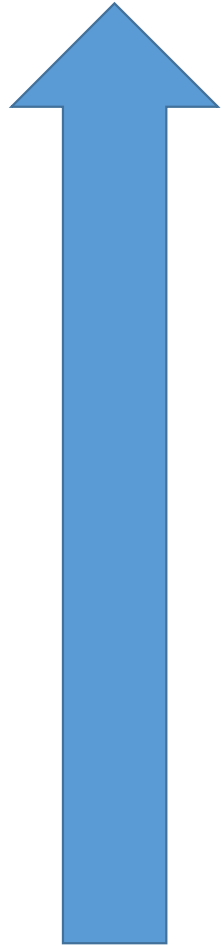
Rayleigh



[click here to watch video](#)

Mr. Hinz -- Earth Systems -- Room 511 -- @HinzScience92

Fastest

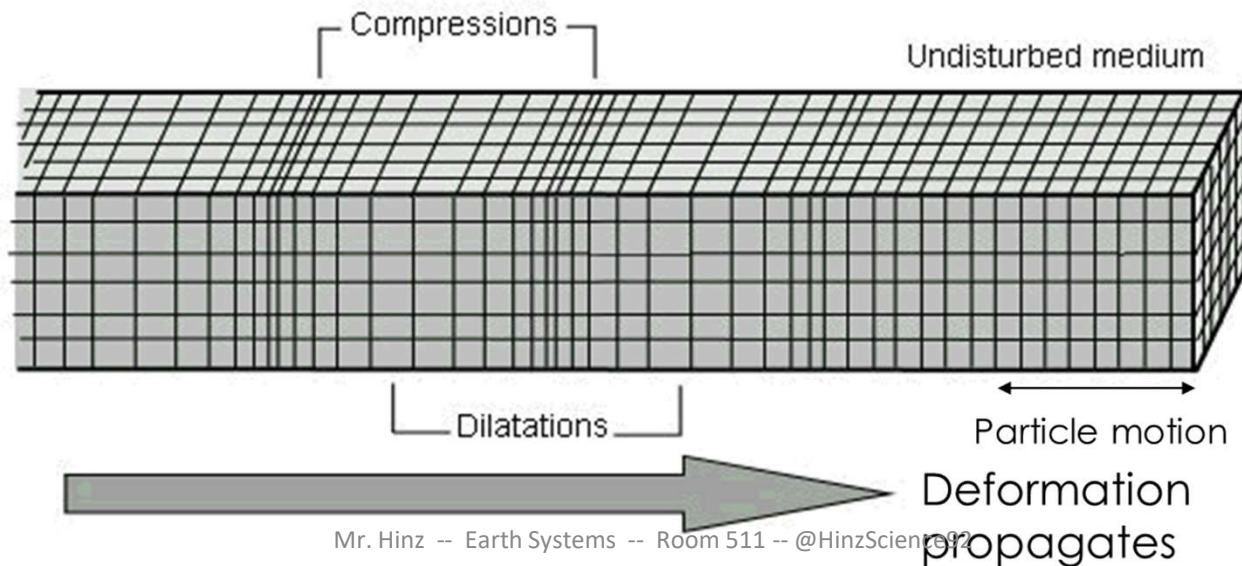


Slowest

Primary or compressional (P) waves (Body Wave)

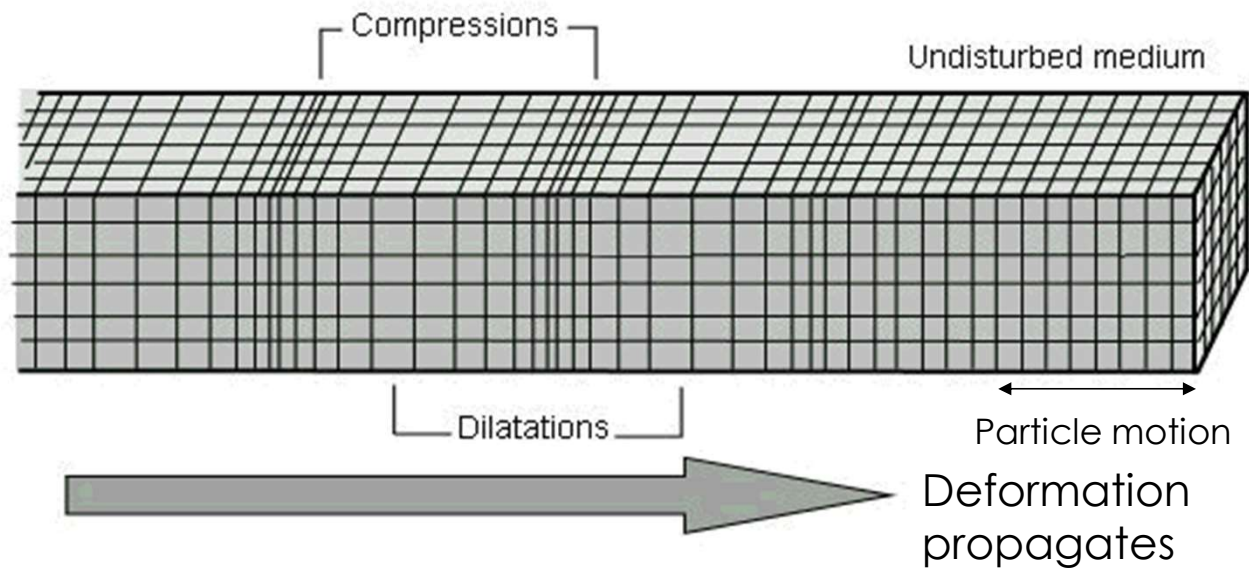
- This is the fastest kind of seismic wave. Highest velocity (6 km/sec in the crust)
- It can move through solid rock and fluids, (e.g. water or liquid layers of Earth)
- It pushes and pulls the rock it moves through just like sound waves push and pull the air.

P Wave



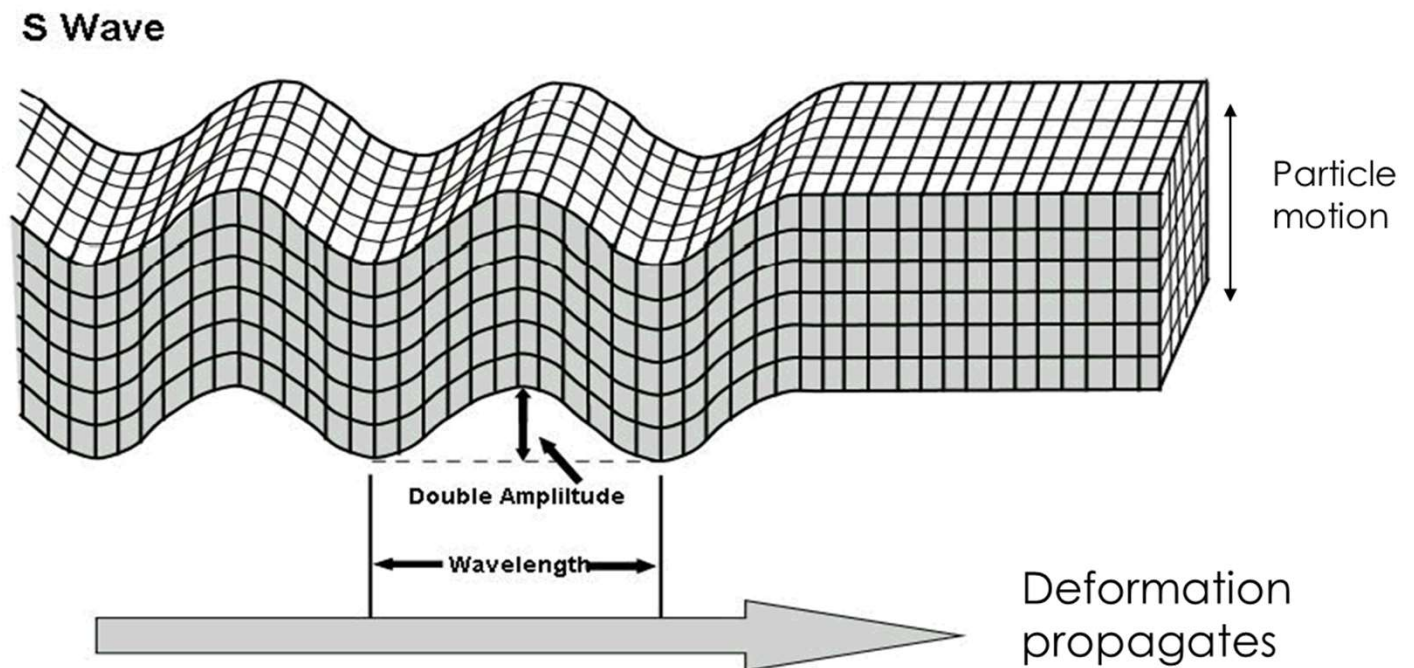
P-Wave

P Wave



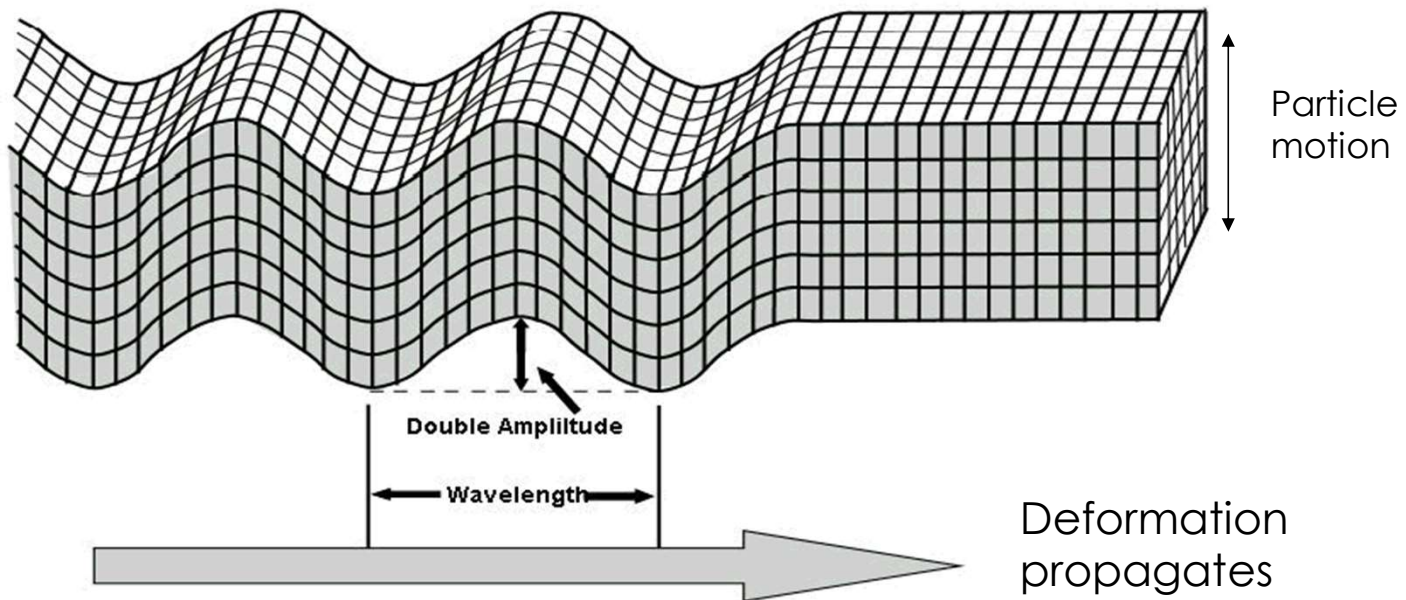
Secondary or shear (S) waves (S Wave)

- The second wave you feel in an earthquake.
- Slower than a P wave and can only move through solid rock. (3.6 km/sec in the crust)
- This wave moves rock up and down, or side-to-side.



S-Wave

S Wave



What materials can the waves travel through?

- P-waves- Travel through Practically anything!
- S-waves- Travel through SOLIDS only!

Where does an earthquake start?

- Focus-Underground origin of Earthquake
- Epicenter-Point on the SURFACE above focus

How do we measure the power of an earthquake?

- **Magnitude:** the power or energy produced from an earthquake
- **Richter Scale:** a scale between 0 and 9 that rates the magnitude of an earthquake. 9.0 is the LARGEST
- **Mercalli Scale:** a scale between 1 and 12 that measures the intensity of the earthquake. 12 is the most damage.