**Assignment #2 EARTHQUAKE FILL IN NOTES FOR WAVES NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. What is a wave?
2. Draw and Label Picture of a WAVE.

wavelength

amplitude

crest (ridge)

trough

frequency

1. List the 7 types of waves given.
2. Seismic Wave Information:

* Waves that travel \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Classifications:
  + Body Waves
    - \_\_\_\_\_\_\_\_\_\_\_\_, travel through the interior of the Earth
    - \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (primary)
    - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(secondary)
  + Surface Waves
    - \_\_\_\_\_\_\_\_\_\_\_\_\_, travel along the surface of the Earth
    - Cause more \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
    - Similar to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
    - \_\_\_\_\_\_\_\_\_ waves
    - \_\_\_\_\_\_\_\_\_ waves

1. Primary Waves:

* \_\_\_\_\_\_\_\_\_\_\_\_\_ cause the ground to have vibrations along or \_\_\_\_\_\_\_\_\_\_\_ to the direction of the wave
  + \_\_\_\_\_\_\_\_\_The first type of seismic wave to arrive at a point away from the epicenter
  + Can travel through \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Typical speeds:
    - In air: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
    - In water: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
    - In granite: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Secondary Waves:

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_ cause the motion of the ground to be perpendicular to the direction of the wave
  + Can only travel through \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Speed is about \_\_\_\_\_\_\_\_\_\_\_ of a P-wave in a material
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ at a point away from the epicenter

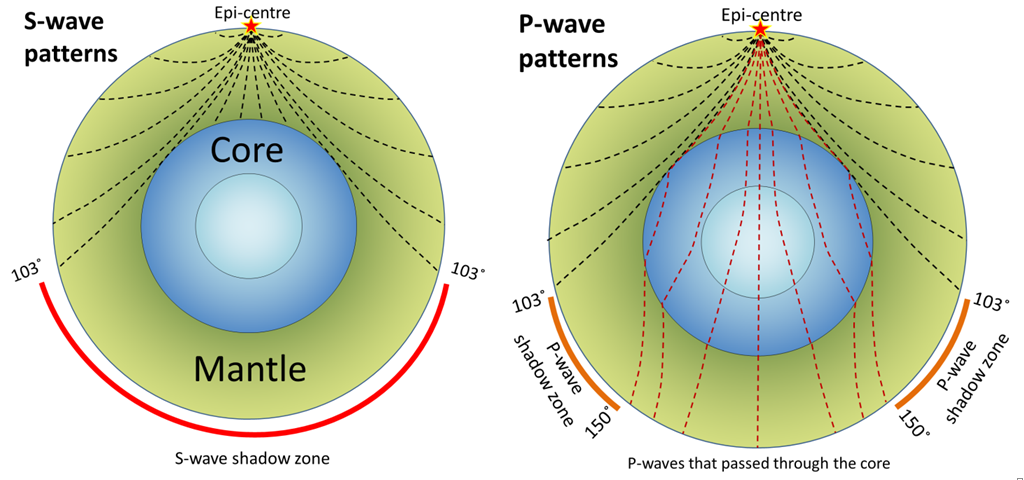
1. Love Waves:

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cause \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ shifting of the Earth during earthquakes
  + Move \_\_\_\_\_\_\_\_ than P-waves and S-waves, but \_\_\_\_\_\_ than Rayleigh waves
  + Named for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, the man who predicted this type of seismic wave in 1911

1. Rayleigh Waves

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_ waves cause a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ motion—like ocean waves
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the seismic waves (travel at around \_\_\_\_\_\_\_\_\_\_\_\_\_\_)
  + Produced by the \_\_\_\_\_\_\_\_\_\_\_\_ of P- and S-waves at the Earth’s \_\_\_\_\_\_\_\_\_
  + Can be used to characterize the Earth’s interior and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Intensity depends on:
   1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_ of earthquake
   2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_ to the earthquake
   3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the earthquake
   4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_structure of the crust
   5. The \_\_\_\_\_\_\_\_\_\_\_\_\_ decreases with increasing \_\_\_\_\_\_\_\_\_ of the earthquake and with distance traveled.



<https://earthquake.usgs.gov/earthquakes/map/>

1. Go to the above link and find the last 10 earthquakes reported in the United States. List their location, magnitude and date.