

Earthquake Early Warning Student Worksheet Answer Key

Answer Key - This key contains possible student responses, and responses will vary.

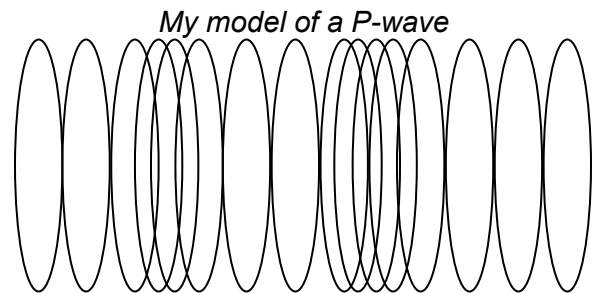
Earthquake Basics

An earthquake is **ground shaking**.
It is caused by **pieces of earth that are moving, but are stuck together because of friction. When they get unstuck, they suddenly lurch past each other. This releases energy, which causes the ground shaking.**

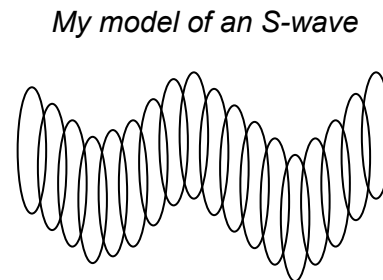
Earthquakes are Waves of Energy

Seismic waves are **waves of energy traveling through the earth that are produced by earthquakes and can move objects.**

P-waves **move back and forth. They send energy in the same direction as the spring by compressing or stretching it.**
Their speed is **faster than S-waves.**

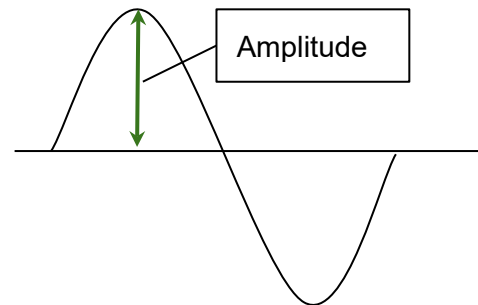


S-waves **move up and down (perpendicularly). They send energy in the same direction as the spring by stretching the spring away from its center.**
Their speed is **slower than P-waves.**

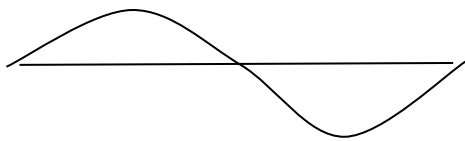


Seismic Waves with Different Amounts of Energy

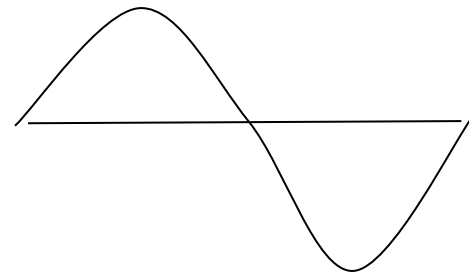
Wave amplitude is **the height of the wave**.



Draw a wave with a low amplitude.



Draw a wave with a high amplitude.



How does the amplitude of the wave affect the amount of shaking?

The greater the amplitude, the **greater** the shaking. My evidence is **that the tape moved more when the amplitude was greater**.

How does the amplitude of the wave change as you get further from the earthquake?

The further you are from the spot where the earthquake started, the **smaller** the amplitude becomes. My evidence is **that the closer the tape was to the person who started the wave, the more it moved. The tape that is furthest from the person who started the wave moved the least**.

Key Things to Remember

The key things I need to remember to stay safe if there's an alert or if I feel shaking are **Drop, Cover, and Hold On. If you can, try to get away from glass that could break or things that could fall on you.**

The most important thing I learned that I will share with my family is **that we need to have an emergency plan and materials. Also, we should Drop (or Lock), Cover, Hold On if there's ground shaking or an Earthquake Early Warning alert.**

