

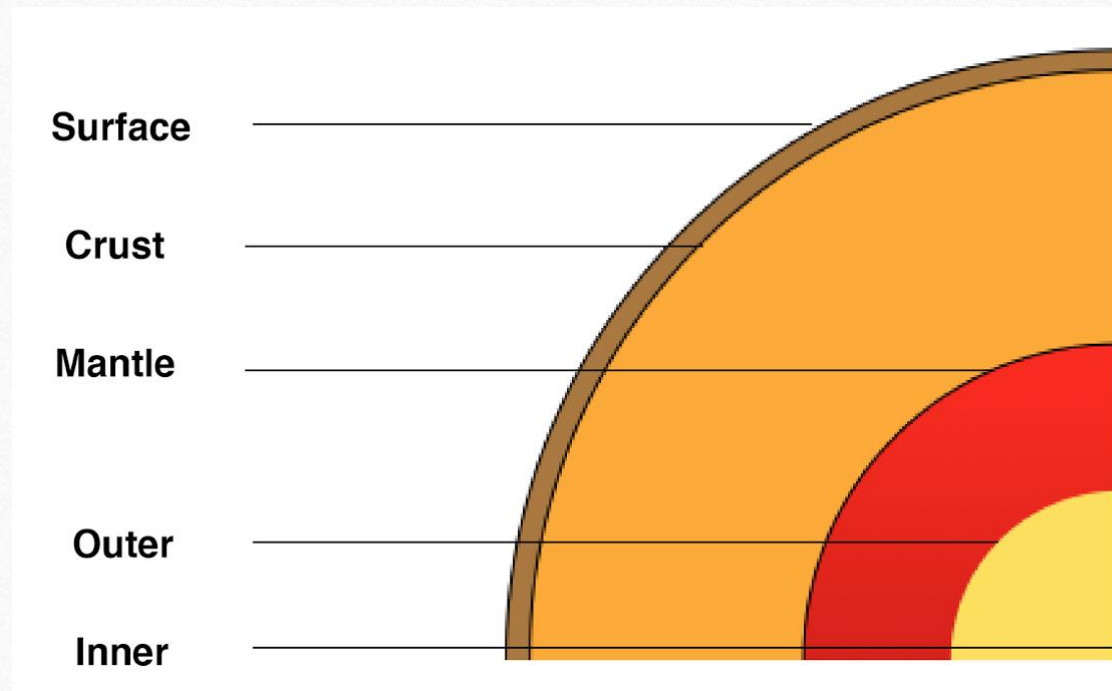
Unit 2: Heat and Energy in the Earth's Systems

L9: Shake Like an Earthquake

Guiding Question: How can we use seismic data to determine the composition of Earth's Interior?

- Do Now:

- For the layers of the earth to the right, state their relative density (most to least) and state of matter (solid, liquid, gas)



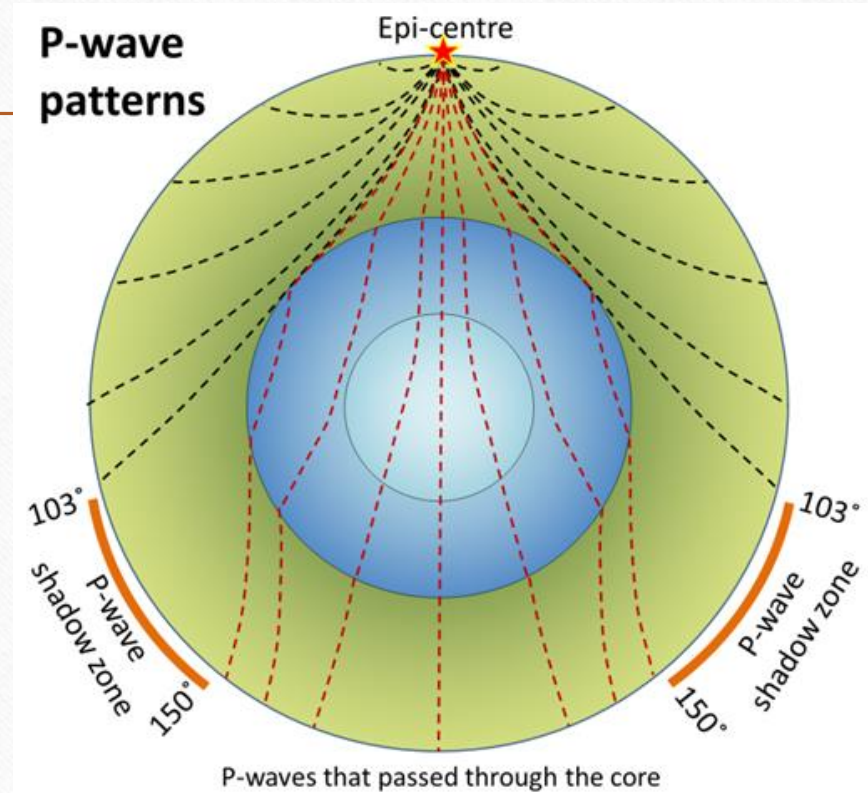
Notes

- Seismologists can use data from earthquakes occurring all over the world to determine the physical state of each layer of the earth

Notes

P Waves

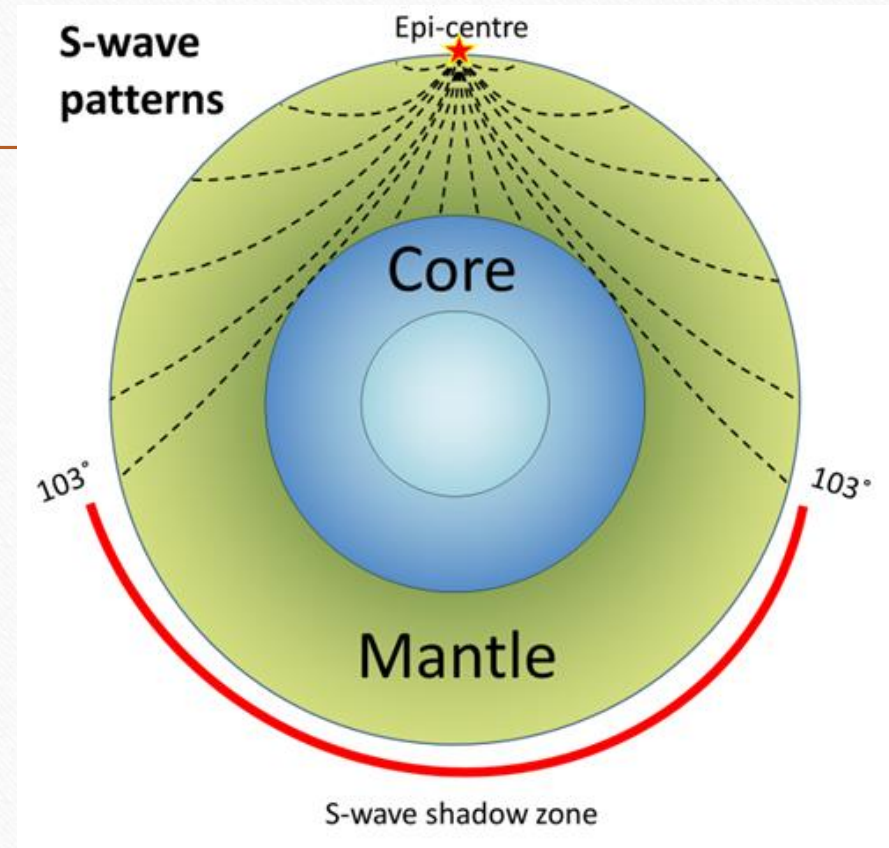
- A Longitudinal Wave
 - Cause the ground to move up and down
 - Pass through solids and liquids
 - Fast



Notes

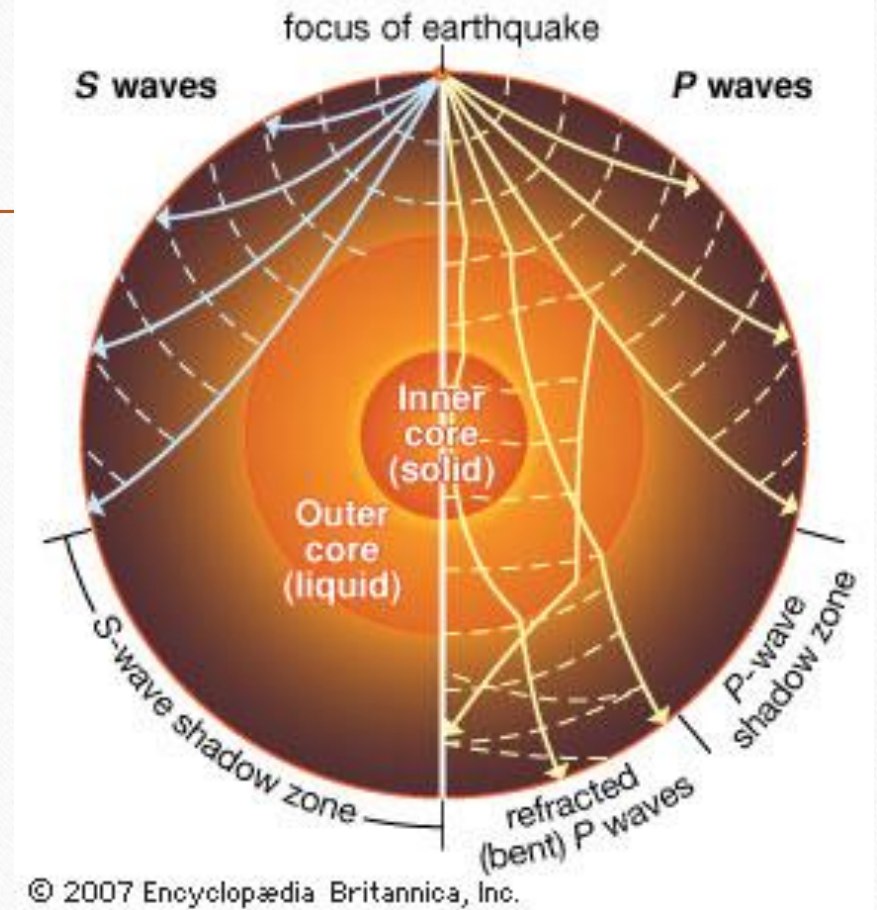
S Waves

- Transverse Waves
 - Cause the ground to move left to right
 - Travel through solids only (not liquids)
 - Slower
- Create a shadow zone



Notes

- Both P and S waves are refracted as they pass through the different densities and layers in the earth
- Notice the shadow zone where no S waves get through
- By comparing the differences in the waves, seismograph stations in different places can calculate the size of the earth's core and verify that it is a liquid.



Closure

- Homework #8 is due Friday 10/20
- Achieve 3000 article “To Warn the People” is due Friday 10/27 at 11:59pm