

Chapter 19 Section 1 Guided Reading

1. How deep is it to the center of Earth?
 - a) 1,000 kilometers
 - b) 6,400 kilometers
 - c) 10,000 kilometers

2. A scientist who studies earthquakes and analyzes seismic waves is called a
 - a) Seismologist
 - b) Volcanologist
 - c) Geologist

3. Seismic waves transmit _____ released by earthquakes or other disturbances through material that is firm.

4. Match each feature with the correct wave type.

P – wave	slower wave
S – wave	faster wave

P – wave	forward and backward motion
S – wave	side to side motion

P – wave	pass through solids only
S – wave	pass through solids and liquids

5. Draw Figure 19.1. Make sure to include labels for P and S waves. You will need to draw more wave arrows to demonstrate how P-waves move through all types of matter.

6. Scientists determined that S – waves do not move through liquids. How did scientists conclude this fact?

7. Complete the table.

Layer of Earth	Feature 1	Feature 2
Crust		
	Lies between crust and core	
asthenosphere		Separates the mantle into two pieces, one thin and one thick
lithosphere	Earth's moving outer shell that includes both the crust and the upper mantle	
	Outer and inner core are both made of iron	

8. The density of Earth material (*increases, decreases*) as you go deeper into the center of Earth.

9. Where does convection occur within Earth?

10. How is the mantle affected by the lithosphere floating on top of this layer?