

Name: _____ Period: _____ Date: _____

The Interior of the Earth WebQuest

➤ Part 1: The Layers of the Earth

Click [here](#) to access a conceptual model of the earth's layers. Use this model to help you answer the following questions.

1. Crust:

- a. What percentage of the earth's mass makes up the crust? _____
- b. Where is the very thickest crust found? _____
- c. Where is the thinner, younger crust found? _____

2. Asthenosphere:

- a. What does "Asthenosphere" mean? _____
- b. In terms of rock, how quickly is the rock here flowing?

3. Mantle:

- a. How many km thick is the mantle? _____
- b. The motion of the mantle helps drive the movement of plates above the asthenosphere. What creates the powerful currents in the mantle?

4. Outer Core:

- a. What types of materials make up the outer core? _____
- b. What do scientists hypothesize about the movement of molten metal in the earth's outer core?

5. Inner Core:

- a. The outer core is liquid but the inner core is solid. Why is the inner core solid?

➤ Part 2: The Structure of the Interior of the Earth

Click [here](#) to access a reading about the structure of the earth's interior. Use this reading to help you answer the following questions.

1. Scientists cannot ride in a glass elevator to the center of the earth. Most of what is known about the interior of the earth has been deduced (understood/figured out) from what type of data?

2. What are the two different types of waves mentioned on the website? Draw a sketch of each type of wave.

Name of Wave	Sketch of Wave

3. Which type of wave cannot travel through liquids? _____
4. Which type of wave can travel through both liquids and solids? _____
5. Which type of wave should be able to travel through the crust, upper mantle, and inner core?

6. Look at the animation of P-waves (red) and S-waves (yellow) traveling from the left side of the earth, through the layers, to the other side of the earth. Which type of wave makes it through all of the layers of the earth and can be measured on the surface at the other side?

7. a. Which type of wave cannot pass through the mantle? _____
- b. These waves do not disappear. They are refracted (made to change direction) and instead of measuring them on the other side of the earth, they are measured at various other locations on the earth's surface. How do scientists measure the size of the liquid core?

8. The core of the earth is very hot; warmer than the surface of the sun. Where does the heat of the core come from?

To test your knowledge, click [here](#) to play a game about the earth's structure!

Click [here](#) to discover what lies beneath...

Note: This computer model makes scientific reference to alcohol and does not promote alcohol use in anyway.