

Unit 3 Handout 12

Lesson 5: Modeling Earth's Interior

Purpose: To create a to-scale two dimensional model of earth's interior

Guiding Questions: What are the earth's interior layers and what are their characteristics?

1. First take a sheet of 8.5" x 11" computer paper, fold it hot-dog way, and cut it in half. Tape the short ends together so you have a sheet that measure 22" x 5.5". At one end, write your name and class period.
2. At the opposite end of where you wrote your name will be the earth's core. We will work from this end to begin. We will use the following scale to help us create our model: **every 1cm on the model is equal to 200km of the earth.** With this in mind, let's fill in the table to show how long we need to make each section. To calculate this, we simply divide the thickness of the layer by 200 to tell us how many centimeters it will need on our scale model.

Layer of Earth	Thickness of Layer (In kilometers)	Length on Scale (In centimeters)
Crust	~40 km ÷	200 = (d) _____ cm
Mantle	2900 km ÷	200 = (c) _____ cm
Outer Core	2300 km ÷	200 = (b) _____ cm
Inner Core	1200 km ÷	200 = (a) _____ cm

3. Now that we have our measurements, let's measure, from the bottom of our long sheet, the thickness of our core. Measure (a) _____ cm from the bottom of the paper and draw a straight line across the sheet. Everything below this line is the inner core. Label it neatly as the inner core. From this line, measure (b) _____ cm to find the beginning point of the outer core. Draw a straight line across the sheet. Label this section the outer core. From this line, measure (c) _____ cm to find the beginning point of the mantle. Draw a straight line across the sheet. Label this section the mantle. Finally, from this line measure (d) _____ cm to find

the beginning point of the crust. Draw a straight line across the sheet. Label this section the crust. (Note: because this section is so small, you may write information about it in the open space above it.)

4. Take a half sheet of from the box at your table.
5. Fill in the half sheet with important information about each layer. Use the information from the stations activity (Handout 11), the XPT Textbook (pp. 70-71), and online resources to write descriptions of each layer including characteristics and thickness.
6. Tape these onto your sheet in the correct location.
7. Finally, add a title to your sheet.