

Name: _____

Date: _____

Period: _____

Scale Drawing of the Earth

Use the data below to create a scale model of the cross-section of the earth on a separate piece of paper. Go to <http://volcano.oregonstate.edu/earths-layers-lesson-11> to find properties of each layer, particularly temperature.

Layer	Radius	Scaled Radius	Cumulative radius	Properties
Crust	25 miles		(scaled radius + total from cell below)	
Mantle	1800 miles		(scaled radius + total from cell below)	
Outer Core	1400 miles		(scaled radius + 2 cm)	
Inner Core	800 miles	2 cm	XXXXX	

Cross multiply: (Show Work on Back)

$$\frac{10 \text{ cm}}{4025 \text{ miles}} = \frac{1 \text{ cm}}{x}$$

$$\frac{1 \text{ cm}}{402.5 \text{ miles}} = \frac{x}{800 \text{ miles}}$$

$$\frac{10 \text{ cm}(x)}{10 \text{ cm}} = \frac{4025 \text{ miles}(1 \text{ cm})}{10 \text{ cm}}$$

$$\frac{402.5 \text{ miles}(x)}{402.5 \text{ miles}} = \frac{800 \text{ miles}(1 \text{ cm})}{402.5 \text{ miles}}$$

$$X = 402.5 \text{ miles}$$

$$X = 1.98 \text{ cm} \sim 2 \text{ cm}$$

To Make the Scale Diagram

1. Find the center of the graph paper
2. Start with inner core (42mm)
3. Measure radius in at least 10 directions from the center (North, South, East, West, etc)
4. Draw a ring to connect dots
5. Add radius of Outer Core to Inner Core & Repeat step 3 & 4
6. Continue Process for all layers