Earth’s Interior Structure

**Materials:**

* 2 11”x17” sheets of paper
* Meter stick
* Pencil
* 70cm string with loop at one end
* Colored pencils or crayons

**Procedure:**

1. Tape the sheets of paper together on the short side
2. Draw a light center line and “width lines” and construct a scale model of a slice of the Earth’s interior (the scale is 1cm = 100km)

**Figure 1:** *Dashed lines are light pencil lines drawn first that should be erased after solid lines are drawn*



1. Draw the arc line using the string with a loop and a pencil with the length from the center point to the pencil in the loop being 63.7cm
2. Draw the straight angle lines from the center point to the width lines to intersect with the arc.
3. Complete the scale model slice of the Earth by drawing arcs with the pencil and string at the appropriate radii indicated in Table 1 and Figure 2.
4. Label the boundaries and layers of the Earth and color the layers
   1. Inner core: white
   2. Outer core: yellow
   3. Mantle (below the lithosphere): orange
   4. Upper Mantle: red
   5. Lithosphere: brown
5. Cut out your scale model slice

**Table 1: Measurements for Earth’s Interior Pie Slice**

|  |  |  |
| --- | --- | --- |
|  | **Actual Value** | **Scale Value (1:10 million Scale)** |
| Radius of Earth | 6371 km | 63.7 cm |
| Depth\* to base of the crust (average) | 35 km | 0.35 cm |
| Depth\* to base of lithosphere (average) | 100 km | 1.0 cm |
| Depth\* to base of upper mantle | 670 km | 6.7 cm |
| Depth\* to core-mantle boundary | 2885 km | 28.9 cm |
| Depth\* to outer core-inner core boundary | 5155 km | 51.6 cm |

**Figure 2: Earth’s Interior Structure**

