

Life on Planet Earth

Date: _____

Try This – Scale Model of Earth

Scale: 1 mm = 12.7 km (or 1 m = 12,700 km)



Earth feature	Actual distance	Model distance (mm)
Thickest portion of lithosphere	150 km	
Distance betw. Toronto & Thunder Bay	1380 km	
Average ocean depth	3.7 km	
Maximum ocean depth	10.9 km	
Height of Mount Everest	8.4 km	
Average Thickness of Anarctic ice	1.6 km	
Thickness of lower atmosphere	20 km	

Now Draw it out!

1. Use paper provided, a metre stick, some string and a pencil to draw a circle 1 m in diameter (1 metre across the centre). This represents the EARTH since its diameter is 12,700 km.
2. Draw & label a representation of each of the features on your scale Earth.

Think About it

Did the model distances surprise you? Why?

Which model distances, if any, were less than expected? More than expected?

Based on this scale model (and imagining a 3D earth!), the volume of Earth would be 520 L but the volume of ALL the earth's oceans would only be 0.640 L or 640 mL. That's less than 2 cans of pop. If this is true, why do you think Earth is often referred to as 'the watery planet'?

In our Earth model, all life would exist within 1 mm of the surface. Given this information, would it surprise you to learn that many scientists consider the ocean, atmosphere and biosphere to be very vulnerable to pollution and other forms of damage?

Homework: Copy the Summary from 2.1

Atmosphere -

Spheres of Earth

Atmosphere	Lithosphere
Hydrosphere	Biosphere

Gaia Hypothesis – proposed by scientist _____ in 1960's and states _____

Watch 3 minutes of videosclips (links on homework blog too) <http://www.youtube.com/watch?v=JVIFugTtNQ> and <http://www.youtube.com/watch?v=kSNbLYHRrU8>

1) How do they show the earth as living organism? (Gaia Hypothesis)

2) Which one do you think shows this theory better? Why?