Name:_____

Waters on Earth

Materials:
7 2-liter bottles
Food coloring
Labels for bottles
Graduated cylinders
Dropper (calibrated for 1 mL)

Procedure:

1. Fill up one of the 2 liter bottles with approximately 2000 mL of water. A 2-liter bottle holds 2000 mL of liquid when full.
2. Use 3-5 drops of food coloring to color the water.
3. Measure out 1944 mL of water from the 2000 mL of water and place it in the second 2-liter bottle. Label the bottle "oceans".
4. Measure out 56 mL from the original 2-liter bottle and place it in the third 2-liter bottle. Label the bottle "fresh water".
5. From the **"fresh water"** bottle, measure out 46 mL of water and place it in the fourth 2-liter bottle. Label it "fresh water trapped in ice".
6. From the **"fresh water"** bottle, measure 8 mL of water and place it in the fifth 2-liter bottle. Label it "groundwater".
7. From the **"fresh water"** bottle, measure out 1 mL of water and place it in the sixth 2-liter bottle. Label it "surface fresh water (ie, rivers, lakes, streams, etc)".
8. From the **"fresh water"** bottle, pour the remaining water into the seventh bottle and label it "soil and air".

Line up the bottles labeled "oceans", "fresh water trapped in ice", "groundwater", "surface fresh water", and "soil and air". Sketch the bottles below.

Data and Analysis:

1. Calculate the percentage of water found in each location. Fill in the chart below.

Location	Amount of Water in mL	Percentage of Water
Whole Earth	2000 mL	100%
Oceans		
Fresh Water		
Fresh Water as Ice		
Fresh Water as Groundwater		
Fresh Water as Surface Water		
Fresh Water in Soil and Air		

2. What location has the greatest amount of water?

3. Which of the locations provides usable water for human consumption?

4. How might icebergs and glaciers be used to provide water for human consumption?

The Water Cycle and Our Earth

1. Water travels in the following path: Ocean → Bird → Ground → Plant. By what process will the water leave the plant?

2. What are the two processes by which water enters the Earth's atmosphere?

3. What process creates clouds?

4. What percentage of water is found as fresh water?

5. What percentage of water is available for human consumption?

6. What percentage of water is found in the atmosphere?

7. Describe two process for obtaining "new" fresh water supplies.

8. What are the environmental issues associated with moving icebergs to warm water for new fresh water resources?

9. Where does most of the potable water on the earth come from?

10. Where most of the freshwater is stored?

11. Why is the stored freshwater so hard to access and use for drinking water?

12. Why is the ocean not a common source of drinking water for coastal communities?