

Name Demonstration Hour _____
Labsheet: "All the Water on Earth"

Facts to Remember:

- * 72% of the Earth's surface is water.
- * 97% of the total water is saltwater found in the oceans.
- * 3% of the total water is freshwater.
- * 71% of the total freshwater is sea ice and glaciers.
- * The percent of freshwater remaining is 29%. Of this 29%, most is contained in groundwater (95%)
- * The final 5% of freshwater is found in freshwater lakes, saltwater lakes, rivers and water vapor.

Question : Suppose that 1 Liter or 1,000 milliliters of water represents all the water on the earth's surface. Your task is to decide how many milliliters (ml) out of the total (1,000 ml) represents each of the categories below.

1. Begin with 1,000 ml of water. **This is all the water on the earth!**

1000 mL All of earth's water (ml)

2. Salt water is 97% of the total water. Find 97% of 1,000 ml. 970 mL Saltwater (ml)

3. Subtract the amount of saltwater from "All the water on earth" to get the total amount of water which is not ocean saltwater. 30 mL Total Freshwater (ml)

4. Sea ice and glaciers make up 71% of the total freshwater. Find 71% of your total freshwater amount. Round to the nearest milliliter. 21 mL Sea Ice and Glaciers (ml)

5. Subtract the amount of water contained in sea ice and glaciers from the total amount of freshwater to get the remaining amount of freshwater. 9 mL Remaining Freshwater (ml)

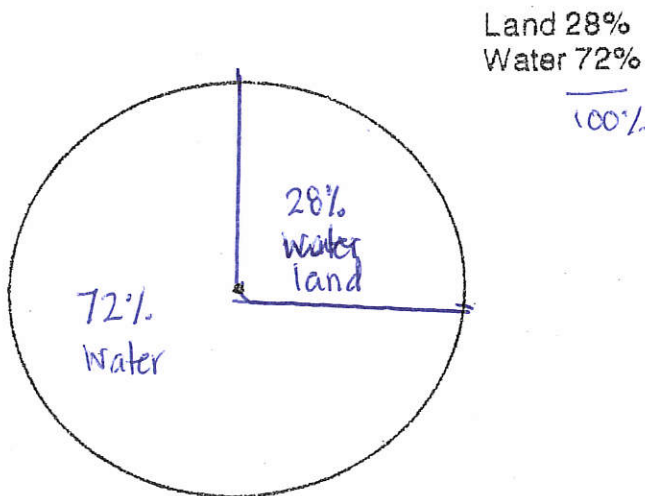
6. Of the remaining freshwater, 95% of that amount is groundwater. Find 95% of the remaining fresh water. Round to the nearest tenth. 8.6 mL Groundwater (ml)

7. Subtract the amount of groundwater from the remaining freshwater amount to get what we'll call "the rest". This remaining amount of fresh water makes up all of the freshwater lakes, saltwater lakes, rivers and water vapor on earth! 0.4 mL "The Rest" (ml)

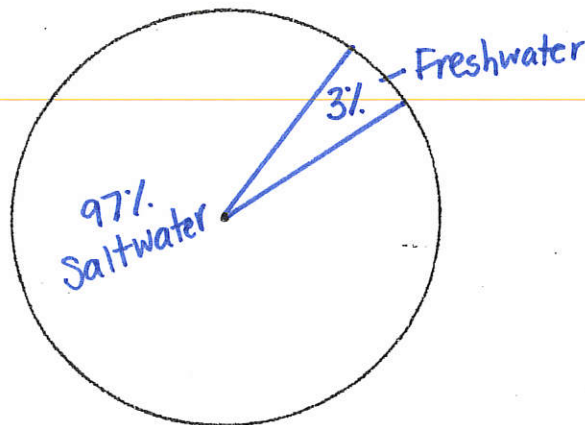
8. After calculating all of the above amounts, reach a class **consensus** with the other groups and your teacher to be sure all of your answers are correct. Using colored water and graduated cylinders, your teacher will demonstrate what the earth's water supply might look like using the model we developed in class!
9. Draw 3 different circle graphs using the information provided below. **Label** all graphs with the names of each category. Remember, to draw an accurate graph you must use a protractor. You must also calculate what percent of the circle each category represents.

Example: Category - 32% so $.32 \times 360^\circ = 115.2$ degrees
 Measure 115.2 degrees on your protractor to draw this section.
 (This is difficult to measure exactly, so round it to the nearest degree which is 115 degrees).

THE EARTH'S SURFACE

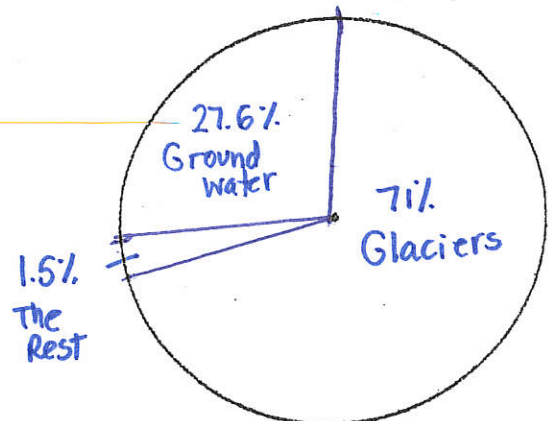


THE EARTH'S WATER



Saltwater - 97%
 Freshwater - 3%

FRESH WATER



Glaciers, Sea Ice - 71%
 Groundwater - 27.55%
 Rest (freshwater lakes, saltwater lakes, rivers, water vapor) 1.45%