Name: _____ Date: _____ Group: _____

MATH CONNECTIONS

The majority of Earth's surface is covered with water. Most of Earth's water is salt water. Only a small amount is fresh water, including water found in many lakes, rivers, and underground streams, brooks and basins, and in the form of ice. Earth has an estimated 338,168,194 cubic miles of water. However, not all of that water is drinkable. Use the following formula to figure out just how much water is available for the human population to drink:

Percent of Water Type x Total Amount of Water = Amount of Water Type

Water Source	Percent of Freshwater	Percent of Total Water
Oceans, seas, and bays	—	96.5
Ice caps, glaciers, and permanent snow	68.7	1.74
Ground water	—	1.69
Freshwater	30.1	0.76
Saline	—	0.93
Soil moisture	0.05	0.001
Ground ice and permafrost	0.86	0.022
Lakes	—	0.013
Fresh	0.26	0.007
Saline	—	0.006
Atmosphere	0.04	0.001
Swamp water	0.03	0.0008
Rivers	0.006	0.0002
Biological water	0.003	0.0001

Chart adapted from http://water.usgs.gov/edu/earthwherewater.html

1. How much of Earth's total water is in oceans, seas, and bays?

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MATH CONNECTIONS

2. In the column *Percent of Total Water*, the shaded cells represent the amount of freshwater on Earth. What is the total percent of freshwater on Earth?

3. The people on Earth can survive only on freshwater. Based on your answer in question 2, what is the total *amount* of freshwater on Earth?

4. While a lot of freshwater seems to be available to us, much of that water is frozen in ice or located underground. Most people survive on water available in lakes and rivers. What percent of Earth's freshwater is located in rivers and lakes?

5. Create an equation to determine how much total freshwater is available to us in lakes and rivers. (Use your answers from questions 3 and 4 to help you.)

6. Solve your equation to figure out how much total water is available to us in Earth's lakes and rivers.

7. What factors can affect the cleanliness of the water in lakes and rivers? How important is it for us to keep the water in lakes and rivers clean?