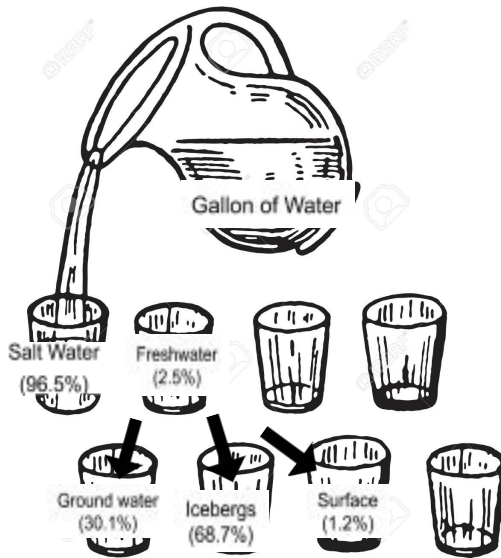


## Earth's Spheres

Name: \_\_\_\_\_

Date: \_\_\_\_\_

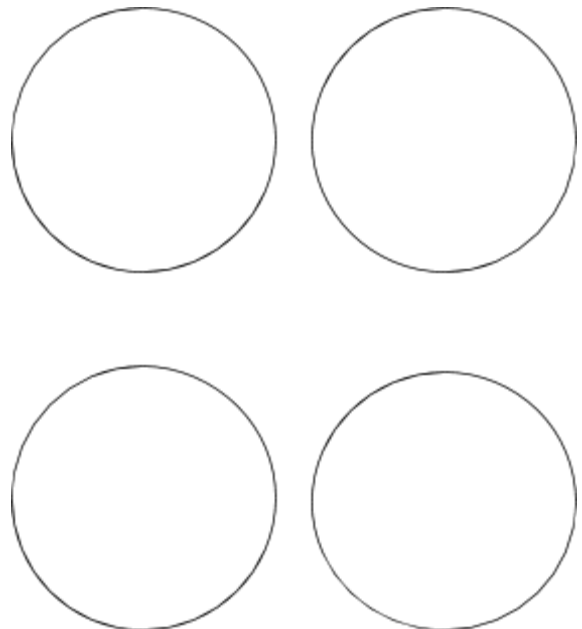
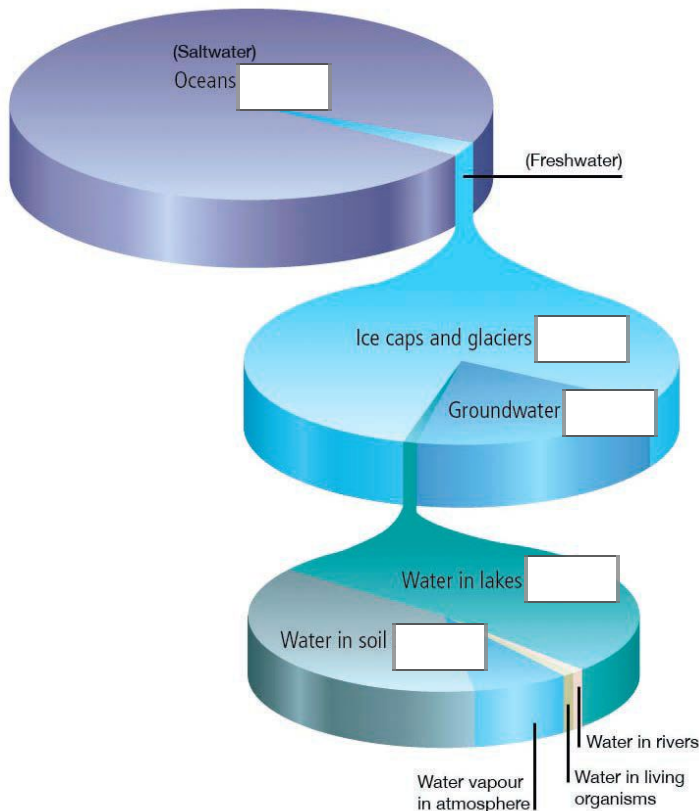
**Introduction:** Around 70% of our planet is covered in water but how much of that water is usable to sustain our lives here on Earth? Well, only around 2.5% of Earth's water is what we consider “freshwater” and only around 1.2% of that freshwater is actually usable, with the rest being tied up in glaciers or underground. This 1.2% of freshwater is found in our lakes, rivers, reservoirs, and rain and is what we depend on for everyday life: crops, drinking water, baths, electricity production, and so much more!



### Plan and Carry Out:

For this activity there will be a gallon of water, from this the water will be separated out based on the percentages of salt to freshwater on the Earth. The freshwater will continue to be separated to demonstrate just how little we can actually use. A gallon of water represents the earth's water and we will separate it into how much of that water is from oceans and how much is fresh water. Then separating that freshwater amount into the different sources of the water. Then discussing the various ways the small amount of water remaining needs to be used and ways to conserve it.

**Data Collection:** Fill in the image with the percentage of how much water is in each area and label and color each of the earth's spheres



Analyze Data:

1. Based on the diagram above, what is one of the main sources we get our water from? And can you think of any more?
2. Our planet is made up of 4 spheres that all interact: Biosphere (life), lithosphere (rock, land), hydrosphere (water), and the atmosphere (air). A good example of these interactions is how increased carbon emissions in our atmosphere can cause rise in water levels as temperature increases directly affecting life and land availability. Based on the data collected decide what parts of the spheres are affected and how?
3. After looking at the cups of water, pick one source of water, besides freshwater, and explain why it is or is not useful for us?



Explain:

1. An important part of freshwater is the water cycle, in Utah a main source of our water is from the large amounts of snow each year melting and running down our rivers. If all precipitation stopped (rain and snow) then how do you think this would affect freshwater sources?
2. How do you think geography affects freshwater availability? (Think about how this might apply to landscapes - mountains, deserts, plains)
3. Why do you think we can't use salt water in place of freshwater?
4. How do you think freshwater availability affects our biosphere (life, plants, and living things)? Could we live without it?

