

Hold the Salt

Section: The Chemistry of Life & Earth Sciences

Name: _____

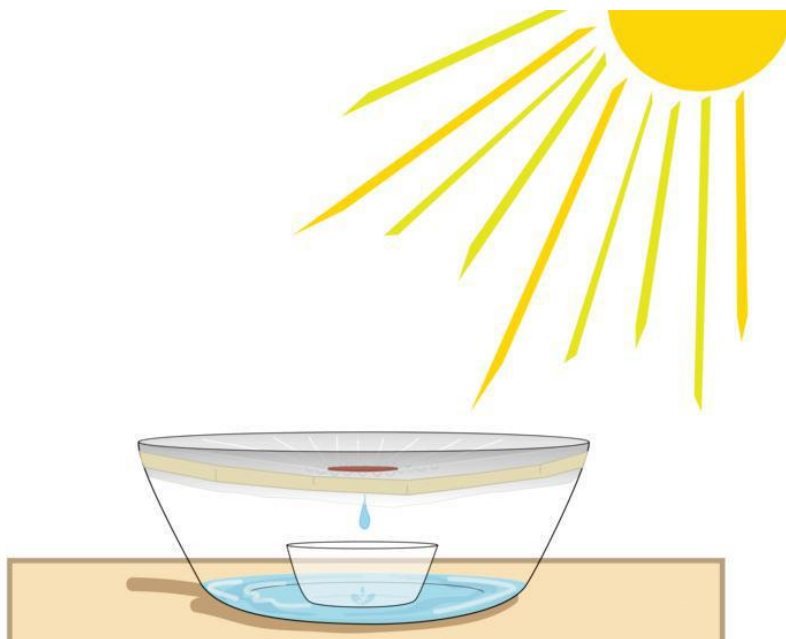
Date: _____

Inquiry Question

Write down what you'll be learning today! What do you want to understand?

Procedure

1. Pour water into a bowl to a depth of around 5 cm. Either write down the depth or mark it on the bowl using tape or a dry erase marker.
2. Add 10 drops of blue food coloring and 2-3 teaspoons of salt. Mix until the salt dissolves.
3. Place the glass cup in the center of the bowl with the opening facing up, so the base is in the blue saltwater solution. (If the cup floats try to find a heavier cup or put something in the cup to weigh it down.)
4. Loosely cover the bowl with plastic wrap and tape it to the side of the bowl securely so no air can get in or out. The plastic wrap should not be pulled tight, but should sag slightly in the middle.
5. Place a coin on top of the plastic wrap, directly over the cup.
6. Put the bowl on a flat surface in a warm place, like near a windowsill, outside, or under a heat lamp.
7. Wait at least 4 hours, then observe the height of the water and see if there is anything in the cup.
8. Remove the plastic wrap and lift the cup out of the bowl to observe the results.



Observations, Data Collection & Analysis

Write down your observations below.

1. Describe the problem posed in this activity.

2. Brainstorm some ways you might solve the problem posed in this activity. Draw or describe your thinking and solutions.

3. Using the materials supplied, discuss with your group how you could build a device that would transform saltwater into pure water. After coming to a consensus, draw your idea and label the parts and their purpose. Or, if your teacher has shown you one way to do this, describe how you think it will work.

4. After a few hours or the next day, describe what you notice in the device that was built. Did you successfully make pure water? How do you know? If not, what might have gone wrong?

5. Measure the amount of liquid in the bowl, and record below. Remember to include units.

Time	Height of the Solution in the Bowl
Start (0 hours)	
Finish (___ hours)	

6. What do you see forming on the plastic wrap? What is causing this to form?

7. What color is the liquid that collected in the cup? What does this tell you?

8. Describe or draw how you think water is made from saltwater in this experiment.
