**Modeling Ocean Salinity** Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Hour \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Background**: We have been learning about the climate, salinity and our oceans. Yesterday we discussed how our oceans contain many ions, sodium chloride being the most abundant. Elements in sea water can be used for many things, some marine organisms use dissolved salts to make body parts. Some remove calcium ions from the water to form bones. Other animals, such as oysters, use the dissolved calcium to from shells. As sea water evaporates, salt is left behind. This lab is meant to model how some ions in salt get into the oceans.

**Materials**:

2 spoonfuls of salt and soil mixture

1 coffee filter

1 paper cup (with 5 holes in it)

3 spoonfuls of water

1 piece of black construction paper

**Procedure**

A. Make sure you have all the materials you need. You will be working with your table partner.

B. Use a pencil/pen and carefully punch 5 small holes in the bottom of your paper cup. (You will not get another paper cup, so do this step carefully)

C. Place 2 spoonfuls of the salt and soil mixture into the coffee filter.

D. Fold the coffee filter up and place it at the bottom of your paper cup.

E. Hold the paper cup 2 cm above the black construction paper and pour about 3 spoonfuls of water into your cup. The water should drip onto the black construction paper. Salt is being dissolved into the soil and it will deposit onto the paper.

F. Once all the water has dripped out of your paper cup, place the paper on the counter where your hour is to dry.

G. Tomorrow we will observe what happened to our construction paper and answer the comprehension questions on the back of this lab sheet.

**Observations and Questions** (Answer the following using complete sentences with a restate)

1. In step E the salt was being dissolved into the soil, than ended up deposited onto the paper, how does this relate to runoff and deposits of salt between the land and the ocean?

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2. What happens to the ocean water that is left behind after evaporation?

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3. As ocean water becomes more dense, where does it go? How does it move? (does it sink, float why?)

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4. Describe how density currents circulate water? (orange 521-522)

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5. Organisms in the oceans are important sources of food and medicine. What steps can humans take to ensure that these resources are available for future generations?

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