

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

## Ocean Currents

What are ocean currents and what causes them to move?

### Pre Lab

Where in the ocean do warm currents flow? \_\_\_\_\_

Where in the ocean do cold currents flow? \_\_\_\_\_

### Materials

Clear Wash basin filled with 2 inches of (ambient) room temperature water

Two clear plastic cups large enough to extend above the water in the basin

Two push pins

Red and blue food coloring dye

### Procedure

1) Fill a clear wash-basin tub with 2 inches of ambient (room temperature) water. This represents the ocean.

2) Then stick a pushpin into each plastic cup about half an inch from the bottom.

3) Fill one clear plastic cup with ice water and two drops of blue food coloring.

4) Fill the other clear plastic cup with hot water and two drops of red food coloring.

5) Place the cups in the basin with the pushpins facing outward.

6) Gently and simultaneously pull out the pushpins to form currents.

7) Quickly observe what you see.

### Observation

Draw a picture of what you see.

What happens to the blue colored water? \_\_\_\_\_

\_\_\_\_\_

Why does the blue water behave that way? \_\_\_\_\_

\_\_\_\_\_

What happens to the red colored water? \_\_\_\_\_

\_\_\_\_\_

Why does the red water behave that way? \_\_\_\_\_

\_\_\_\_\_

How does this model resemble ocean currents? \_\_\_\_\_

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## Vocabulary

stratification: arranged in layers of an area

atmospheric pressure: the force put on a given area by the weight of the air  
above it

molecule: a particle that contains two or more atoms joined together

density: a measure of how tightly matter is packed in a given amount of  
space

ambient: of or relating to the immediate surroundings of something