Name _____ per_____

Ocean Currents Simulations

You will be using a few simulations to learn about the effects of salt and temperature on ocean currents.

Getting Started

1. Go to my website www.mrwadnizak.weebly.com
2. Click on the 6th grade Integrated Science Tab
3. Click on the ***Lawrence Hall Ocean Current Simulation*** Button

The Great Ocean Conveyor Belt

1. Click on the image
2. Where does the warm (red) surface current start?

The warm surface current starts at the _____.

3. Where does the water start to go deeper?

The water goes deeper near _____.

4. Click back to the original image to see this on a global scale.
5. Go back to the previous screen.
6. Notice where the Air Temperature gauge and the Salinity gauge are.
7. Move the air temperature slider halfway toward the **(-)** sign.
8. What happened to the Salinity of the ocean?

The salinity of the water (INCREASED / DECREASED).

9. What happened to the ocean current?

The ocean current (SPEEDS UP / SLOWS DOWN).

10. Notice the size of the glacier just below the Air Temperature gauge.
11. Move the temperature all the way to the **(+)** side.
12. Describe what happens to the glacier, the salinity and the ocean current.

_____

_____

_____

_____

13. Why does an increase in air temperature cause a decrease in salinity? Think about different states of matter here.

Highly Proficient Opportunity

14. What would an increase in temperature do to the density of the surface water near Greenland? Explain in detail.

NASA Space Place

1. Go back to my website and click on the NASA Ocean Currents Simulation
2. DO NOT START PLAYING THE GAME YET.
3. Scroll down and read *How Currents Work in the Ocean*
4. Go back up and play the game. Make sure to review what each icon means.

Weather and Climate: Role of Water in Earth's Surfaces - Ocean Currents

4 Highly Proficient	**3** Proficient	**2** Close to Proficient	**1** Developing
❑ My answers are detailed. ❑ I can explain how an increase in temperature would affect the density of the ocean.	❑ I can *explain* why an increase in temperature leads to a decrease in salinity. ❑ The lab is complete.	❑ I can *describe* what happens between the temperature, ocean current and ocean salinity. ❑ My answers need more detail. ❑ Some of my information may be incorrect. ❑ My work is incomplete.	❑ I show little to no understanding of ocean currents.