

Earth/Environmental Science Homework & Test Review**Week 1: January 20 – 23, 2015****DUE DATE: Friday, January 23rd**

Vocabulary: Fill in the missing areas on the table below using your textbook, class activities and any other resources you find helpful.

Vocabulary Word	Definition	Example/Application
Hydrosphere	All the water in Earth's oceans, lakes, seas, rivers, and glaciers plus all the water in the atmosphere	Swamps, pools, groundwater
Density	Mass divided by volume.	The mass of water is 1g/mL. Calculation example: $110\text{g}/110\text{mL} = 1\text{g/mL}$
Salinity	Measure of the amount of salts dissolved in seawater, which is 35 ppt, on average.	Oceans, Contact Solution, Sweat
Density Current	Movement of ocean water that occurs in depths too great to be affected by surface winds and is generated by differences in water temperature and salinity.	Warm vs cold water; Very salty vs little salt vs fresh water

Key Questions from the Week: Answer the questions below pertaining to this week.

1. How is the density of ocean water affected by temperature?

The density of seawater plays a vital role in causing ocean currents and circulating heat because of the fact that dense water sinks below less dense. Salinity, temperature and depth all affect the density of seawater. Warmer water is less dense than colder water. Therefore, colder water will sink below warmer water.

2. How do ocean currents form?

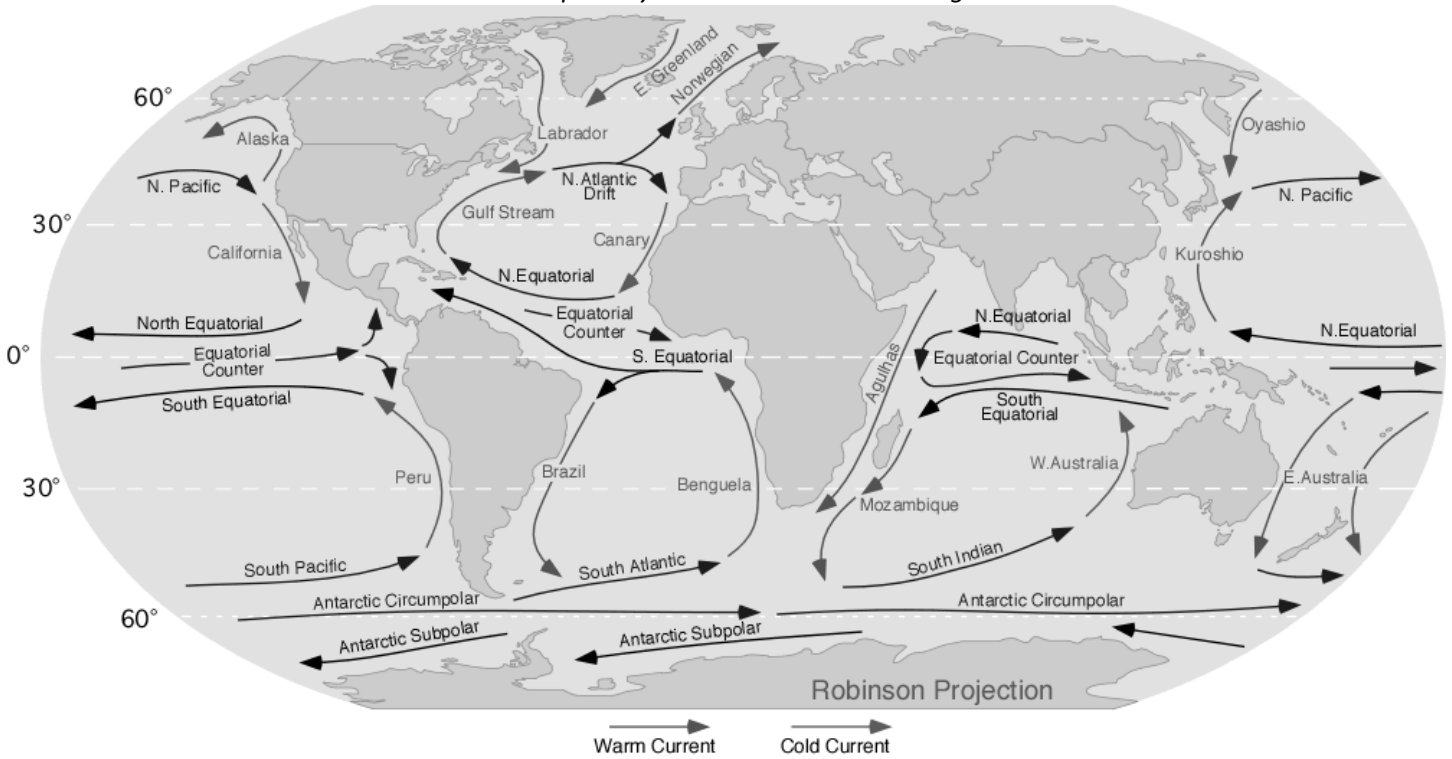
The currents are generated from the forces acting upon the water like the earth's rotation, the wind, the temperature and salinity differences and the gravitation of the moon.

Diagram for the Week: Warm currents travel away from the equator and cold currents travel towards the equator.

1. Designate the following currents as either warm (W) or cold (C)

- | | | | | |
|---------------------|----------------------|-----------------------|---------------------|-----------------------|
| <u>W</u> Alaska | <u>C</u> Labrador | <u>C</u> E. Greenland | <u>C</u> Benguela | <u>C</u> Oyashio |
| <u>C</u> California | <u>W</u> Gulf Stream | <u>W</u> Norwegian | <u>W</u> Agulhas | <u>W</u> Kuroshio |
| <u>C</u> Peru | <u>W</u> Brazil | <u>C</u> Canary | <u>W</u> Mozambique | <u>C</u> W. Australia |
| | | | | <u>W</u> E. Australia |

2. From question 1 above, trace the warm currents red and trace the cold currents blue in the diagram below. *Note: There are additional currents shown on the map that you will not be color coding.*



Concept Map: Relate this week’s talk about the hydrosphere by completing the following concept map using the provided word bank. Each word is used only once.

Word Bank

- Rivers
- 3 Percent
- Ice Caps
- On Earth’s Surface
- Underground
- Water Table
- Fresh Water

