

**\*ATTACH THIS WEB QUEST INTO YOUR NOTEBOOK. Will be checked on your next notebook check!\***

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

## Currents, Climate & Water Cycle Web Quest

### Directions

- You may write your answers on this paper.
- Go to <http://trackstar.4teachers.org> and enter in View Track #457226 'Go'
- Select **View in Frames** to gain access to the websites needed to complete the web quest

### Website #1: Currents

1. What are the two types of currents and how is each type caused?

A) \_\_\_\_\_ currents are mostly caused by the \_\_\_\_\_ because it creates friction as it moves over the water.

\_\_\_\_\_ also plays a role in the movement of these currents because the top of the ocean is uneven.

B) \_\_\_\_\_ currents, are also called \_\_\_\_\_.

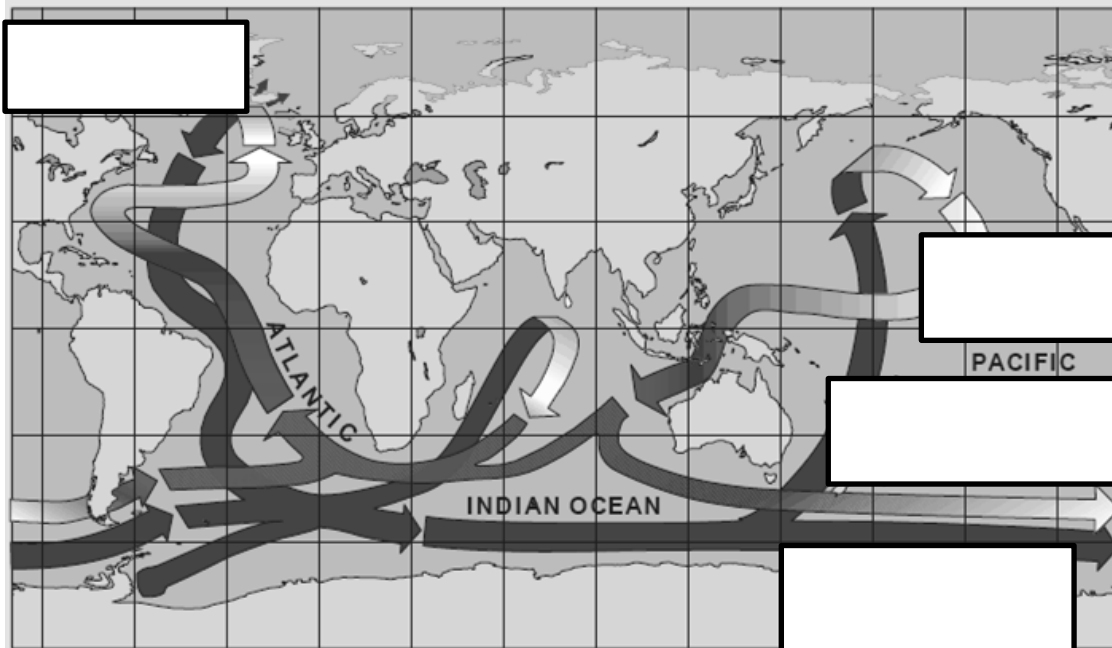
Gravity plays a role in their creation, but these currents are mainly caused by \_\_\_\_\_ differences in the water due to temperature and salinity.

### Website #2: The Ocean Conveyor Belt

2. In the diagram label the following:

#### Phrase Bank

Heat release to atmosphere    Warm Surface Current    Cold, Saline Bottom Current    Recirculated Deep Water



3. Thermohaline Circulation Implications for Climate:

A) The thermohaline circulation plays an important role in supplying \_\_\_\_\_ to the polar regions.

### Website #3: Currents Quiz

4. Take the online quiz to get you feedback on your level of expertise.

5. Why do surface waters sink in the North Atlantic ocean?

\_\_\_\_\_

\_\_\_\_\_

**Website #4: What is happening in the ocean?** (Video Not Required)

6. How much of Earth's water is contained in the oceans? \_\_\_\_\_%

7. The ocean does an excellent job of absorbing excess heat from the atmosphere. What will happen if the ocean gets too warm?

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8. How does the ocean soak up CO<sub>2</sub>?

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9. How does the ocean affect the climate?

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**Website #5: Water Cycle Review**

10. Complete the diagram by first clicking on the colored rectangle then clicking on your answer choice.

11. The diagram shows infiltration, but not percolation. As a review from yesterday's reading what is the difference between infiltration and percolation?

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**Website #6: Groundwater**

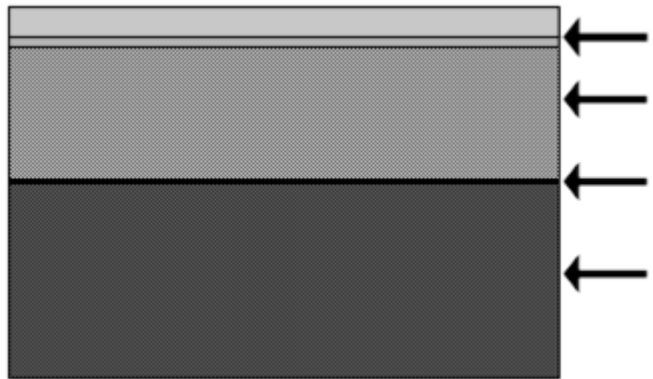
12. Groundwater is all the water that has penetrated the earth's surface and is found in one of two soil layers. Fill in the blanks and label the diagram below.

A) The **surface layer** is exposed to the atmosphere

B) Zone of \_\_\_\_\_ is filled with both air and water

C) Zone of \_\_\_\_\_ is filled with water

D) The \_\_\_\_\_ is the boundary between these two layers.



**Website #7: Porous vs. Permeable**

13. What is the difference between porous and permeable?



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**Website #8: Concept Map for The Flow of Fresh Water**



Use this website to create a concept map summarizing groundwater

## Website #9: Build Your Own Aquifer

14. Click on Introduction.

A) Underground sources of water are called \_\_\_\_\_

*Click on the right arrow to keep advancing through the rest of the introduction.*



*Jump to section 3 to see an example of an aquifer.*

B) How does this lab experiment display the importance of preventing harmful runoff and water contamination?

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**Website #10: Finished Early?** Play the *Droplet and the Water Cycle!* <http://kids.earth.nasa.gov/datwc.html>

**Rules:** Avoid pitfalls and predators while you navigate through several challenging levels of the hydrological cycle.

**Controls:** Hold shift to increase speed; space bar to jump; arrow keys to climb up/down and move left/right. You can catch rides on leaves, but avoid other disasters that will break your water drop!

**Goal:** Make it to the orange triangle medallion to move through stages of each level

## REMINDERS!

- Homework Page from Week 2 due on Friday, January 30<sup>th</sup>
- Quiz on Friday, January 30<sup>th</sup> Study Homework Pages from Week 1 and Week 2 for the quiz