

# Oceans



Ocean 1



Ocean 2



Ocean 3



## Vocabulary



30-66 blue books

40's - 50's

41 + 42 Thermohaline.

Deep current 58 - both bolded sections

Ocean Currents Vocab 2015

Coriolis effect - how they  
move in  
the two  
hemispheres.

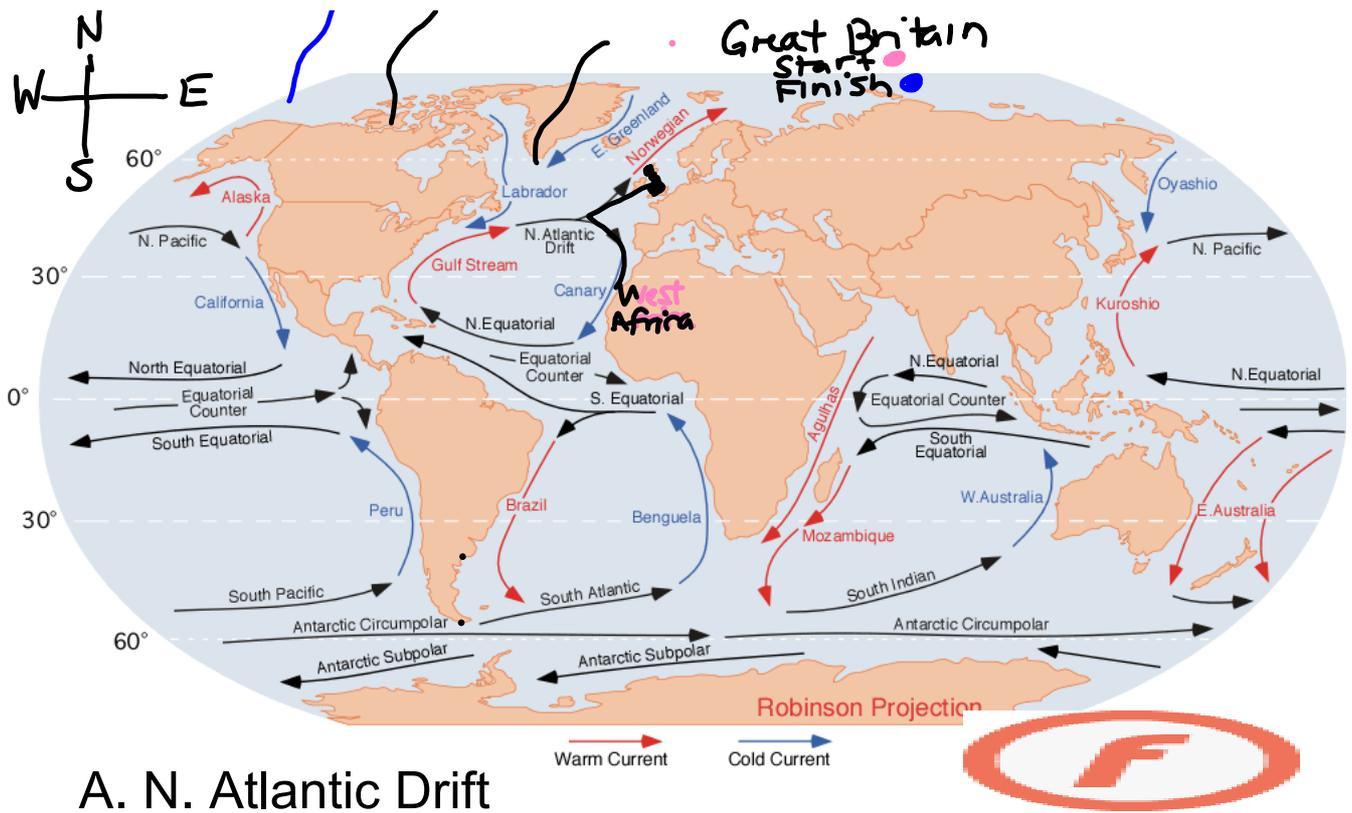
I love Lucy



## The Global Conveyor Belt

Activity \_2 wind driven ocean circulation





### A. N. Atlantic Drift

# Go with the Flow: Deep Ocean

## Circulation

41- 58<sup>-5</sup>

Google Classroom Bell 1



Google Classroom Bell 2



Google Classroom Bell 6



Bell 7 Google Classroom





Name: [Redacted]  
Bell: [Redacted]

### Deep Ocean Circulation

**Background Information:**

Surface currents in the ocean are created by global wind patterns dragging across the surface of the water, creating friction. This force pushes the water in the same direction the winds are blowing. For example, Prevailing Westerlies blow in an eastern direction, and the surface currents also blow in an eastern direction. Deep ocean currents do not come in contact with global winds and they are therefore moved by different means.

Different temperatures of air have different densities. We have discussed that cold polar air is denser than warm equatorial air based on how the air molecules are spaced. When a substance is warmed the molecules will spread apart taking up a larger volume, making it less dense. When the air is cooled the molecules move closer together putting more mass in the same volume, which increases density. This same principal applies to water as well. Cooler water has a higher density than warmer water.

If you have tasted the ocean, you know it is very salty. That is why it is easier to float in the ocean than in a fresh-water swimming pool or lake. Salty water is "thicker" or denser than fresh water. If you poured some ocean water into a lake, the ocean water would sink to the bottom. The amount of salt in the water is called salinity.

Using the background information complete the following diagram

1. Add the following words to the boxes to show how the water would arrange itself in the density column.

**Situation #1**

Cold water	Warm water	Hot water
Hot water	Cool water	warm water
		cool water
		cold water

**Situation #2**

High salinity	Freshwater	fresh water
Medium salinity	Low Salinity	low salinity
		medium salinity
		high salinity

**Situation #3**

Cold/ High Salinity	Cool/ Low Salinity	warm/low
Warm/ High Salinity	Warm/Low Salinity	warm/high
		cool/low
		cold/high

warm/low  
cool/low  
warm/high

2. Go my website or type this website directly into your computer  
<http://spaceplace.nasa.gov/ocean-currents/en/#>

What are the two rules to remember?

- salt water is more dense than fresh water
- heat makes water lighter so it rises

Scroll down and click Play Go with the Flow. Please turn the music off!!!!

**Level One:** You are only given one tool to use in order to get the sub to reach its destination. What was the main idea behind this level?

it shows that heat rises

**Level Two:** Once again you are only given one tool to work with, salt, but there is also a current that is moving near the bottom of the ocean floor. What was the main idea behind this level?

Salt is more dense than fresh water so it weighs it down

**Level Three:** In level three you are given two tools, a current and walls.

Explain how you used the current. Why is a current important?

i put it to the feet of the sub. the current pushed the sub.

Explain how you used the walls. Identify items that can actually be found in the ocean that could act as a barrier to deflect ocean currents.

i put them above big ship. the sub. coral

**Level Four:** In level four find at least three different ways to solve this puzzle.

- put two walls on the middle and left walls
- put a wall on the first salt next to the sub and under that, heat
- under the sub next to the other put a heat next to the other and walls under the first and third salt

# NOAA Lab

NOAA Lab sheet



ONQ

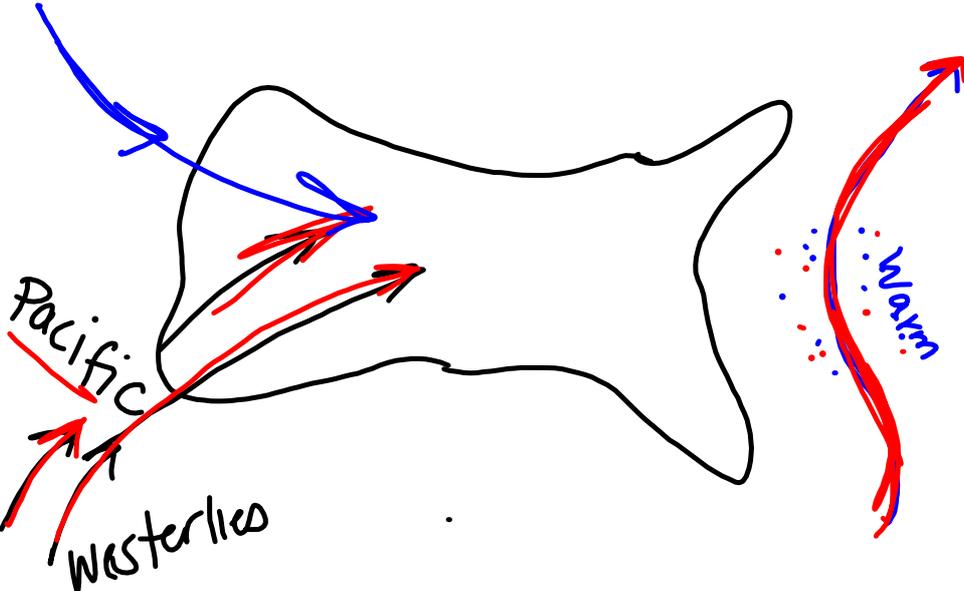
pg 464

Green book!



Ocean Currents Nye





120 Surface current

-10 or more Facts

Picture

deep/density  
current

-10 facts.

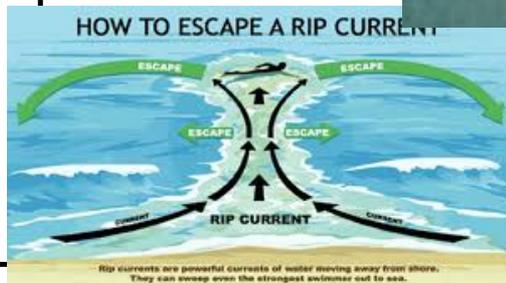
picture

What is Climate:  
-10 facts

121 rip current

-10 Facts

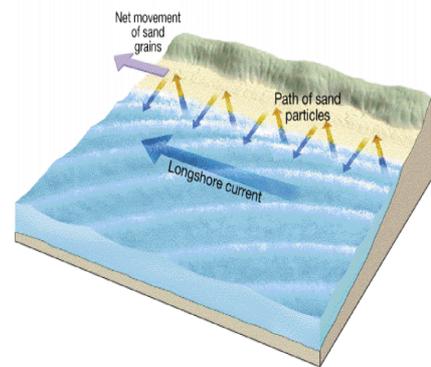
picture



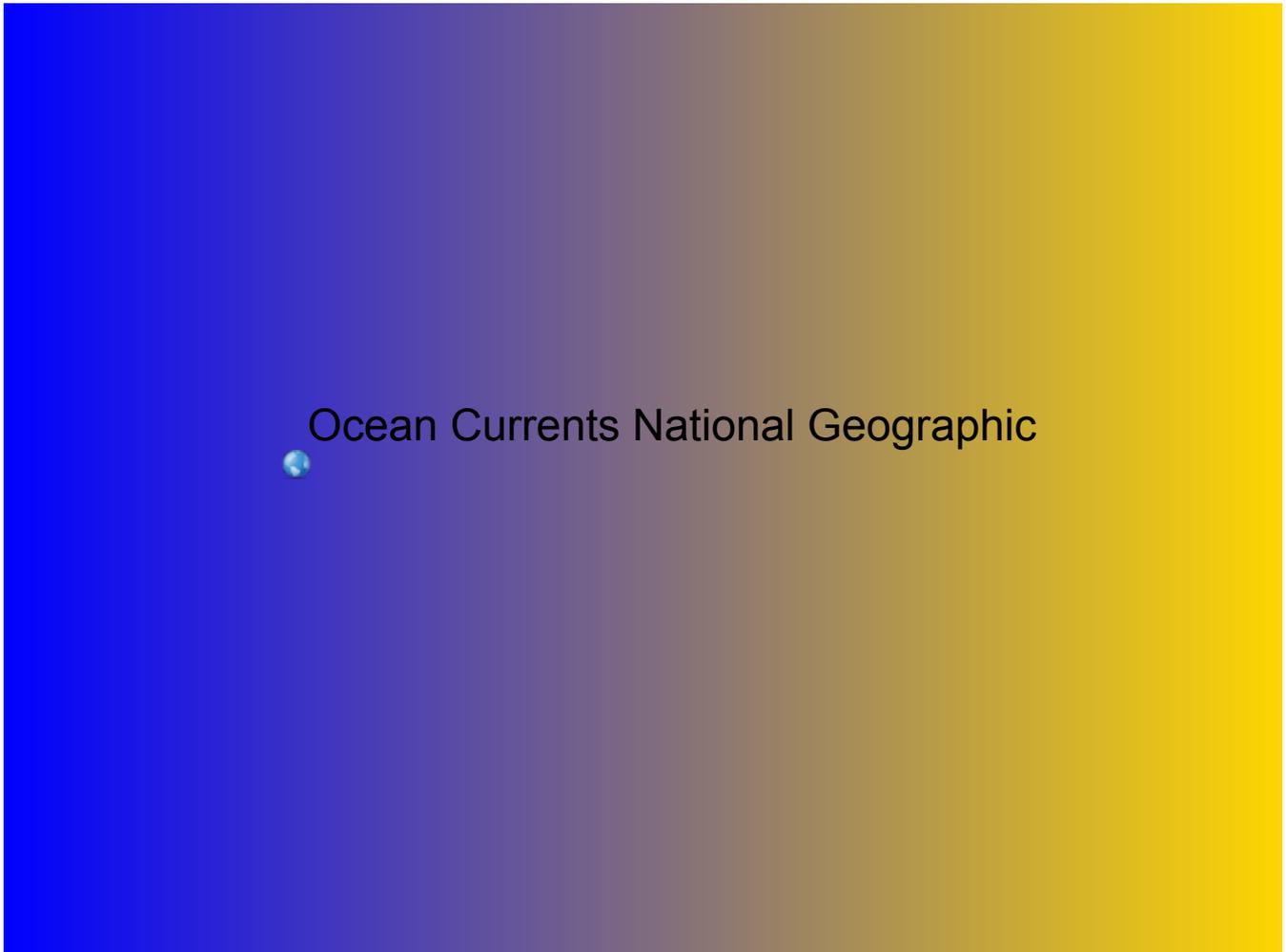
Longshore current

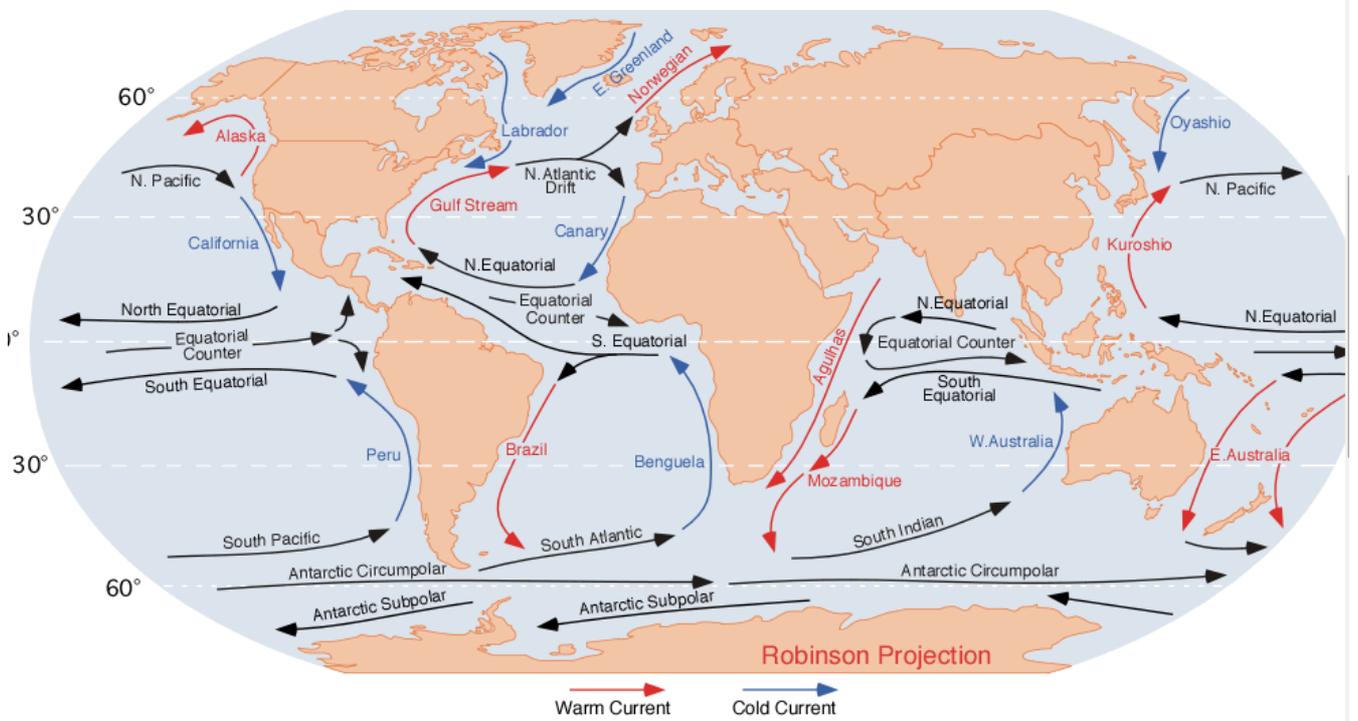
-10 Facts

picture



# Ocean Currents





Show desktop

## Attachments

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Ocean 1



Ocean 2



Ocean 3

Ocean Currents Vocab 2015.docx



I love Lucy

Activity \_2 wind driven ocean circulation.pdf



Bell 7 Google Classroom



Google Classroom Bell 6



Google Classroom Bell 2



Google Classroom Bell 1



NOAA Lab sheet



Ocean Currents Nye



Ocean Currents



Ocean Currents National Geographic