

Oh Where, Oh Where Did My Rubber Ducky Go?

Lesson developed by Brenda Paul



GPS Standard(s)

S6E3. Students will recognize the significant role of water in earth processes.

- a. Explain that a large portion of the Earth's surface is water, consisting of oceans, rivers, lakes, underground water, and ice.
- c. Describe the composition, location, and subsurface topography of the world's oceans.
- d. Explain the causes of waves, currents, and tides.

Ocean Literacy Standard(s)

1. The Earth has one big ocean with many features.

Materials

- “What can 28,000 rubber duckies lost at sea teach us about our oceans?” article for each student of pair of students
- Ocean Currents Map for each student
- Markers

Lesson Plan

In this activity, students will learn about the paths traveled by ocean currents.

First, students will read the article “What can 28,000 rubber duckies lost at sea teach us about our oceans?” Students may read the article in small groups, individually, or as a whole class. After all students have read the article, do a **think-pair-share** about the article. For this **think-pair-share**, students will first write down the most important parts of the article. Next, they will discuss what they wrote with a partner. Next, the class will compile all partner lists on the class white board. Discuss which aspects relate to ocean currents and the paths taken by the rubber duckies. Which oceans did they travel through? Through what countries that you have been studying in social studies did the rubber duckies pass?

In the second part of the lesson, students will be given a map of ocean currents. Students should be given a color marker and map a path through the ocean that the rubber duckies may travel. Students should find Hong Kong on the map to mark their starting point. So long as their path travels along ocean currents, their path may take the rubber duckies anywhere!

Once students have mapped out their rubber duckie's path with a marker, they will write out a description of their rubber duckie's journey. This description must include (1) a list, in order, of all the ocean currents the rubber duckie traveled through, (2) a list, in order, of all the oceans the rubber duckie traveled through, and (3) the names of any countries you have studied in social studies that the rubber duckie passed by.

What can 28,000 rubber duckies lost at sea teach us about our oceans?

A shipping container filled with rubber duckies was lost at sea in 1992, and the bath toys are still washing ashore today.

By Bryan Nelson

Tue, Mar 01 2011 at 5:24 PM



Photo: poolie/Flickr

In 1992, a shipping crate containing 28,000 plastic bath toys was lost at sea when it fell overboard on its way from Hong Kong to the United States. No one at the time could have guessed that those same bath toys would still be floating the world's oceans nearly 20 years later.

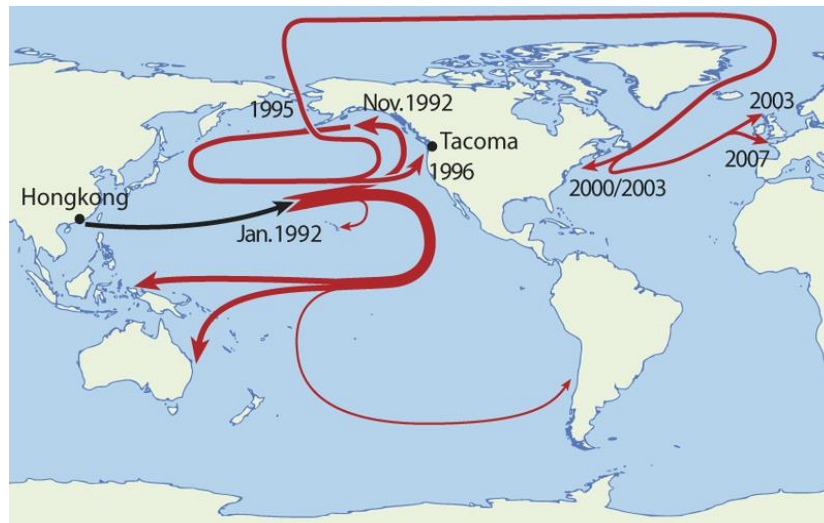
Today that flotilla of plastic ducks are being hailed for revolutionizing our understanding of ocean currents, as well as for teaching us a thing or two about plastic pollution in the process, according to the Independent.

Since that fabled day in 1992 when they were unceremoniously abandoned at sea, the yellow ducks have bobbed halfway around the world. Some have washed up on the shores of Hawaii, Alaska, South America, Australia and the Pacific Northwest; others have been found frozen in Arctic ice. Still others have somehow made their way as far as Scotland and Newfoundland, in the Atlantic.

The charismatic duckies have even been christened with a name, the "Friendly Floatees," by devoted followers who have tracked their progress over the years.

"I have a website that people use to send me pictures of the ducks they find on beaches all over the world," said Curtis Ebbesmeyer, a retired oceanographer and Floatee enthusiast. "I'm able to tell quickly if they are from this batch. I've had one from the UK which I believe is genuine. A photograph of it was sent to me by a woman judge in Scotland."

This map details the extent of where the ducks have traveled so far:



Perhaps the most famous Floatees, though, are the some 2,000 of them that still circulate in the currents of the North Pacific Gyre — a vortex of currents which stretches between Japan, southeast Alaska, Kodiak and the Aleutian Islands that the plight of the duckies helped to identify.

"We always knew that this gyre existed. But until the ducks came along, we didn't know how long it took to complete a circuit," said Ebbesmeyer. "It was like knowing that a planet is in the solar system but not being able to say how long it takes to orbit. Well, now we know exactly how long it takes: about three years."

Today the North Pacific Gyre is also home to what has been called the Great Pacific Ocean Garbage Patch, a massive island of floating debris, mostly plastic, that the gyre stirs like a giant pot of trashy soup. (A short documentary about the gyre paints a pretty grim picture.) Though the rubber ducks have helped raise awareness about the gyre, most of what makes up the garbage patch is hardly so cute. Most of it consists of tiny plastic fragments and chemical sludge, but just about anything that floats which people discard can be found there.

Some of the trash got there the same way the rubber duckies did, via lost shipping crates. Though no one knows exactly how many shipping containers are lost at sea every year, oceanographers put the figure at anything from several hundred to 10,000 a year, a startling estimate, though still only a tiny part of a global trash problem.

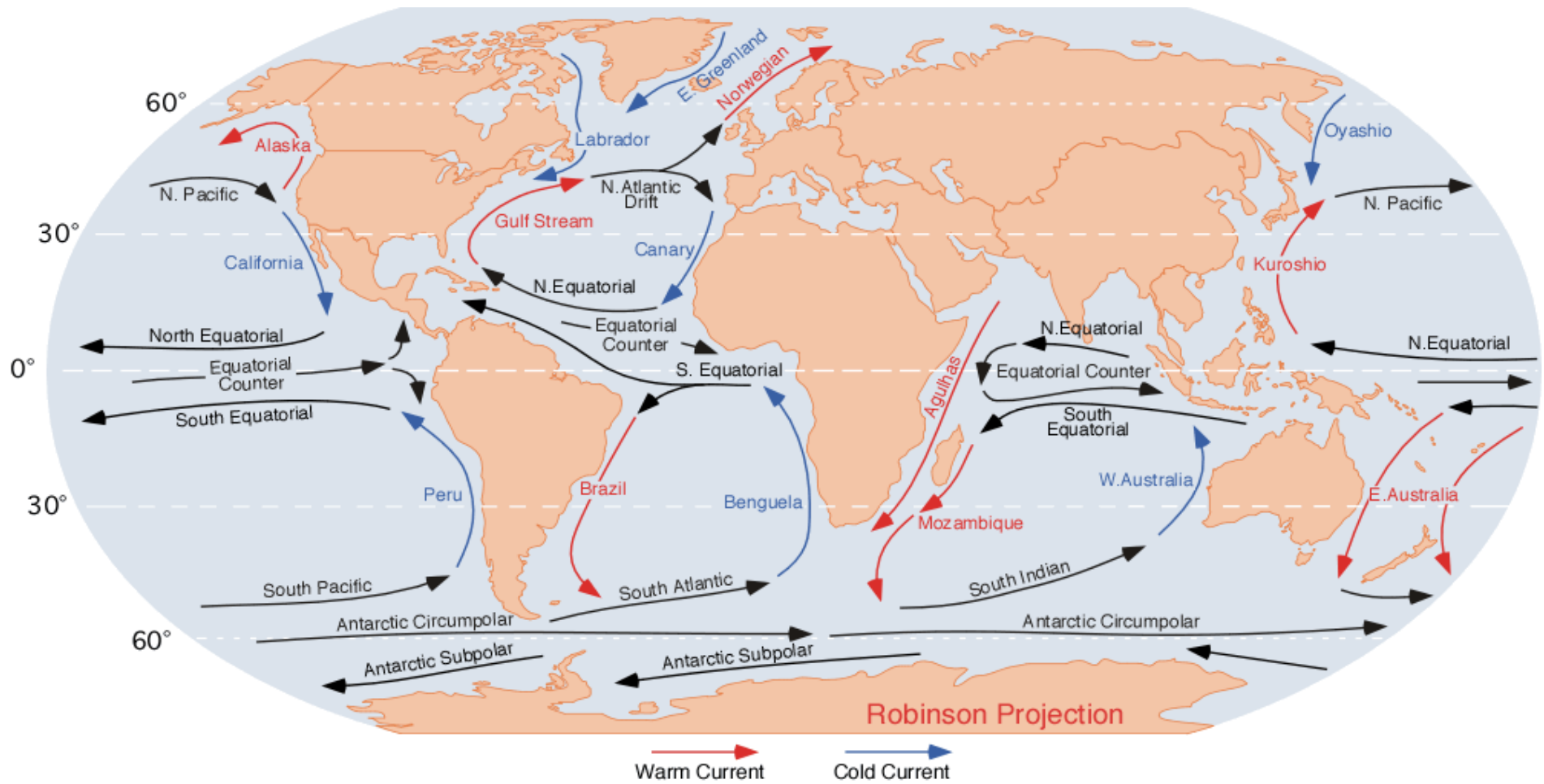
"I've heard tales of containers getting lost that are full of those big plastic bags that dry cleaners use," said Donovan Hohn, an author of a book called "Moby-Duck," which immortalizes the journey of the 28,000 rubber duckies. "I've also heard of crates full of cigarettes going overboard, which of course end up having their butts ingested by marine animals. In fact, one of the endnotes in my book lists the contents of a dead whale's belly: it was full of trash. Plastic pollution is a real problem."

Today we know that there are as many as 11 major gyres across the world's oceans, and all of them are potential vestibules for the world's trash. And if the Friendly Floatees are an example for anything, it's that plastic trash endures for a very long time and that it's a global issue.

"The ones washing up in Alaska after 19 years are still in pretty good shape," added Ebbesmeyer.

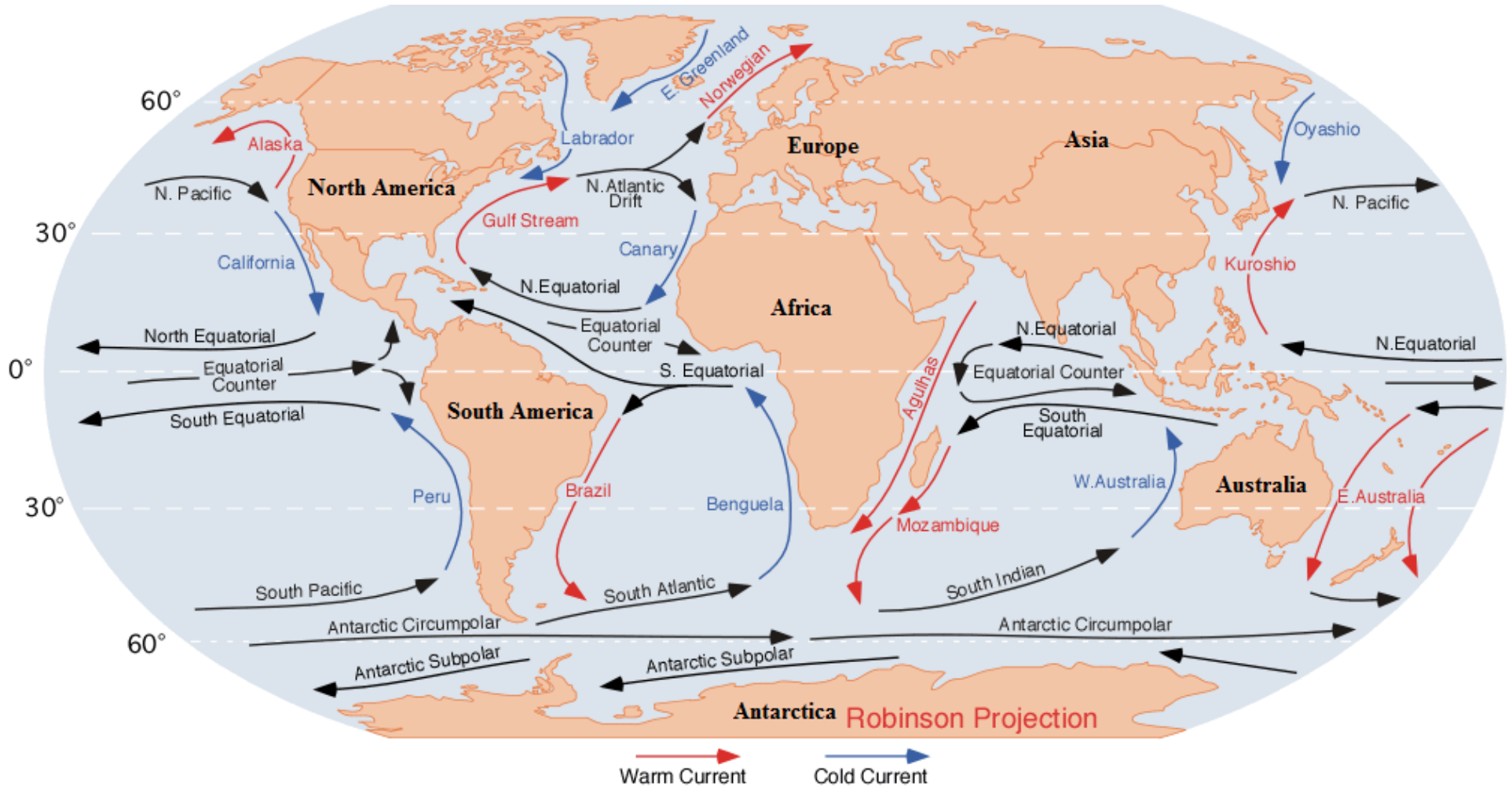
Nelson, B. (2011, March 01). [Web log message]. Retrieved from <http://www.mnn.com/earth-matters/wilderness-resources/stories/what-can-28000-rubber-duckies-lost-at-sea-teach-us-about->

Ocean Currents Map



Pidwirny, M. (2006). "Surface and Subsurface Ocean Currents: Ocean Current Map". *Fundamentals of Physical Geography, 2nd Edition*. Date Viewed. http://www.physicalgeography.net/fundamentals/8q_1.html

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Name _____



Oh Where, Oh Where Did My Rubber Ducky Go?

Ocean Currents My Rubber Duckie Traveled With	Oceans My Rubber Duckie Traveled Through	Countries My Rubber Duckie Passed By
1.		
2.		
3.		
4.		
5.		

Name _____



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Ocean Currents My Rubber Duckie Traveled With	Oceans My Rubber Duckie Traveled Through	Countries My Rubber Duckie Passed By
1.		
2.		
3.		
4.		
5.		
6.		
7.		
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