

ACTIVITY: Students recreate the movement of currents through role-play and art.



GRADE LEVEL(S): K to 5th



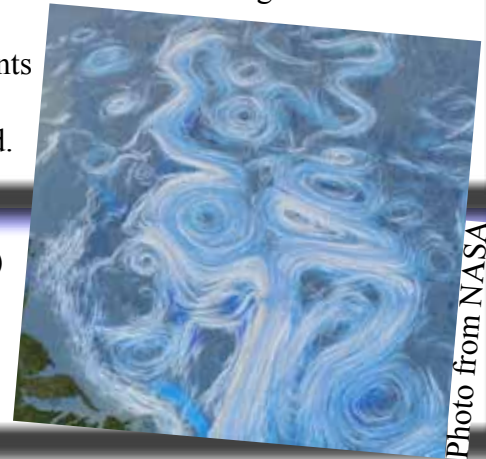
30-45 minutes

OVERVIEW: Students create their own ocean current using sidewalk chalk

DISCIPLINES: Science, oceanography, art, music, dance, physical activity

OBJECTIVES: Students will be able to:

- role-play movement of water
- describe and draw an ocean current
- describe how water currents move throughout water.
- recognize that even though we cannot see them, currents travel throughout the water column.
- explain how currents move nutrients and pollutants through the water.
- discuss how animals rely on currents to find food.



- MATERIALS:
- Ocean current photograph (provided in activity)
 - Sidewalk chalk
 - Sidewalk or large concrete area to draw
 - Music (calm, soothing instrumental)

WHAT TO DO:

STEP 1: Show NASA's ocean surface currents photograph. Point out the coastline. Explain that this is a photo of the ocean and scientists drew in the currents we normally cannot see to show how currents move and connect with each other. Have students describe the shapes they see (circles, spirals, half-circles, swirls, curves, squiggly lines...etc.). Ask, *Do any of the currents in this photo look like the ice cube current? Do you see how the currents sometimes seem to join or wrap around each other?* Let students share what else they observe.

STEP 2: Have students become the water and mimic how they think a current moves through the water. Have students stand an arm's length apart. Play music. Encourage students to move gracefully and slowly. They can spin, walk in spirals, flow back-and-forth, even swirl their hands and arms, to create their own current.

STEP 3: Have the students use sidewalk chalk to draw their own ocean current map. Tell students they will create a giant ocean current map, like the photograph. Students can choose whichever current shape they prefer. Encourage them to use the space and draw huge currents.

Suggestions:

- Have students stand arm's length or a little further apart so each student has a drawing area, but still keeps the currents connected -- just like in the ocean.
- Play music while students create.
- Your *Go with the Flow* ocean current map might look like this.
- **OR** combine the activity with the *Follow the Current* game and have a pre-drawn path to draw.



STEP 4: After students finish drawing their currents, take time to observe and enjoy the giant art piece in different ways.

STEP 5: Play music and have students become the water and follow the chalk current map.

Go Deeper:

- Count the number of spiral currents, swirls and other shapes
- Graph the number of spiral currents, swirls and other shapes
- Discuss how the currents flow into each other connecting to the next current connecting the entire world.
- Use the chalk currents to introduce or reinforce discoveries, such as how animals and trash might move with currents.
- Use with other Taking Science Deeper Activities:
 - ♦ Learn the *Jelly Dance Song*. Sing and role-play jellies moving through current map.
 - ♦ Play the *Follow the Current Game* obstacle course

A bit of background about currents: The ocean is in constant motion moving. Ocean currents move water up and down and across the sea. Currents move water, nutrients, animals, even pollution around the world. Scientists describe this movement as a “conveyor belt.” The conveyor belt starts in the Norwegian Sea, where water warmed by the Gulf Stream heats the atmosphere, cooling the water and causing it to sink. It takes about 1,000 years for this water conveyor belt to make a trip or one cycle around the world.

Throughout the world, ocean animals rely on currents. Plankton (tiny plants and animals) and jellies depend on currents. With little or no ability to move through the water on their own, they go wherever the currents take them. Sharks, whales, seabirds, and fish follow the nutrient-rich currents to find food.

For more information on currents visit these NOAA pages:

What is a Current (oceanservice.noaa.gov/facts/current.html)

What is the Global Ocean Conveyor Belt? (oceanservice.noaa.gov/facts/conveyor.html)

Why does the Ocean get colder at Depth? (oceanservice.noaa.gov/facts/coldocean.html)



NASA-created image of wind-created surface currents off the coast of Florida.

Photo Credit NASA

Taking Science Deeper!

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