

RESOURCE LIBRARY
ACTIVITY : 50 MINS

The Benefits of Studying Ocean Currents

Students conduct research about how studying ocean currents is helpful to people in specific jobs or professions. Then they present their findings to the class.

GRADES

6 - 8

SUBJECTS

Geography, Physical Geography

CONTENTS

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OVERVIEW

Students conduct research about how studying ocean currents is helpful to people in specific jobs or professions. Then they present their findings to the class.

For the complete activity with media resources, visit:

<http://www.nationalgeographic.org/activity/benefits-studying-ocean-currents/>

DIRECTIONS

1. Introduce the activity.

Tell students they will work in small groups to conduct research. Their task will be to consider why studying ocean currents might be of interest to people in specific jobs or professions, and how those people's studies might benefit society as a whole. Groups will then present what they found to the rest of the class.

2. Distribute the worksheet, discuss the example as a class, and assign groups.

Distribute the worksheet Studying Ocean Currents. As a class, discuss how a scientist who

studies climate change would benefit from studying ocean currents. Elicit student responses beyond what appears on the worksheet. Then divide the class into six small groups and assign each group one of the professions. Groups can use what they already know and resources in the classroom or on the Internet to complete the assignment. Encourage students to find visual aids that emphasize their points and that they can incorporate into their presentations.

3. Have groups present the information they found.

Have each small group present what they found. As a class, agree on the benefits of each and have students complete their worksheets based on the discussions. Example answers appear below.

- A politician who makes laws regarding pollution benefits because knowing the patterns of currents can help people track the origin of pollutants that are detrimental to an ecosystem. This information allows political leaders to confront a foreign source of pollution that is affecting their nation.
- A biologist benefits when studying biodiversity. Organisms can live on or under floating debris and ride the currents to new destinations. Biologists can trace where organisms originated and can also learn more about how they affect new habitats and ecosystems.
- A business owner who ships materials overseas benefits because he or she can map the fastest and easiest route. This knowledge can reduce the overall cost of products as the most efficient route will cost less in terms of energy and time. Businesses can also be better aware of where lost cargo would end up.
- A person responsible for establishing shipping routes for oil tankers can find the fastest travel route, with the least risks, and assist the oil industry in efficiently cleaning up any spills at sea.
- An environmentalist can study currents to learn how devastating and far-reaching pollution is when transported on the “conveyer belt” of ocean currents. They note how moving pollution affects marine life and even creatures on land, since currents can carry non-biodegradable substances all over the world.
- A researcher studying waste disposal can get information about garbage and its longevity and potential for damage. They can study different products that do not break down after years in water and learn how different areas in the world can better manage waste.

Extending the Learning

After the presentations, have a whole-class discussion focusing on why studying ocean currents is of value to us as individuals. Guide the discussion so students consider how this knowledge might affect their personal behaviors, especially in relation to the environment and social and political activism.

OBJECTIVES

Subjects & Disciplines

Geography

- Physical Geography

Learning Objectives

Students will:

- conduct research about how people in different professions use maps of ocean currents
- synthesize and present the information they find

Teaching Approach

- Learning-for-use

Teaching Methods

- Cooperative learning
- Discussions
- Research

Skills Summary

This activity targets the following skills:

- Critical Thinking Skills
 - Analyzing

- Applying
- Understanding
- Geographic Skills
 - Acquiring Geographic Information
 - Analyzing Geographic Information

National Standards, Principles, and Practices

NATIONAL GEOGRAPHY STANDARDS

- **Standard 1:**

How to use maps and other geographic representations, geospatial technologies, and spatial thinking to understand and communicate information

Preparation

What You'll Need

MATERIALS YOU PROVIDE

- Pencils
- Pens

REQUIRED TECHNOLOGY

- Internet Access: Optional
- Tech Setup: 1 computer per classroom

PHYSICAL SPACE

- Classroom

GROUPING

- Small-group instruction

BACKGROUND & VOCABULARY

Background Information

Ocean currents function as a system of global transportation, carrying animals, plants and even people and cargo from place to place. Oceanographers have mapped these currents. The maps not only help people understand the ocean, but they help people from many professions perform daily tasks.

Prior Knowledge

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Recommended Prior Activities

- [Our Interconnected Ocean](#)
- [The Geography of Ocean Currents](#)

Vocabulary

Term	Part of Speech	Definition
current	<i>noun</i>	steady, predictable flow of fluid within a larger body of that fluid.
ocean circulation	<i>noun</i>	worldwide movement of water (currents) in the ocean.
oceanographer	<i>noun</i>	person who studies the ocean.

For Further Exploration

Websites

- [Marine Conservation Biology Institute: From Sea to Shining Sea](#)

PARTNER



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