

RESOURCE LIBRARY
ACTIVITY : 15 MINS

One Ocean

Students explore the boundaries of Earth's five oceans, recognizing that they are all connected. Students discuss what this means for conservation of the one world ocean.

GRADES

3 - 8

SUBJECTS

Earth Science, Oceanography, Geography, Physical Geography

CONTENTS

1 Video, 1 Link

OVERVIEW

Students explore the boundaries of Earth's five oceans, recognizing that they are all connected. Students discuss what this means for conservation of the one world ocean.

For the complete activity with media resources, visit:

<http://www.nationalgeographic.org/activity/one-ocean/>

DIRECTIONS

1. Establish student background on the ocean.

Show students a physical world map, and have volunteers point to an ocean. Ask: *Has anyone been to an ocean? Can you point to it on the map?* As a group, find the Atlantic, Pacific, Indian, and Arctic Oceans.

2. Students explore ocean boundaries on the World Physical MapMaker Kit.

Distribute the tabletop version of the World Physical MapMaker Kit to students in small groups, or use the MegaMap with the whole class. Ask students to draw the boundaries of each ocean on the map with markers. Have students work in groups to try to draw these lines. They may struggle, because there are no true lines separating oceans. In effect, there is really only one ocean. Discuss this finding with students. Ask: *How can we say there are "four oceans" and also there is "one ocean"? Isn't that a contradiction? Why do you think maps typically name four oceans?"*

3. Discuss issues of ocean stewardship.

Discuss implications of Earth's one ocean and how this creates challenges for ocean stewardship. Water, animals, plants, pollution, and people travel throughout the world on this constantly moving body of water. Ask: *What do you think this means for marine life, and for the use and care of the ocean?* Talk about environmental and human implications, such as overfishing and water pollution, and potential impacts on ecosystems and people's food sources. Brainstorm ways the ocean's resources can be protected and conserved.

Tip

Laminate the individual sheets of the MapMaker Kit map so you can re-use it for several years.

Modification

You can adapt the activity for different MapMaker Kit sizes as needed for different settings.

Extending the Learning

- Have students look at five to ten other bodies of water such as the Gulf of Mexico, the Caribbean Sea, the Mediterranean Sea, the Arabian Sea, and the Phillipine Sea. Have students try to draw boundaries for them. Ask: *What challenges do you think countries that need to share these bodies of water face? What challenges might there be in protecting all of these interconnected bodies of water?*

OBJECTIVES

Subjects & Disciplines

Earth Science

- Oceanography

Geography

- Physical Geography

Learning Objectives

Students will:

- explain how the Atlantic, Pacific, Indian, and Arctic Oceans are interconnected on Earth's surface
- explain that the Earth has one connected ocean

Teaching Approach

- Learning-for-use

Teaching Methods

- Brainstorming
- Cooperative learning
- Discovery learning
- Discussions

Skills Summary

This activity targets the following skills:

- Critical Thinking Skills
 - Applying
 - Understanding
- Geographic Skills
 - Answering Geographic Questions

National Standards, Principles, and Practices

NATIONAL GEOGRAPHY STANDARDS

- **Standard 3:**

How to analyze the spatial organization of people, places, and environments on Earth's surface

- **Standard 4:**

The physical and human characteristics of places

OCEAN LITERACY ESSENTIAL PRINCIPLES AND FUNDAMENTAL CONCEPTS

- **Principle 1a:**

The ocean is the dominant physical feature on our planet Earth—covering approximately 70% of the planet's surface. There is one ocean with many ocean basins, such as the North Pacific, South Pacific, North Atlantic, South Atlantic, Indian and Arctic.

- **Principle 1h:**

Although the ocean is large, it is finite and resources are limited.

Preparation

What You'll Need

MATERIALS YOU PROVIDE

- Markers

REQUIRED TECHNOLOGY

- Internet Access: Required
- Tech Setup: 1 computer per classroom, Projector
- Plug-Ins: Flash

PHYSICAL SPACE

- Classroom

SETUP

Wall or floor space large enough to hang a giant map

GROUPING

- Large-group instruction
- Small-group instruction

OTHER NOTES

Print and assemble the map as a class or on your own before class. Use the assembly video provided to help with this process. If you do not have room for the large map, print several table top maps for the students to use in small groups.

BACKGROUND & VOCABULARY

Background Information

All of the oceans and seas on Earth are interconnected making one world ocean. Many boundaries that seemingly separate these bodies into separate entities are manmade for navigational or political reasons.

Prior Knowledge

☐ Recommended Prior Activities

- [Undersea Geology](#)

Vocabulary

Term	Part of Speech	Definition
Arctic Ocean	<i>noun</i>	one of Earth's four oceans, bordered by Asia, Europe, and North America.
Atlantic Ocean	<i>noun</i>	one of Earth's four oceans, separating Europe and Africa from North and South America.
boundary	<i>noun</i>	line separating geographical areas.
conservation	<i>noun</i>	management of a natural resource to prevent exploitation, destruction, or neglect.

Term	Part of Speech	Definition
ecosystem	<i>noun</i>	community and interactions of living and nonliving things in an area.
impact	<i>noun</i>	meaning or effect.
Indian Ocean	<i>noun</i>	one of Earth's four oceans, bordered by Africa, Asia, Australia, and Antarctica.
ocean	<i>noun</i>	large body of salt water that covers most of the Earth.
Pacific Ocean	<i>noun</i>	one of Earth's four oceans, bordered by North America, South America, Australia, Asia, and Antarctica.
resource	<i>noun</i>	available supply of materials, goods, or services. Resources can be natural or human.
sea	<i>noun</i>	large part of the ocean enclosed or partly enclosed by land.
stewardship	<i>noun</i>	responsible management to ensure benefits are passed on to future generations.
water current	<i>noun</i>	flowing movement of water within a larger body of water.
water pollution	<i>noun</i>	introduction of harmful materials into a body of water.

For Further Exploration

Websites

- [National Geographic: The Ocean](#)

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