OUR INTERCONNECTED OCEAN

How has the thinking about the ocean changed over time?

OVERVIEW

Students discuss the geography of the ocean and explore how the ocean has been categorized in the past and today.

For the complete activity with media resources, visit:
http://www.nationalgeographic.org/activity/our-interconnected-ocean/

DIRECTIONS

1. Have a whole-class discussion about oceans.
   Ask:
   - How much of our planet's surface is covered with water? (more than 70%)
   - Are the different oceans separated completely by land or is the Earth covered with a single layer of connecting water? (a single layer)

   Explain to students that they will learn about the different labels our ocean has had over time and how we categorize it today.

2. Discuss how oceans have been categorized in the past.
   Ask: Have you ever heard the expression “to sail the Seven Seas”? Select seven students to stand in front of a large wall map of the world. Explain that many years ago the “Seven Seas” may have been used to label the list below. As you read each place name, have one student locate the sea and place a sticky note
Ask: Are the Seven Seas geographically far apart or close together? Why do you think that is? (They are relatively close together, clustered around the Mediterranean, most likely because ancient mariners had not strayed far from that area.) Explain that in ancient times, “seven” often meant “many,” so the expression “to sail the Seven Seas” may have simply meant to sail all over the world.

3. Discuss how oceans are categorized today.
Tell students that there were more changes over time related to how we categorize oceans. But today we recognize four main oceans that make up our one interconnected ocean: the Arctic, Atlantic, Indian, and Pacific Oceans. Explain that scientists are in the process of recognizing a fifth ocean—the Southern Ocean. Once this ocean is globally accepted and recognized as a fifth major ocean, maps and other resources will have to change accordingly. Ask five students to stand in front of the wall map. Have them identify each ocean and place a sticky note on the map to mark it as you read the following clues:

- This ocean is the largest ocean. It covers one-third of our planet's surface and is larger than the Earth's entire landmass. (Pacific)
- This ocean is the third largest and includes the Red Sea and the Persian Gulf. (Indian)
- This ocean is the smallest and the shallowest. Much of it is ice most of the year. (Arctic)
• This ocean is the second largest and is the most heavily traveled. (Atlantic)
• Where do you think the Southern Ocean will be located?
• Find the ocean that is closest to you.

Remind students that the continents move slowly over time. Ask: How do shifting continents affect our four main oceans? (The oceans change in size.)

OBJECTIVES

Subjects & Disciplines

Geography
• Physical Geography

Learning Objectives

Students will:

• explain how Earth is covered by a single layer of connecting water
• describe how the ocean has been categorized in the past and today

Teaching Approach

• Learning-for-use

Teaching Methods

• Discussions
• Visual instruction

Skills Summary

This activity targets the following skills:
• Critical Thinking Skills
  • Understanding
• Geographic Skills
  • Acquiring 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
• Sticky notes
• Wall map of the world

PHYSICAL SPACE

• Classroom
GROUPING

• Large-group instruction

BACKGROUND & VOCABULARY

Background Information

Over 70% of planet Earth is covered with water. Although there are labels that separate names of different regions, the Earth ultimately has just one large, interconnected ocean.

Prior Knowledge

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Recommended Prior Activities

• MPA Designation and Management
• The Benefits of Studying Ocean Currents
• The Geography of Ocean Currents
• Water Quality Degradation in the Ocean

Vocabulary

<table>
<thead>
<tr>
<th>Term</th>
<th>Part of Speech</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>continent</td>
<td>noun</td>
<td>one of the seven main land masses on Earth.</td>
</tr>
<tr>
<td>ocean</td>
<td>noun</td>
<td>large body of salt water that covers most of the Earth.</td>
</tr>
</tbody>
</table>

For Further Exploration

Websites

• National Geographic Environment: The Ocean
• Marine Conservation Biology Institute: From Sea to Shining Sea