

RESOURCE LIBRARY
ACTIVITY : 50 MINS

Ocean Habitats and Animal Adaptations

Students analyze three broad ocean habitats, the characteristics and conditions of each, and research the animals of each zone and their adaptations.

GRADES

6 - 8

SUBJECTS

Biology, Geography, Physical Geography

CONTENTS

4 Links, 2 PDFs

OVERVIEW

Students analyze three broad ocean habitats, the characteristics and conditions of each, and research the animals of each zone and their adaptations.

For the complete activity with media resources, visit:

<http://www.nationalgeographic.org/activity/ocean-habitats-animal-adaptations/>

DIRECTIONS

1. Introduce ocean habitats.

Go to the NOAA/National Weather Service's Profile of the Ocean diagram. Discuss the significance of the depths shown on this diagram. Point out to students that the deepest part of the ocean shown is 11,000 meters (36,100 feet), or approximately 11 kilometers (7 miles) deep. Point out the intertidal zone—in the epipelagic zone right above the continental shelf—and tell students it is the region along the shoreline covered by the sea at high tide but exposed to air at low tide. Then point out to students that the top three zones together are called the pelagic zone, or open ocean. Explain that the abyssopelagic, or abyssal benthic, zone is the

region that includes the ocean floor. Ask: *Why is the ocean divided into different zones?* Elicit from students that each zone has unique characteristics and animal and plant life.

2. Have students predict the different conditions that exist in each habitat.

Ask students to describe the differences in pressure, temperature, and light in the different layers of the ocean. Ask:

- *Where is it the darkest?*
- *Where is it the coldest?*
- *Where is the pressure the greatest?*
- *Why is that so?*

Students should realize that it gets colder and darker and pressure increases as one moves from the surface to the bottom of the ocean.

3. Have students research the animals of each zone and their adaptations.

Distribute the worksheet and have students work in small groups to complete it. Encourage groups to use information from the diagram and the provided Internet resources, or classroom and library resources. Ask students to take turns reading the Internet web pages and leading the discussion in their small groups.

Informal Assessment

Rotate around the small groups to make sure all students are contributing to the discussions. After students have completed the worksheets, collect the worksheets and use the provided answer key to check students' answers.

OBJECTIVES

Subjects & Disciplines

Biology

Geography

- Physical Geography

Learning Objectives

Students will:

- describe three broad ocean habitats and their locations
- describe the conditions that exist within these habitats
- identify the animals and adaptations in each habitat

Teaching Approach

- Learning-for-use

Teaching Methods

- Discussions
- Research
- Visual instruction

Skills Summary

This activity targets the following skills:

- Critical Thinking Skills
 - Analyzing
 - Understanding
- Geographic Skills
 - [Acquiring Geographic Information](#)
 - [Analyzing Geographic Information](#)

National Standards, Principles, and Practices

NATIONAL GEOGRAPHY STANDARDS

- [Standard 8:](#)

The characteristics and spatial distribution of ecosystems and biomes on Earth's surface

NATIONAL SCIENCE EDUCATION STANDARDS

- (5-8) Standard C-5:

Diversity and adaptations of organisms

Preparation

What You'll Need

MATERIALS YOU PROVIDE

- Pencils
- Pens

REQUIRED TECHNOLOGY

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

PHYSICAL SPACE

- Classroom

GROUPING

- Small-group instruction

BACKGROUND & VOCABULARY

Background Information

The ocean has three broad habitats: the intertidal zone, the pelagic zone, and the abyss. Water depth, temperature, and the presence or absence of light are some of the conditions that differ in these habitats. Animals adapt to their environments to help them survive. Ocean animals have unique adaptations depending on what ocean habitat they live in.

Prior Knowledge

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Recommended Prior Activities

- [Animal Adaptations in the Ocean](#)

Vocabulary

Term	Part of Speech	Definition
abyss	<i>noun</i>	deep pit in the ocean or other body of water.
habitat	<i>noun</i>	environment where an organism lives throughout the year or for shorter periods of time.
intertidal zone	<i>noun</i>	region between the high and low tide of an area.

For Further Exploration

Websites

- [National Geographic Environment: The Ocean](#)

FUNDER



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