

Wild Reef

K-2 TEACHER'S GUIDE



Grade: K-2

Objectives:

Collect data about animal diversity in habitats found in the Wild Reef exhibit.

Construct a scientific argument about presence of biodiversity in coral reefs.

Identify characteristics that define animal species.

Timing: 30 minutes at Shedd Aquarium

Materials: Printed activity sheet for each student

Introduction

The ocean is made up of a diverse collection of ecosystems and animals. Coral reefs are the most biodiverse type of ocean habitat, providing a home and resources to an incredible number of living things. In this learning experience, students will explore the similarities and differences among various species of reef animals. Students will also explore multiple habitats to uncover the different areas of the reef that they live in. Students will use their data to construct a scientific argument.

Working toward these Next Generation Science Standards

LS4.D Biodiversity and humans: There are many kinds of living things in any area, and they exist in different places on land and in the water.

Science and engineering practices

Planning and carrying out investigations: Make observations (firsthand or from media) to collect data that can be used to make comparisons.

Crosscutting concepts

Patterns

Background information

Coral reefs are the most diverse ecosystems in the ocean. Shedd's Wild Reef exhibit shares the story of Apo Island in the Philippines. Apo Island is surrounded by a coral reef teeming with life. Coral reefs can be found in the tropics around the world. Corals are animals that live in colonies. The many species of corals come in a wide variety of shapes, sizes and colors. Some species of corals build reefs that provide habitat for many other species. Species' habitats include everything they need to survive: food, water, shelter and space. Reefs are important because they support biodiversity (many species), and they also support millions of people by providing food, jobs and tourism opportunities.

Additional resources

- Here Is the Coral Reef by Madeleine Dunphy, Tom Leonard <https://www.amazon.com/Here-Coral-Reef-Web-Life/dp/097737954X>
- Over in the Ocean: In a Coral Reef by Marianne Berkes (Author), Jeanette Canyon (Illustrator) <https://www.amazon.com/Over-Ocean-Coral-Simply-Nature/dp/1584690828>

Online resources

- Shedd Aquarium Wild Reef exhibit - <https://www.sheddaquarium.org/wild-reef/>
- NOAA coral reef information - <http://www.noaa.gov/explainers/coral-reefs-essential-and-threatened>

Lesson Outline

Know before you go

- Read a book about animals in a coral reef and discuss how many types of animals that habitat supports. *See resources section for book suggestions.*
- Discuss with students that coral reefs are ocean habitats with warm, clear water and sunshine. The animals they will see in Wild Reef are from the Philippines, which is a country made of islands and surrounded by coral reefs.

Explore at Shedd!

- Give students their activity sheet (included below). Explain that they will be walking through the Wild Reef exhibit and writing on their activity sheet.
- A teacher or chaperone can read the prompts aloud to students who cannot yet read.
- For some of the questions, students will need to observe the exhibits.
- The activity sheet is broken up into five parts. The first two parts can be done before students arrive in the Wild Reef exhibit. The third part can be completed in the first large coral habitat (just beyond the tidal pool). The fourth part can be answered at the large shark habitat. The last part can be answered in any area.

Optional extension at Shedd

- Choose two habitats to compare and decide which one has the greater number of species. Why do you think one habitat might have more species than another?
- Compare the number of species in a coral reef habitat to a habitat in another area of the aquarium.
- Explore the Mangrove exhibit toward the end of Wild Reef. There are no corals here. Make observations to answer the question: Can ocean animals live in a place without corals?

Optional classroom debrief questions

- What would you tell Raquel about the number of species found on the reef?
- What would you tell Raquel about where on the reef various species live?
- Why do you think so many species live on the coral reef?

Optional extension activities

- Create a classroom mural that shows multiple types of habitats around the coral reef, such as beaches, mangrove forests and lagoons. Have students research what kinds of animals can be found in these different habitats and add them to the mural.
- Investigate the biodiversity of your schoolyard. Have students document all the species they can count, including plants, insects and birds. What areas have more biodiversity?

Notes/considerations

Differentiation

