



Ranger Rick

EDUCATOR'S GUIDE

EDUCATIONAL EXTENSIONS FOR THE JULY 2020 ISSUE OF RANGER RICK® MAGAZINE

OCEAN ZONES

Before students read “**The Ocean,**” pages 4-13, ask them to describe how the ocean is like a birthday cake. List their ideas on the board without comment. Then tell children to be thinking about the “birthday cake” question as they read the article. Once they have read “The Ocean,” ask the question again. (Answer: The ocean has layers). Briefly identify the three layers (called zones) mentioned in the article, and ask students to complete the Student Page called “In the Zones.”

ECOSYSTEM IQ

In “**What’s Your Ocean IQ?**” on pages 14-17, students can test their knowledge of some ocean-dwelling creatures. What is the major ecosystem where you live? Forest, wetland, shoreline, desert, or something else? Have students investigate the ecosystem and create quiz questions about some of its key species and features. Compile the questions in a format (paper or digital) students can share with the school or community to generate awareness about the local landscape.

SEA HOMES

At the conclusion of “**Coral Condos,**” pages 18-23, students learn what happens to corals when they get stressed and expel their algae. Have students learn more about coral bleaching, answering the following questions.

- What percentage of the world’s reefs are impacted by this phenomenon?
- How is marine life affected?
- What are scientists doing to save coral reefs?
- What can students do to help save coral reefs?

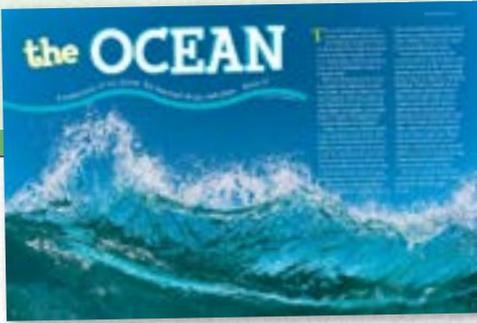
ZOOM IN ON BIODIVERSITY

Collect a sample of water from your closest stream or pond and take turns looking at it under a microscope or with a magnifying glass. Ask students to draw what they see. Now have students read about marine plankton in “**Super (Small) Heroes,**” pages 26-30. Look at a fresh sample or the same sample again. Can they find any plankton? Plankton represent amazing biodiversity because there are so many different kinds. Investigate local biodiversity with something a little bigger and easier to count. For example, discover how many different species of trees there are in your schoolyard or a local park, using the tree shapes, differences in leaves and bark, and leaf buds specified in field guides.

TRASH CENSUS

After reading “**Trash Tracker,**” pages 31-35, do some trash tracking of your own. Organize a clean-up project at a park, beach, or trail in your area. Have students keep a running tally of the objects they collect. Which kinds of trash are most abundant? Can you determine the sources of some of these items? For instance, are people littering at the site, is litter washing or blowing in from somewhere else, or is there some other explanation? Check out Eco-Schools USA’s [Watersheds, Oceans, and Wetlands pathway](#) to help students investigate ways they might take action to stop some of the trash at its source.





IN THE ZONES

Use what you learned from reading "The Ocean" (pages 6–15), as well as information from other resources, to complete the following chart about zones in the ocean.

ZONES (FROM TOP TO BOTTOM)	HOW WOULD YOU DESCRIBE THIS ZONE?	WHAT PLANTS AND ANIMALS LIVE IN THIS ZONE?	WHAT INTERESTED YOU MOST ABOUT THIS ZONE?	WHAT QUESTIONS DO YOU HAVE ABOUT THIS ZONE? (LIST AT LEAST TWO PER ZONE.)
SUNLIT ZONE				
TWILIGHT ZONE				
MIDNIGHT ZONE				

BONUS ACTIVITY : Select two of the questions in the last column of your chart. Write the questions on the back of this paper: one question at the top of the page and the other in the middle of the page. Now go online to explore the questions. : Under each question, write your findings.



CORAL CONDOS



In "Coral Condos," on pages 18–23, you see how fish and other animals live in every nook and cranny of a coral reef. Imagine if your bedroom were as busy as a coral condo (and filled with seawater, of course). Draw the room below, with fish and other coral reef creatures living in every available space.

- 1 How is the bedroom in your drawing like a real coral condo?

- 2 How is it different?

