
DIVE TO THE CORAL REEFS

Authors: Elizabeth Tayntor, Paul Erickson & Les Kaufman

Publisher: Crown

THEME:

There's a whole different world beneath the sea, especially where there's a living coral reef.

PROGRAM SUMMARY:

This feature book describes the formation of coral reefs and the many plants and animals that live in and around these underwater communities.

LeVar is inspired by the book to learn more about the world of coral reefs, so he dons diving gear and gives viewers a tour of the National Marine Sanctuary, an underwater park in Florida. Viewers also meet a 'reef doctor' who shows how he restores life to damaged reefs by transplanting living coral.

TOPICS FOR DISCUSSION:

Introduce the concept of "ecosystem" (the functioning of a community and its environment together as a unit in nature). Discuss how the undersea world of a coral reef is an ecosystem. Based on what the students saw in the program, how do plants and animals live together successfully in a coral reef?

Ask the students if humans are part of the coral reef ecosystem. What threats to the ecosystem by humans were mentioned in the program?

Discuss other ecosystems with which students are familiar. How are they similar to and different from the coral reef ecosystem?

Discuss why the reef doctors were handling the coral with such care.

CURRICULUM EXTENSION ACTIVITIES:

Coral reefs are found only in tropical oceans. Have students locate tropical oceans on a map of the world. The largest coral reef in the world is the Great Barrier Reef off the coast of Australia (over 1200 miles long). Locate this reef. Find the Florida Keys on a map of the United States.

Study the shape of waves by making a wave in a bottle. Obtain a one-gallon round clear plastic bottle and fill half the bottle with mineral oil. Add a few drops of blue food coloring to the oil. Pour rubbing alcohol into the bottle until it is full. Put the cap on tightly and balance the bottle to create the wave motion. Take note of any changes in the shapes of the waves.

Using the program and pictures in books as resources, have students use clay to make models of different types of coral. Before starting, recall some of the coral that was mentioned in the program (brain coral, staghorn coral, plate coral) and discuss distinguishing characteristics.

Review the definition of camouflage and discuss how it applies to some members of a coral reef community. Have students select an animal that uses camouflage in a coral reef and draw a picture of that animal in its surroundings. They will need to examine the camouflaging characteristics of the animal and create a background that will disguise its presence. Display the finished pictures and discuss the artist's effectiveness at camouflaging the animal.

Invite someone who knows how to dive into the classroom to talk about diving and demonstrate how her/his equipment works.

Have students research animal life in a coral reef. Investigate animals that are quite different from each other to show the diversity of animal life in this ecosystem. Possible topics of study might include: sea anemone, sponge, sea urchin, starfish, hermit crab, sea horse, butterflyfish, spiny lobster, clownfish, octopus, moray eel, barracuda, wrasse, nurse shark, shrimp, sea turtle, sea fan, and many others. Have students write key facts on index cards to be used in the activity described below.

Have the class design and make a mural of a coral reef. Include the animals from their research and others. Add plants and different varieties of coral. Provide materials so that they may make parts of the mural three-dimensional (e.g., pipe cleaners, cardboard, drinking straws, fabric scraps, small shells, etc.). Have them start by painting the watery background, making variations in the darkness of the blue paint. All members of the coral reef community that the students create can be attached to the background. Have students make labels for the plant and animal life in their mural. Key the labels to the index cards from their research and post the cards along the side of the mural for reference.

Have students make signs that they would post near a coral reef, advising people against actions that would threaten the reef (e.g., water pollution, air pollution, touching the coral, oil spills, dragging boat anchors, souvenir collecting, and others).

Students might enjoy visiting the New England Aquarium on the Internet. The address is: <<http://www.neaq.org>>

RELATED THEMES:

ocean-related careers
ecology
habitats

RELATED READING RAINBOW PROGRAMS:

Program #67 — Jack, The Seal And The Sea
Program #88 — Seashore Surprises
Program #83 — Sam The Sea Cow

ABOUT THE AUTHORS:

Elizabeth Tayntor, Paul Erickson, and Les Kaufman are members of the education department at the New England Aquarium in Boston, Massachusetts. *Dive to the Coral Reefs* is based on a filmstrip recounting an expedition off the coast of Jamaica to explore the reefs.

BOOKS REVIEWED BY CHILDREN:

HOW TO HIDE AN OCTOPUS & OTHER SEA CREATURES
by Ruth Heller (Grosset & Dunlap)

I CAN BE AN OCEANOGRAPHER
by Paul P. Sipiera (Children's Press)

CREATURES OF THE SEA
by John Christopher Fine (Simon & Schuster)

SUPPLEMENTARY BOOKLIST:

THE SIGN OF THE SEAHORSE
by Graeme Base (Abrams)

LIFE ON A CORAL REEF
by Lionel Bender (Gloucester)

CORAL REEF: A CITY THAT NEVER SLEEPS
by Mary Cerullo, photos by Jeffrey L. Rotman (Cobblehill/Dutton)

THE SEA: CORAL REEFS
by Jason Cooper (Rourke)

CORALS: THE SEA'S GREAT BUILDERS
from The Cousteau Society (Simon & Schuster)

A LOOK AROUND CORAL REEFS
by Tracey E. Dils, photos by Tom Stack & Associates (Willowisp Press)

IT COULD STILL BE CORAL
by Allan Fowler (Children's Press)

CORAL REEF
by Michael George (Creative Editions)

CORAL REEFS: EARTH'S UNDERSEA TREASURES
by Laurence Pringle (Simon & Schuster)

CORAL REEFS

by Alberto Ruiz de Larramendi (Children's Press)

SEA WATCH

by Jane Yolen, illus. by Ted Lewin (Philomel)

WHO'S HIDING HERE?

by Yoshi (Picture Book Studio)

UNDER THE WATER

by Harriet Ziefert, illus. by Suzy Mandel (Puffin)



READING RAINBOW TEACHER'S GUIDE

Program #61 — Dive to the Coral Reef

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