

# Exploring Coral Reefs



## Objectives

The student will be able to show on a globe or world map the location of the two largest reef formations, as well as a third reef of his or her choice. The student will be able to explain how coral contributes to local economies and/or cultures.

## Materials

- Atlas
- Computer with Internet access
- Copies of world map (provided)
- Writing and drawing materials including color markers or pencils
- Equipment and materials for presentations
- Recommended book: *World Atlas of Coral Reefs*

## Background

Reef-building corals are scattered throughout the tropical and subtropical western Atlantic and Indo-Pacific oceans, generally within 30°N and 30°S latitudes. Coral reefs encompass about 284,300 square km (109,769 square mi.). The Great Barrier Reef, on the northeast coast of Queensland, Australia, is the largest coral reef. It's 2,000 km (1,240 mi.) long and contains more than 3,000 separate reefs and shoals. The second largest reef system is along the coast of Belize in the Caribbean Sea. Coral reef ecosystems are found in more than 100 countries and territories. However, coral reefs comprise only 0.09% of the oceans' total area worldwide. So why should we pay attention to them? Coral reefs are home to a wider variety of organisms than can be found above the ocean; reefs host an estimated half a million animal and plant species. Coral reefs remove and recycle carbon dioxide; excessive amounts of this gas contribute to global warming. Reefs also shelter land from tsunamis and other harsh weather. Local economies benefit from fishing opportunities and tourism. Unfortunately, coral reefs are in peril due to pollution, sediment flow from deforestation, elevated sea surface temperatures due to global warming, overfishing, and destructive fishing practices.



## Action

1. Divide students into small groups and distribute world maps on page 3. As a class, identify and discuss the largest reef formation, the Great Barrier Reef. Then, in their groups, students will conduct research to discover what the second largest reef system is and name it. They will also choose a third coral reef to research in more detail. Using the library or Internet, each group should find the following information about the reef they've chosen:
  - Reef(s) name
  - Reef location
  - Reef type
  - Current health status
  - How the reef(s) supports the local economy (fishing, tourism, etc.)
  - Any governmental or local protection and conservation programs working to protect the reef(s).
2. Using the information gathered, student groups put together an educational 2- to 3-minute "infomercial" about their reefs. Ideas include creating a brochure or poster, short video, slide show presentation, or acting out a "live" commercial. Groups should identify the audience (children, adults, fishing industry, government, conservationists, etc.) and state the infomercial's goal.
3. Have student groups present their infomercials to classmates.

## Deeper Depths

Are there any products made from coral reefs found in your local stores? Some common examples might be coral jewelry and coral calcium vitamins. Can students find any others? What kind of school projects can be done to help restore or build reefs? (Example: Science students at Harlee Middle School in Bradenton, Florida, created reef balls [artificial reefs] made of concrete and worked with Mote Marine Laboratory of Sarasota to have the balls placed in ideal areas off the coast of Manatee and Sarasota counties.)