**Summary** This nonfiction article about coral reefs identifies what makes up the reefs, tells why coral reefs are important, and suggests ways to protect them.

**Lesson Vocabulary**
- algae
- atoll
- colony
- coral
- coral polyp
- coral reef
- global warming
- lagoon
- pollution
- tentacle

**Introduce the Book**

**Introduce the Title and Author** Discuss the title and author of *Coral Reefs*. Invite students to consider the illustration. Ask: Do you think this is a coral reef? Might those be different kinds of coral?

**Build Background** Briefly discuss with students what they know about the dangers to people, animals, and plants from pollution. Explain that the ocean is not immune. Some ocean animals and plants are also endangered by pollution.

**Preview/Use Text Features** Have students preview the book by paging through it and looking at the illustrations. Ask: How can captions and labels help you understand what’s in a photograph or diagram? How can the glossary help you?

Make sure students understand that words highlighted in the text are in the glossary. If they cannot figure out the meaning of a highlighted word, they can look it up in the glossary at the back of the book.

**Read the Book**

**Set Purpose** Ask students to discuss what they think their purpose for reading *Coral Reefs* could be. Remind them to base their ideas on what they saw as they previewed the book.

**Strategy Support: Predict and Set Purpose** In discussion, recall with students why it is important to predict what they think a book might be about and to set a purpose for reading. Remind them that previewing can help on both counts.

**Comprehension Questions**

**Page 3** What is a coral reef? (An undersea ridge of hard rock formed by the skeletons of tiny animals called corals.)

**Pages 4–5** What is the main difference between hard and soft corals? (Soft corals do not have a hard outer skeleton the way hard corals do, so soft corals are not part of coral reefs.)

**Page 8** What are the three main kinds of coral reefs? (fringing reefs, barrier reefs, and atolls)

**Page 11** Why should we make an effort to protect coral reefs? (The reefs protect nearby land and provide food and refuge for many plants and animals.)

**Pages 19–21** How can people protect the reefs? (create marine parks, plant mangrove trees and other plants, reduce global warming, and so on)
**REVISIT THE BOOK**

**READER RESPONSE**

1. Dangers coral reefs face (Causes) include dynamite fishing, pollution, global warming, tourists, and building close to shore. Effects of all these include damage to the reefs. Dynamite fishing and pollution kill plants and animals in the reef; global warming raises the water temperature, which kills the algae and starves the coral until it dies; people break the coral and demand to buy it; even wearing sunscreen when swimming in the ocean poisons plants and animals in a reef.

2. Responses will vary, but most students will realize that the coral reefs could all die, which would have an impact on the shores by the oceans.

3. Pollution means adding dirty and dangerous substances to something such as air or water. Pollution can kill not only the coral reefs but also the animals and plants that live in them.

4. Possible response: We must protect the coral reefs because we depend on them. They protect the nearby land from storms. They are home for many plants and animals. They provide food and medicine.

**EXTEND UNDERSTANDING** Explain that there are other kinds of reefs, some in lakes or other bodies of water. They are narrow ridges of rock or sand at or near the surface of water.

**RESPONSE OPTIONS**

**ART** Have students draw or paint a mural of a coral reef. You may want to have them look at other sources of information to get accurate pictures of animals and plants in coral reefs. Ask them to label the reef and plants and animals in it, as well as nearby land. They may want to share and explain the mural to another class.

**SCIENCE CONNECTION**

Provide research materials such as books, encyclopedias, and the Internet, so students can find out more about coral and coral polyps. Have them follow the directions on pages 22–23 to make models of coral polyps. You may want to challenge them to figure out other materials to use to make the model. Have them stick several model polyps together to form a model of a coral reef.

**Skill Work**

**TEACH/REVIEW VOCABULARY**

Read the vocabulary words. Have students locate each vocabulary word in the text where it is highlighted. Ask them to identify the context clues they find to the word’s meaning and compare them to the definitions given in the Glossary on page 24.

**TARGET SKILL AND STRATEGY**

**CAUSE AND EFFECT** Remind students that an effect is something that happens and a cause it what makes it happen. Ask volunteers to provide some oral examples, including from the book.

**PREDICT AND SET PURPOSE** Invite students to tell you how predicting what they are about to read and setting a purpose for reading can help them be better readers.

**ADDITIONAL SKILL INSTRUCTION**

**GENERALIZE** Discuss with students that generalizing means coming up with an idea that covers many things without being specific about any one of them. Invite volunteers to offer one or two generalizations about all coral reefs.
Cause and Effect

- A **cause** tells what makes something happen.
- An **effect** is what happens after a cause.

**Directions** Answer the questions that follow about *Coral Reefs*.

1. Why don’t soft corals help build coral reefs?

2. Why do soft corals live in deeper water than hard corals?

3. What makes a coral polyp go inside itself?

4. Why are most coral reefs in the tropics and not farther away from the Equator?

5. What are two causes of danger to the coral reefs?

6. What are two ways to help protect the coral reefs?
Vocabulary

Directions  Write a sentence that includes each word. Try to use a context clue to its meaning. Use the glossary to check the word’s meaning if you need to.

Check the Words You Know

___algae ___atoll ___colony
___coral ___coral polyp ___coral reef
___global warming ___lagoon ___pollution
___tentacle

1. algae

_________________________________________________________________

2. atoll

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3. colony

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4. coral

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5. coral polyp

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6. coral reef

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7. global warming

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8. Write a sentence using two or more vocabulary words.

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