The Frozen Continent: Antarctica

**SUMMARY** Though Antarctica is the coldest place on Earth, it is home to penguins, seals, and other animals. Antarctica is also a fascinating place for scientists who study weather. These scientists measure temperature changes there to understand the effects of air pollution on global climates.

**LESSON VOCABULARY**
- cuddles
- flippers
- frozen
- hatch
- pecks
- preen
- snuggles

**INTRODUCE THE BOOK**

**INTRODUCE THE TITLE AND AUTHOR** Discuss with students the title and the author of *The Frozen Continent: Antarctica*. Ask: What does the cover photo tell you about Antarctica’s climate, land, and animals? Discuss what information students think the author will provide based on the title and cover.

**BUILD BACKGROUND** Invite students to discuss what they know about Antarctica from movies, TV, books, or magazines. Ask: What might you see if you traveled to Antarctica? Does it seem like a place you would want to visit? Why or why not?

**PREVIEW/USE TEXT FEATURES** Have students look at the pictures, captions, and diagrams to find clues about what aspects of Antarctica will be covered in the book. Point out that certain images, such as snow and penguins, appear often in the pictures.

**READ THE BOOK**

**SET PURPOSE** Have students set a purpose for reading *The Frozen Continent: Antarctica*. What impressions do they get from skimming the photos, captions, and maps in the book? What makes Antarctica so different from most other continents? Students’ curiosity should guide their purpose for reading.

**STRATEGY SUPPORT: MONITOR AND CLARIFY**

When students *monitor* their comprehension, they should realize when they understand what they’re reading and when they do not. There are strategies to restore their understanding when problems arise, such as summarizing facts and details to clarify ideas. Encourage them to read on to see if basic ideas are explained on the next pages. Challenge them to summarize facts and details after they finished reading.

**COMPREHENSION QUESTIONS**

**PAGE 5** What types of animals live in Antarctica? (penguins, fish, seals, and whales)

**PAGES 6–8** What is the main idea of this section? (Possible response: Scientists who study the weather in Antarctica use very specialized tools.)

**PAGE 9** How is Antarctica helping scientists learn about climate change? (Possible response: Its changes in temperature tell about the effects of global warming.)
REVISIT THE BOOK

READER RESPONSE

1. Possible response: Main idea: Scientists study the climate in Antarctica. Details: They use a radio called an acoustic sounder to find out about wind speed and direction. Weather balloons with radios record information about the air.

2. Responses will vary but students should identify the clarifying strategies they used to resolve their problems and confusion.

3. The words that follow—“or clean and smooth their feathers”—show what preen means.

4. Responses will vary.

EXTEND UNDERSTANDING Point out how images in the book are paired together for certain reasons. Ask students what they can learn from such combinations, such as the satellite image paired with the photo of an actual satellite on page 7 and the global warming diagram paired with the photo of a traffic jam on page 9.

RESPONSE OPTIONS

WRITING Ask students to pretend they are visiting Antarctica and writing letters to friends at home. Have them write one or two paragraphs describing their experiences.

WORD WORK On the board, write groups of four words, three of which have similar meanings and one of which is completely opposite or unrelated. Include story vocabulary words in some groups. Have students point out which word in each group does not belong. For example, in the group frozen, icy, freezing, and melted, the word melted does not belong.

SCIENCE CONNECTION
Scientists in Antarctica use special equipment to gather information. Invite students to learn how scientists in other environments use special tools and technology to gather information.

Skill Work

TEACH/REVIEW VOCABULARY
Discuss the vocabulary words and reinforce word meaning by asking questions such as, “What are some animals that have flippers?”

ELL Distribute index cards, each with a vocabulary word written on it. Challenge students to go on a scavenger hunt to find books, magazines, or other print sources containing the same word.

TARGET SKILL AND STRATEGY

MAIN IDEA AND DETAILS Remind students that the main idea is the most important idea about a topic. Supporting details are pieces of information that tell more about the main idea. Model how asking questions helps readers find the main idea of a book. Ask: In a word or two, what is this book about? (This identifies the topic.) What is the most important idea about the topic? (This identifies the main idea.) What are some details that tell more about the main idea? As students read, have them think about what could be the main idea of the book and what details may support it.

MONITOR AND CLARIFY Remind students that good readers pause occasionally in their reading to be sure they understand what they have read. If needed, students should go back and reread or use any other clarifying strategies that might help.

ADDITIONAL SKILL INSTRUCTION

GENERALIZE Remind students that they are often given ideas about several related things. To make a statement about all of them together is to generalize about them. This statement might tell how the things are mostly or completely alike in some way. Have students look for generalizations in the book. Clue words such as most, many, usually, few, seldom, all, and generally can signal generalizations.
Main Idea and Details

- The main idea is the most important idea about a paragraph, passage, article, or book.
- Details are pieces of information that support, or tell more about, the main idea.

Directions  Read the following passage. What is the main idea of the paragraph? Write it in the box at the top. Then find three details that tell about the main idea. Write one detail in each smaller box.

Antarctica is very windy and dry. Antarctica is so dry that scientists call it a desert. The small amount of snow that falls there never melts. It is moved around by the wind until it freezes into ice.
### Vocabulary

**Directions** For each vocabulary word, write the letter of the definition that matches it.

<table>
<thead>
<tr>
<th><strong>cuddles</strong></th>
<th><strong>flippers</strong></th>
<th><strong>frozen</strong></th>
<th><strong>hatch</strong></th>
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<tr>
<td>pecks</td>
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1. ______ cuddles  
2. ______ flippers  
3. ______ frozen  
4. ______ hatch  
5. ______ pecks  
6. ______ preen  
7. ______ snuggles

**Directions** Write the vocabulary word or words that go best with each clue.

8. This word describes Antarctica. ________________
9. Penguins use these to swim well. ________________
10. A penguin chick does this to its eggshell. ________________
11. This is another word for how a penguin chick is born. ________________

**Directions** Write a short paragraph. Use at least three of the vocabulary words.

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