PREVIEW 35

Antarctica is a place of unique and extreme characteristics. But just *how* unique and extreme? Read each statement below. Circle whether you believe each one is a fact or an exaggeration.

- The ice sheets that cover Antarctica average one and a half miles in thickness. The thickest ice is almost three miles thick.
  Fact **Exaggeration**

- If Antarctica's ice sheets melted, the world's oceans would rise by 200 feet.
  Fact **Exaggeration**

- Most of Antarctica is a desert. The annual precipitation over Antarctica is less than 2 inches.
  Fact **Exaggeration**

- From November to February, it almost never gets dark in Antarctica.
  Fact **Exaggeration**

- Antarctica's largest land predator is a mite. It weighs about the same as two grains of table salt.
  Fact **Exaggeration**

- The lowest temperature ever recorded on Earth, −128°F, was in Antarctica.
  Fact **Exaggeration**

- At the beginning of winter, the Antarctic Sea freezes by around 40,000 square miles *per day*, eventually doubling the size of Antarctica.
  Fact **Exaggeration**

- In 2000, an iceberg broke free from Antarctica. It measured 183 miles long and 23 miles wide—approximately the size of the state of Connecticut.
  Fact **Exaggeration**

GEOTERMS 35

Read Sections 35.1 and 35.2. Then create an illustrated dictionary of the Geoterms by completing these tasks:

- Create a symbol or an illustration to represent each term.
- Write a definition of each term in your own words.
- Write a sentence that includes the term and the word *Antarctica*.

Geoterm and Symbol	Definition	Sentence
biome		
global warming		
greenhouse effect		
ice shelf		

READING NOTES 35

35.3 The Theory of Global Warming

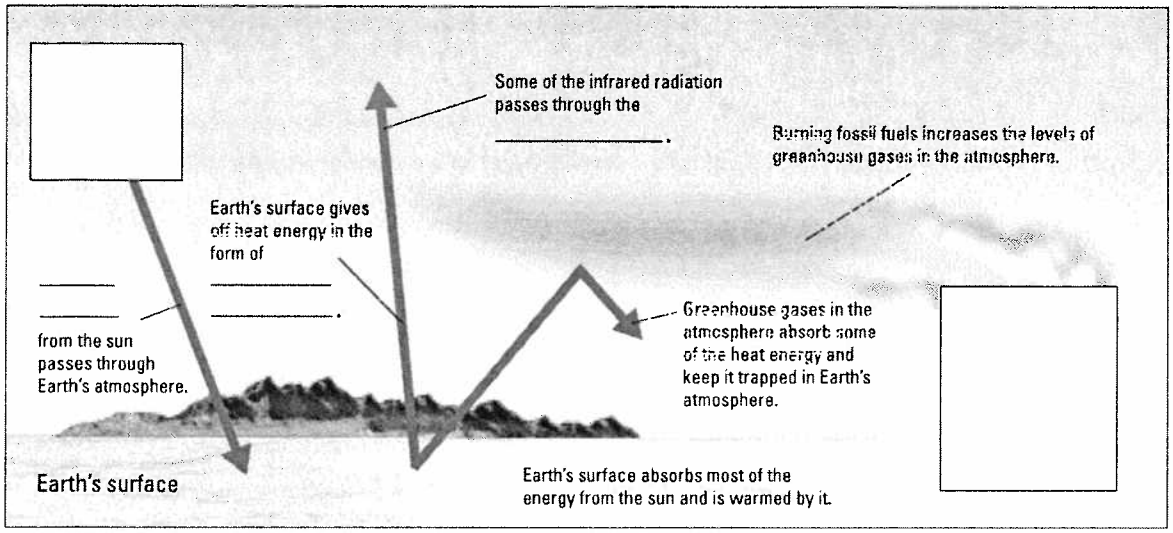
What three key ideas is the theory of global warming based on?

1.

2.

3.

Fill in the five missing pieces on the diagram of the greenhouse effect.



In the first column of the table, list a reason to support each of the three key ideas of the global warming theory. In the second column, list a reason to doubt each key idea.

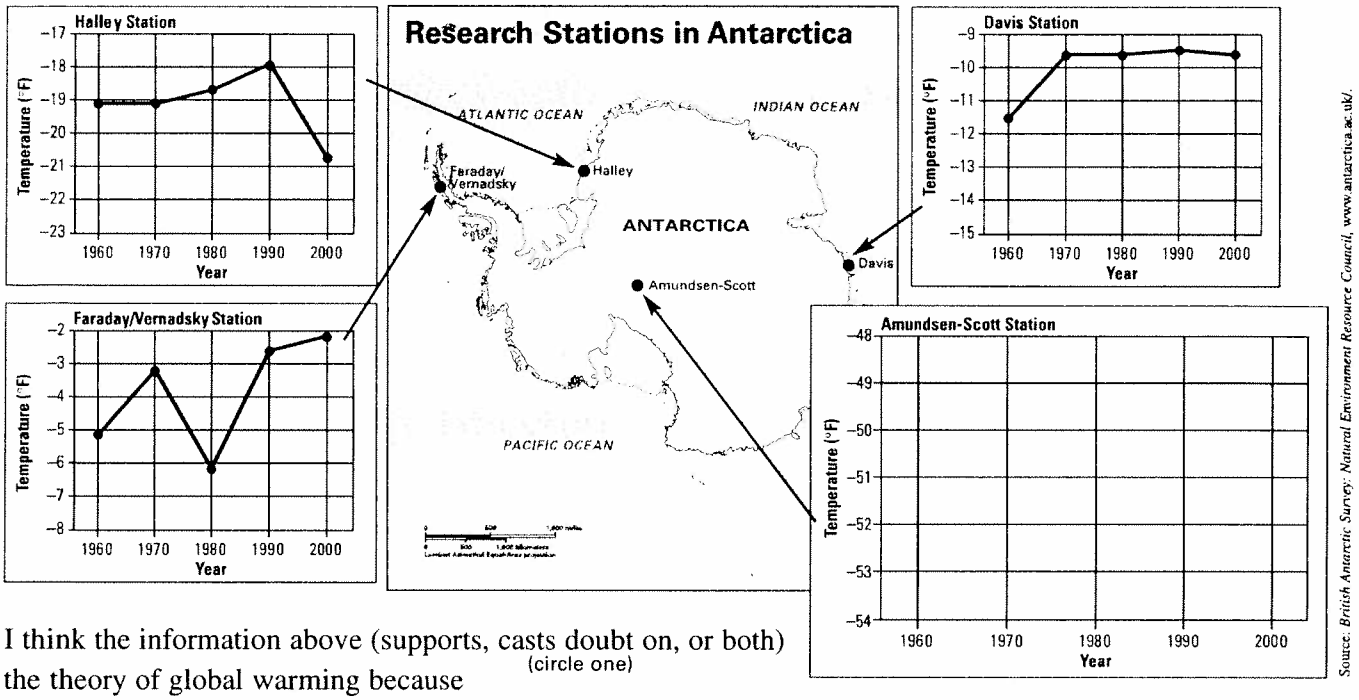
35.4 Support for the Global Warming Theory	35.5 Doubts About the Global Warming Theory

READING NOTES 35

Follow the directions at Amundsen-Scott Station to complete the Reading Notes below.

35.6 Studying Temperatures in Antarctica

Complete the temperature graph for Amundsen-Scott Station.



Source: *British Antarctic Survey: Natural Environment Research Council, www.antarctica.ac.uk/.*

I think the information above (supports, casts doubt on, or both) (circle one) the theory of global warming because

In the first column, write arguments that a supporter of the global warming theory might make. In the second column, write arguments that a doubter of the theory might make.

Geographer Who Supports the Theory of Global Warming	**Geographer Who Doubts the Theory of Global Warming**

READING NOTES 35

Follow the directions at Rothera Station to complete the Reading Notes below.

35.7 Studying Ice Shelves in Antarctica

Calculate how much ice was lost from the Larsen Ice Shelf in 2002 by filling in the blanks below.

Larsen Ice Shelf, January 31, 2002

A. Total area of Larsen Ice Shelf on January 31, 2002: 2,749 square miles

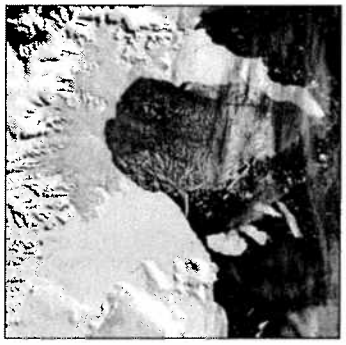
B. _____ x 100 square miles = _____ square miles
(number of *fully* colored squares)

\+

C. _____ x 50 square miles = _____ square miles
(number of *partially* colored squares)

D. Total area of ice lost between January 31 and March 5, 2002: _____ square miles (Add the answers to B and C.)

E. Percentage of ice lost between January 31 and March 5, 2002: _____ %
(Divide the answer to D by the answer to A. Multiply the result by 100 to turn the decimal into a percent.)



Larsen Ice Shelf, March 5, 2002

I think the information above (supports, casts doubt on, or both) the theory of global warming because (circle one)

In the first column, write arguments that a supporter of the global warming theory might make. In the second column, write arguments that a doubter of the theory might make.

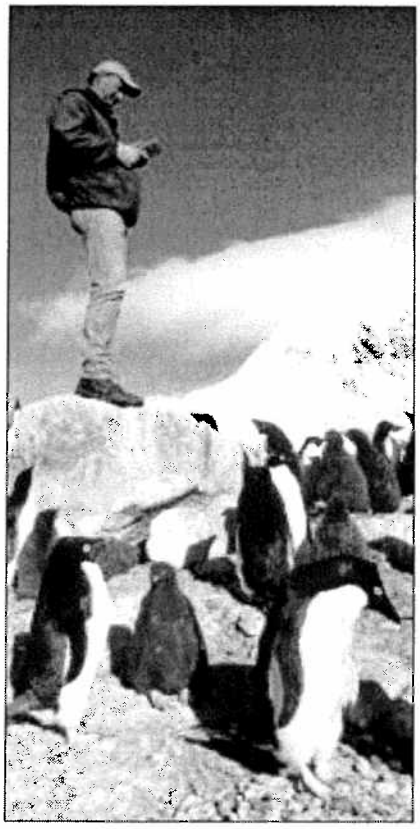
Geographer Who Supports the Theory of Global Warming

Geographer Who Doubts the Theory of Global Warming

READING NOTES 35

Follow the directions at Palmer Station to complete the Reading Notes below.

35.8 Studying Penguins in Antarctica



Calculate the change in the number of breeding pairs of Adelie penguins by filling in the blanks below.

A. Total number of breeding pairs, 1975: 16,000

B. Number of breeding pairs in *your* colony, present: _____

C. Number of breeding pairs in other colonies, present: 4,960

D. Total number of breeding pairs, present: _____
(Add the answers to B and C.)

E. Total change in the number of breeding pairs: _____
(Subtract the answer to A from the answer to D.)

F. Percent change in the number of breeding pairs: _____ %
(Divide the answer to E by the answer to A. Multiply the result by 100 to turn the decimal into a percent.)

I think the information above (supports, casts doubt on, or both) (circle one) the theory of global warming because

In the first column, write arguments that a supporter of the global warming theory might make. In the second column, write arguments that a doubter of the theory might make.

Geographer Who Supports the Theory of Global Warming	**Geographer Who Doubts the Theory of Global Warming**