

Active Reading

Section: Global Warming

Read the passage below and answer the questions that follow.

Many scientists think that the increasing greenhouse gases in our atmosphere result in increasing the average temperature on Earth. The result, they believe, will be a warmer Earth. This predicted increase in global temperature is known as **global warming**. Earth's average global temperature increased during the 20th century. Many scientists project that the warming trend that began in the 20th century will continue throughout the 21st century. However, not all scientists agree that the observed global warming is due to greenhouse gases. Some scientists believe that the warming is part of natural climatic variability. They point out that widespread fluctuations in temperature have occurred throughout geologic time.

IDENTIFYING MAIN IDEAS

One reading skill is the ability to identify the main idea of a passage. The main idea is the main focus or key idea. Frequently, a main idea is accompanied by supporting information that offers detailed facts about main ideas.

In the space provided, write the letter of the term or phrase that best completes each statement.

- _____ 1. Earth's average temperature _____ during the 20th century.
- | | |
|--------------|--------------------|
| a. increased | c. stayed the same |
| b. decreased | d. fluctuated |
- _____ 2. Scientists predict that the Earth's average temperature will _____ throughout the 21st century.
- | | |
|-------------------------|---------------------------|
| a. stabilize | c. begin to decrease |
| b. continue to increase | d. fluctuate more sharply |
- _____ 3. Many scientists blame the presence of _____ in the atmosphere for Earth's increased average temperature.
- | | |
|-----------|---------------------|
| a. CFCs | c. ozone |
| b. oxygen | d. greenhouse gases |

VOCABULARY DEVELOPMENT

Read each question and write the answer in the space provided.

4. The predicted increase in Earth's average temperature is known as

_____.

Active Reading *continued*

5. What is another key term for this chapter that appears in this passage?

6. *Global* can mean “worldwide.” Given this definition, whom would you say is affected by global warming?

RECOGNIZING SIMILARITIES AND DIFFERENCES

One reading skill is the ability to recognize similarities and differences between two phrases, ideas, or things. This is sometimes known as comparing and contrasting.

Read each question and write the answer in the space provided.

7. What do those scientists who believe the Earth is experiencing global warming use as evidence to support their claims?

8. What do these scientists say is the cause of global warming?

9. What do those scientists who do *not* believe the Earth is experiencing global warming use as evidence to support their claims?

10. What do these scientists say is the cause of the increase in temperature throughout the 20th century?

16. Answers may vary. Sample answer: Fossil fuels are the remains of plants that lived millions of years ago. Fossil fuels represent millions of years worth of photosynthetic activity that pulled enormous quantities of carbon dioxide out of the air and converted it into hydrocarbons. Now we are burning the fossil fuels and returning these millions of years worth of stored carbon to the atmosphere much faster than the carbon was originally removed.

Active Reading

SECTION: CLIMATE AND CLIMATE CHANGE

- 23.5° relative to the plane of its orbit
- in summer
- It is tilted toward the sun.
- b
- winter
- summer
- the tilt of the Earth on its axis
- The angle at which the sun's rays strike the Earth changes as Earth orbits the sun.
- When there are more hours of daylight, the sun has more time to heat the Earth, and thus it is summer.
- It is tilted away from the sun.
- It is tilted away from the sun.

SECTION: THE OZONE SHIELD

- phytoplankton
- near the surface of the ocean
- amphibians
- in the shallow water of ponds and streams
- Answers will vary. High levels of UV light may cause damage to organisms.
- They lack shells.
- Amphibians are especially sensitive to the environment and are a good indicator of environmental change.
- UV light can kill them.
- It increases.
- They are disrupted, and fish harvests could be reduced.
- It can kill amphibians' eggs.
- the DNA
- The population will be put at risk.

SECTION: GLOBAL WARMING

- a
- b
- d
- global warming
- greenhouse gases
- all people worldwide
- the fact that the average global temperature has increased in the 20th century
- greenhouse gases
- the fact that widespread fluctuations in temperature have occurred throughout time
- natural climatic variability

Map Skills

- latitude
- east to west
- west to east; because the wind comes from the west
- Answers may vary but should be between the tropic of Cancer and the tropic of Capricorn because the prevailing winds there blow west.
- Answers may vary. Accept all reasonable responses.

Quiz

SECTION: CLIMATE AND CLIMATE CHANGE

Matching	Multiple Choice
1. d	6. b
2. c	7. d
3. a	8. c
4. e	9. c
5. b	10. a

SECTION: THE OZONE SHIELD

Matching	Multiple Choice
1. a	6. d
2. c	7. a
3. e	8. c
4. d	9. a
5. b	10. b

SECTION: GLOBAL WARMING

Matching	Multiple Choice
1. c	6. b
2. e	7. a
3. a	8. d
4. d	9. c
5. b	10. d