



EARTH'S CHANGING CLIMATE

Natural Cycles and Climate Change

In *Natural Cycles and Climate Change*, learn how Earth's living and nonliving things are connected and how human activities have damaged that connection.

What did you learn?

QUESTIONS

1. About how much of Earth's atmosphere does nitrogen gas make up?
 - a. 5 percent
 - b. 42 percent
 - c. 78 percent
 - d. 99 percent
2. Which of the following is NOT a consumer in the carbon cycle?
 - a. Algae
 - b. Fish
 - c. Horses
 - d. Human beings
3. Which is NOT an example of a fossil fuel?
 - a. Coal
 - b. Natural gas
 - c. Oil
 - d. Wind
4. About 250 years ago, ___ sparked an increase in fossil fuel usage.
 - a. The Industrial Revolution
 - b. The fall of the Incan Empire
 - c. The invention of the sandwich
 - d. World War I
5. In the carbon cycle, what kinds of living things are called producers?
6. What is the role of volcanoes in the carbon cycle?

TRUE OR FALSE?

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| _____ 1. Atoms come in over 100 different kinds, called elements. | _____ 4. DNA molecules do not require carbon to form. |
| _____ 2. When water is in its solid state, it is called water vapor. | _____ 5. Animals breathe out carbon dioxide and plants take in carbon dioxide. |
| _____ 3. The element phosphorus is mostly found in the air. | _____ 6. Many ocean creatures use calcium carbonate to form their shells. |

ANSWERS

- 1. c. 78 percent.** On page 10, we learn that "Molecules of nitrogen gas make up about 78 percent of Earth's atmosphere."
- 2. a. Algae.** On page 26, we learn that all animals including humans are consumers in the carbon cycle, and that plants and algae are producers.
- 3. d. Wind.** On page 34, we learn that coal, oil, and natural gas are fossil fuels.
- 4. a. The Industrial Revolution.** On page 36, we learn that the Industrial Revolution sparked a sudden increase in fossil fuel usage.
- 5.** On page 26, we learn that plants and algae are producers in the carbon cycle.
- 6.** On pages 30 and 31, we learn that when volcanoes erupt, they release carbon dioxide from the earth back into the atmosphere.

TRUE OR FALSE? ANSWERS

- 1. True.** On page 6, we learn that "Atoms come in over 100 different kinds, called elements." So, the correct answer is True.
- 2. False.** On page 8, we learn that when water is in a gaseous state, it is called water vapor. When it is in a solid state, it is called ice. So, the correct answer is False.
- 3. False.** On page 10, we learn that phosphorus is not found in the air, and is mostly locked away in rocks. So, the correct answer is False.
- 4. False.** On page 18, we learn that DNA molecules would not be able to form without carbon. So, the correct answer is False.
- 5. True.** On page 20, we learn that animals breathe out CO_2 and plants take in CO_2 . So, the correct answer is True.
- 6. True.** On page 28, we learn that ocean creatures use calcium carbonate to form their shells and other hard parts. So, the correct answer is True.