

Name:

Date:

Class:

Lesson 14.3: Ecological Cycles

Know and Understand

Answer the following questions using the information provided in this lesson.

1. What is the name for a pathway that a substance follows in the biosphere? (14.3.1)
 - A. Ecosystem
 - B. Cycle
 - C. Forum
 - D. Byway

Answer:

2. What are the three phases of water? (14.3.2)
 - A. Solid, liquid, humidity
 - B. Snow, water, steam
 - C. Solid, liquid, plasma
 - D. Solid, liquid, gas

Answer:

3. What is the name of the underground structures where liquid water may be stored? (14.3.2)
 - A. Aquifers
 - B. Conifers
 - C. Aqueducts
 - D. None are correct.

Answer:

4. *True or False?* More than one-third of Earth's water exists as vapor in the atmosphere. (14.3.2)

Answer:

5. How is cropland irrigation threatening to disrupt the water cycle in the United States? (14.3.2)
- A. By polluting rivers and streams along farm fields.
 - B. By pulling water from major rivers and leaving less drinking water
 - C. Using water in the Ogallala Aquifer faster than it can be replenished by precipitation.
 - D. All are correct.

Answer:

6. What are the primary pollutants of rivers and streams in the United States? (14.3.2)
- A. Wastewater and acid rain
 - B. Invasive fish species
 - C. Runoff water and soil
 - D. All are correct.

Answer:

7. *True or False?* Acid rain is a natural phenomenon. (14.3.2)

Answer:

8. How do human and industrial activities contribute to acid rain? (14.3.2)
- A. By increasing the amount of carbon in the atmosphere.
 - B. By eliminating the ozone layer and causing the ozone hole.
 - C. By elevating the levels of nitric and sulfuric acids in rivers and streams.
 - D. By elevating the levels of nitric and sulfuric acids in rain by releasing sulfur and nitrogen into the atmosphere.

Answer:

9. What percentage of Earth's atmosphere is nitrogen? (14.3.3)

- A. 7%

- B. 8%
- C. 500%
- D. 78%

Answer:

10. What is the process through which atmospheric nitrogen is converted to ammonium or nitrates for plant use? (14.3.3)

- A. Fixation
- B. Ammonification
- C. Nitrification
- D. Denitrification

Answer:

11. *True or False?* Nitrogen fixation occurs every time lightning strikes. (14.3.3)

Answer:

12. Which of the following is not a stage of the nitrogen cycle? (14.3.3)

- A. Fixation
- B. Legume
- C. Nitrification
- D. Ammonification

Answer:

13. What is the name of the symbiotic bacteria that help plants convert atmospheric nitrogen into ammonium? (14.3.3)

- A. Rhizobia
- B. Fixaters
- C. Nodules
- D. Legumes

Answer:

14. Which type of nitrogen is usable by most plants? (14.3.3)

- A. Atmospheric nitrogen
- B. Ammonium
- C. Dendrites
- D. Nitrites

Answer:

15. Why would the agricultural industry have an interest in a corn variety that requires little nitrogen? (14.3.3)

- A. Producing nitrogen in a plant-usable form is expensive.
- B. Nitrogen is a major greenhouse gas.
- C. Corn crops require a lot of nitrogen.
- D. Both A and C.

Answer:

16. Which of the following absorbs and stores carbon for extended periods? (14.3.4)

- A. Carbon sink
- B. Carbon source
- C. Carbon pool
- D. Carbon fiber

Answer:

17. Why does atmospheric carbon cause the most concern for human life? (14.3.4)

- A. Carbon is a major greenhouse gas.
- B. Carbon is produced by burning fossil fuels, such as gasoline.
- C. Carbon causes lung cancer.
- D. Carbon accumulates on buildings, causing major damage.

Answer:

18. How does carbon dioxide get into the atmosphere? (14.3.4)

- A. From burning fossil fuels

- B. Through respiration of plants and animals
- C. From burning tropical rainforests
- D. All are correct.

Answer:

19. What is methane? (14.3.4)

- A. It is a major component of acid rain.
- B. It is a chemical that captures carbon dioxide from the atmosphere.
- C. It is runoff from cattle production operations.
- D. The primary component of natural gas.

Answer:

20. *True or False?* Plants and animals make up about one-quarter of the carbon in the biosphere. (14.3.4)

Answer: