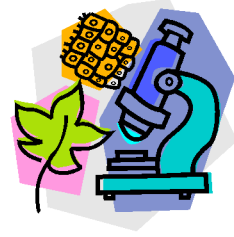


Roland-Story Biology Class
Chapter 18 Study Guide
The Environment



Name _____

Section: Global Change

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

_____ 1. Scientists have discovered that acid rain is caused by

- a. acid evaporating into the atmosphere.
- b. sulfur introduced into the atmosphere from burning coal.
- c. hydrochloric acid in clouds.
- d. gas introduced into the atmosphere from animal wastes.

_____ 2. Which of the following statements about acid rain is NOT true?

- a. Rain and snow in the northeastern United States are more acidic than in the rest of the United States.
- b. In the United States and Canada, many lakes are “dying” as their pH levels fall below 5.0.
- c. Acid rain is causing damage to forests.
- d. Tall smokestacks prevent smoke from polluting the atmosphere.

_____ 3. A hole in the ozone layer has formed over

- a. Antarctica.
- b. North America.
- c. Australia.
- d. None of the above

_____ 4. The primary cause of the destruction of ozone is

- a. a higher concentration of sulfuric acid in acid precipitation.
- b. higher carbon dioxide levels in the atmosphere.
- c. chlorofluorocarbons (CFCs) reaching the upper atmosphere.
- d. increased amounts of ultraviolet radiation reaching our planet.

- _____ 5. Exposure to high levels of ultraviolet radiation can lead to
- more productive food crops.
 - larger animal populations.
 - warmer summers and cooler winters.
 - skin cancer and cataracts.
- _____ 6. The protective shield of ozone is needed because ozone
- is part of the nitrogen cycle.
 - absorbs solar wind.
 - absorbs ultraviolet radiation.
 - is a source of oxygen.
- _____ 7. The use of CFCs has been banned or limited in many countries because
- CFCs are carcinogens.
 - Ultraviolet light breaks down CFCs and the resulting chlorine destroys ozone.
 - CFCs cause asthma.
 - less expensive coolants can be used in refrigerators and air conditioners.
- _____ 8. All of the following are greenhouse gases EXCEPT
- chlorine.
 - carbon dioxide.
 - methane.
 - nitrous oxide.
- _____ 9. The chemical bonds in carbon dioxide molecules that absorb solar energy as heat radiates from Earth is known as
- the ozone layer.
 - the greenhouse effect.
 - acid rain.
 - CFCs.

Section: Effects on Ecosystems

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

1. What is biological magnification?

2. What are agricultural chemicals?

3. What happened to the oil tanker in 1989, and what impact did it have on the environment?

4. Why did Lake Erie become polluted?

5. What effect does DDT have on birds?

6. Why is the rosy periwinkle an important species?

7. Why is the rosy periwinkle in danger of being wiped out?

8. Why are people concerned about the destruction of tropical rain forests?

9. Why is the loss of topsoil a great concern?

10. What are aquifers?

11. How is our ground water being wasted?

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

_____ 12. The rate of population growth has increased since 1650 because of which of the following?

- a. an increase in the birth rate
- b. a decrease in the birth rate
- c. an increase in the death rate
- d. a decrease in the death rate

_____ 13. The United Nations predicts that the world population will stabilize at

- a. 6 billion.
- b. 6.8 billion.
- c. 8.5 billion.
- d. 9.7 billion.

Section: Solving Environmental Problems

Complete each statement by underlining the correct term or phrase in the brackets.

1. In the early 1990s, there was an international agreement to stop [CFC / DDT] production.
2. All cars in the United States are required by law to have [filters / catalytic converters].
3. The Clean Air Act of 1990 requires that power plants install [scrubbers / recycling devices] in their smokestacks to reduce pollution.
4. The gasoline [tax / act] can reduce the use of gasoline.

The following are five components to solving an environmental problem successfully. In the space provided, describe what each component entails.

5. assessment

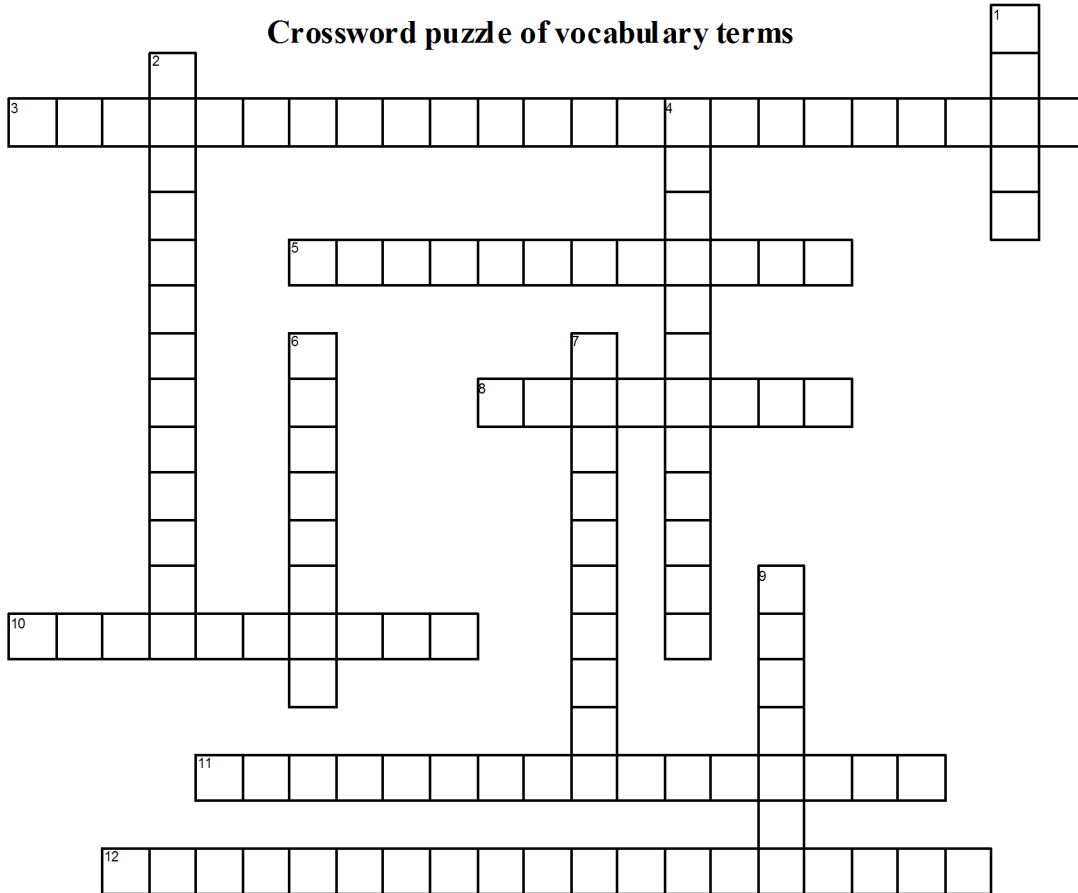
6. risk analysis

7. public education

8. political action

9. follow-through

Crossword puzzle of vocabulary terms



www.CrosswordWeaver.com

ACROSS

- 3 the increasing build-up of toxic substances within the bodies of living things as the substances move up the food chain
- 5 cancer causing
- 8 a pollution category/type that is closely associated with soil spills and mis-use of fertilizers and pesticides □
- 10 chemicals used to control bacterial growth
- 11 the warming of the surface and lower atmosphere of Earth that happens when carbon dioxide, water vapor, and other gases in the air absorb and reflect the sun's heat back to Earth
- 12 chemicals used in coolants for refrigerators and air conditioners and in cleaning solvents □

DOWN

- 1 a hole in this zone allows more ultraviolet radiation to reach the Earth's surface
- 2 a slow increase in average world temperatures
- 4 chemicals used to control insects
- 6 precipitation that has a pH below normal and has a high concentration of sulfuric or nitric acids,
- 7 chemicals used to control growth of plants
- 9 a body of rock or sediment that stores groundwater and allows the flow of groundwater

