

## Assessment

# Chapter Test

---

## Ecosystems

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

- \_\_\_\_\_ 1. A typical ecosystem might include which of the following?
- large and small mammals
  - microscopic eukaryotes
  - birds, trees, and flowers
  - All of the above
- \_\_\_\_\_ 2. Equilibrium in succession means that an ecosystem
- will never change again.
  - is stable.
  - has an even number of species.
  - has a high biodiversity.
- \_\_\_\_\_ 3. An example of a marine ecosystem is a
- kelp forest.
  - pine forest.
  - hemlock forest.
  - hardwood forest.
- \_\_\_\_\_ 4. In a meadow food chain, which is the correct sequence of the path of energy flow?
- hawk → snake → mouse → grass
  - mouse → grass → hawk → snake
  - grass → mouse → snake → hawk
  - snake → mouse → hawk → grass
- \_\_\_\_\_ 5. In a marine food web, there is a far greater mass of algae than of all the killer whales. Why is this so?
- Whales are bigger than algae.
  - An alga has more mass than a killer whale.
  - Whales don't eat algae.
  - It takes a massive amount of algae to support a food web with a killer whale at the top.
- \_\_\_\_\_ 6. The ultimate source of energy for producers and all consumers is
- plants.
  - the sun.
  - algae.
  - the ocean.

Chapter Test *continued*

---

- \_\_\_\_\_ 7. Which statement about a forest describes the highest degree of biodiversity?
- a. Six kingdoms of life are represented.
  - b. The forest is home to many small mammals.
  - c. Birds inhabit the forest.
  - d. There are many different kinds of trees.
- \_\_\_\_\_ 8. In the living portion of the water cycle, water passes through plants and evaporates into the atmosphere through the process of
- a. photosynthesis.
  - b. respiration.
  - c. transpiration.
  - d. nitrification.
- \_\_\_\_\_ 9. The carbon in the remains of organisms that lived long ago is released in the burning of
- a. wood.
  - b. limestone.
  - c. calcium carbonate.
  - d. fossil fuels.
- \_\_\_\_\_ 10. Nitrogen-fixing bacteria live in
- a. the human intestine.
  - b. soil and plant roots.
  - c. rotting logs.
  - d. All of the above
- \_\_\_\_\_ 11. How are humans categorized in the human food web?
- a. producer
  - b. herbivore
  - c. carnivore
  - d. omnivore
- \_\_\_\_\_ 12. Humans who eat tuna from the third trophic level require how many kilograms of producers to make 1 kg of tissue?
- a. 1 kg
  - b. 10 kg
  - c. 100 kg
  - d. 1,000 kg
- \_\_\_\_\_ 13. Which material is required in the greatest quantity in all ecosystems?
- a. manganese
  - b. sodium
  - c. water
  - d. iron
- \_\_\_\_\_ 14. Phosphorus is often found in soil and rock as
- a. calcium carbonate.
  - b. calcium phosphate.
  - c. nitrogen dioxide.
  - d. carbon dioxide.
- \_\_\_\_\_ 15. Which type of bacteria plays a significant role in the nitrogen cycle?
- a. nitrogen-fixing bacteria
  - b. decomposers
  - c. denitrifying bacteria
  - d. All of the above

**Chapter Test *continued***

---

**In the space provided, write the letter of the description that best matches the term or phrase.**

- |                          |   |
|--------------------------|---|
| _____ 16. habitat        | a. complicated, interconnected group of food chains                                   |
| _____ 17. biodiversity   | b. a diagram that shows the flow of energy from the sun through all trophic levels    |
| _____ 18. respiration    | c. Of abiotic factors, this has the greatest influence on an ecosystem's inhabitants. |
| _____ 19. food web       | d. one source of atmospheric carbon dioxide   |
| _____ 20. energy pyramid | e. cycled throughout the living world primarily by bacteria                           |
| _____ 21. water          | f. the place where an organism or population of organisms lives                       |
| _____ 22. nitrogen       | g. the number of species living in an ecosystem                                       |

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

23. Why are both bacteria and fungi important organisms in an ecosystem?

---

---

---

24. Describe the process of primary succession that occurred following the retreat of the glacier at Glacier Bay, Alaska.

---

---

---

---

---

25. Why are producers an essential component of an ecosystem?

---

---