

Bio Handout 04 - Ecosystems, Communities, & Biomes**Modified True/False**

Indicate whether the sentence or statement is true or false. If false, change the identified word or phrase to make the sentence or statement true.

- ___ 1. Earth's natural "insulating blanket" is the biosphere. _____
- ___ 2. Carbon dioxide, methane, and water vapor trap light energy. _____
- ___ 3. Palm trees and shrubs around a small pool of water in the middle of a barren desert is an example of an ecosystem. _____
- ___ 4. The tropical rain forest is characterized by a wet season and a dry season. _____
- ___ 5. The depth of the water in an aquatic ecosystem determines the amount of oxygen that living things receive there. _____

Multiple Choice

Identify the letter of the choice that best completes the statement or answers the question.

- ___ 6. The average year-after-year conditions of temperature and precipitation in a particular region is the region's
a. weather. b. latitude. c. ecosystem. d. climate.
- ___ 7. All of the following factors contribute to Earth's climate EXCEPT
a. latitude. b. biomes and ecosystems. c. transport of heat. d. shape and elevation of land mass.
- ___ 8. The loss of heat to space is slowed by
a. radiation entering the atmosphere. b. atmospheric gases. c. solar energy. d. the biosphere.
- ___ 9. Earth has three main climate zones because of the differences in latitude and
a. amount of solar energy received. b. angle of heating. c. ocean currents. d. prevailing winds.
- ___ 10. The unequal heating of Earth's surface
a. drives wind and ocean currents. b. causes winds that transport heat throughout the biosphere. c. has important effects on Earth's climate regions. d. all of the above
- ___ 11. The tendency for warm air to rise and cool air to sink results in
a. global wind patterns. b. ocean upwelling. c. unequal heat distribution. d. regional precipitation.
- ___ 12. A mountain can affect climate by
a. absorbing more solar energy at the peak than at the base of the mountain. b. causing precipitation to fall mostly on one side of the mountain. c. pushing a cool air mass back out over the ocean. d. interfering with air currents and affecting Earth's rotation.
- ___ 13. Why does Earth have three main climate zones?
a. Warm air rises at the equator and cold air sinks over the poles causing an unequal distribution of heat over Earth. b. There are differences in latitude and, thus, the angle of heating from the sun. c. Continents and other landmasses physically interfere with global heat distribution. d. The Earth rotates and affects the major ocean currents.
- ___ 14. Each of the following is an abiotic factor in the environment EXCEPT
a. plant life. b. soil type. c. rainfall. d. temperature.

- _____ 15. Which is a biotic factor that affects the size of a population in a specific ecosystem?
a. average temperature of the ecosystem b. type of soil in the ecosystem c. number and kinds of predators in the ecosystem d. concentration of oxygen in the ecosystem
- _____ 16. An organism's niche is
a. the way the organism uses the range of physical and biological conditions in which it lives. b. all the physical and biological factors in the organism's environment. c. the range of temperatures that the organism needs to survive. d. a full description of the place an organism lives.
- _____ 17. Several species of warblers can live in the same spruce tree ONLY because they
a. have different habitats within the tree. b. eat different foods within the tree. c. occupy different niches within the tree. d. can find different temperatures within the tree.
- _____ 18. An interaction in which one organism captures and feeds on another organism is called
a. competition. b. sybiosis. c. mutualism. d. predation.
- _____ 19. No two species can occupy the same niche in the same habitat at the same time
a. because of the interactions that shape the ecosystem. b. unless the species require different abiotic factors. c. because of the competitive exclusion principle. d. unless the species require different biotic factors.
- _____ 20. A symbiosis in which both species benefit is
a. commensalism. b. mutualism. c. predation. d. parasitism.
- _____ 21. A predator can increase the numbers of certain species in its habitat by
a. killing and eating the competitors of other species. b. living symbiotically with other species. c. avoiding certain prey species. d. crowding out the species it does not eat.
- _____ 22. The series of predictable changes that occurs in a community over time is called
a. population growth. b. ecological succession. c. climax community. d. climate change.
- _____ 23. Primary succession can begin after
a. a forest fire. b. a lava flow. c. farm land is abandoned. d. a severe storm.
- _____ 24. What is one difference between primary and secondary succession?
a. Primary succession is slow and secondary succession is rapid. b. Secondary succession begins on soil and primary succession begins on newly exposed surfaces. c. Primary succession modifies the environment and secondary succession does not. d. Secondary succession begins with lichens and primary succession begins with trees.
- _____ 25. Which factor can influence continual change in an ecosystem?
a. further disturbances b. long-term climate changes c. introduction of nonnative species d. all of the above
- _____ 26. Which is a factor that could interrupt the progress of succession?
a. colonization of surfaces by lichens b. different animals appearing at each stage c. another natural disturbance d. long-term fluctuations in climate
- _____ 27. Climate conditions in a small area that differ significantly from the climate of the surrounding area are called
a. natural features. b. microclimates. c. biomes. d. ecosystems.
- _____ 28. An example of a place with a microclimate is
a. a mountain range capped with ice. b. a forested park in a desert city. c. an orchid growing in a rain forest. d. coniferous trees in a temperate forest.

- _____ 29. Which biome is characterized by very low temperatures, little precipitation, and permafrost?
a. desert b. temperate forest c. tundra d. tropical dry forest
- _____ 30. Which two biomes have the least amount of precipitation?
a. tropical rain forest and temperate grassland b. tropical savanna and tropical dry forest c. tundra and desert d. boreal forest and temperate woodland and shrubland
- _____ 31. A biome is identified by its particular set of abiotic factors and its
a. average precipitation and temperature. b. characteristic ecological community. c. distance from the equator. d. specific geographical location.
- _____ 32. Which animal would be found in the biome that has cold to moderate winters, warm summers, fertile soils, and is home to a variety of vegetation, such as coniferous trees, broadleaf deciduous trees, flowering shrubs, and ferns?
a. white-tailed deer b. polar bear c. iguana d. moose
- _____ 33. Aquatic ecosystems are classified by all of the following EXCEPT
a. depth and flow of the water. b. temperature of the water. c. organisms that live there. d. chemistry of the water.
- _____ 34. The chemistry of aquatic ecosystems is determined by the
a. amount of salts, nutrients, and oxygen dissolved in the water. b. the number of other organisms present in the water. c. amount of rainfall the water receives. d. biotic and abiotic factors in the water.
- _____ 35. Which one of the following statements is NOT true of freshwater wetlands?
a. Freshwater wetlands include bogs, marshes, and swamps. b. Water may be present near the surface of the soil for part of the year. c. The water in freshwater wetlands is always brackish. d. Wetlands are important breeding grounds for migratory birds.
- _____ 36. Ponds and lakes are
a. flowing-water ecosystems. b. wetlands. c. standing-water ecosystems. d. estuaries.
- _____ 37. Which is NOT an adaptation that organisms have for living in flowing water?
a. hooks b. tentacles c. streamlined bodies d. suckers
- _____ 38. Which is one way a wetland ecosystem differs from a standing-water ecosystem?
a. Water circulates in a standing-water ecosystem, but not in a wetland. b. Wetlands are nesting areas for birds, but standing-water ecosystems are not. c. Water does not always cover a wetland as it does a standing-water ecosystem. d. Wetlands are salty, but standing-water ecosystems are fresh.
- _____ 39. Which of the following statements is NOT true about the oceanic zone?
a. The open ocean has very low levels of nutrients. b. Organisms in the deep oceanic zone are exposed to frigid temperatures and total darkness. c. The oceanic zone begins at the low-tide mark and extends to the end of the continental shelf. d. Most of the photosynthetic activity on Earth occurs in the open ocean within the photic zone.
- _____ 40. Which organism lives where it is often submerged and routinely exposed to air, heat, battering waves, and strong currents?
a. sea star b. tube worm c. dolphin d. whale