

*In your textbook, read about ecosystems.*

For each statement below, write true or false.

- \_\_\_\_\_ 1. Organisms interact with the nonliving parts of their environments.
- \_\_\_\_\_ 2. Relationships between organisms are abiotic factors in ecosystems.
- \_\_\_\_\_ 3. In the carbon cycle, animals produce nutrients from carbon dioxide in the atmosphere.
- \_\_\_\_\_ 4. Commensalism is a relationship in which one species benefits while the other species is neither helped nor harmed.
- \_\_\_\_\_ 5. The temperature and precipitation in a certain land area influence the type of biome that is found there.

*In your textbook, read about food for life.*

Use the diagram on the right to answer questions 6–10.

6. Describe a food chain using organisms in the pyramid.

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7. Which organisms are carnivores?

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8. How many trophic levels are included in the pyramid?

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9. Which trophic level has the smallest biomass?

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10. How does the biomass of the autotrophs compare with the biomass of the herbivores?

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*In your textbook, read about population size.*

Use the terms below to complete the passage. You will not use all the terms.

carrying capacity    species    maximum    limit    competition  
linear growth    minimum    exceeds    food    exponential growth

A population is the number of organisms of one **(11)** \_\_\_\_\_ that live in a certain area. Under ideal conditions in which there are no factors that **(12)** \_\_\_\_\_ the size of a population, a population shows **(13)** \_\_\_\_\_. However, in the environment, the sizes of populations are influenced by various limiting factors, such as the availability of **(14)** \_\_\_\_\_, water, space, and other resources. As population size increases, **(15)** \_\_\_\_\_ for the resources increases. The **(16)** \_\_\_\_\_ size of a population that an environment can support is the environment's **(17)** \_\_\_\_\_ for that population. When a population **(18)** \_\_\_\_\_ the carrying capacity, individuals are unable to meet all their needs and die.

*In your textbook, read about succession and biodiversity.*

Number the steps of succession below in the order in which they occur.

- \_\_\_\_\_ **19.** Shade from grasses and shrubs provides protection for tree saplings.
- \_\_\_\_\_ **20.** Pioneer species and other small plants are unable to grow in the shade and die.
- \_\_\_\_\_ **21.** Grasses and bushes appear.
- \_\_\_\_\_ **22.** A plot of farmland is abandoned.
- \_\_\_\_\_ **23.** Tree saplings grow and increase the amount of shade in the area.
- \_\_\_\_\_ **24.** Pioneer species, such as dandelions, take root in the soil.

Answer the following questions.

**25.** What effect does succession have on the biodiversity of ecosystems?

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**26.** What human actions decrease the biodiversity of ecosystems?

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