

Module 10 Review

Biology

- Know the difference between a population, community, ecosystem, and biome
- Know several density-dependent factors of a population
- Be able to name at least four biomes
- Be able to determine trophic levels – producer, primary consumer, etc.
- Determine how changes in a food web will affect other species
- Understand what a biomass pyramid represents
- Know the examples of mutualism discussed in the chapter
- Functions and processes of the water cycle
- Producers and users of oxygen and carbon
- Know what the three types of bacteria in the nitrogen cycle do

1. Vocabulary: What does each word mean?

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|-----------------------|---------------------------------|
| a. Ecology | h. Tertiary consumer |
| b. Population | i. Ecological (biomass) pyramid |
| c. Community | j. Biomass |
| d. Ecosystem | k. Transpiration |
| e. Biome | l. Watershed |
| f. Primary consumer | m. Greenhouse effect |
| g. Secondary consumer | |

2. What's the difference between a producer and a consumer?

3. Why does each level of the biomass pyramid get smaller?

4. Draw a biomass pyramid that shows the producers with the largest amount of biomass, the primary consumers with half as much biomass, and the secondary consumers with less biomass than the primary consumers.

5. What term describes the relationship between the two organisms that live together and both benefit each other?

6. What are three density-dependent factors for population growth?

7. Look at the food web on page 302 of your book and answer these questions:
 - a. What is the trophic level of the snake?
 - b. What is the trophic level of the rabbit?
 - c. What is the trophic level of the plants?
 - d. If the frog population died out, how would it affect the:
 - i. Racoons?
 - ii. Butterflies?
 - iii. Mice?
8. What are three functions (not processes) of the water cycle?
9. Starting with evaporation of water from the ocean, describe the processes in the water cycle.
10. Which two gases make up most of the air we breathe?
11. What would happen if all the plants and trees in a watershed were removed?
12. If all the plants in the world died:
 - a. How would the oxygen cycle be affected?
 - b. How would the carbon cycle be affected?
13. The nitrogen cycle uses three types of bacteria. Explain the function of each type:
 - a. Nitrifying
 - b. Nitrogen-fixing
 - c. Denitrifying
14. List two ways oxygen is added to the air.
15. Where does most of the oxygen in the atmosphere come from?
16. List two ways carbon dioxide is added to the air.
17. What happens to most of the water that evaporates from the ocean?
18. List four of the biomes.