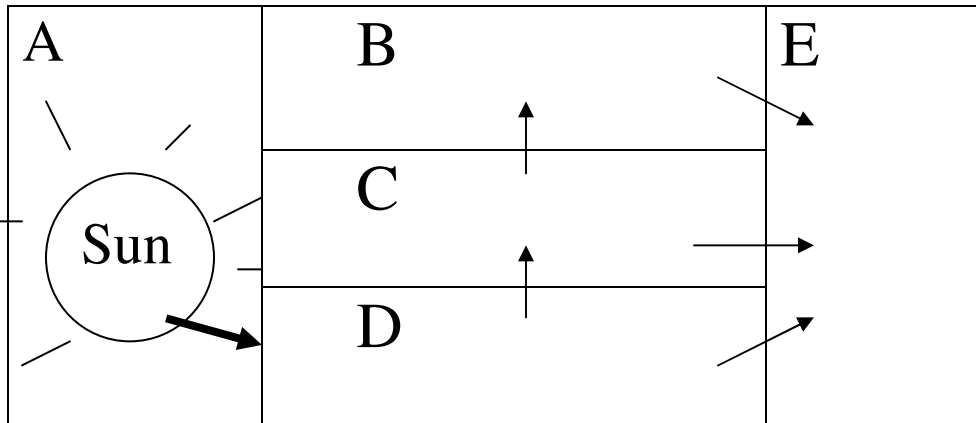


Review sheet: Populations and Ecosystems



A. Look at the diagram of a food web above. Match the following list of words with the proper letter in the diagram by writing the letter in the blank next to the correct term. You may use letters more than once.

- | | |
|------------------------------|------------------------------|
| _____ 1. fungi | _____ 6. primary consumers |
| _____ 2. producers | _____ 7. trees |
| _____ 3. decomposers | _____ 8. herbivores |
| _____ 4. autotrophs | _____ 9. secondary consumers |
| _____ 5. energy from the sun | _____ 10. predators |

B. In each sentence below, fill in the blank with the best word or phrase to complete the sentence. Use words from this word bank:

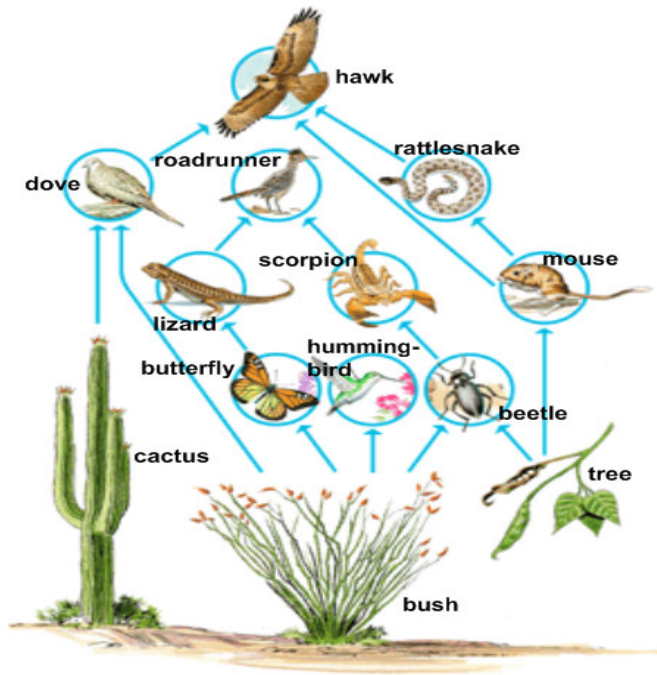
- | | | | |
|------------|---------------------|--------------|--------------------------|
| population | carbon dioxide | adaptation | incomplete metamorphosis |
| omnivores | predators | oxygen | carrying capacity |
| food web | prey | calorie | primary consumers |
| habitat | individual | community | complete metamorphosis |
| primary | secondary consumers | carbohydrate | reproductive potential |

11. A characteristic that helps an organism survive in its environment (like the white fur on a polar bear) is called an _____.
12. _____ is a colorless, odorless gas that is a waste product of photosynthesis, but is important because animals need it for respiration.
13. Any population of one species could possibly give birth to a certain number of organisms. This is the _____ of the population.

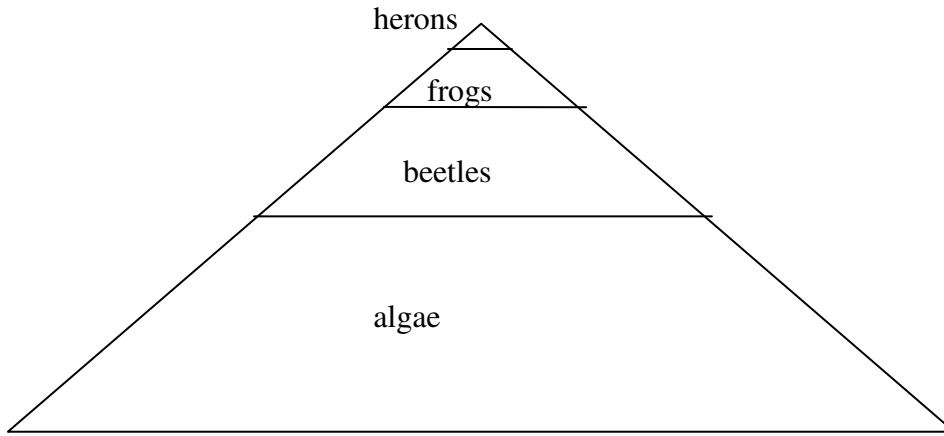
14. Since they hunt and kill some of their food, humans might be considered _____.
15. A _____ is a diagram of energy flow in an ecosystem.
16. The amount of energy needed to raise the temperature of one milliliter of water, one degree Centigrade is called a _____.
17. The supportive environment where something lives is its _____.
18. _____ are two levels above producers in a food web.
19. A _____ is made of all the organisms of more than one species in one place at one time.
20. Producers, primary consumers, and secondary consumers are examples of three _____.
-

C. 21. Explain how the sun supplies energy to all of the organisms in an ecosystem. Use and underline the following words in your explanation: producer, sun, carbon dioxide, sugar, water, chlorophyll, photosynthesis, oxygen, consumer, energy, 10% rule, decomposer. Include the correct chemical formula for photosynthesis. (See pages 14-16 in the P&E reading book.)

D. The picture below represents feeding relationships in a desert ecosystem. Some organisms belong to more than one trophic level. Circle the correct answer in the questions below.



-
22. The picture/diagram above represents
 - a. a population
 - b. a decomposition tree
 - c. energy flow
 - d. an aquatic environment
 23. The plants in this picture could also be called
 - a. consumers
 - b. autotrophs
 - c. herbivores
 - d. decomposers
 24. The beetle and hummingbird are
 - a. primary producers
 - b. secondary consumers
 - c. primary consumers
 - d. omnivores
 25. Two birds on the same trophic level are
 - a. dove and roadrunner
 - b. dove and hawk
 - c. roadrunner and hawk
 26. Two carnivores in the picture are the
 - a. lizard and mouse
 - b. hawk and scorpion
 - c. butterfly and bush
 - d. dove and roadrunner
 27. How many tertiary consumers are shown in the picture above?
 - a. six
 - b. five
 - c. three
 - d. two
 28. To be complete, the food web above should also include:
 - a. the sun and decomposers
 - b. moon and stars
 - c. water and people



E. The food pyramid above represents the 10% rule of energy transfer in an aquatic ecosystem.

29. Explain why the algae section of the pyramid is so large.

30. Which trophic level contains the most energy? Which trophic level contains the least energy?

31. This food chain represents all of the food sources for each individual in the food chain (each consumer eats only the organism in the trophic level below it), If there were 2000 kilograms of algae, what would be the largest weight possible for herons at the top of this food chain? (in kilograms)

F. Write a complete hypothesis in proper format using an appropriate variable for each situation:

32. I think some seeds would grow better with double strength fertilizer.

33. Duracell batteries probably keep a flashlight working longer than Eveready batteries.

34. If I put milkweed bugs in a warm, moist habitat, they'll do better than in a cool, dry habitat.