

**12 | Chapter Test A****Key Concepts**

Choose the letter of the best answer. (4 points each)

- \_\_\_\_\_ 1. The study of how living things interact is called  
a. ecosystems  
b. abiotic factors  
c. ecology  
d. the energy pyramid
- \_\_\_\_\_ 2. The source of energy for almost all life on Earth is  
a. fungi  
b. animals  
c. water  
d. sunlight
- \_\_\_\_\_ 3. An example of a biotic factor in a forest ecosystem is  
a. waterfall  
b. cliff  
c. a tree  
d. a rock
- \_\_\_\_\_ 4. An ecosystem is made up of  
a. living things only  
b. physical environment only  
c. living things and the physical environment  
d. living things and decaying matter
- \_\_\_\_\_ 5. A plant uses a gas from the air to make sugar during photosynthesis. This process is part of the  
a. physical cycle  
b. water cycle  
c. carbon cycle  
d. nitrogen cycle
- \_\_\_\_\_ 6. Pure nitrogen in the air  
a. can be taken up and used by all organisms  
b. can be taken up and used by animals  
c. cannot be taken up and used by plants  
d. cannot be taken up and used by any organism

Name \_\_\_\_\_

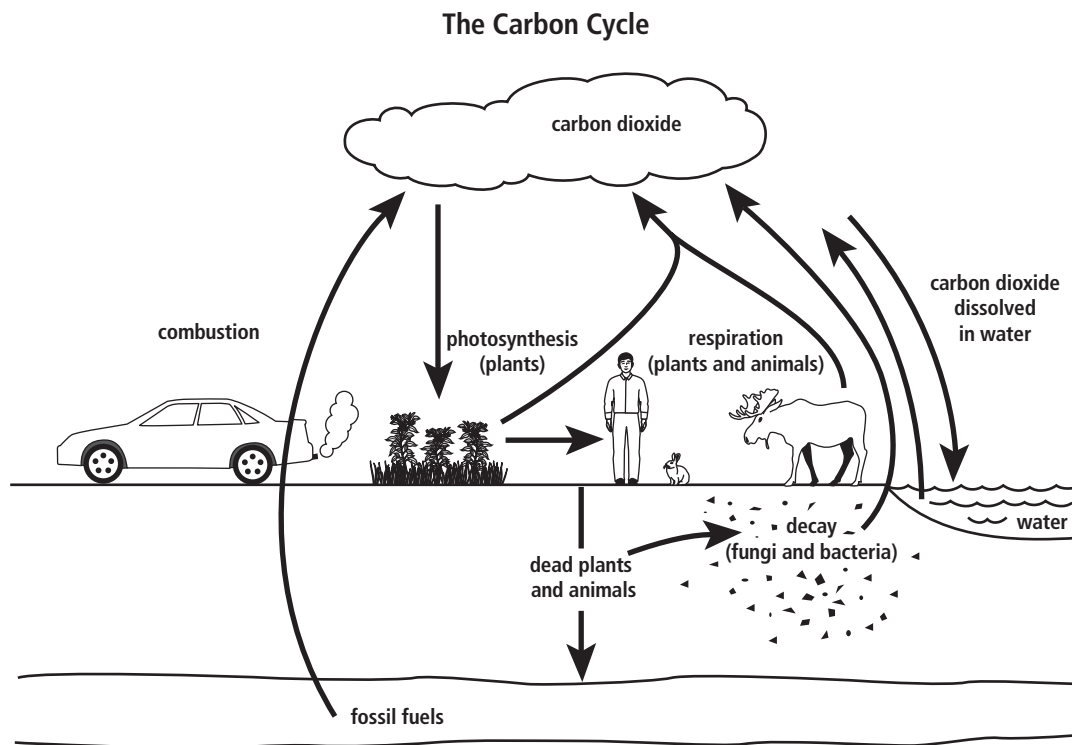
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- \_\_\_\_\_ 7. In an energy pyramid, the bottom level represents
- a. consumers
  - b. producers
  - c. scavengers
  - d. decomposers
- \_\_\_\_\_ 8. An example of a consumer in a pond ecosystem is
- a. a water lily
  - b. algae
  - c. a reed
  - d. a frog
- \_\_\_\_\_ 9. Which of these food chains is in the correct order?
- a. caterpillar, cattail, frog, water snake
  - b. cattail, caterpillar, frog, water snake
  - c. water snake, frog, caterpillar, cattail
  - d. cattail, frog, caterpillar, water snake
- \_\_\_\_\_ 10. A whale is feeding on plankton. In which aquatic biome are they?
- a. river
  - b. lake
  - c. deep ocean
  - d. open ocean
- \_\_\_\_\_ 11. A pine tree is a coniferous tree. This means it can
- a. produce food throughout the year
  - b. store water in dry weather
  - c. produce its own food through photosynthesis
  - d. get nutrients from the soil
- \_\_\_\_\_ 12. The wettest land biome is the
- a. tropical forest
  - b. temperate forest
  - c. tundra
  - d. grassland

## Interpreting Visuals

Using the diagram, answer the following questions. (7 points each)



- 13.** List two abiotic factors shown in the diagram.

\_\_\_\_\_

- 14.** List two biotic factors shown in the diagram.

\_\_\_\_\_

- 15.** Identify one way in which carbon enters the atmosphere.

\_\_\_\_\_

\_\_\_\_\_

- 16.** Identify one way carbon is removed from the atmosphere.

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\_\_\_\_\_

Name \_\_\_\_\_

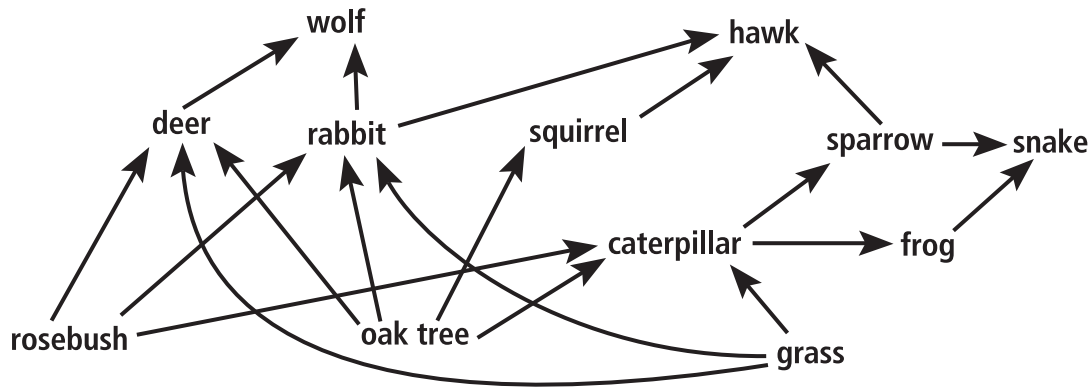
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## Interpreting Visuals

Using the diagram, answer the following questions. (6 points each)

**Food Web Diagram**



17. What do the arrows in the food web represent?

\_\_\_\_\_

18. List two producers in the food web and three consumers in the food web.

\_\_\_\_\_

19. Draw one food chain that includes the sparrow.

\_\_\_\_\_

## Extended Response

Answer the following question on the back of this paper or on a separate sheet of paper. (6 points)

20. **Analyzing** Study the table below. For each biome listed:

discuss how rainfall affects the plant life in the biome

discuss how the organism is adapted to live in the biome

BIOME WATER AND SOIL NUTRIENT DATA			
Biome	Rainfall	Soil Nutrient Level	Organism
Tropical rain forest	250–400 cm/year	Poor	Monkey
Temperate forest	75–150 cm/year	Rich	Deciduous tree
Desert	Less than 25 cm/year	Poor	Cactus