

**Ecosystems and Biomes** ▪ *Guided Reading and Study*

## Energy Flow in Ecosystems

*This section explains the different roles that organisms play in the movement of energy through an ecosystem. The section also describes how organisms in the different roles interact to form food chains and food webs.*

### Use Target Reading Skills

*After you read the section, reread the paragraphs that contain definitions of Key Terms. Use all the information you have learned to write meaningful sentences using Key Terms.*

### Energy Roles

Match the energy role with its definition.

Energy Role	Definition
___ 1. producer	a. Organism that breaks down wastes and dead organisms
___ 2. consumer	b. Organism that obtains energy by feeding on other organisms
___ 3. decomposer	c. Organism that can make its own food

4. What types of organisms are producers?

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5. Is the following sentence true or false? Energy enters all ecosystems as sunlight. \_\_\_\_\_

6. Is the following sentence true or false? Producers are the source of all the food in an ecosystem. \_\_\_\_\_

7. List two major groups of decomposers.

a. \_\_\_\_\_ b. \_\_\_\_\_

8. Complete the compare/contrast table.

Types of Consumers	
Type of Consumer	Type of Food
	Only plants
Carnivore	
	Both plants and animals
	Dead organisms



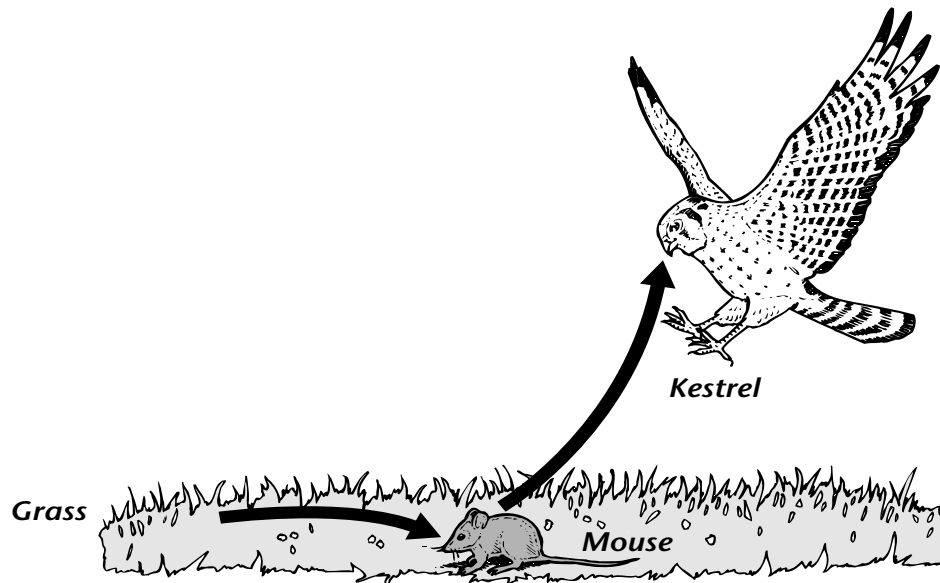
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## Energy Flow in Ecosystems *(continued)*

9. Is the following sentence true or false? Decomposers return raw materials to the environment. \_\_\_\_\_

### Food Chains and Food Webs

10. A series of events in which one organism eats another and obtains energy is called a(n) \_\_\_\_\_.
11. Label the producer and the first-level and second-level consumers in the food chain.



12. The many overlapping food chains in an ecosystem make up a(n) \_\_\_\_\_.
13. Circle the letter of each sentence that is true about a food web.
- a. Producers are at the top of the food web.
  - b. All first-level consumers are carnivores.
  - c. Second-level consumers may be carnivores or omnivores.
  - d. An organism may play more than one role in a food web.

### Energy Pyramids

14. What does an energy pyramid show?
- \_\_\_\_\_

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15. Circle the letter of each sentence that is true about an energy pyramid.

- a. The greatest amount of energy is available at the producer level.
- b. At each level of the pyramid, there is more energy available.
- c. About half the energy at one level is transferred to the next.
- d. Most food webs have only three or four feeding levels.

16. Why are there usually few organisms at the top of a food web?

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