Energy Flow in Ecosystems (pages 740–745)

Energy Roles (pages 740–741)

Key Concept: **Each of the organisms in an ecosystem fills the energy role of producer, consumer, or decomposer.**

- Energy enters most ecosystems as sunlight.
- Energy moves through an ecosystem. Each organism in an ecosystem plays a part in the movement of energy.
- An organism that can make its own food is called a **producer**.
- An organism that gets energy by eating other organisms is called a **consumer**. **Herbivores** are consumers that eat only plants. **Carnivores** are consumers that eat only animals. **Omnivores** are consumers that eat both plants and animals.
- An organism that gets energy by eating wastes and dead organisms is called a **decomposer**. Mushrooms and bacteria are decomposers.

Answer the following questions. Use your textbook and the ideas above.

1. Energy enters most ecosystems as

_____.

2. Draw a line from each term to its meaning.

Term	Meaning
decomposer	**a.** an organism that makes its own food
producer	**b.** an organism that gets energy by eating other organisms
consumer	**c.** an organism that gets energy by eating wastes and dead organisms

3. Draw a line from each type of consumer to its description.

Type of Consumers	Description
carnivore	**a.** consumer that eats only animals
herbivore	**b.** consumer that eats both plants and animals
omnivore	**c.** consumer that eats only plants

Food Chains and Food Webs (pages 742–743)

Key Concept: **The movement of energy through an ecosystem can be shown in diagrams called food chains and food webs.**

- Food chains and food webs are diagrams. They show how energy moves through an ecosystem.
- A **food chain** shows a series of organisms that eat other organisms.
- The first organism in a food chain is always a producer. The organism that eats the producer is called a first-level consumer. The organism that eats the first-level consumer is called a second-level consumer.
- A **food web** is made up of many food chains in an ecosystem. The food chains overlap and connect with one another.

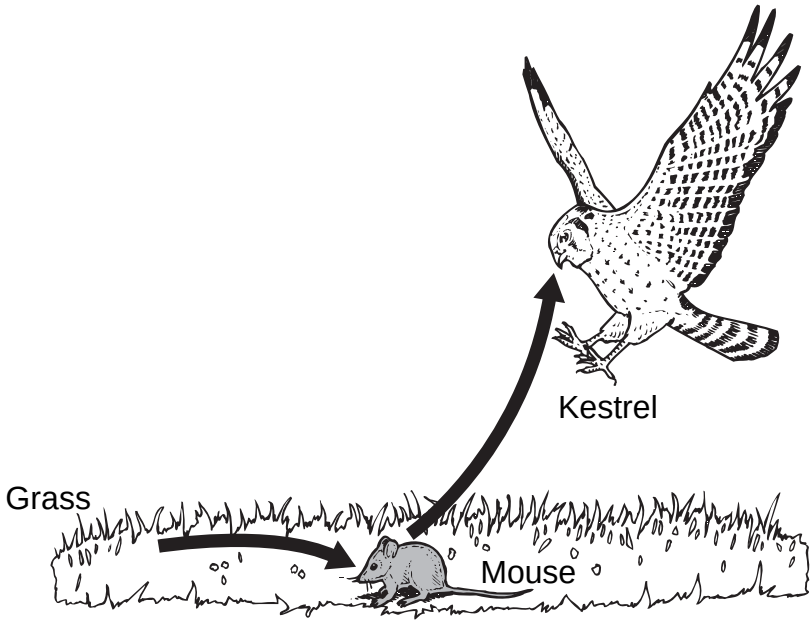
Answer the following questions. Use your textbook and the ideas above.

4. A diagram that shows a series of organisms that eat other organisms is called a(an)

_____.

5. A diagram that is made up of many food chains is called a(an) _____.

6. The picture below shows a food chain. In this food chain, there is a producer, a first-level consumer, and a second-level consumer. Circle the organism that is the first-level consumer.



Energy Pyramids (pages 744–745)

Key Concept: **In an energy pyramid, the most energy is available at the producer level of the pyramid. As you move up the pyramid, each level has less energy available than the level below.**

- An **energy pyramid** is a diagram in the shape of a pyramid. It shows how much energy moves from one feeding level to another. Energy moves from the bottom level up to the top level.
- The first level of an energy pyramid always has the most energy.
- Each level of an energy pyramid has less energy than the level below it.

Answer the following questions. Use your textbook and the ideas above.

7. Circle the letter of the name of a diagram that shows how much energy moves from one feeding level to another.

a. food web

b. energy pyramid

c. food chain

8. Circle the letter of each sentence that is true about energy pyramids.

a. Energy moves from the bottom level to the top level.

b. The first level always has the most energy.

c. Each level has more energy than the level below it.