Edgenuity

Warm-Up | Energy Flow in Ecosystems

Lesson Question

Lesson Goals

Explore energy flow within an ecosystem.

Explain the roles of producers, consumers, and decomposers in an _____.

Identify producers, consumers, and _____ in food chains and food webs.

Examine the movement of energy through food chains and food webs.

Analyze the transfer of energy through the trophic levels of an energy pyramid.

Words to Know

Fill in this table as you work through the lesson. You may also use the glossary to help you.

	the position of an organism in a food web or energy pyramid
	an organism that makes its own food; also called a producer
	an animal that eats both plants and animals
	an organism that eats other organisms; also called a heterotroph

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Words to Know

	an animal that eats only plants
	a diagram illustrating the amount of energy available at each feeding level in an ecosystem
	a model that shows the feeding relationships between organisms in an ecosystem
	a model that shows the interconnected food chains in an ecosystem
	an organism that breaks down waste and dead organisms
	an organism that eats other organisms; also called a consumer
	an animal that only eats other animals
	an organism that makes its own food; also called an autotroph

Photosynthesis

- Green plants and some other organisms make food through photosynthesis.
  - _____ dioxide + water → glucose + _____
- The _____ stored in plants is passed on to _____ that eat plants and then to animals that eat those animals.

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Producers

- A **producer** is an organism that makes its own food; it is also called an [ ].
  - Converts energy from the sun into food energy through [ ]
  - Creates all usable food energy on the planet

Consumers

A **consumer** is an organism that eats other organisms; it is also called a [ ].

[ ] only eat plants.

[ ] only eat other animals.

[ ] eat both plants and animals.

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Decomposers

- A **decomposer** is an organism that breaks down [ ] and dead organisms.
  - Recycles [ ] back into the environment

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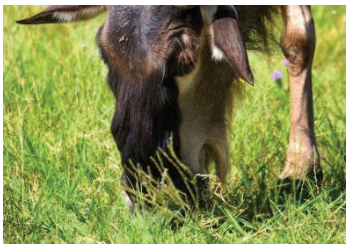
Food Chains

A **food chain** shows the [ ] relationships between organisms in an ecosystem.

[ ] → [ ] consumer → [ ] consumer

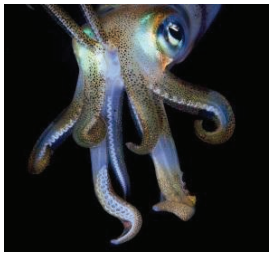




If one organism is [ ] from a food chain, it affects all of the [ ] in the chain.

Producer → Primary consumer → Secondary consumer → [ ] consumer

Circle the consumer in the image that will overpopulate with the removal of squid.



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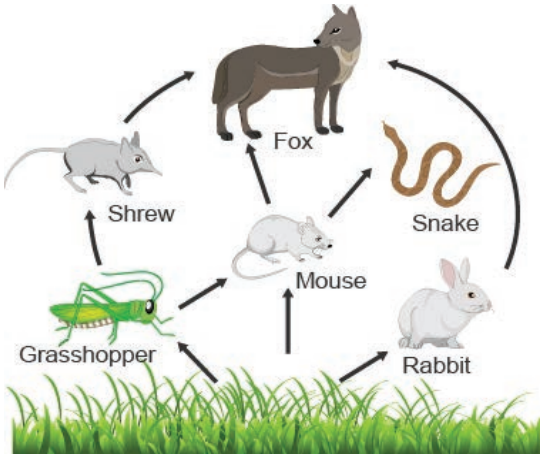
Food Webs

- A **food web** shows the interconnected food [ ] in an [ ].
- [ ] can follow several different paths in a food web.

Circle the producer in the food web.



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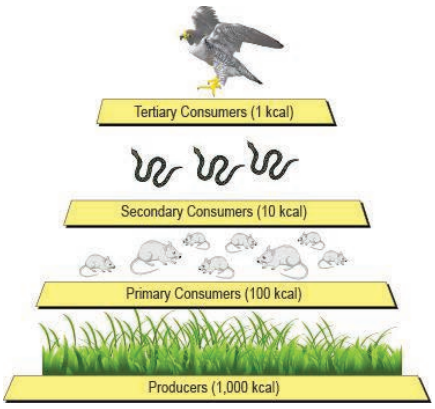
Energy Transfer in Ecosystems

- An energy [ ] is a diagram illustrating the amount of energy available at each feeding level in an ecosystem.
- The position of an organism in a food web or energy pyramid is called a [ ] **level**.

- Only about [ ] of the energy at one trophic level is passed on to organisms at the next trophic level.
- The remaining [ ] of the energy is used in [ ] processes or is lost as [ ].

Draw an arrow to show the direction of energy transfer in the energy pyramid.



Summary | Energy Flow in Ecosystems

Lesson Question

How does energy flow through an ecosystem?

Answer

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Review: Key Concepts

- Energy enters an ecosystem in the form of sunlight.
- Producers, or _____, convert energy from the sun into food energy through photosynthesis.
- Consumers, or _____, eat other organisms to get the energy they need.
- _____ break down waste and dead organisms.

Summary | Energy Flow in Ecosystems

Slide 2

Review: Key Concepts

- A food chain shows the _____ relationship between organisms in an ecosystem.
- A food web shows interconnected food chains in an _____.
- An _____ pyramid illustrates the amount of energy available at each trophic level.
    - Only about 10% of the energy at one trophic level is passed on to organisms at the next trophic level.
    - The remaining 90% of the energy is used in life processes or is lost as _____.

Use this space to write any questions or thoughts about this lesson.