

Name \_\_\_\_\_

Date \_\_\_\_\_

### Reinforcement 13.3: Energy in Ecosystems

**KEY CONCEPT** Life in an ecosystem requires a source of energy.

All organisms must have a source of energy in order to survive.

- **Producers** get their energy from nonliving resources, meaning they make their own food. Producers are also called **autotrophs**.
- **Consumers** get their energy by eating other living or once-living resources. Consumers are also called **heterotrophs**.

Photosynthesis is the two-stage process that green plants, cyanobacteria, and some protists use to produce energy in the form of carbohydrates. These chemical reactions form carbohydrates from carbon dioxide and water.

Other producers use chemicals to form carbohydrates in a process called **chemosynthesis**. Chemosynthetic producers are found in deep-sea vent communities as well as in sulfur-rich salt marsh flats and hydrothermal pools.

1. What is the difference between a producer and a consumer?

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2. Why do all ecosystems depend on producers?

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3. How are consumers dependent on the Sun?

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4. What is the difference between photosynthesis and chemosynthesis?

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## Section Quiz 13.3: Energy in Ecosystems

Choose the letter of the best answer.

- \_\_\_\_\_ 1. An organism that makes its own food is called a
- consumer.
  - producer.
  - heterotroph.
  - chloroplast.
- \_\_\_\_\_ 2. A moose is considered to be a consumer because it
- gets energy by eating other resources.
  - makes its own food.
  - forms carbohydrates using chemicals.
  - uses sunlight for energy.is not in any ecosystem.
- \_\_\_\_\_ 3. The basis for the energy in an ecosystem is provided by
- consumers.
  - heterotrophs.
  - chemosynthesis.
  - producers.
- \_\_\_\_\_ 4. Most producers get energy from the Sun using the process of
- respiration.
  - consumption.
  - photosynthesis.
  - chemosynthesis.
- \_\_\_\_\_ 5. Chemosynthesis is the process in which organisms
- form carbohydrates using chemicals.
  - get energy by eating other organisms.
  - make chemicals that absorb sunlight.
  - use energy from the sun to form carbohydrates.