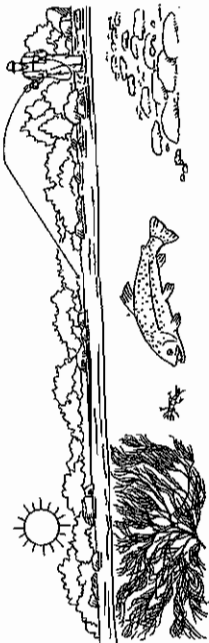


# Ecosystems

energy flow

## Energy Flow in Ecosystems



All organisms require energy, in the form of food, to live. Most of the energy that supports life on Earth comes from the sun. **Producers** are organisms that make their own food. Most producers make food by capturing the sun's energy through the process of **photosynthesis**. Producers include green plants, algae, and some bacteria.

**Consumers** are organisms that cannot make their own food. They obtain the energy they need by feeding on other organisms. Most animals are consumers. **Herbivores** are consumers that eat only

plants. **Carnivores** are consumers that eat mostly or only animals. **Omnivores** are consumers that eat both plants and animals. **Scavengers** are consumers that eat dead animals. **Decomposers** are bacteria and fungi that break down waste materials and the remains of dead organisms and their wastes.

A **food chain** is a simple model that shows how energy flows from one organism to another in a community. A food chain shows only one of many ways in which energy can flow from the sun to a consumer.

How are producers different from consumers?

Tell about 4 types of consumers

A **food chain** is an energy pathway, but energy movement within an ecosystem is not this simple. Organisms often belong to several food chains. Together, all the food chains in an ecosystem form a **food web**.

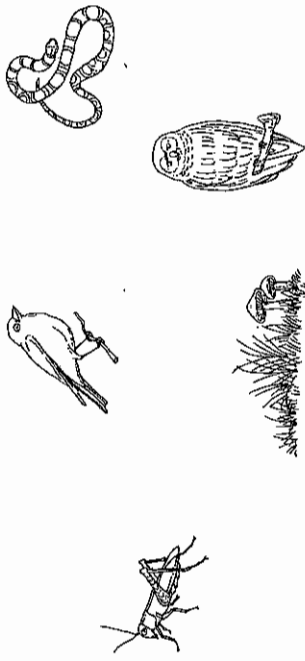
Look at the diagram of a food web in a meadow, a kind of grassland ecosystem. Producers include a variety of grasses. Herbivores include grasshoppers and rabbits. Carnivores include birds, snakes, owls, and foxes. Decomposers include fungi and bacteria.

A change in one part of a food web can affect organisms throughout the ecosystem. Suppose that a **drought**, or long period without water, killed some grasses.

Herbivores such as grasshoppers would have less food. Less food would mean that some grasshoppers leave to find food and others die. Without insects, birds would also leave or die. Without birds, snakes would go hungry and so would animals that depend on snakes for food. In time, all the organisms in the ecosystem could be affected.

Standards NYC  
Science 5.2d

draw in this food web



who eats who?

Draw a line from an animal to its food source. Use arrows.

our goal is to find out how energy moves through an ecosystem. we will also find out about producers, consumers and food chains.

describe 2 food webs that can be shown here. ① ②