



Objectives

- ▶ define food chain and food web
- ▶ understand how organisms in an ecosystem are interrelated
- ▶ create a food chain for rainforest organisms

Vocabulary

consumers
decomposers

food chain
food web

producers

Background

A food chain is a feeding pattern in which energy from food passes from one level to the next in a sequence. All living things are linked in food chains. The sun is the principal source of energy for all of them.

One common food pattern is called the grazing food chain. Grasses and other green plants (the producers) using solar energy are the base of this food chain. They are eaten by herbivores (the consumers). Herbivores are consumed by carnivores or by omnivores.

Another common food chain, called the detritus food chain, begins with the remains of plants and animals. These remains are slowly broken down by organisms, such as bacteria and fungi—the decomposers. In this process, nutrients are returned to the soil and then used again by plants.

Most organisms eat several kinds of food and therefore belong to more than one chain. Because of this, scientists refer to connecting food chains as food webs, networks that transfer energy within an ecosystem.

Materials

reference books, such as an encyclopedia and books on plants and animals of the rainforest
large pieces of poster board or oak tag
markers and felt-tip pens

Activity

1. Explain the term food chain using the background information. Tell students that all living organisms in a food chain can be classified as a producer, a consumer, or a decomposer. Producers consist mainly of plants. Most consumers are herbivorous, omnivorous, and carnivorous animals. Decomposers, mainly bacteria and fungi, break down dead plants and animals to make nutrients in the soil.
2. Refer to the list of rainforest animals on page 13. An example of a food chain of the Australian rainforest is: a coral snake is a consumer that eats a tree frog; the tree frog is a consumer that feeds on a butterfly; the butterfly is a consumer that feeds on nectar in a flower; the flower is a producer; bacteria and fungi are decomposers—they make nutrients in the soil to feed the flower.
3. Remind students of the plight of the cassowary. Explain that a lack of data on its habitat needs and food sources have frustrated conservation and management efforts. Discuss why it is important for scientists to understand food chains.
5. Divide the class into cooperative groups. Distribute copies of the list of rainforest animals. Suggest that students use library resources to find information about the animals and the foods they eat. Have students make a flow chart to show the order in which energy is transferred through several organisms. Tell them to label producers, consumers, and decomposers in their chart.

Extend the Activity

Explain to students that a series of interconnecting food chains make up a food web. Have students diagram a food web based on their research of plants and animals of the rainforest.