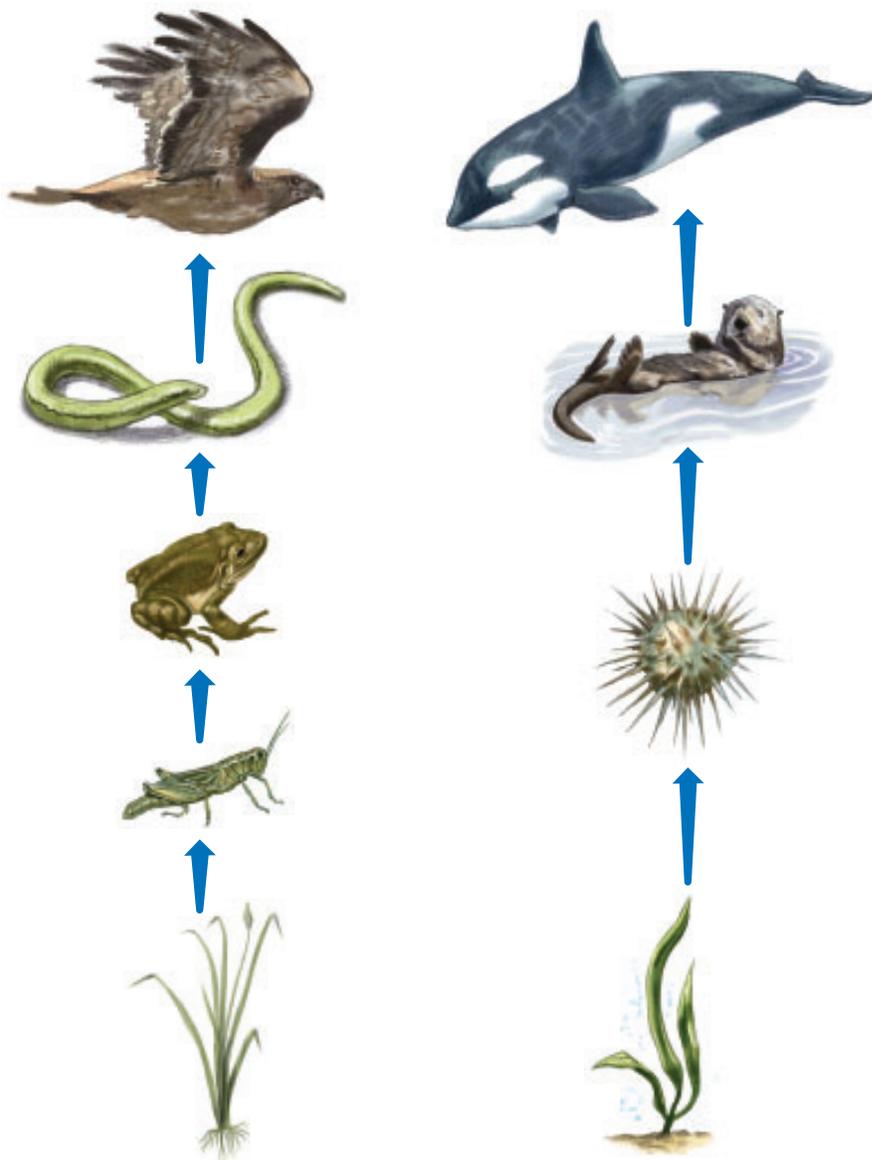


# Food Chains and Food Webs

## 2.2

Energy flows through ecosystems. When a herbivore eats a plant, the food energy that is stored in the plant passes into the herbivore's body. When the herbivore is eaten by another consumer, the food energy that is stored in the herbivore's body passes into that consumer's body. A model that shows how food energy passes from one organism to another in a feeding pathway is called a **food chain** (Figure 1). Each organism in a food chain depends on the organism before it in the chain for its food energy.



### LEARNING TIP

Flow charts like the ones in Figure 1 are used to show a sequence of steps or a timeline. Where else have you seen flow charts used?

**Figure 1**

The flow of energy through two different food chains: The arrows show the direction of the energy flow. What is the original source of energy for each food chain?



## TRY THIS: DRAW A LUNCH FOOD CHAIN

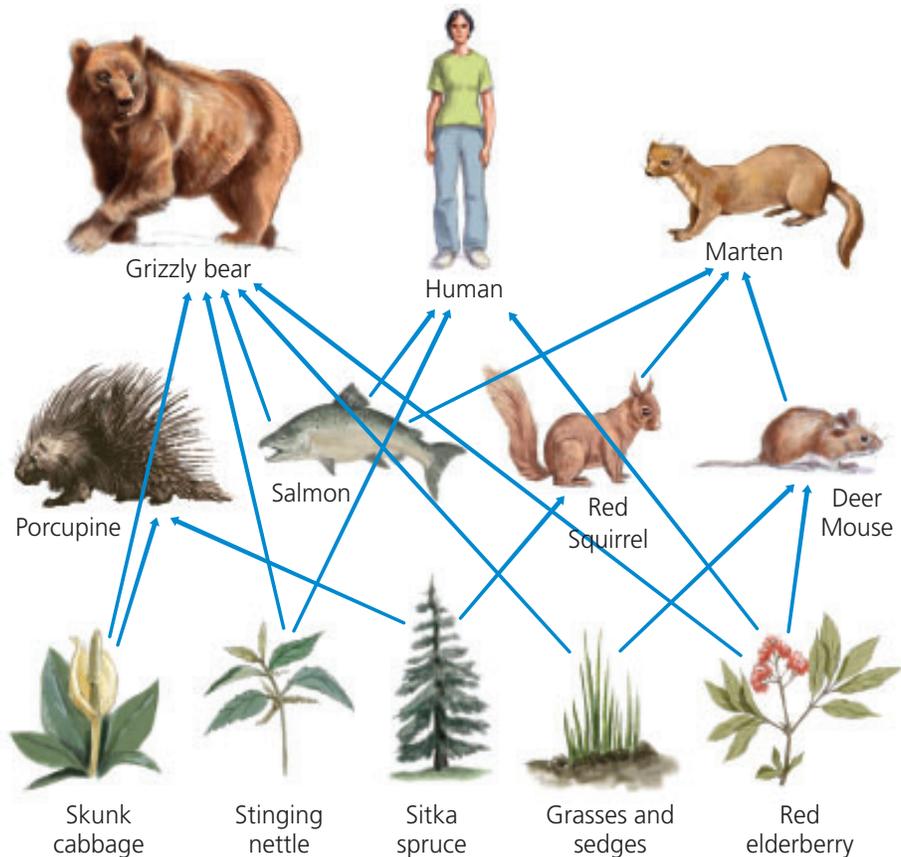
**Skills Focus:** classifying, inferring

1. Write down everything that you had for lunch, either yesterday or today.
2. List all the organisms that were required to produce your lunch.  
For example, a sandwich may require wheat and yeast for the bread, and meat or cheese for the filling. Did your lunch include products from both plants and animals?
3. Choose several items from your lunch. Draw a food chain for each item, with you at the top in each case. Which is the longest food chain?

Consumers do not usually rely on only one source of food. For example, a coyote eats rabbits, but it will also eat mice, grouse and their eggs, and many other animals. The mice that the coyote eats consume the seeds, inner bark, and shoots of many different plants. Thus, most organisms are part of several food chains. A model that shows several different food chains, and the connections between them, is called a **food web** (Figures 2 and 3).

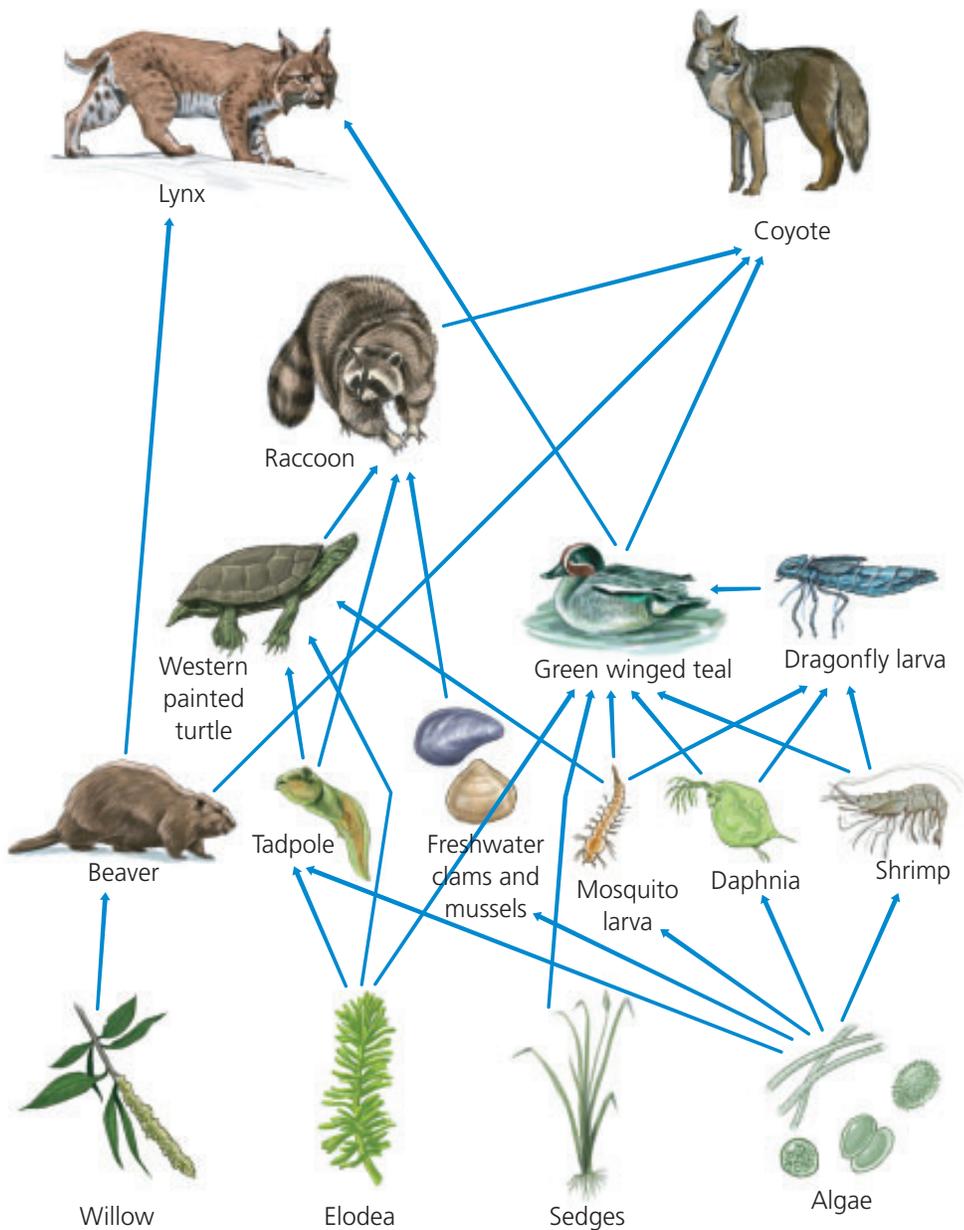
### ▶ LEARNING TIP

Evaluate the food web in **Figure 2** by comparing it to what you have learned about the Khutzeymateen Valley. Do you think that all of the organisms in the valley have been shown?



**Figure 2**

This food web shows some of the organisms in the Khutzeymateen Valley ecosystem. It is made up of many food chains.



**Figure 3**

This food web shows some of the organisms in a pond.

Food chains and food webs show who eats whom. They also show how energy flows through ecosystems from producers to consumers to detritivores to decomposers.

**CHECK YOUR UNDERSTANDING**

1. What type of living thing does a food chain always begin with? Why?
2. Draw a food chain that ends with a pet.
3. How are food chains related to a food web?