



Food Web / Food Chain Station

(Adapted from BirdSleuth Nature Detectives)

GOALS:

- To learn the importance of plants and animals and how they are connected
- To learn why birds are important to our environment
- To learn the importance of the wetlands in the ecosystem

MATERIALS:

Food Web name tags with string
2 lengths of string per person, each about 3ft long
Producer, Consumer, and Decomposer signs

BACKGROUND INFORMATION:

Step1: what is a Food Web/Chain?

A food chain shows the flow of energy from its source (the sun) through a series of plants and animals. For example, energy passes from the sun to a plant leaf, then on to the caterpillar that eats the leaf, to the robin that eats the caterpillar, the hawk that eats the robin, and finally to the fungus that decomposes the hawk's body after it dies. A food web is a web of food chains and illustrates the more complex flow of energy through an ecosystem. An increase or decrease in any one species (plant, animal, or fungus) can have strong effects throughout the food web.

Producers (plants) use the sun's energy to produce food energy, through the process of *photosynthesis*.

Consumers (animals) eat, or consume, other organisms to get energy. Consumers are divided into three groups: herbivores eat plants, carnivores eat other animals, and omnivores eat both.

Decomposers (fungus and bacteria) get energy by breaking down dead plants and animals.



INSTRUCTIONS:

Step1: Place the Food Web name tags in a box and pass it around so everyone gets the name of one organism. This will be their role in the ecosystem.

Once everyone knows what they are in the ecosystem, go outside go set up the web. For younger or less experienced participants, consider using the Food Web Tangle poster as a guide. Have a box of strings nearby. Everyone should take enough strings for each organism from which they get energy and offer those organisms the other end of the string. For example, the "Sun" should be connected by a separate string to each plant in the web. A small bird should be connected to the plants whose seeds it eats, the insects it eats. This will create a connected web with the sun in the middle or at one end. This will create a connected web with the sun in the middle or at one end.

Ask one of the producers to gently tug one of the strings they are holding. Each participant who feels a tug should pass the tug along to their connections. Have an organism sit down to show a decline in that species. What happens to the organisms they are connected to?

To discuss: How does this web represent the way organisms are connected in nature? How does one species affect the other species in the food chain/web? What parts of the food chain or web seem to be the most important? Why?

Step2: Where do you get your energy?

Get into groups according to where each organism GETS its energy.

1. If you get your energy from the sun, you PRODUCE food and you are called a producer.
2. If you get your energy by eating plants OR other animals, you are a CONSUMER.
3. If you get your energy by breaking down dead plants or animals, you are a DECOMPOSER.

Have one person from each group hold one of the laminated producer, consumer, or decomposer signs. Everyone else must find their group as quickly as they can.