FOOD WEBS AND FOOD CHAINS

We All Need ENERGY…

Every living organism on Earth needs energy to live, including plants, animals, and us! The main energy source for all living things on Earth is the Sun. The process of energy being captured by plants from the sun and then transferred from one organism to the next in the food chain is referred to as energy flow within an ecosystem. Sunlight and plants are the two most important things our ecosystem needs in order to always have a supply of energy.

Lesson Checkpoint:

What is the main source of energy for all living things?

Producers

Animals get the energy they need to survive in different ways. Plants use sunlight to make their own food. This process is known as photosynthesis. Producers are organisms, such as plants, which make their own food.

Consumers

Consumers are organisms that eat other living things in order to get energy. Consumers include herbivores, carnivores, omnivores, and decomposers. What are those?

Herbivores get energy by eating only plants.
Carnivores get energy by eating only other animals.

Omnivores get energy by eating both plants and other animals.

Decomposers get energy by eating the remains of dead matter, like dead plants and animals. Decomposers break down dead plants and animals into nutrients that are stored back into the soil. Plants then use these important nutrients to grow healthy and strong.

Lesson Checkpoint: What is a consumer?

Food Chains
Energy found in plants can be passed along from animal to animal through a food chain. In a food chain, energy is passed by an animal eating and being eaten.

All food chains begin with energy received from the Sun. After the Sun, the next link in every food chain is plants. Plants are the only organisms that get energy from Sun.
In a food chain diagram, the arrows show the transfer or flow of energy from one organism to the next.

If one animal species in a food chain dies, that will affect all the animals in the food chain.

Lesson Checkpoint:

Energy Flow in Food Chains
Animals at the end of the food chain need to eat the MOST to get enough energy to survive. There are more producers in a ecosystem than consumers! As the energy is passed on from organism to organism along a food chain, the amount of energy becomes less and less. The more links in the food chain, the less energy each animal gets along the way.
Food Webs
There are also food webs in an ecosystem. A food web is a system of overlapping food chains. An ecosystem has many food chains. An animal can be the eaten by many different types of animals and therefore be a part of many different food chains.

The following diagram is an example of a food web. Can you see the food chains within this web?

Lesson Checkpoint:
What is a food web?

Survival
All living organisms depend on other organisms in an ecosystem in order to survive in an ecosystem! This is called interdependence. Being interdependent means to depend and rely on one another. Interdependence of populations within a food chain helps to maintain the balance of plant and animal populations within a community.

Lesson Checkpoint:
What does it mean to be interdependent?