

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 that **make their own food**.



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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.



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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 added back into the soil. Plants then use those 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.

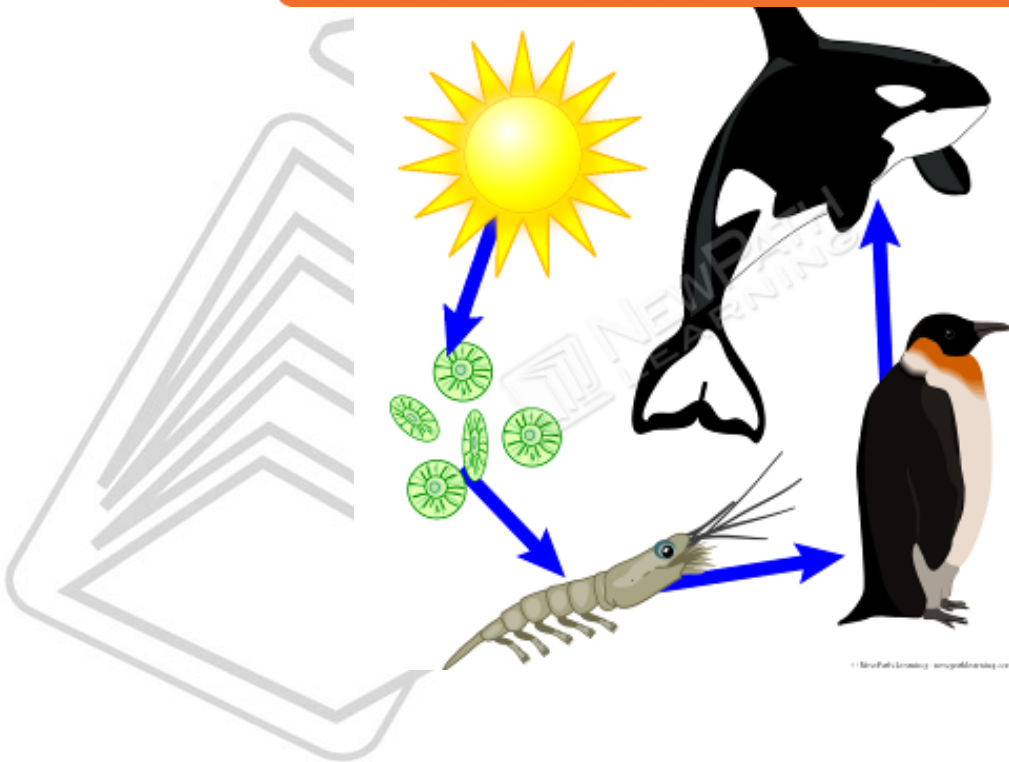
Lesson Checkpoint: What is a food chain?

Energy Flow

Animals at the top of the food chain need energy to survive. They are called consumers! At the bottom of the food chain, the producers provide the energy for the consumers.

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Let enough energy flow through the food chain to support all the organisms along with a few more links in the chain.



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 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?