

Food Chains

This text is adapted from an original work of the Core Knowledge Foundation.

An ecosystem is like a habitat where an organism lives, but it includes many habitats plus the nonliving systems that support them. In an ecosystem, each living thing depends on other living and nonliving things for survival.

In a forest ecosystem, living things depend on one another. Many living things depend on trees for shelter and food. You can almost certainly find bugs on any tree. Woodpeckers can find them too!

If you dig down into the soil or scrape away some tree bark, you will discover all sorts of other critters in the forest ecosystem, such as worms, beetles, and ants.

You might not see all those insects and other little critters when you look around the forest, but they are there! You can find them under leaves, rocks, and fallen trees. Mostly, their world is underground and out of sight, unless you are willing to get dirty digging for them!



Beetles live in the forest ecosystem.

What are all those bugs doing there? They are doing what all living things do: surviving. To survive, living things need food. The nutrients in food provide energy for the body. Without

energy, the body stops. It's that simple! What else are bugs and other living things doing besides eating? They are doing whatever it is they need to do in order to produce young. Plants make seeds. Mammals, such as squirrels and deer, give birth to live babies. Bugs and birds lay eggs.

Spiders make egg sacs like the one in this image. When the sac opens, hundreds of tiny baby spiders will run out. Most of them will be eaten by other bugs. Those that survive will grow to be hunters like their parents.

Living things also must develop ways to protect themselves from other things in the ecosystem. Squirrels build their nests high in trees, away from predators. Worms dig down into the soil. Snails and turtles have shells to protect them.

Unfortunately for squirrels, worms, snails, and turtles, these defenses do not always work. The predators that hunt and eat other animals for a living have sharp teeth and claws for catching their prey.



Spiders make egg sacs like this one.

There are ecosystems in many places. Each ecosystem has its own food chain. Look at the image of the wolf, the deer, and the acorn. This is a very simple way to think of the food chain. Smaller animals are eaten by slightly larger animals. But this image only represents a small part of a real food chain. Most food chains also include plants. They also include bacteria and

other tiny, microscopic organisms.

Plants and smaller animals are usually near the bottom of the food chain. At the top of the food chain, you will find beasts like grizzly bears, lions, blue whales, or great white sharks. These animals are too big to be hunted by anything else. A lion or shark is called an apex predator because it is at the top of the food chain.



food chain