

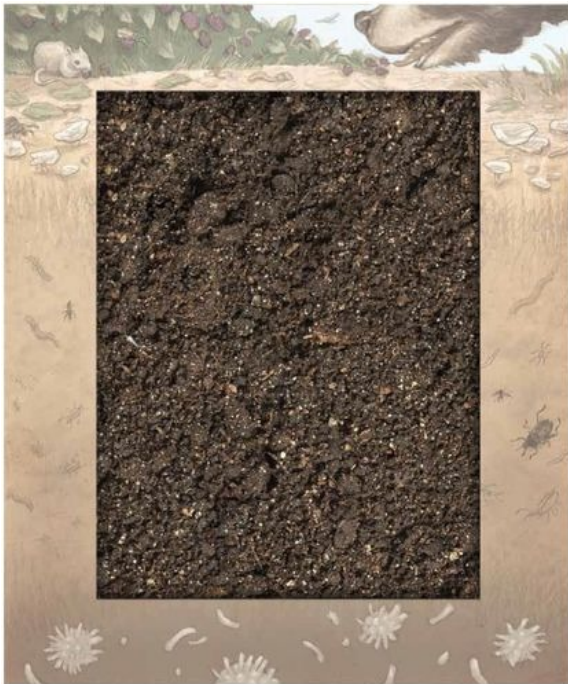
Producers, Consumers, and Decomposers

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

Do you recognize the brown material in this picture? Some people call it dirt.

Dirt is what you are supposed to wipe off your shoes and wash off your hands, right? Dirt is what you are never supposed to get on your good shirt, right? To some people, dirt is just yucky and needs to be cleaned up.

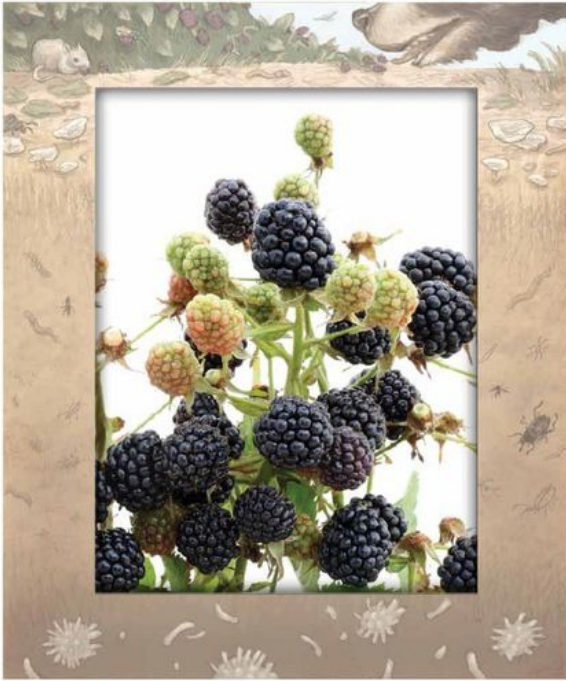
Well, ecologists don't mind getting dirty. Ecologists are scientists that study the relationships between living things and their environment. Ecologists know dirt is very important. In fact, ecologists don't call it dirt at all. They call it soil. Without soil, life on land as we know it could not exist. Soil is at the heart of most ecosystems on land.



For example, in the forest ecosystem, every living thing can be sorted into one of three basic categories: producers, consumers, and decomposers.

Producers make their own food. Plants do this through the process of photosynthesis. Many producers also happen to produce, or make, things that animals eat. The blackberry plant is a tasty example. It makes its own food through photosynthesis. The berries contain the plant's seeds. Wild animals such as birds, bears, and bugs eat the berries. The animals eat the juicy berries, but they do not digest the tiny seeds.

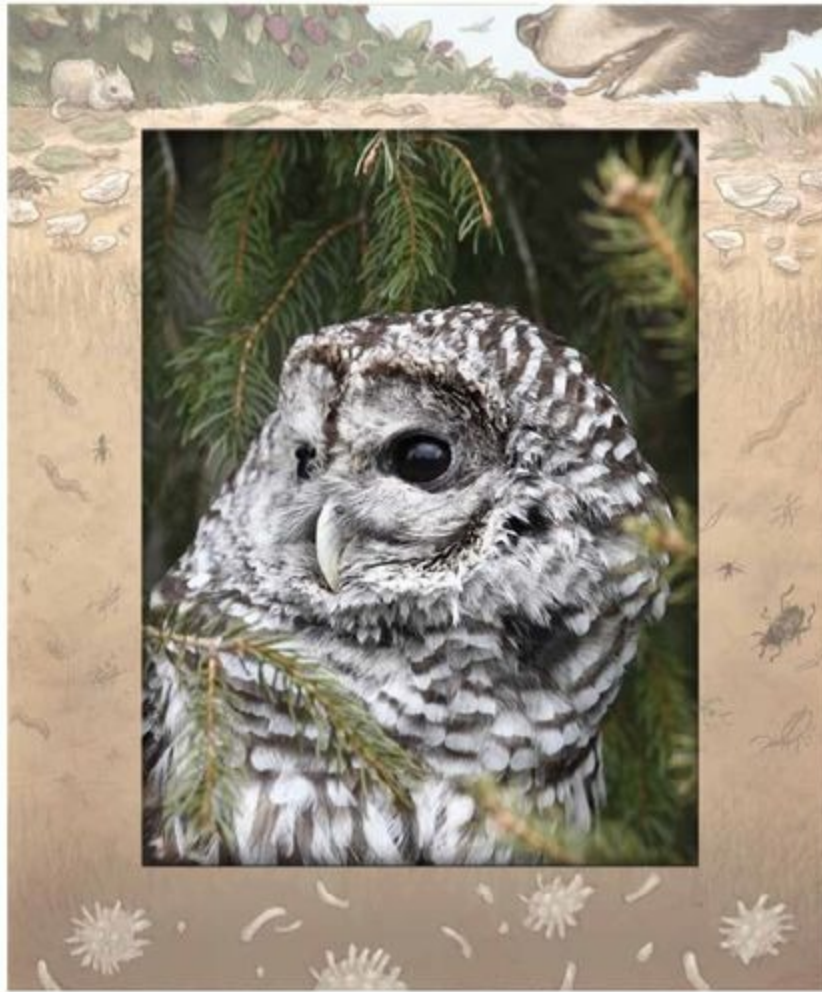
Dirt is called soil by ecologists.



A blackberry plant is a producer.

Consumers eat other plants and animals. As you can probably guess, squirrels are acorn consumers. Unfortunately for squirrels, they are not at the top of the food chain.

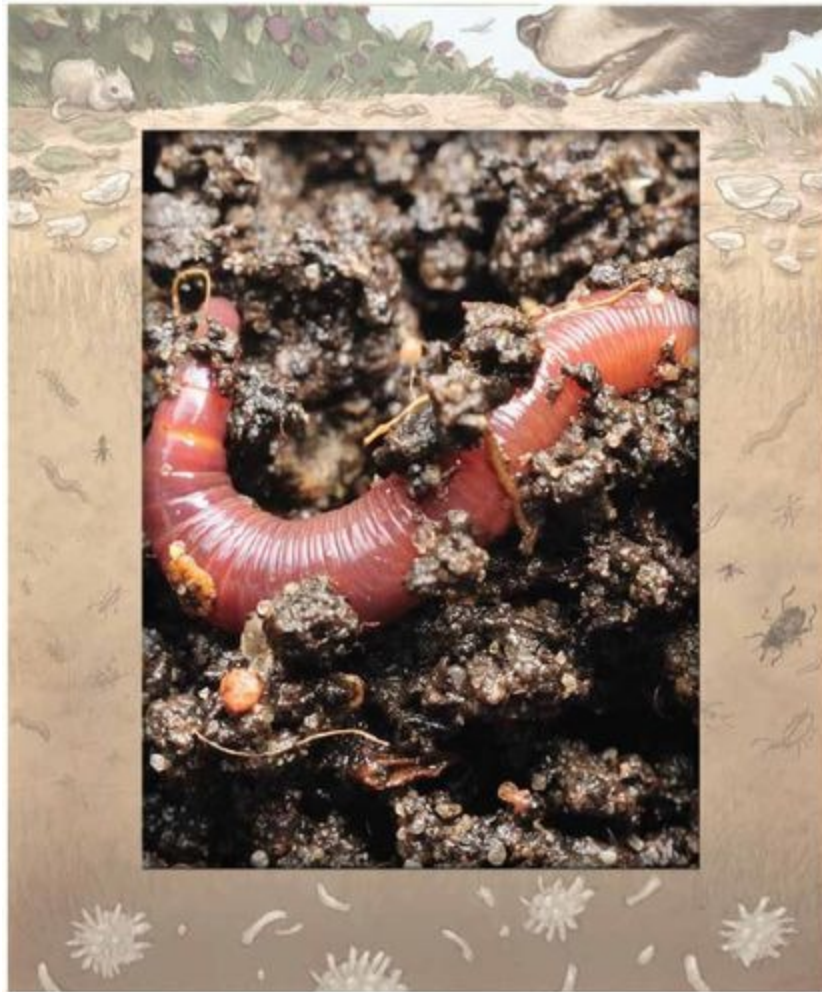
This owl is a skilled predator. It is nocturnal, meaning it hunts at night. It consumes small rodents, including squirrels. With excellent hearing and eyesight, the owl will catch any squirrel or other rodent who leaves the safety of its nest at night.



The owl is a skilled predator.

Decomposers are the third type of living thing in the forest ecosystem. Earthworms are decomposers. They feed on dead organic matter, such as leaves. The worms pull the leaves down into the ground. They shred the leaves into little pieces and then eat them.

Worms are pretty low on the food chain. Fish, birds, frogs, and turtles will all eat any worm unlucky enough to cross their paths. Some insects are pretty big. Some are so small you need a magnifying glass to see them. Some fly. Some crawl. Some insects are decomposers. Others are consumers and some are even predators. Most insects are pretty far down on the food chain.



Earthworms are decomposers.