



## Soil Life

The soil is home for billions of living things. They are working all the time, helping to create healthy soil for growing plants.

### ANIMALS

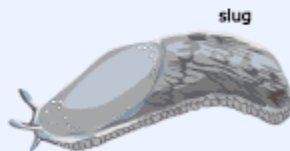
Animals, such as rabbits and moles, dig holes and help mix up the soil. Their tunnels let air reach plant roots, let water drain through soil, and provide spaces where plant roots can grow.



Rabbits live in underground burrows.

### SMALL CREATURES

Small animals stir up the soil and make holes where air and water can enter the soil. They chew up dead plants into tiny pieces so fungi and bacteria can break them down more easily. They also feed on bacteria, fungi, and protozoa, and help release the nutrients in them for plants to use.



Nematodes are tiny worms that you can barely see. Their wastes are rich in nutrients that plants can use.

### PROTOZOA

Protozoa are tiny organisms that can only be seen with the aid of a microscope. When they feed on bacteria, fungi, and other protozoa, they release nutrients that plants can use.



### BACTERIA

One teaspoon of topsoil may contain 50 million one-celled bacteria! They help to break down dead plant and animal matter. In doing so, they release the nutrients for use by other microbes, small animals, and plants.



Bacteria are shaped like rods, spirals, and spheres.

Nitrogen-fixing bacteria can take nitrogen gas from the air, and convert it into a form that plants can use to grow. Some of these bacteria live in nodules on the roots of beans, peas, and other plants called "legumes."

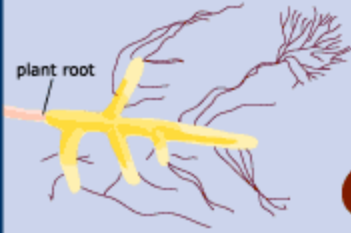


nodule on pea plant

## FUNGI

Fungi start the decay of fresh organic matter. They soften up plant matter, and make it easier for bacteria to join in the decay process.

Fungus strands fan out in soil and take up water and nutrients.



Fungi usually have two parts. Their thin, thread-like strands grow in soil, rotting logs, and roots. In some fungi, the strands spread from the roots through the soil. In this way, the fungi help plants get nutrients from the soil.



The underground strands are connected to the mushrooms you can see growing on top of the soil. The mushrooms contain the spores that reproduce the fungi.

## HELPING SOIL LIFE

You can help provide soil life with food, water, and air. When their needs are met, soil life will grow and multiply, and keep your soil healthy.



Add organic matter to the soil, and use organic mulch on the surface. Turn over soil as little as possible and do not compact the soil.