

What Is Soil Made of?

Note-taking Guide - Answer Key

*silt, clay, absorb, grains, essential, consumed, fungi, particles,
gravel, life, humus, roots, components, space, plants, bottom, equal,
color, combinations, lightest, support, transparent, soil profile,
sandy, separate*

All life on Earth depends on soil. Plants grow roots in the soil. They also absorb water and minerals from the soil that help them grow.

Soil is made of particles of broken-down rock.

Rock particles can be in the form of sand, silt, and clay. These are called soil components.

Sand is made up of particles of rock that are smaller than gravel, and rough to the touch.

Silt is even smaller than sand and its grains can be seen only through a microscope.

Clay is made up of particles that are too small to see, even through a microscope.

Decaying plant and animal matter in soil is called humus, which is another important soil component.

Humus slowly gets consumed by organisms called decomposers.

Decomposers break down humus into essential nutrients that are then mixed with the soil. This makes space for air and water to enter the soil. Fungi, bacteria, insects, mites, and worms are examples of decomposers.

Soil color depends on the color of the rock that it comes from.

If soil has more sand than silt or clay, it is known as sandy soil. Sandy soil is not great for most plants to grow in, because it can't support the roots of most plants.

Soil that contains relatively equal amounts of sand, silt, and clay is called loamy soil. It's great to grow plants in and also makes a good home for ants.

In this way, different combinations of sand, silt, and clay result in different types of soil.

You can study the soil in your garden, with a quick test, called soil profile. Fill a transparent container with water, and mix a spoonful of the soil sample in it.

After a minute, the soil sample will separate into its constituents, with sand—the heaviest—right at the bottom, followed by silt and clay. Humus being the lightest, floats on the surface.