



Soils are complex mixtures of minerals, air, water, organic matter, and decaying remains of things that were once living.

Among a variety of jobs, soils

1. Support the growth of all kinds of plants.
2. Impact the atmosphere by emitting and absorbing gases (carbon dioxide, methane, water vapor, and the like) and dust.
3. Soils offer a habitat for animals that such as groundhogs and mice and to organisms such as bacteria and fungi.
4. Soils act as a living filter to clean water before it moves into an aquifer.

There are several types of soils and combinations of soils, more than one of which may be found in your own back yard! Take a look at four main types on the back of this page.

In this activity, you'll use two types of soil – sandy clay (orange) and humus (dark brown) – along with water to make two colors of paint. This kit contains two painting sheets and a brush. Add water to your soil to create paint. Start with just a little water at first. The more water you add, the lighter the paint will be. Enjoy!

From the kids at the Williamsburg Field School!

Disclaimer: Please note that none of the materials in this kit are to be ingested. The activities are for art and science and creative exploration. They are non-edible. It is the sole responsibility of a supervising adult to ensure safe and appropriate use of the materials in this kit.

LOAM

Loam is the **perfect soil!** It is a mixture of humus, clay, and sand.

Loam is very good for plants because it has a lot of **nutrients**. Nutrients are healthy things in the soil that help plants grow tall and strong.



SAND

Sandy soils do not have a lot of nutrients. Sand is made mostly from broken up rocks. There are not many plants that like sandy soil. Sandy soils do not soak up a lot of water. Places that have sandy soils are deserts or beaches.



CLAY

Clay is made of tiny rocks and sand. Clay can be very wet or very dry. Plants do not like to grow in clay. The **roots can't breathe in clay** because there is no air in clay. Clay does not have any nutrients for plants to grow.



HUMUS

Pieces of **humus** and rock make up soil. **Humus is the remains of dead plants and animals.** Humus has many nutrients that help new plants grow.

