Ages: All
Materials:

- Different types of soil
- Water
- Cup
- White or light-colored paper

- Paint brushes (or experiment with pine needles/twig brushes)


## Directions:

1. Collect different types of soil from your back yard or neighborhood. Look for different colors, but it is ok if you can only find 1 or 2 different colors.
2. Put soil in small piles on a piece of cardboard, in the indentations of egg cartons, or in small bowl.
3. Fill cup up with water
4. Mix the soil and water to make paint. Try to:
a. put brush in water then soil
b. put water on soil then dip brush
c. put soil on paper then dip brush in water and paint
d. any other way you can think of

5. Paint with the soil-paint on paper.

What about:

1. Can you change how solid or see through your soil paint is? How?
2. How does soil texture affect color intensity?
3. What happens when you mix colors?
4. Which soil do you like to paint with best? Why?
5. Try collecting soil from different depths if it is safe and you can dig a hole. Does it change?


## WHAT'S HAPPENING?

Pigment gives paint its color. A pigment looks a certain color because it reflects some wavelengths of lights and absorbs others. Different pigments are mixed together to make other colors.

Paints are made of color pigments mixed evenly, or suspended in a liquid. When you spread paint on a surface, the liquid part dries and leaves behind the solid color pigments.

## DID YOU KNOW?

Do you know the difference between dirt and soil?
Soil is the word for the earth beneath our feet. It's in gardens, farms, forests, prairies, on the side of the road, under puddles. It's almost everywhere.

Dirt is soil that is someplace it shouldn't be, like soil that has been tracked in and lands on the kitchen floor. It is under your fingernails and on the knees of your jeans.

Soil consists of crumbling rock or sand, minerals, water, air, organic matter (material that was recently living), and decaying organisms. It also contains lots of tiny living creatures, such as earthworms. Earthworms turn the decaying plant material into nutrients that other living things can use.

There are soil art paintings in museums. See some Soil Art Examples.

## TRY THIS!

Make a value and color chart with your soil samples. Value is the lightness or darkness of a color or hue. You can make a value chart by dipping your brush into just a little bit of water, and then into the soil. See what color it makes on the paper. Add more water to make a lighter color, and keep adding water until the value is as light as it can get. See how many different colors and values you can get!


Can you make a soil painting using all found materials? Make your paintbrush out of pine needles, sticks, or something else. Paint on wood, rocks, or cardboard instead of paper.

