

Connecting Kids to Nature

Try this activity in a forest—a natural place to learn!

For over 35 years, Project Learning Tree® has used the forest as a “window” to help young people gain an awareness of the world around them and their place within it. Blending a walk in the forest with a fun and engaging PLT activity creates a powerful learning experience for children of all ages. Here’s one idea in a series from PLT that introduces the concepts of **structure and scale**.

Activity 70: Soil Stories

In this activity, students explore differences in soil types and composition.

Doing the Activity

Who doesn’t like getting their hands a little dirty? The next time a child in your care decides to dig a hole in the ground, turn it into an educational opportunity. Describe to children that you will conduct an experiment to analyze the soil sample they have just collected. As you dig and collect soil samples, ask:

- What do trees and other plants get from soil? If so, why?
- Do different plants have different soil needs?
- Describe the soil: What color is it? How does it smell? How does it feel?

Have children make a “soil shake” by placing one half cup of soil into a jar with a lid and adding two cups of water. Ask them to predict what will happen if they shake the closed jar and let it settle for a few hours. Then, try it. Over time, soil layers will become visible. Gravel will fall first; then sand, silt, and clay; organic matter (leaves, twigs, stems) will remain floating in the water. Have children draw a picture of the layers formed by their soil shake, or collect and test soil samples from other areas (forest, field, yard) for comparison.

Safety! Get permission before taking soil samples. Use plastic jars, if possible.

Challenge students to complete the “Soil Composition” diagram, reminding them that the largest particles fall to the bottom first.

DID YOU KNOW?

Undisturbed forest soils have the ability to absorb rainfall due to the mixture of leaves, twigs, and stems on the forest floor, combined with the soil pores and channels created by decaying roots. Research shows that water can infiltrate West Virginia forest soils at rates ranging from 19 to 260 inches per hour!

Soil Composition

Fill in the missing vowels to label the soil layers.

Match up the measurements with the appropriate soil layer. All measurements are in millimeters (mm).

CLAY a) 2.0 - 0.06 mm

SILT b) greater than 2.0 mm

SAND c) less than 0.002 mm

GRAVEL d) 0.06 - 0.002 mm

Adapted from Activity 70: Soil Stories from Project Learning Tree’s PreK-8 Environmental Education Activity Guide.

Discover how PLT can help you teach... from nature!

- Attend a workshop near you to receive PLT activity guides, ideas, and materials.
- Contact your West Virginia PLT State Coordinator: Cinda Francis, cfrancis@wvadventures.net or toll-free at (888) 372-9663.

Answers: (c) clay, (d) gravel, (a) sand, (b) silt, (e) organic matter, water, gravel, sand, silt, clay, water, organic matter



Project Learning Tree® (PLT) is a program of the American Forest Foundation.