

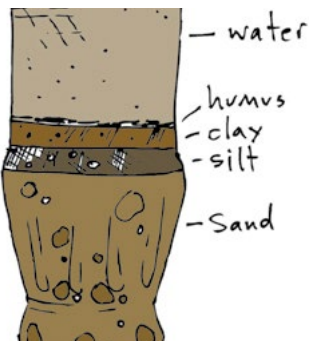


## SUPPLIES

- Clear, plastic bottle or jar, or glass jar (just be careful!),
- Soil samples
- Water
- Powdered dish (optional)
- Dancing shoes (optional)
- Ruler (optional)



**FIGURE 1.** One jar is a clayey soil still settling and the other is a loamy sand.



**FIGURE 2.** This shimmy illustration shows a really sandy soil.

This activity is adapted from the [Soil Solutions Curriculum](#) published by North Carolina Cooperative Extension. Any 4-H curriculum is freely available to any NC educator through a [local Cooperative Extension's 4-H Youth Development Agent](#).

### 1 SOIL SHIMMY

# SOIL SHIMMY

*Time needed: 10 minutes*

Soils are composed of particles of different sizes: Sand (.05 to 2 mm), silt (.002 to .05 mm), and clay (smaller than .002 mm). Humus, or decomposed organic matter, is often a part of soils. A soil shimmy is another way to determine what kind of soil you have. Get your dance shoes on and get shaking (with your soil!)

## LET'S DO IT!

1. Put at least a half cup of soil (from your yard, not from a bag!) into a clear 20-ounce plastic soda bottle.
2. Optionally, add a tablespoon of powdered dish detergent in with the soil
3. Fill the bottle with water.
4. Secure the bottle cap.
5. Dance around and shake the bottle vigorously for at least two minutes.
6. Place your bottle in a location where it can sit undisturbed for 24 hours. The soil should settle out from bottom to top in layers of sand, silt, clay, organic matter, respectively.

## TALK IT OVER

1. What happened to the soil in the jars?
2. What type of soil settled out first? Why do you think so?
3. Which layer has the most? Which layer has the least?
4. What other things do you notice about your jar?
5. What kind of soil do you think you have?
6. What other ways can you figure out what soil you have?

## ACTIVITY EXTENSION

1. After the soil has settled from your shaking, measure the total height of settled soil.
2. Then measure the height of the sand, then the silt, and then the clay.
3. Then divide each measure by the total soil measurement.
4. For example, if all three layers measured 2 inches in total, and the sand layer measured 1.5 inches, then the sample would consist of 75 percent sand ( $1.5/2 = 75\%$  sand).
5. Use this link to enter your sand, silt, and clay percentages to find out what soil type you have! [https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/research/guide/?cid=nrcs142p2\\_054167](https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/research/guide/?cid=nrcs142p2_054167)