

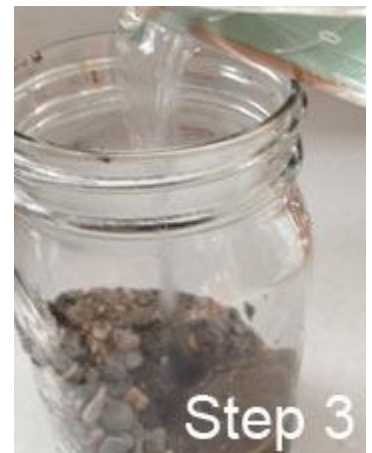
Get the “dirt” on soil! What is soil and how does it help plants grow? Take a close look at some dirt and try out our projects to find out just how amazing soil really is!

Materials:

- dirt patch
- small shovel (garden trowel)
- sand (sandbox or beach sand is fine)
- gravel (or some small pebbles)
- a clear jar with a lid
- water
- soil worksheet

PROCEDURES:

1. Get an adult’s permission, then dig a small hole in a dirt patch of your yard or garden. Put the first shovel-full (we’ll call this a scoop) of soil into your jar and set the next few scoops aside. Dig one or two more scoops (making the hole a little deeper) and add that soil to the jar. Fill the hole in with the soil you set aside.
2. Put one scoop of sand in the jar. Add half a scoop of small pebbles.
3. Pour in enough water to cover all of the soil and pebbles, then screw the lid on tightly and gently tip the jar back and forth to mix up the contents.
4. Take the lid off and set the jar in a safe place where it will not get bumped or moved and allow it to sit for a full day (24 hours).
5. The next day, take a look at the soil in your jar. Can you see any layers in the jar? Have the pebbles fallen to the bottom? Are there things floating on top of the water?



What Happened:

Adding water and shaking your jar mixed the soil inside the jar, but over time, the soil began to settle into layers. The most dense pieces in the jar fell to the bottom, with some smaller particles of soil between them. Above that you probably noticed most of the soil you dug from your yard. Do you see any changes in the colors of that layer of soil? Can you see dark or light streaks? Those are layers of minerals, clay, and sand. If there was some organic material in your soil that had not been decomposed yet, it's probably floating on the top of the water. If you were able to drain all of the water out through the bottom of the jar, this is similar to how the horizons of soil on the earth look. Rocks and the most dense soil particles (like clay) are near the bottom with the darker, richer soil near the top, and organic matter (like dead leaves and bugs) at the very top.