Soil

**Purpose**
To examine the texture of soil.

**Materials**
- Garden trowel
- Marker
- Masking tape
- Newspaper
- 1 quart (1 L) soil
- 1-quart (1-L) bowl
- 3 identical 1-pint (500-mL) transparent jars
- Colander with large holes
- Large fine-mouth mesh strainer

**Procedure**
1. Select a spot with soil, such as near a tree or where plants are growing. Remove about 1 quart (1 L) of soil.
2. Use the trowel to fill the bowl with soil.
3. Use the marker and tape to number the jars “1,” “2,” and “3.”
4. Lay the newspaper on a table.
5. Spread the soil on the newspaper and use the trowel to pick up live or dead organisms and transfer them to where the soil was collected.
6. Pour the soil into the colander and shake the colander over the newspaper until no more particles fall through the holes in the colander.
7. Put the particles left in the colander into jar 1.
8. Pour the particles on the newspaper into the strainer. Shake the strainer over the paper until no particles fall through.
9. Put the particles in the strainer into jar 2 and the particles on the newspaper into jar 3.
10. Compare the amount of material in each jar.
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Results
The soil is separated into three sizes of particles large, medium, and small. The amount of material in each jar will vary with different soil samples.

Why? Soil is a mixture of particles of rock, humus (decayed animal and plant matter), air, and water. All soils are not alike. The rock particles come from different kinds of rocks, and the amount and composition of humus vary. Most soil contains particles of varying size. In this experiment, you separated the particles. Coarse-grained particles, as in jar 1, are larger than medium-grained particles, as in jar 2. Fine-grained particles, as in jar 3, are smaller than the other two particle types. The texture (how large the grain is) of soil depends on which type of particles predominates in the soil. For example, if there are more particles in jar 3, then the texture of the soil sample would be considered fine-grained.