Particle Size and Density

Summary

To collect and test a variety of Earth materials to see the effects of particle size and density.

Main Core Tie

SEEd - Grade 7

Strand 7.2: CHANGES TO EARTH OVER TIME Standard 7.2.2

Time Frame

1 class periods of 70 minutes each

Group Size

Individual

Materials

sand, rock, gravel, clay, dirt, soil
stereoscopes or microscopes (optional)
canning jars with lids
glass microscope slides
- student sheet
(see below)

Instructional Procedures

Assign students to bring in soils, dirt, gravel or any other Earth material that is loose in their yards. A small baggie full will be enough. If students are working in groups, only one person per group needs to bring soil.

In class, have students prepare slides of the material they brought in and observe and draw it under the stereoscope or microscope (low power only). If the microscopes or stereoscopes are not available a hand lens will also work.

Have students mix their materials with water in a jar. The jar should be half full of the Earth material and half full of water. If students are working in groups they can mix the materials they brought.

A lid should be placed on the jar and the students should shake it thoroughly. Allow it to settle for 2 minutes.

Students should draw the jar and identify what is in the layers based on their observations through the microscope.

Students should answer the analysis questions and clean up.

Assessment Plan

Scoring guide

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1. Students draw detailed view through microscope……4
2. Students match microscopic view to results in jar……4
3. Student correctly answer analysis questions……4

Bibliography

Lesson Design by Jordan School District Teachers and Staff.

Authors

Utah LessonPlans