

Amazing Soils

(3rd - 5th grade)

1 hour

Differentiate between the three soil types (sand, silt and clay) based on particle size and permeability through a hands-on experiment. Discover how soil is made. Discuss the properties of soil and their importance to farmers and community members.

Grade Level Expectations in Science:

- 1.1.1 - Identify, describe, and sort objects and materials using observed physical properties such as hardness, shape, state of matter, smell, temperature, texture, weight, and magnetic properties.
- 1.1.5 - Describe and sort soils based on physical properties (e.g., color, particle size, ability to retain or drain water, texture, smell, support plant growth, source of minerals nutrients (not food) for plants).
- 1.2.3 - Identify small parts of a substance as still being that substance.
Observe and describe that some particles can only be seen with magnification.
- 1.3.4 - Describe how weathering and erosion change the surface of the Earth.
Describe how earthquakes, landslides, and volcanic eruptions change Earth's surface.
- 2.1.1 - Identify the question being asked in an investigation.
Ask questions about objects, organisms, and events based on observations of the natural world.
- 2.1.3 - Describe a reason for a given conclusion using evidence from an investigation.
- 2.1.4 - Investigate phenomena using a simple physical or computer model or simulation.
- 2.2.5 - Describe how results of scientific inquiry may change our understanding of the systems of the natural and constructed world.
- 3.1.2 - Describe possible solutions to a problem (e.g., preventing an injury on the playground by creating a softer landing at the bottom of a slide).
- 3.2.2 - Describe how scientific ideas and discoveries are used to design solutions to human problems, extend human ability, or help humans adapt to different environments.
- 3.2.4 - Describe the limited resources humans depend on and how changes in these resources affect the livability of the environment for humans.



Students getting their hands "dirty"



Students observing the "water race"