



SOIL

Lesson 1 ♦ What is soil?

Grades K-2

Key Words

Decomposition, Organic Matter, Minerals, Particles, Silt, Sand, Clay

Key Concepts

- Healthy soil is essential for the survival of plants.
- Soil is composed of four main “ingredients”: minerals, water, air and organic matter. The minerals and organic matter in the soil may vary by location.
- Minerals in soil can be arranged into three categories: sand, silt and clay. High quality soil has an even balance of all three, which will enable the plant to intake the ideal quantity of water.

Lesson Outline

Introduce the focus of the lesson, soil. Begin demonstrating excitement for soil, bringing to light that, while its composition varies by location, soil is alive and necessary for all plant life to thrive.

Prompt inquisitive conversation with the students by asking, “What is soil? Where does it come from? What ‘ingredients’ make up soil?”

Explain that soil is a mixture of minerals, water, air and organic matter, expanding lightly on what each “ingredient” is and why it is essential to the plant. In gardening, we categorize minerals in the soil in three categories: sand, silt and clay. Because each of these varies by particle size, which will influence its ability to hold water, a healthy soil has a balance of all three. However, the ratio of sand, silt and clay will vary by location.

Organic matter is anything in the soil that was once alive and is now dead, such as sticks and leaves. By means of decomposition, the nutrients in the organic matter will be cycled back into the soil for use by living plants.

Introduce the activity Sensual Soil.

Video Lesson

[SOIL Lesson 1 Video - What is soil?](#)

Activities

ACTIVITY_Sensual Soil Activity: Sensual Soil - Students use most of their senses to discover soil in this science/language-arts activity. Reference: Sensual Soil (page 10-11).
Courtesy of Life Lab Science Program 2007

Additional Resources

- ACTIVITY_Soil is not Dirt : 14 page Powerpoint presentation explaining the importance of soil with a lot of cool history and nice visuals. *Courtesy of Courtesy of the Soil Science Society of America*
- SONG_Dirt Made My Lunch : Youtube video (4 min) with a puppet explaining to children how dirt made their lunch and everything we eat, plus a fun “Dirt Made my Lunch” song!
Courtesy of Banana Slug String Band
- ACTIVITY_Soil Investigators : Students examine soil on a paper plate with a magnifying glass *Courtesy of Green Education Foundation*

NGSS - Next Generation Science Standards

- 2-PS1-1 Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.
- K-LS1-1 Use observations to describe patterns of what plants and animals (including humans) need to survive.

KAP - Kū ‘Āina Pā Curriculum Map - Courtesy of the [Kohala Center](#)

- KAP_2:LS_K-2_2.1 The relationship between weeds and soil
- KAP_2:LS_K-2_5.3 Interrelationships between soil, plants, animals, humans, and environment