

Focus on: Soil and Capacity to Hold Water

This lesson is meant to support the unit on Plants on Earth. It should be done after students explore humus and its capacity to hold water.

Clarifying Objectives:

3.L.2.2 Explain how environmental conditions determine how well plants survive and grow.

3.L.2.4 Explain how the basic properties (texture and capacity to hold water) and components (sand, clay and humus) of soil determine the ability of soil to support growth and survival of many plants.

Key Vocabulary:

Definitions can be found at <http://learnersdictionary.com>

- Survive/ Survival
- Environment /Environmental
- Conditions
- Properties
- Texture
- Capacity to Hold Water
- Components
- Sand
- Clay
- Humus
- Soil

Focus Question(s):

How do the results of the water test on humus compare to the results from the water test on garden soil?

Materials:

- School Garden
- Cups to Collect Soil
- Cups of water
- Water Dropper
- Funnel
- Absorb
- Rate

Activities:

- Visit the school garden to collect soil in cups.
- Review exploring water and humus.
- Have students record how much water they have within the cup.
- Have students use a dropper to add all of the water to the garden soil. Then compare how much water has collected in the 2nd cup underneath the funnel with how much water was in the original cup.
- Encourage students to share results with the class.
- Discuss findings.
- Review why water in soil is important for plants. What new things have they learned about soil?
- Discuss

Guiding Questions:

- What steps will you take to complete this test?
- How much water went through right away?
- How much water stayed in the soil?
- How are your results similar to the water test you completed with humus?
- How are your results different from the water test you completed with humus?
- What does this test tell you about garden soil?
- What makes you think that?
- Why is the capacity to hold water important for the growth of plants?
- How is this test similar to rain?