



Adapted from: Life Lab Sensual Soil from The Growing Classroom

**Overview:** Through exploring soil, students use most of their senses to discover qualities of different components in soil.

Subject area: Science, English Language Acquisition

Grade level: 1st-3rd

### **Next Generation Science Standards:**

2-PS1 Matter and its Interaction

• **2.PS1.1** Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.

# **English Language Acquisition Common Core Standards:**

- 1.L.5.c ELA. Identify real-life connections between words and their use.
- **2.RL.4 ELA.** Describe how words and phrases (regular beats, alliteration, rhymes, repeated lines) supply rhythm and meaning in a story, poem, or song.
- **3.SL.1 ELA.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts.

**Objectives:** Students will be able to explore the different components of the soil.

Prep time: 30 minutes

Lesson time: 30 minutes

**Teacher Background:** Soil is made up of different components, which all together provide essential nutrients for optimum plant growth. There are three sizes of soil mineral particles in soil, along with organic matter, air, and water. All together, these components of soil help plants get the nutrients they need to grow.

Note: For this activity, students need to be familiar with poems.

#### Materials needed:

- 5 containers with different types of soil: clay, compost, sand, silt, and garden soil.
- 5 lunch bags
- Scrap paper
- 10 large pieces of construction paper (2 per station)

Space needed: Classroom

Staff needed: 1



**Preparation steps:** Set up 5 stations in the classroom or in the garden. At each station, place a container of soil, one lunch bag, strips of scrap paper, pencils, and 2 large sheets of paper. Make sure there is enough room for 1/5 of the class to gather around each station.

#### **Discussion:**

- What do plants need to grow? (sun, air, soil, water, space)
- What are the five senses? (smell, sight, touch, taste, hearing)
- What is in soil? (minerals, water, air, nutrients (in organic matter))
- Look at this container I am holding. Which senses can you use to describe what is in this container? Sight? Hearing? Smell? Touch? (Not taste)
- What are some words you can use to describe soil?

## Part I - Presentation Steps:

- 1. Divide the class into 5 groups and assign each group to a station.
- 2. Ask each group to explore the soil sample at their station.
- 3. Encourage students to smell a clump of it, and rub it with their fingers near their ears to hear what it sounds like.
- 4. Ask each student to choose a word to describe the soil at the station, write the word on a strip of paper, and put the paper in the lunch bag.
- 5. After 4-5 minutes, have each group rotate to a different station.
- 6. Repeat until each group comes back to their original/first station.
- 7. Discuss with the students. Which soil felt the weirdest? Which felt smooth and slippery? Which felt gritty and coarse? Which had the strongest smell? Compare the soils that seemed very different. Compare the soils that seemed the most similar. Ask, what does the soil have to do with growing plants in a garden ecosystem? Do we need healthy soil to grow healthy plants?

## Part II - Presentation Steps:

- 8. Have each group open the lunch bag of words and copy the words onto one sheet of the construction paper.
- 9. On the other sheet of construction paper, ask students to use all the words at their station to compose a Soil Poem. (Each word must be used once; if the same word appears three times, it must be used three times.) Encourage creativity; students can choose the order of the words and the rhythm.
- 10. Have each group present their poem to the class.