



BIG GREEN ACTIVITIES

Soil Investigation

Activity Outcomes

- Students will become comfortable touching soil.
- Students will have a better understanding of what soil is composed of.

Materials and Preparation

- Shovel or trowel to break up soil, if compacted or dry
- Review the activity and familiarize yourself with your Learning Garden
- Orient any volunteers to the activity and the structure of your planting day

Teacher Background

Use this activity in tandem with the *Planting Seeds Activity* and *Seeds by Feel Game* to create a three-station planting day with support from volunteers! To see an outline for the day, please review *Planting with your Classroom*.

Investigating soil is a great learning opportunity for all students, whether they are new to the Learning Garden or are experienced student gardeners looking for a deeper connection. Be aware that dry soil can blow into students' eyes easily when picked up or dropped.

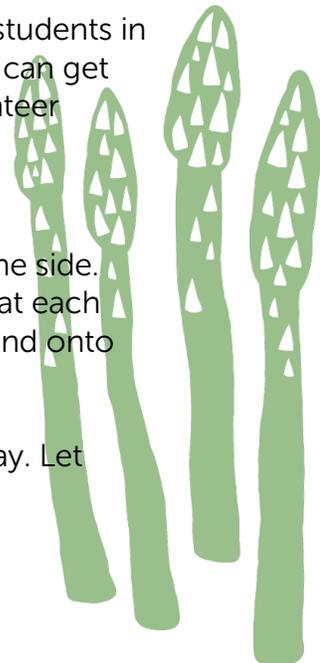
Only use this activity if you are 100% certain the Learning Garden bed you are working in has not been planted! The Learning Garden may look empty if it was recently planted with seeds; double check with your school's Learning Garden Team before digging with students.

This activity allows teachers and/or volunteers to work with a small group of students in the Learning Garden. Students can rotate between different activities, so they can get one-on-one attention while they are investigating the soil. If you have a volunteer helping you today, make sure the volunteer reviews this activity!

Introduction

Welcome your students to the Learning Garden and line students up along one side. Stand on the opposite side so you can address the entire group. Make sure that each student has enough room to get both of their hands in the Learning Garden and onto the soil surface.

Ask students if they know what they will be doing in the Learning Garden today. Let them know they will be investigating the soil using 3 of their 5 senses.



Review the 5 senses with students (see, feel, smell, hear, and taste) and ask students which of their senses they will be using today to investigate the soil. Students will be using see, feel, and smell.

Encourage students to look at the soil with their eyes and instruct them to not touch the soil until they've been asked. Remind students to keep soil inside the Learning Garden and that they are expected to not throw the soil in the air or at other students.

Activity

Students will begin investigating the soil through teacher and/or volunteer prompts.

1. Have students investigate soil visually. Invite students to look at the soil and find the following things:
 - The largest piece of soil they can see
 - The smallest piece of soil they can see
 - Any materials they recognize
 - Different colors they see
2. Have students investigate soil by smell. Students will often assume that soil smells bad. In reality, soil should smell rich. Give students a second chance to smell the soil to react to their senses rather than their expectations. Invite students to scoop up a handful of soil with both hands and ask them how the soil smells:
 - Does the soil smell good?
 - Bad?
 - Sour?
 - Rich?

Encourage students to use observational words and to explain why they describe the soil as smelling in a specific way.

3. Have students investigate soil by feel. Have students take a pinch of soil and rub it between their fingers.
 - Is the soil smooth?
 - Rough?
 - Gritty?
 - All of the above?
4. Have students investigate soil structure. Invite students to grab a handful of soil and pack it into a ball in their hands. Hold the ball in an open palm and see if it stays together. See how hard of a tap on top of the ball it takes for the ball to break.
 - Is the soil blocky?
 - Is it loose?
 - Does it stay fluffy or does it compact easily?



5. Review with students that soil is composed of 4 different things - air, water, minerals, and organic matter -and that soil structure depends on the percentage of each of these components.

Conclusion

Have students share out key parts of today's discussion and review the Activity Outcomes.

Students should clean up the Learning Garden as needed.

