

Objective

Make observations about soil properties and observe how rain (water) changes physical properties. Explain how we can use environmental resources in our school garden to meet basic needs of food and clothing.

Engage & Explore

1. Collect soil from the garden and around the school (possibly send zip top bags home with students to collect soil from home). If soil is wet, allow soil to dry out completely.
2. Using a magnifying glass or microscope, observe the dry soils. Use all the senses (except taste) to observe the soils. Discuss what makes up soil. Are there rocks, sand, pebbles, clay, wood, insects, etc. in the soil?
3. Compare the physical properties of the various soils. Compare particle size, color, particle shape, texture, and weight.
4. Add some water to each soil sample and observe what happens. How did the soil change when the water was added? Did it expand? Did the color, particle size, smell or texture change?
5. Explain that soil and water are both environmental resources. Ask the students how we use soil and water to meet our basic needs (shelter, food, clothing)? Which of these needs can we meet using soil and water? (shelter, food, and clothing)

Grade Level: Kindergarten

Subject Area: Science / Social Studies

Materials:

Garden soil samples
Rain gauge
Magnifying glasses or microscopes
Seeds or plants for the garden

Resources:

Weather Tracking Data sheet
Taste Tested sheet

Standards:

K.E.1.1 Infer that change is something that happens to many things in the environment based on observations made using one or more of their senses.
K.E.1.2 Summarize daily weather conditions noting changes that occur from day to day and throughout the year.
K.P.2.1 Classify objects by observable physical properties (including size, color, shape, texture, weight and flexibility).
K.G.2.2 Explain ways people use environmental resources to meet basic needs and wants (shelter, food, clothing, etc.)

Collaborators:

Brittany Banks
Jacob Banks
Courtney Quintana
Lara Cabaniss

Activity

1. Allow students to plant some seeds in the garden or in a container near their classroom. (Lettuce and radishes are easy to grow and can typically be harvested within 4-5 weeks.)
2. Have the students check the soil moisture frequently and track the daily rainfall. You may want students to track the weather using the Weather Tracking Data sheet. What do you think will happen to the plants if the soil dries out? Have students water the garden as needed.
3. While you are waiting for your vegetables to grow, discuss with the students how they have observed changes in the environment and the weather. How do those changes affect the soil and plant growth?
4. Once the vegetables are ready to harvest, conduct a tasting. Give each student a sticker and have them place it in the appropriate column on the Taste Tested sheet.

Your Notes & Ideas

Weather Tracking Data

Name: _____

Date:				
100	100	100	Cloud coverage: Clear	
95	95	95		
90	90	90		Partly cloudy
85	85	85	Cloudy	
80	80	80	Wind speed: None	
75	75	75		
70	70	70		Light
65	65	65		Breezy
60	60	60		Windy
55	55	55	Wind direction: North	
50	50	50		
45	45	45		West East
40	40	40	South	
35	35	35		
30	30	30		
25	25	25	Rainfall (inches)	
Current High Low <i>(reset thermometer after recording)</i>				<i>(empty rain gauge after recording)</i>

Date:				
100	100	100	Cloud coverage: Clear	
95	95	95		
90	90	90		Partly cloudy
85	85	85	Cloudy	
80	80	80	Wind speed: None	
75	75	75		
70	70	70		Light
65	65	65		Breezy
60	60	60		Windy
55	55	55	Wind direction: North	
50	50	50		
45	45	45		West East
40	40	40	South	
35	35	35		
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45	45	45		West East
40	40	40	South	
35	35	35		
30	30	30		
25	25	25	Rainfall (inches)	
Current High Low <i>(reset thermometer after recording)</i>				<i>(empty rain gauge after recording)</i>

Taste Tested

Directions: Have each student taste a vegetable from the school garden and place a sticker in the appropriate column.

Vegetable: _____

Loved it	Liked it	Not today