

Edible Soil Layers

Grade Level: 3, 4, 5, 6

Duration: 20-30 mins

Classification: Classroom AND/OR STEM Spark

Subject(s): Ecology, Soil Science, Earth Science

Categories (STEM): Science

Keywords: Earth Science, Soil Layers

Introduction

- Summary: Students will learn and create an edible cookie soil cup that is representative of different Earth soil layers.
- Description: Students will learn about each distinct soil layer as they add ingredients to their edible soil cup. At the end of the activity students will be able to consume the cookie cup.
- *Please note students with dietary restrictions may have to modify this activity.*

Online Resource:

https://www.nrcs.usda.gov/wps/portal/nrcs/mt/people/teachers/nrcs144p2_057811/

Materials

Materials	Quantity	Reusable?
Oreos	1 Oreo per student	No
Chocolate Chips	1 Tbsp students	No
Butterscotch Chips	1 Tbsp students	No
Pre-Crumbled Oreos	1 per student	No
Pre-dyed Green Shredded Coconut	1 Tbsp students	No
Gummy Worms	2 worms per student	No
Spoons	1 per student	No
Individual Pudding Cups	1 per 2 students	No
Paper Towels	1 roll	No
Clear Plastic Cups	1 per student	No

* All food supplies must be safe for kids to eat, all spoons and cups must be clean

Directions

- Hand out ingredients and then read off soil layer descriptions on the student handouts.
- Help students add ingredients sequentially and discuss all the soil layers.



Discussion Questions

- What are all of the important soil layers?
- What is the importance of each layer?
- Give examples of things you could find in each layer of soil.
- Are soils the same as you go deeper toward the Earth?
- What makes up soil?
- What parts of the soil do plants utilize?
- How do soils form?

What is happening?

- Students are learning about the different layers of soil as they create edible layers. Role models will go through the purpose of each layer of soil as edible pieces are added to a cup.

Applications:

- Majors
 - Anthropology, Soil Science, Ecology & Earth Science, Agriculture & Horticulture
- Jobs
 - Archeologist, Anthropologist
- Hobbies
 - Collecting worms, Vermicomposting (compositing with worms)
 - Testing soil pH for gardening
- Real world applications
 - Similar to layers of the Earth's crust
 - Tilling dirt and fertilizing
 - Digging up animal remains



This activity was last updated in fall 2020 by Student Role Models.