

Soil

Theme	Soil and Farming
Level	Middle school
Topics covered in syllabus	Soil, Soil constituents, soil formation, types of soil, layers of soil
Academic Objective	To actively learn what is soil, soil constituents, formation of soil, types of soil, layers of soil
Attitudinal Objective	To feel and experience the soil, make connections with it .
Action Objective	Children will be able to touch, feel the soil and choose the right soil when they actually start growing plants.
Items/ Resources needed	<ul style="list-style-type: none"> • Reading material for layers of soil, • Dry coconut shells to collect soil samples, • Winnow or tray
Alternative spaces	Soil bed on the terrace
Links	https://www.youtube.com/watch?v=kybPmB1zBUw https://www.youtube.com/watch?v=GEZX6UoVRuQ
Learnings/ outcome	Children will be able to understand, connect, articulate what is soil, and work with it comfortably. They will also be able to identify and state the parts of a plant and the plant lifecycle.

Activity 1:

Time taken – 60 mins

- Children to go out into the nature for a walk, observe soil and pick up samples from different places- playground, near the base of a well grown plant, potter's clay.
- Now children put a part of the samples in a winnow(Tray) and try to see what all can be segregated from the samples. They will be able to see small stones, dry leaves,twigs, insect wings, fine sand , ants, termites, small bugs, earthworms, etc.
- In that they identify living and non living things.
- Now children see a short video on how soil is formed.
- The facilitator will consolidate what is soil, soil constituents and tell them how soil is formed.

Activity 2:

Time taken -30 minutes

- The second part of the sample can be put in transparent glasses. Insert a twig in each sample and see in which sample it can be done easily.

- Then, we add water drop by drop and smell the soil. See which sample makes more water bubbles. Which sample has taken more water before it separates from soil? Children are now encouraged to identify and discuss the differences in the soil observed (colour, texture, water absorption, space for movement of air).
- Children can draw a mind map/ bubble map of the types of soil.

Activity 3:

Time taken -45 minutes

- Children use gardening tools and dig a pit in the ground.
- They observe the soil colour as they remove the soil from it.
- They will be able to state that the colours are different, the moisture content is different, the difficulty to dig increases as the depth increases.
- The facilitator then gives them reading material about the layers of soil.
- Children read and discuss about the layers of soil based on the following triggers:
 1. In which layer of soil will you find living things?
 2. In which layer will you find the roots of plants?
 3. In which layer will you find animal burrows?
 4. Which layer has the most water content?
 5. Which layer is most fertile?
- The facilitator consolidates the layers of soil.

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