

## Curricular Connections Grade 3

### Archeology Program

#### *Science Grade 3*

<b>Earth and Space Science: Exploring Soils (ES)</b>
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**ES3.1 Investigate the characteristics, including soil composition and ability to absorb water, of different types of soils in their environment.**

- a. Pose questions and make predictions about the characteristics and composition of soils that lead to exploration and investigation (e.g., What colours are soil? What does soil feel like? Where does soil come from? Is there water in soil?).
- b. Examine physical characteristics (e.g., particle size, texture, moisture, particle size distribution, colour, and ability to hold together) of soils from different locations (e.g., garden, flower pot, river bed, slough, hill top, grassy field, lawn, ditch, and forest) in their environment.
- c. Classify soils in their environment according to location and type (e.g., clay, sand, silt, and loam).
- d. Analyze soil samples using tools such as spoons, hand lenses, jars, and filters appropriately and safely.
- e. Make and record observations and measurements in investigations related to soil composition using techniques such as notes in point form, diagrams, tables, bar graphs, photographs, and video.
- f. Make predictions about the capability of different types of soil to absorb water and test these predictions through exploration and investigation.
- g. Collect and display data, using tables and bar graphs, to show the amount of water absorbed by different types of soil.
- h. Sort soil samples according to one or more physical characteristics such as texture, ability to absorb water, particle size, and colour.
- i. Communicate procedures and results of investigations related to the testing of water absorption of soils using drawings, demonstrations, and oral and written descriptions.
- j. Propose answers to initial questions related to soil composition based on personal investigations.

**ES3.2 Analyze the interdependence between soil and living things, including the importance of soil for individuals, society, and all components of the environment.**

- a. Suggest ways in which individuals and communities value and use soil, including the importance of Mother Earth for First Nations and Métis peoples.**
- b. Examine the interdependence between animals and soils (e.g., insects and grubs live in soil, soil provides shelter for some animals, and earthworms aerate soil).**
- c. Examine the interdependence between plants and soils (e.g., soils provide nutrients for plant growth, plant leaves die and fall onto the ground, and plant roots spread throughout soil).**
- d. Relate the characteristics of soils (e.g., composition, colour, texture, and ability to absorb water) to their uses (e.g., agriculture, berms, fuel, pottery, earth shelters, road building, habitats, landscaping, and purifying water).**
- e. Observe the effects of moving water on soils in different environments (e.g., beneath an eavestrough downspout, along a stream bank, down a slope, and under a sprinkler).**
- f. Collaboratively design and safely carry out procedures to determine the effects of moving water on different types of soils.**
- g. Propose practices that individuals and communities can take to reduce the effects of erosion on a small-scale (e.g., vegetable garden and flower pot) and large-scale (e.g., agricultural field, sports field, river bank, and road ditch).**
- h. Suggest sustainable practices (e.g., composting and fertilizing) that can affect soils positively and reduce or prevent harmful effects such as compaction and contamination of soils.**
- i. Research careers that involve an understanding of soil.**

**To examine the local, indigenous, and global interactions and interdependence of individuals, societies, cultures, and nations. (IN)**

**IN3.1 Analyze daily life in a diversity of communities.**

- a. Describe characteristics of daily life in communities studied, and compare the ways in which the needs are met by individuals in diverse communities (e.g., housing, tools, work, use of the land, games, education).**
- b. Give examples of how culture is reflected in daily life in various communities, and examine why these cultural elements are important (e.g., language, stories, cultural traditions, religious traditions, recreation, art, architecture, clothing).**
- c. Compare life of a child in the local community to life of a child in one of the communities studied (e.g., family, housing, education, recreation).**