

# EARLY CHILDHOOD EDUCATION

## "YOUNG FOREST STEWARDS"

### LESSON PLAN

Topic: Soil

Level #: 1

Ages: 6-9 Years

## Learning Goals

### Learning Goal:

Understand that the health of the forest depends on the health of the soil.

### Investigative Question:

Dig into the soil. What makes up the forest's soil? What factors contribute to healthy forest soil composition? What animals have dens in the ground?

## Teaching Points

The forest soil is made up of minerals (dirt) composed of sand, clay, silt and small ground up rocks as well as composting materials like tree leaves, needles, branches/twigs (humus), water/moisture from rain, snow, frost, dew, etc., and air. Worms, grubs, ants, roots and animals play a role in the forest having healthy soil by keeping the soil loose, allowing air and water to flow through the dirt. Microorganisms help to compost all the decaying materials to make more soil. Spiders, mice and other animals often have dens in the soil. Soil is food for the whole forest and without good soil, nothing in the forest can be healthy.

## Materials

### For Students:

a.)	Shovels	b.)	Paper	c.)	White glue
d.)		e.)		f.)	
g.)		h.)		i.)	

### For Teachers:

a.)	Book 1 - Soil	b.)	Glue spreader	c.)	Bucket for soil
d.)	Starter trees	e.)	Clear plant containers	f.)	Soil for potting
g.)		h.)		i.)	





# Learning Experience

Experience (e.g., field trip, story, song)	Activity (e.g., game, art, scavenger hunt)	Location
Book	Read through the book and discuss the important parts of the soil. What are worm castings? What is most interesting to the children about the soil?	Classroom, outside, in the forest.
Art - Soil Painting Master Artists	Challenge this group on what they can create using the forest's soil. Add in sand, silt, clay, stones, rainwater, tree needles or roots. This would be a great age group to make awesome portraits in soil matter! Can you find and use different colors and textures of soil? Alternatively, draw and colour a forest scene. Use soil to add texture!	Classroom or outdoor activity.
Activity - grow a tree	Grow a Hemlock tree in a clear container. Will need soil and Hemlock tree starter.  Where could you grow starter trees that are later planted in the forest? How will it get water? Where will you plant it once it's too big for the container? Children will view the root system of the tree, learn to care for the tree and bring it to forest once it's too big. Can touch/smell/see tree as it grows.	Classroom or outdoor activity.
Field Trip - Visit a Tree Nursery	Arrange a visit with a local tree nursery. If you have an opportunity to visit the nursery, you will get to observe the planting process of new trees in a large scale environment and learn about how these trees support growth in the forest. Why is this important? How is this different from a natural forest? What should we think about when replanting a forest? (hint: what is biodiversity?)	Tree Nursery
Field trip	You will need to collect your materials for your soil art, so why not bring your supplies and make an exploration trip as well. Focus on what you see in the forest's soil. You may want to bring a magnifying glass. Do you see any bugs? Is there any color change in the soil layers? How come?	Locate closest natural forest and plan accordingly.





# Risk Management

Identified Risk (e.g., falling, animal encounters, bee stings, vehicle use, lost child)	Management Measures (e.g., buddy system, driver's/criminal record checks, first aid kits)	Planning/Responsibility (e.g., staff responsible for each part of the Risk Management Plan)
Forest time	Use the buddy system, ensure children know their exploration boundaries, have an extra adult to support needs such as bathroom breaks, carry a first aid kit, do not enter the forest if it is windy or if there is a concern of overhead objects falling.	Teacher
Animal encounters	Remain together, make a lot of noise and raise arms to make yourself large. Maintain eye contact with the animal and slowly, as a group, back away from the animal.	Teacher
Sharp objects in the soil	Sift through any soils brought to the classroom to ensure there are no sharp object.	Teacher
Travel to tree nursery	Ensure children are dressed appropriately. First aid kits, snacks and water, parental chaperones. Use the buddy system and implement all field trip safety protocols.	Teacher
Forest time - footing, falling, eye hazards and prickles	Choose a relatively flat and level area for easy walking and not too many obstacles. Choose a darker area where there will be less underbrush which can snap back and hit walkers in the face or eyes. Avoid brushy areas with lots of prickles (salmonberry, trailing raspberry, devils club).	Teacher





## Example Soil Painting

