

## Digging Around

**Overview:** - This lesson will help students understand that variations in the landscape can affect soil properties. This activity will take place at the Cove River site but can easily be adapted to the school yard.

**Objectives (1-3):** - Students will be able to characterize soils. Students will be able to relate the five soil forming factors to soil properties

<b>Key Concepts:</b> Observing and describing soil samples, collecting data in the field, identifying relationships between soil forming factors and resulting soils
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<b>Subjects:</b> Earth Science
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<b>Duration:</b> half day field trip
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<b>Setting:</b> Cove River or other applicable site
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<b>Season:</b> Spring/fall
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<b>Interdisciplinary Connections</b>
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Earth science, life science, language arts
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*Environmental Education @ the Cove River Site, and other coastal Connecticut settings.*



*Produced by the Graduate Students in Environmental Education EVE 546 Spring 2009*



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### **Introduction:**

This lesson serves as a good follow up to the *SOILS OUT MY BACKDOOR* lesson. The soil is unique for every place on earth. What makes each soil unique is the way the five soil forming factors work together at any particular place. The five soil forming factors can be found in Appendix A of this unit. As your class explores the soils of Cove River, notice whether the effects of the five soil-forming factors are different on one part of the site versus another. Students may notice the following properties change from one location to another on the site: the soil color, type and amount of surface vegetation, amount of roots in the soil surface, shape of soil particles, feel of the soil, amount of rocks in the soil, how warm or cool the soil feels.

### **Materials:**

- small shovel (one per group)
- pencils
- science lab notebooks

### **Engage:**

#### **What kind of soils are here?**

Students will gather as a whole group at the Cove River Site. Explain that soils can vary greatly even in relatively small areas, depending on the factors that form it. Review the rules of safety and respect for the research site.

### **Explore:**

Students will work in groups of two. Each group should have their lab notebooks and a small shovel or trowel.

Students should select five (5) different areas of the site to explore differences in soil properties.

Students should examine the soil at each point. How does it feel? Is it wet? Dry? What color is it?

Students should record characteristics from each of the five dig sites into their lab notebooks.

***Elaborate:***

The students should be given time to find a quiet place on the research site (under a shady tree, etc.) During this time the students should write a summary of the dig in his/her notebook, including details of what was learned about the soils at Cove River. Encourage students to also take some time for reflective free writing or drawing about the day. Do they enjoy the site? What areas appeal most to them? Is there any wildlife or plants they saw?

***Evaluate:***

As a follow-up to the field trip, the class should come together in a relaxed setting (in a circle on the floor or outside on school grounds) to share and discuss findings from their lab notebooks about the trip.

*...From here on you can fully describe your lesson in 5-E format – try to keep it all within 2-3 double-sided pages, plus any explanations, further instructions for the teacher, bibliography and links, handouts, worksheets, etc.*