



# BE AN EARTH ROVER

Grade 3 | 90 Minutes

## Teacher's Guide

### Description

This inquiry-based field trip allows students to get their hands dirty exploring the soil and rocks that make up our planet Earth. Students explore "investigation stations" and head out on a hike to conduct core sampling in this survey of the non-living world.

**Adult chaperones recommended:** 5

### Content Standards

Subject	Gr	Standard	Objective/"I can" Statements
Life Science	3	<ul style="list-style-type: none"><li>• Earth's nonliving resources have specific properties.</li><li>• Earth's resources can be used for energy.</li><li>• Some of Earth's resources are limited.</li></ul>	<ul style="list-style-type: none"><li>• I can sort rocks by color and grain size</li><li>• I can tell you why water passes through different soils at different rates</li><li>• I can identify the living and non-living resources that contribute to the soil</li></ul>

## Pre-Trip Activities at School

### Vocabulary

composition	particles
dirt	property
erosion	grains
moisture level	soil
organic material	texture

### Book

- Life in a Bucket of Soil by Dover Children's Science Books, 2000.
- How Mountains are Made by Kathleen Weidner Zoehfeld. HarperCollins, 2005.

## Other Activities

- Look at local soil maps.
- Conduct web soil survey as a class.
- Research Ohio's "state soil" – Miamian (look at layers within soil; find a map of soil regions of Ohio; in which soil region do we live?).

## Post-Trip Activities at School

Use descriptive words and vocabulary to tell a story about their experience as an Earth rover.

### Other Resources:

- Read article about Mars rover.
- Look at satellite data to analyze soil moisture levels: [smap.jpl.nasa.gov](http://smap.jpl.nasa.gov)
- Read about different types of beaches.
- Look at rock maps of Ohio and discuss coal.
- Design and construct a pond, water garden or a wetland environment in a terrarium. Evaluate different soil types to ensure that the chosen soil is able to hold water and support plant life. Present the explanation of the process and the findings to the class.
- Math: Design a Mars rover.

Suggested Web Resource: [www.soils4teachers.org](http://www.soils4teachers.org)