Soil Science and Stewardship

An Educational Program of the Environmental Interpretive Center at the University of Michigan–Dearborn

Teacher Information

Program Length, Season and Appropriate Grade Levels

- The program lasts 1 ½ to 4 ½ hours, and can be adapted to suit the needs of your group.
- Program season: April through November.
- Appropriate for Grade Levels 4-8.

Program Description and Activities

In this program we will explore various living and non-living characteristics of soil, and investigate ways to protect and sustain soil quality. Various hands-on lab and field activities are involved.

Your students will be engaged in a multifaceted program experience that may include:

- Exploring the role of decomposition in soil formation.
- Using microscopes to view the various small creatures that are involved in the breakdown of organic matter, and exploring their role in the soil food web.
- Studying the interconnections between the inorganic and organic components of the soil.
- Connecting the living aspects of soil to the remarkable “soil and life loop” in which soil both supports life and depends on the activities of life to maintain itself.
- Studying the physical characteristics of soil, such as soil structure.
- Using soil core samplers to sample soil at various depths.
- Examining a soil profile to view and discuss soil horizons.
- Contrasting various soil textures.
- Investigating soil hydrology and compaction by running soil permeability tests along our outdoor route.
- Using vegetation and soil maps to explore the connection between glaciations, plant communities, soils, and agriculture in southeast Michigan.
- Comparing soils from different habitats.
- Observing soil erosion and deposition along the Rouge River.
- Noting and discussing the causes of siltation in the Rouge River.
- Exploring the Campus Community Organic Garden to investigate organic gardening practices, such as composting that promote and sustain healthy soil.
- Exploring worm composting (vermiculture) as an effective way to recycle organic waste in the home.