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*Environmental Learning Center  
of Goshen College*

# Rock Cycle

## 3rd - 5th

### Program Description

Dig into northeastern Indiana's rich geological history! Students discover the impact glaciers had on this area by seeing glacial activity up close. Hike down an esker, move through layers of topsoil and glacial till to find a peat bog, explore and identify rocks in an abandoned gravel pit, and use models to understand how glaciers changed Indiana's landscape.

### Program Objectives

Students will:

- Discover how the landscape in northeastern Indiana has changed over time
- Learn about the forces that changed the landscape
- Explore how the rocks and soil influence the plants and animals that live in this area

### Program Outline

Students rotate in groups through four different activity stations:

1. **Lab Investigation:** Students learn about the history of the landscape and use microscopes to do some close-up investigation
2. **The Models:** Students try out models of changing landscapes and investigate how humans make use of rocks and gravel
3. **Gravel Pit:** Students explore an old gravel pit to look at rocks brought here from the last glacier and deposited in an esker
4. **Esker Hike:** Students hike a glacial feature called an esker and explore different ecosystems along the way

### Vocabulary

- Landscape
- Esker
- Metamorphic
- Glacier
- Igneous
- Sedimentary

### Quick Facts

**Season** Fall: September - November  
Spring: April - May

**Grades** 3rd - 5th

**Program Length** 4 hours

**Maximum # of Students** 80 Students

### Standards Correlation

**LS3.B: Natural Selection:** Other characteristics result from individuals' interactions with the environment, which can range from diet to learning. Many characteristics involve both inheritance and environment. (3-LS3-2)

**LS2.C: Ecosystem Dynamics, Functioning, and Resilience:** When the environment changes in ways that affect a place's physical characteristics, temperature, or availability of resources, some organisms survive and reproduce, others move to new locations, yet others move into the transformed environment, and some die. (secondary to 3-LS4-4)

**LS4.D: Biodiversity and Humans:** Populations live in a variety of habitats, and change in those habitats affects the organisms living there. (3-LS4-4)

**ESS1.C: The History of Planet Earth:** Local, regional, and global patterns of rock formations reveal changes over time due to earth forces, such as earthquakes. The presence and location of certain fossil types indicate the order in which rock layers were formed. (4-ESS1-1)

**ESS1.A: The Universe and Its Stars:** Earth's major systems are the geosphere (solid and molten rock, soil, and sediments), the hydrosphere (water and ice), the atmosphere (air), and the biosphere (living things, including humans). These systems interact in multiple ways to affect Earth's surface materials and processes. The ocean supports a variety of ecosystems and organisms, shapes landforms, and influences climate. Winds and clouds in the atmosphere interact with the landforms to determine patterns of weather. (5-ESS2-1)  
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