

Rockin' at the Run

Recommended for Grades 6-8
Program Length: 2 Hours
Location: Virginia Kendall Ledges

'Rockin' at the Run' is an overview of the unique geologic story of the Cuyahoga Valley, with a hike on the rocky trails of the Virginia Kendall Ledges.

Learner Outcomes

Students will:

1. Name the three basic rock types and describe how they are formed.
2. Name three types of bedrock in the Cuyahoga Valley, the order and way in which they were created, and the approximate time span in which this occurred.
3. Define porous or permeable as it relates to rock.
4. Describe the vegetation in the Ledges area and explain why it is different from vegetation elsewhere along the trail.
5. Explain how the glaciers affected the landscape and approximately when this occurred.
6. Explain stream erosion and deposition.
7. Give at least two examples of how humans have influenced the landscape.

Program Description

The program begins with a large group welcome to the national park. Students then participate in a hike with a group leader (10 – 15 students per group)

The hike is prefaced with an introduction or review of the concepts of erosion and deposition, the three types of rock, and the hike route, possibly using a topographic map of the area. The group may visit the Mater Dolorosa cemetery to compare the types of rocks the tombstones are made of.

The hike leader will take students down a steep hill, where they may observe evidence of glaciation, erosion, slumping, and soil creep. Students will cross Haskell Run, a stream that has cut through the glacial till, where they may observe and find glacial erratics and shale in the stream bed and observe evidence of erosion and deposition.

The trail then leads uphill into the Ledges, near and through outcroppings of Sharon Conglomerate. In this exploratory hike, students can find honeycombing, joint fractures, examples of chemical and physical erosion, visit Ice Box Cave, and observe the unique vegetation in the Ledges area. Throughout the hike students will be discussing and reviewing the human and natural forces that shaped Cuyahoga Valley.

***The following Ohio Academic Content Standards will be addressed during
Rockin' at the Run***

Science Benchmarks:

6-8 Earth and Space Sciences

- D. Identify that the lithosphere contains rocks and minerals and that minerals make up rocks. Describe how rocks and minerals are formed and/or classified.
- E. Describe the processes that contribute to the continuous changing of Earth's surface (e.g., earthquakes, volcanic eruptions, erosion, mountain building and lithospheric plate movements).

Grade Level Indicators:

Grade 6

Earth and Space Sciences – Earth Systems

- 1. Describe the rock cycle and explain that there are sedimentary, igneous and metamorphic rocks that have distinct properties (e.g., color, texture) and are formed in different ways.
- 2. Explain that rocks are made of one or more minerals.

Grade 7

Earth and Space Sciences – Earth Systems

- 1. Explain the biogeochemical cycles which move materials between the lithosphere (land), hydrosphere (water) and atmosphere (air).

Life Sciences – Diversity and Interdependence of Life

- 5. Explain that some environmental changes occur slowly while others occur rapidly (e.g. forest and pond succession, fires and decomposition)

Grade 8

Earth and Space Sciences – Earth Systems

- 11. Use models to analyze the size and shape of Earth, its surface and its interior (e.g. globes, topographic maps, satellite images).
- 13. Describe how landforms are created through a combination of destructive (e.g., weathering and erosion) and constructive processes (e.g., crustal deformation, volcanic eruptions and deposition of sediment).
- 14. Explain how folding, faulting and uplifting can rearrange the rock layers so the youngest is not always found on top.