



Miami County Park District School Educational Programs with Ohio Academic Content Standards Intermediate Grades 4, 5, 6

Grade 4

Water Cycle Grade 4

With boots, nets, magnifying glasses, energy and imagination the water cycle is followed and reenacted through each state (evaporation, condensation, precipitation), as students are transformed into water droplets down the trail through animals and plants, in the creek, cave and pond and prairie.



Banana Slug Song Water Cycle Boogie

Academic Standards

Earth and Space Sciences Earth Systems

2. Identify how water exists in the air in different forms (e.g., in clouds, fog, rain, snow and hail)
3. Investigate how water changes from one state to another (e.g., freezing, melting, condensation and evaporation).

Geology Trail Grade 4

Students take a leap back in time to experience how Charleston Falls was formed during a multi-sensory trail to discover, experience and reenact the geology of the Falls. Current landforms throughout the Falls area are the remnants of geologic action that students must interpret to put together the time line of events.

Academic Standards

Earth and Space Sciences Processes That Shape Earth

8. Describe how wind, water and ice shape and reshape Earth's land surface by eroding rock and soil in some areas and depositing them in other areas producing characteristic landforms (e.g., dunes, deltas and glacial moraines).
9. Identify and describe how freezing, thawing and plant growth reshape the land surface by causing the weathering of rock.
10. Describe evidence of changes on Earth's surface in terms of slow processes (e.g., erosion, weathering, mountain building and deposition) and rapid processes (e.g., volcanic eruptions, earthquakes and landslides).





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Grade 4

Roots, Stems and Leaves

Grade 4

On the trail, students discover and experience uses for and the functions of the six plant parts, visiting Nature's Grocery Store, shopping for wild foods, realizing that all our food comes from green plants originally in the wild, and concluding with a wild plant parts picnic. Build a plant activity involves all students in simulating the functions of roots, stems, leaves, flowers, fruits and seeds.



Banana Slug Song Roots, Stems, and Leaves

Academic Standards

Life Sciences Diversity and Interdependence of Life

2. Relate plant structures to their specific functions (e.g., growth, survival and reproduction).
3. Classify common plants according to their characteristics

Key A Tree/Flower

Grade 4

Students use simplified plant keys to identify vegetation by distinctive traits, such as simple or compound leaves, leaf shape, etc. At the same time they unravel the puzzle of the “wisdom of the trees” (how we use these trees in everyday life) and collect flower “keys” as they follow a burma shave adventure trail through the park.

Banana Slug Song Give Plants a Chance

Academic Standards

Life Sciences Diversity and Interdependence of Life

4. Classify common plants according to their characteristics (e.g., tree leaves, flowers, seeds, roots and stems).





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Pathfinders Grade 4

Students integrate the use of GPS (Global Positioning Systems), Topographical Mapping, Compass Orienteering, Latitude-Longitude Grids, the Sun and the Stars in a way that is interesting, informative and engaging for young people. Through fun hands on discovery adventure activities and in the field observations the students develop an understanding of Natural Science and our relationship to exactly where they are in the Universe. Student will learn about the lay of the land, the earth's position in the cosmos, magnetic poles and develop a practical understanding of the natural world we live in using Ancient and 21st Century Technology.



Academic Standards

Science and Technology Understanding Technology

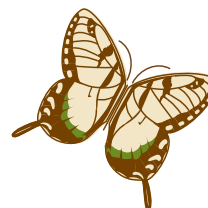
2. Investigate how technology and inventions change to meet peoples' needs and wants.

Geography Location

1. Use a linear scale to measure the distance between places on a map.
2. Use cardinal and intermediate directions to describe the relative location of places

Movement

10. Use elevation, natural resource and road maps





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Ohio Water Ride To The Past Grade 4

Students “time travel” through periods of Ohio history to discover how water has affected land forms and soil, plants, animals and human history in Ohio. Through fossil finds and glacier reenactments students explore pre-historic geology. They experience a simulated deer hunt, bead necklace construction and a rendezvous where French trappers trade with local Indians. Students climb aboard a flatboat in the river and simulate a canal ride to homesteads in the forest where they build temporary shelters. Dams and levees are constructed by the students to show response to the 1913 flood for protection of the population.



Academic Standards History

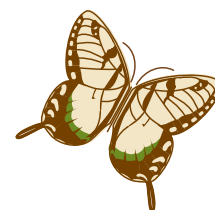
1. Construct time lines with evenly spaced intervals for years, decades and centuries to show the order of significant events in Ohio history.
2. Describe the earliest settlements in Ohio including those of prehistoric people
5. Explain how canals and railroads changed settlement patterns in Ohio and Ohio’s economic and political status in the United States.

People in Societies

2. Describe the impact of the expansion of European settlements on American Indians in Ohio
3. Explain the reasons people came to Ohio

Geography

4. Use maps to identify the location of major physical and human features of Ohio
7. Explain how resources, transportation and location influenced the development of cities and industries in Ohio
10. Use elevation, natural resource and road maps to answer questions about patterns of settlement, economic activity and movement.





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Grade 5

Food Chain Orienteering

Grade 5

Students thrill with the excitement of learning how to use a compass to find their way through the park to different stations where they explore multiple habitats to discover clues to food chains in each of the ecosystems. Each has their own compass to use during the trail and constructs food chains at the conclusion to solve the mystery of the top consumer of their habitat's food chain.

Banana Slug Song Food Chain



Academic Standards

Life Sciences Diversity and Interdependence of Life

3. Trace the organization of simple food chains and food webs (e.g., producers, herbivores, carnivores, omnivores and decomposers).
4. Summarize that organisms can survive only in ecosystems in which their needs can be met (e.g., food, water, shelter, air, carrying capacity and waste disposal). The world has different ecosystems and distinct ecosystems support the lives of different types of organisms.

Pathfinders

Grade 5

Students integrate the use of GPS (Global Positioning Systems), Topographical Mapping, Compass Orienteering, Latitude-Longitude Grids, the Sun and the Stars in a way that is interesting, informative and engaging for young people. Through fun hands on discovery adventure activities and in the field observations the students develop an understanding of Natural Science and our relationship to exactly where they are in the Universe. Student will learn about the lay of the land, the earth's position in the cosmos, magnetic poles and develop a practical understanding of the natural world we live in using Ancient and 21st Century Technology.

Academic Standards

Science and Technology - *Understanding Technology*

1. Investigate positive and negative impacts of human activity and technology on the environment.

Geography - *Location*

1. Use coordinates of latitude and longitude to determine the absolute location of points in North America.

Places and Regions

5. Explain, by identifying patterns on thematic maps, how physical and human characteristics can be used to define regions in North America.



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Grade 5

Music Sculpture Garden

Grade 5

A creative blend of students working with local artist Michael Bashaw and park naturalists to design, create, and plant a natural musical garden and bamboo concert structure. A knowledge of the connections between nature art and music are discovered in a creative hands-on design.



Academic Standards

Earth and Space Sciences

Benchmark C: Describe Earth's resources including rocks, soil, water, air, animals and plants and the ways in which they can be conserved.

Earth Systems-6: Investigate ways Earth's renewable resources can be maintained (fresh water, air, wildlife and trees).

Life Sciences

Benchmark B: Analyze plant and animal structures and functions needed for survival and describe the flow of energy through a system that all organisms use to survive.

Diversity and Interdependence of Life-2: Explain how almost all kinds of animals' food can be traced back to plants. 3. Trace the organization of simple food chains and food web (producers, herbivores, carnivores, omnivores and decomposers).

Benchmark C: Compare changes in an organism's ecosystem/habitat that affect its survival.

Diversity and Interdependence of Life-6: Analyze how all organisms, including humans, cause changes in their ecosystems and how these changes can be beneficial, neutral or detrimental (beaver ponds, earthworm burrows, grasshoppers eating plants, people planting and cutting trees and people introducing a new species).

Social Studies standard of People in Societies

Cultures-1. Compare the cultural practices and products of diverse groups in North America including: a. Artistic expressions b. Religion e. Clothing

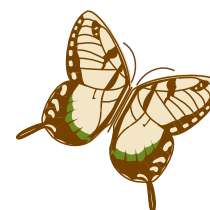
Music

Benchmark: Compare and contrast styles and forms of music from various historical periods.

Indicator: Recognize, identify and demonstrate theme and variations in music of various cultures and/or historical periods.

Benchmark: Identify various ways music affects their lives

Indicator: Discuss how culture influences music.





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Grade 6

Rock Hounds

Grade 6

Through cracking a geode (igneous), ‘changing’ rocks using pressure (metamorphic), Going “inside” a rock (cave-sedimentary formed), finding the “aliens” (granite boulders left here from the glaciers), investigating fossils and going back in time to the formation of the Charleston Falls waterfall, and more, students discover the differences of rock characteristics and formation (igneous, metamorphic and sedimentary), differences in mineral composition, and how we use them in everyday life.



Academic Standards

Earth and Space Sciences Earth Systems

Describe the rock cycle and explain that there are sedimentary, igneous, and metamorphic rocks that have distinct properties and are formed in different ways

1. Explain that rocks are made of one or more min
2. Identify minerals by their characteristic properties

STREAM QUALITY MONITORING

Grades 4, 5, 6

Students learn how their everyday actions affect the quality of their water that they use everyday. With boots, nets, magnifiers, and macro-invertebrate charts students discover how the animals that live in the river can indicate our water quality.

Academic Standards

- Earth and Space Sciences: 4th(2,3); 5th(5, 6)
- Life Sciences: 5th(6)
- Physical Sciences: 4th(4); 6th (6,8)
- Scientific Ways of Knowing: 5th(4,6); 6th (3,4)
- Science and Technology: 6th (1,2)
- Scientific Inquiry: 6th (2,4)
- Geography: 4th (9); 5th (9); 6th (4,5,6,7)
- Social Studies Skills: 4th(10); 5th(9); 6th (2)





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Grade 6

Pathfinders

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Academic Standards

A. Technology and Society Interaction

1. Analyze technologically responsible citizenship
 - a. Describe how the use of technology affects humans in various ways including their safety, comfort, choices and attitudes about technology's development and use.
 - b. Discuss how new technologies have resulted from the demands, values and interests of individuals, businesses, industries and societies.
 - c. Provide examples of technology transfer from a government agency to private industry, and discuss the benefits (e.g., global positioning systems-GPS, Internet).
2. Assess the impact of technological products and systems.
 - a. Employ the use of measuring instruments to collect data.

B. Connect with other disciplines and acquire information

1. Investigate and report on concepts from across disciplines.
 - a. Identify locations using map skills (longitude, latitude).

C. Geography

1. Identify on a map the location of major physical and human features of each continent.
 - a. Use coordinates of latitude and longitude to locate points on a world map.
 - b. Place countries, cities, deserts, mountain ranges and bodies of water on the continents on which they are located.

D. Science and Technology

1. Give examples of how technological advances, influenced by scientific knowledge, affect the quality of life.
 - b. Explain how technology influences the quality of life.
2. Analyze information relative to the characteristics of technology and apply in a practical setting.
 - a. Cite examples of how characteristics of technology are evident in daily life: Technology involves tools, materials and systems





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HUG THE EARTH/WATERSHED WITH THE BANANA SLUG STRING BAND (Grades 4,5,6)

Add the powerful learning experiences of our naturalist lead classroom programs of music and art connecting with the science of any of the above outdoor exploration park field trip offerings and you have the most complete and fun learning of all!



FOR MORE INFORMATION PLEASE CONTACT:

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