OHIO HISTORICAL SOCIETY
SINCE 1885

Birds Tour, Cedar Bog

Description and Curriculum Resources

Tour: Birds Tour

Availability: Wednesday, Thursday, and Friday
September, October, April, May, June
9:30 a.m. – 2:30 p.m.

Time Allowance: 1½ to 2 hours on site

Cost: $3.00 admission fee per student

Grades: Adaptable to all grades
Maximum 100 students

Description:

This guided tour goes in-depth into the habitat, migration, and identification of the birds that both live year-round and migrate through Cedar Bog.

Science Academic Content Standards Addressed:

Earth and Space Sciences (Earth Systems)

7th. Describe how temperature and precipitation determine climatic zones (biomes) (e.g., desert, grasslands, forests, tundra and alpine).

Earth and Space Sciences (Heredity)

3rd. Compare the life cycles of different animals including birth to adulthood, reproduction and death (e.g., egg-tadpole-frog, egg-caterpillar-chrysalis-butterfly).

Life Sciences (Characteristics and Structure of Life)

1st. Recognize that seasonal changes can influence the health, survival, or activities of organisms.

2nd. Identify that there are many distinct environments that support different kinds of organisms.

2nd. Explain that animals, including people, need air, water, food, living space and shelter; plants need air, water nutrients, living space and light to survive.

2nd. Investigate the different structures of plants and animals that help them live in different environments (e.g., lungs, gills, leaves and roots).

2nd. Explain why organisms can survive only in environments that meet their needs (e.g., organisms that once lived on Earth have disappeared for different reasons such as natural forces or human-caused effects).

Life Sciences (Evolutionary Theory)

7th. Investigate the great diversity among organisms.

Life Sciences (Diversity and Interdependence of Life)

2nd. Investigate the different structures of plants and animals that help them live in different environments (e.g., lungs, gills, leaves and roots).

2nd. Compare the habitats of many different kinds of Ohio plants and animals and some of the ways animals depend on plants and each other.
3rd. Relate animal structures to their specific survival functions (e.g., obtaining food, escaping or hiding from enemies).
3rd. Classify animals according to their characteristics (e.g., body coverings and body structure).
5th. Explain how almost all kinds of animals' food can be traced back to plants.
5th. Trace the organization of simple food chains and food webs (e.g., producers, herbivores, carnivores, omnivores and decomposers).
5th. 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.
5th. Support how an organism's patterns of behavior are related to the nature of that organisms present, the availability of food and resources, and the changing physical characteristics of the ecosystem.
5th. Analyze how all organisms, including humans, cause changes in their ecosystems and how these changes can be beneficial, neutral or detrimental (e.g., beaver ponds, earthworm burrows, grasshoppers eating plants, people planting and cutting trees and people introducing a new species).
7th. Investigate how organisms or populations may interact with one another through symbiotic relationships and how some species have become so adapted to each other that neither could survive without the other (e.g., predator-prey, parasitism, mutualism and commensalism).
7th. Explain that some environmental changes occur slowly while others occur rapidly (e.g., forest and pond succession, fires and decomposition).
7th. Explain that photosynthetic cells convert solar energy into chemical energy that is used to carry on life functions or is transferred to consumers and used to carry on their life functions.
7th. Explain how the number of organisms an ecosystem can support depends on adequate biotic (living) resources (e.g., plants, animals) and abiotic (non-living) resources (e.g., light, water and soil).
7th. Investigate how overpopulation impacts an ecosystem.

Science and Technology (Understanding Technology)

5th. Investigate positive and negative impacts of humans activity and technology on the environment.

Science and Technology (Abilities to Do Technological Design)

5th. Explain how the solution to one problem may create other problems.

Scientific Inquiry (Doing Scientific Inquiry)

1st. Ask "what happens when" questions
1st. Explore and pursue student-generated "what happens when" questions
5th. Use evidence and observations to explain and communicate the results of investigations.

Scientific Ways of Knowing (Nature of Science)

5th. Identify how scientists use different kinds of ongoing investigations depending on the questions they are trying to answer (e.g., observations of things or events in nature, data collection and controlled experiments).

Scientific Ways of Knowing (Science and Society)

5th. Identify a variety of scientific and technological work that people of all ages, backgrounds and groups perform.

Social Studies Academic Content Standards Addressed:

History (Chronology)

5th. Create time lines and identify possible relationships between events.

6th. Construct a multiple-tier time line from a list of events and interpret the relationships between the events.

Geography (Places and Regions)

5th. Describe and compare the landforms, climates, population, culture and economic characteristics of places and regions in North America.

5th. Explain how climate is influenced by: Earth-sun relationships; landforms; vegetation.

7th. Describe the changes in physical and human characteristics of regions that occur over time and identify the consequences of such changes.

Geography (Location)

7th. Name and locate the continents and oceans.

Geography (Human and Environmental Interaction)

3rd. Identify ways that physical characteristics of the environment (i.e., landforms, bodies of water, climate and vegetation) affect and have been modified by the local community.

4th. Identify ways that people have affected the physical environment of Ohio including: use of wetlands, use of forests; building farms, towns and transportation systems; using fertilizers, herbicides and pesticides; building dams.

4th. Analyze the positive and negative consequences of human changes to the physical environment including: e. Introduction of new species.

5th. Explain how the characteristics of different physical environments affect human activities in North America.

5th. Analyze the positive and negative consequences of human changes to the physical environment including: Great Lakes navigation; highway systems; irrigation; mining; and introduction of new species**.**

Citizenship (Rights and Responsibilities)

5th. Explain the obligation of upholding the U.S. Constitution including: obeying laws; paying taxes; serving on juries.

Social Studies Skills and Methods (Thinking and Organizing)

5th. Draw inferences from key relevant information.

Social Studies Skills and Methods (Problem Solving)

5th. Use a problem-solving/decision –making process which includes: identifying a problem; gathering information; listing and considering options; considering advantages and disadvantages of options; choosing and implementing a solution;

developing criteria for judging its effectiveness; evaluating the effectiveness of the solution.

Birds Glossary:

adaptation. Adjustment to environmental conditions, modification of an organism or its parts that makes it more fit for existence under the conditions of its environment.
biotic. Relating to life.
body covering. Feature that covers the body, such as fur or feathers.
body system. A system of the body (i.e. digestive system, circulatory system).
capacity. The maximum amount or number that can be contained or accommodated.
characteristic. A distinguishing trait, feature, quality, or property.
climate. The average course or condition of the weather at a place usually over a period of years as exhibited by temperature, wind velocity, and precipitation.
classification. Systematic arrangement in groups or categories according to established criteria.
community. Interacting population that live in a defined habitat.
conservation. A careful preservation and protection of something; especially planned management of a natural resource to prevent exploitation, destruction, or neglect.
consumer. An organism requiring complex organic compounds for food, which it obtains by preying on other organisms or by eating particles of organic matter.
diversity. A great deal of variety.
ecological. The interactions and relationships between organisms and their environment.
ecosystem. The complex of a community of organisms and its environment functioning as an ecological unit.
egg. Female gamete; ovum.
environment. The complex of physical, chemical, and biotic factors that act upon an organism or an ecological community and ultimately determine its form and survival.
evidence. Facts or observations on which a conclusion can be based.
evolution (biological). Changes in the genetic composition of a population through successive generations.
food chain. An arrangement of the organisms of an ecological community according to the order of predation in which each uses the next usually lower member as a food source.
food web. The totality of interacting food chains in an ecological community; interacting food chains in an ecological community.
gene. A functional hereditary unit located at a particular point on a chromosome that controls or acts in the transmission of hereditary characteristics.
habitability. Suitable for a dwelling place.
habitat. The place or environment where a plant or animal naturally or normally lives and grows.
heredity. The sum of the qualities and potentialities genetically derived from one's ancestors; the relation between successive generation, by which characteristics persist.
life. An organism that has the capacity of metabolism, growth, reaction to stimuli, and reproduction.
life cycle. The series of stages in form and functional activity through which an organism passes from fertilized ovum to the fertilized ovum of the next generation.

natural. Existing in, or produced by nature.
natural selection. The principle that in a given environment individuals having characteristics that aid survival will produce more offspring, and the proportion of individual having such characteristics will increase with each succeeding generation.
nesting. To build or occupy a nest; settle in.
observe. To watch carefully, especially with attention to details or behavior for the purpose of arriving at a judgement.
organism. An individual constituted to carry on the activities of life by means of organs separate in function but mutually dependent; a living being.
parasite. An organism living in, with or on another organism in which a parasite obtains benefits from a host that it usually injures.
physical change. A change in a substance that does not alter its chemical makeup.
physical properties. A property of a material that can be observed without changing the chemical makeup of the material.
pollution. A substance that, when added to the environment causes the environment to be harmful or unfit for living things.
population. All the plants or animals of the same kind found in a given area.
predator. An animal that lives by capturing prey as a means of maintaining life.
prey. An animal taken by a predator as food.
property. A quality to trait belonging to an individual or thing.
reproduction. The process by which organisms give rise to offspring and which fundamentally consists of the segregation of a portion of the parental body by a sexual or an asexual process, and its subsequent growth and differentiation into a new individual.
scavenger. An organism that feeds habitually on refuse or carrion.
species. A group of organisms consisting of similar individuals capable of exchanging genes or interbreeding.
trait. An inherited characteristic.