OHIO HISTORICAL SOCIETY
SINCE 1885

Human Migration Tour, Cedar Bog

Description and Curriculum Resources

Tour: Human Migration Tour

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

Time Allowance: 1½ hours on site

Cost: $3.00 admission fee per student

Grades: Adaptable to all grades
Maximum of 100 students

Description:

Why do humans migrate? What do humans look for when they settle in an area? Are humans the only animals to migrate? This program takes a look at the impact of human migration on natural areas and natural resources including: agriculture, transportation, communications and energy; the loss of natural areas, environmental pollution, the availability, usage, and pollution of water, global warming, and population dynamics.

Science Academic Content Standards Addressed:

Earth and Space Sciences (Earth Systems)

1st. Identify that resources are things that we get from the living (e.g., forests) and nonliving (e.g., minerals, water) environment and that resources are necessary to meet the needs and wants of a population.

2nd. Observe and describe that some weather changes occur throughout the day and some changes occur in a repeating seasonal pattern.

2nd. Describe weather by measurable quantities such as temperature and precipitation.

3rd. Describe that smaller rocks come from the breakdown of larger rocks through the actions of plants and weather.

3rd. Observe and describe the composition of soil (e.g., small pieces of rock and decomposed pieces of plants and animals, and products of plants and animals).

3rd. Investigate the properties of soil (e.g., color, texture, capacity to retain water, ability to support plant growth).

4th. Explain that air surrounds us, takes up space, moves around us as wind, and may be measured using barometric pressure.

4th. Identify how water exists in the air in different forms (e.g., in clouds, fog, rain, snow and hail).

4th. Investigate how water changes from one state to another (e.g., freezing, melting, condensation and evaporation).

4th. Describe weather by measurable quantities such as temperature, wind direction, wind speed, precipitation and barometric pressure.

7th. Explain that Earth's capacity to absorb and recycle materials naturally (e.g., smoke, smog and sewage) can change the environmental quality depending on the length of time involved (e.g. global warming).

7th. Describe the water cycle and explain the transfer of energy between the atmosphere and hydrosphere.

7th. Analyze data on the availability of fresh water that is essential for life and for most industrial and agricultural processes. Describe how rivers, lakes and groundwater can be depleted or polluted becoming less hospitable to life and even becoming unavailable or unsuitable for life.

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

9th. Explain the relationships of the oceans to the lithosphere and atmosphere (e.g., transfer of energy, ocean currents and landforms).

10th. Summarize the relationship between the climatic zone and the resultant biomes. (This includes explaining the nature of the rainfall and temperature of the mid-latitude climatic zone that supports the deciduous forest.)

10th. Explain climate and weather patterns associated with certain geographic locations and features (e.g., tornado alley, tropical hurricanes and lake effect snow).

10th. Explain how the acquisition and use of resources, urban growth and waste disposal can accelerate natural change and impact the quality of life.

10th. Describe ways that human activity can alter biochemical cycles (e.g., carbon and nitrogen cycles) as well as food webs and energy pyramids (e.g., pest control, legume rotation crops vs. chemical fertilizers).

Earth and Space Sciences (Processes that Shape the Earth)

1st. Explain that all organisms cause changes in the environment where they live; the changes can be very noticeable or slightly noticeable, fast or slow (e.g., spread of grass cover slowing soil erosion, tree roots slowly breaking sidewalks).

Earth and Space Sciences (The Universe)

5th. Describe the characteristics of Earth and its orbit about the sun (e.g., three-fourths of Earth's surface is covered by a layer of water [some of it frozen], the entire planet surrounded by a thin blanket of air, elliptical orbit, tilted axis and spherical planet).

5th. Describe how night and day are caused by Earth's rotation.

Life Sciences (Historical Perspectives and Scientific Revolutions)

10th. Describe advances and issues in Earth and space science that have important long-lasting effects on science and society (e.g., geologic time scales, global warming, depletion of resources and exponential population growth).

Life Sciences (Characteristics and Structure of Life)

1st. Explore that organisms, including people, have basic needs which include air, water, food, living space and shelter.

1st. Explain that food comes from sources other than grocery stores (e.g., farm crops, farm animals, oceans, lakes and forests).

1st. Explore that humans and other animals have body parts that help to seek, find and take in food when they are hungry (e.g., sharp teeth, flat teeth, good nose and sharp vision).

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

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

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 (Diversity and Interdependence of Life)

1st. Investigate that animals eat plants and/or other animals for food and may also use plants or other animals for shelter and nesting.

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

2nd. Explain that food is a basic need of plants and animals (e.g., plants need sunlight to make food and to grow, animals eat plants and/or other animals for food, food chain) and is important because it is a source of energy (e.g., energy used to play, ride bicycles, read, etc.).

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 organism's ecosystem, including the kinds and numbers of other 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. 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.

7th. Explain that some environmental changes occur slowly while others occur rapidly (e.g., forest and pond succession, fires and decomposition).

7th. Summarize the ways that natural occurrences and human activity affect the transfer of energy in Earth's ecosystems (e.g., fire, hurricanes, roads and oil spills).

10th. Explain how living things interact with biotic and abiotic components of the environment (e.g., predation, competition, natural disasters and weather).

10th. Relate how distribution and abundance of organisms and populations in ecosystems are limited by the ability of the ecosystem to recycle materials and the availability of matter, space and energy.

10th. Conclude that ecosystems tend to have cyclic fluctuations around a state of approximate equilibrium that can change when climate changes, when one or more new species appear as a result of immigration or when one or more species

disappear.

10th. Describe ways that human activities can deliberately or inadvertently alter the equilibrium in ecosystems. Explain how changes in technology/biotechnology can cause significant changes, either positive or negative, in environmental quality and carrying capacity.

10th. Illustrate how uses of resources at local, state, regional, national, and global levels have affected the quality of life (e.g., energy production and sustainable vs. nonsustainable agriculture).

Life Sciences (Heredity)

10th. Explain that natural selection provides the following mechanism for evolution; undirected variation in inherited characteristics exist within every species. These characteristics may give individuals an advantage or disadvantage compared to others in surviving and reproducing. The advantaged offspring are more likely to survive and reproduce. Therefore, the proportion of individuals that have advantageous characteristics will increase. When an environment changes, the survival value of some inherited characteristics may change.

Life Sciences (Historical Perspectives and Scientific Revolutions)

10th. Describe advances in life sciences that have important long-lasting effects on science and society (e.g., biological evolution, germ theory, biotechnology and discovering germs).

Physical Sciences (Nature of Energy)

1st. Recognize that the sun is an energy source that warms the land, air and water.

1st. Describe that energy can be obtained from many sources in many ways (e.g., food, gasoline, electricity or batteries).

Physical Sciences (Nature of Matter)

9th. Demonstrate that the pH scale (0-14) is used to measure acidity and classify substances or solutions as acidic, basic, or neutral.

Science and Technology (Understanding Technology)

1st. Explore ways people use energy to cook their food and warm their homes (e.g., wood, coal, natural gas and electricity).

2nd. Investigate why people make new products or invent new ways to meet their individual wants and needs.

2nd. Predict how building or trying something new might affect other people and the environment.

2nd. Explain that developing and using technology involves benefits and risks.

4th. Explain how technology from different areas (e.g., transportation, communication, nutrition, healthcare, agriculture, entertainment and manufacturing) has improved human lives.

4th. Investigate how technology and inventions change to meet peoples' needs and wants.

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

6th. Explain how technology influences the quality of life.

6th. Explain how decisions about the use of products and systems can result in desirable or undesirable consequences (e.g., social and environmental).

9th. Describe means of comparing the benefits with the risks of technology and

how science can inform public policy.

Scientific Inquiry (Doing Scientific Inquiry)

1st. Ask "what happens when" questions.

1st. Explore and pursue student-generated "what happens when" questions.

2nd. Ask "how can I/we" questions.

2nd. Ask "how do you know" questions (not "why" questions) in appropriate situations and attempt to give reasonable answers when others ask questions.

Scientific Ways of Knowing (Nature of Science)

2nd. Describe that scientific investigations generally work the same way under the same conditions.

Scientific Ways of Knowing (Ethical Practices)

2nd. Describe ways in which using the solution to a problem might affect other people and the environment.

Social Studies Academic Content Standards Addressed:

History (Chronology)

3rd. Place local historical events in sequential order on a time line.

History (Daily Life)

1st. Compare past and present, near and far, with emphasis on daily life including: *The roles of men, women and children;* The identification of basic human needs; and Various ways people meet human needs.

2nd. Identify the work that people performed to make a living in the past and explain how jobs in the past are similar and/or different from those of today.

2nd. Identify and describe examples of how science and technology have changed the daily lives of people and compare: forms of communication from the past and present; and forms of transportation from the past and present.

History (Settlement)

4th. Describe the earliest settlements in Ohio including those of prehistoric peoples.

5th. Explain how American Indians settled the continent and why different nations of Indians interacted with their environment in different ways.

5th. Explain why European countries explored and colonized North America.

History (Heritage)

2nd. Recognize the importance of individual action and character and explain how they have made a difference in others' lives with emphasis on the importance of: Social and political leaders in the United States (e.g., George Washington, Thomas Jefferson, Tecumseh, Harriet Tubman, Abraham Lincoln, Sojourner Truth, Susan B. Anthony and Martin Luther King Jr.); Explorers, inventors and scientists (e.g., George Washington Carver, Thomas Edison, Charles Drew, **Rachel Carson** and Neil Armstrong).

History (Early Civilization)

6th. Describe the early cultural development of humankind from the Paleolithic Era to the revolution of agriculture including: hunting and gathering; tool making; use of fire; domestication of plants and animals; organizing societies; governance.

History (First Global Age)

8th. Describe the political, religious and economic aspects of North American

colonization including: Reasons for colonization, including: religion, desire for land and economic opportunity; Key differences among the Spanish, French and British colonies; Interactions between American Indians and European settlers, including the agricultural and cultural exchanges, alliances and conflicts; Indentured servitude and the introduction and institutionalization of slavery; Early representative governments and democratic practices that emerged, including town meetings and colonial assemblies; Conflicts among colonial powers for control of North America.

History (Industrialization)

10th. Explain the goals and outcomes of the late 19th and early 20th century reform movements of Populism and Progressivism with emphasis on: Urban reforms; conservation; business regulation and antitrust legislation; the movement for public schooling; and the regulation of child labor.

People in Societies (Cultures)

1st. Describe similarities and differences in the ways different cultures meet common human needs including: Food; Clothing; Shelter; Language; Artistic expressions.

People in Societies (Interaction)

4th. Explain the reasons people came to Ohio including: opportunities in agriculture, mining and manufacturing; family ties; freedom from political and religious oppression.

People in Societies (Diffusion)

9th. Explain how advances in communication and transportation have impacted: globalization; cooperation and conflict; the environment; collective security; popular culture; political systems; religion.

Geography (Location)

4th. Use maps to identify the location of major physical and human features of Ohio including: Lake Erie; Rivers; Plains; The Appalachian Plateau; Bordering states; The capital city; and other major cities.

5th. Use maps to identify the location of: The three largest countries of North America; The 50 states of the United States; The Rocky and Appalachian mountain systems; The Mississippi, Rio Grande and St. Lawrence rivers; The Great Lakes.

6th. Place countries, cities, deserts, mountain ranges and bodies of water on the continents on which they are located.

Geography (Places and Regions)

1st. Identify and describe the physical features (lake, river, hill, mountain, forest) and human features (town, city, farm, park, playground, house, traffic signs/signals) of places in the community.

2nd. Describe and locate landforms (plateaus, islands, hills, mountains, valleys) and bodies of water (creeks, ponds, lakes, oceans) in photographs, maps and 3-D models.

4th. Describe and compare the landforms, climates, population, vegetation and economic characteristics of places and regions in Ohio.

4th. Identify manufacturing, agricultural, mining and forestry regions in Ohio.

5th. Describe and compare the landforms, climates, population, culture and

economic characteristics of places and regions in North America.

5th. Analyze reasons for conflict and cooperation among regions of North America including: Trade; Environmental issues; Immigration.

10th. Explain how perceptions and characteristics of geographic regions in the United States have changed over time including: Urban areas; Wilderness; Farmland; and Centers of industry and technology.

Geography (Human Environmental Interaction)

1st. Describe human adaptations to variations in the physical environment including: Food; Clothing; Shelter; Transportation; and Recreation.

2nd. Compare how land is used in urban, suburban and rural environments.

2nd. Identify ways in which people have responded to and modified the physical environment such as building roads and clearing land for urban development.

4th. Identify how environmental processes (i.e., glaciation and weathering) and characteristics (landforms, bodies of water, climate, vegetation) influence human settlement and activity in Ohio.

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; and building dams.

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; Introduction of new species.

6th. Describe ways in which human migration has an impact on the physical and human characteristics of places including: urbanization; desertification; deforestation.

6th. Describe ways humans depend on and modify the environment and the positive and negative consequences of the modifications including: dam building; energy production/usage; agriculture; urban growth.

8th. Analyze how physical characteristics of the environment influenced population distribution, settlement patterns and economic activities in the United States during the 18th and 19th centuries.

9th. Explain the causes and consequences of urbanization including economic development, population growth and environmental change.

Geography (Movement)

6th. Explain push and pull factors that cause people to migrate from place to place including: Oppression/Freedom; Poverty/Economic opportunity; Cultural ties; Political conflicts; Environmental factors.

9th. Analyze the social, political, economic and environmental factors that have contributed to human migration now and in the past.

Economics (Government and the Economy)

10th. Demonstrate how U.S. governmental policies, including taxes, antitrust legislation and environmental regulations affect individuals and businesses.

Citizenship Rights and Responsibilities (Participation)

9th. Analyze how governments and other groups have used propaganda to influence public opinion and behavior.

10th. Describe the ways in which government policy has been shaped and set by the influence of political parties, interest groups, lobbyists, the media and public opinion with emphasis on: Extension of suffrage; Labor legislation; Civil rights legislation; Military policy; Environmental legislation; Business regulation; and Educational policy.

Social Studies Skills and Methods (Obtaining Information)

2nd. Obtain information from oral, visual and print sources.

Human Migration 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.

capacity. The maximum amount or number that can be contained or accommodated.

classification. Systematic arrangement in groups or categories according to established criteria.

community. Interacting population that live in a defined habitat.

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.

emigration. A category of population dispersal covering one-way movement out of the population area.

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.

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.

habitability. Suitable for a dwelling place.

habitat. The place or environment where a plant or animal naturally or normally lives and grows.

immigration. Coming into the population.

landform. A natural feature of a land surface.

method. A systemic procedure, technique, or mode of inquiry employed by or proper to a particular discipline or art.

natural. Existing in, or produced by nature.

observe. To watch carefully, especially with attention to details or behavior for the purpose of arriving at a judgement.

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.

resource. Industrial materials and capacities (as mineral deposits and waterpower) supplied by nature (earth science) and substances used by an organism for survival (biology).

species. A group of organisms consisting of similar individuals capable of exchanging genes or interbreeding.
technology. Human innovation in action that involves the generation of knowledge and processes to develop systems that solve problems and extend human capabilities. The innovation, change, or modification of the natural environment to satisfy perceived human needs and wants.
trait. An inherited characteristic.