

Archaeology (Distance Learning)
Description and Resource Materials

Origination:	Ohio Historical Center 614.297.2663 or 800.850.3245
Program:	Archaeology
Availability:	Monday, Tuesday, Wednesday, and Thursday September through May
Time Allowance:	45-60 minutes per program
Grades:	4 th , 6 th , adaptable to up to grade 12
Cost:	\$ 50.00 per program (inside of Ohio) \$125.00 per program (outside of Ohio)

Description:

What is archaeology? Why is this science important to history? By interacting with the presenter of this presentation students will learn the basic terms, methods, and tools of archaeology. There will be a compare and contrast of the archaeology was performed and interpreted between the past to its practice today.

Ohio Social Studies Academic Content Standards Addressed:

History. Students use materials drawn from the diversity of human experience to analyze and interpret significant events, patterns, and themes in the history of Ohio, the United States, and the world.

Grades 3 – 5

Benchmark A. Construct time lines to demonstrate an understanding of units of time and chronological order.

Chronology

Grade 4

1. Construct time lines with evenly spaced intervals for years, decades and centuries to show the order of significant events in Ohio history.

Grades 6 – 8

Benchmark A. Interpret relationships between events shown on multiple-tier time lines.

Chronology

Grade 6

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

People In Societies. Students use knowledge of perspectives, practices, and products of cultural, ethnic, and social groups to analyze the impact of their commonality and diversity within local, national, regional, and global settings.

Grades 3 - 5

Benchmark A. Compare practices and products of North American cultural groups/

Cultures

Grade 4

1. Describe the cultural practices and products of various groups that have settled in Ohio over time: Paleoindians, Archaic Indians, Woodland Indians (Adena and Hopewell) and Late Prehistoric Indians (Fort Ancient)

Geography. Students use knowledge of geographic locations, patterns, and processes to show the interrelationship between the physical environment and human activity, and to explain the interactions that occur in an increasingly interdependent world.

Grades 3 – 5

Benchmark A. Use map elements or coordinates to locate physical and human features of North America.

Location

Grade 4

1. Use a linear scale to measure the distance between places on a map.

Social Studies Skills and Methods. Students collect, organize, evaluate, and synthesize information from multiple sources to draw logical conclusions. Students communicate this information using appropriate social studies terminology in oral, written, or multimedia form and apply what they have learned to societal issues in simulated or real-world settings.

Grades 3 – 5

Benchmark A. Obtain information from a variety of primary and secondary sources using the component parts of the source.

Obtaining Information

Grade 4

3. Use primary and secondary sources to answer questions about Ohio history.
4. Describe how archaeologists and historians study and interpret the past.

Benchmark B. Use a variety of sources to organize information and draw inferences.

Thinking and Organizing

Grade 4

5. Identify main ideas and supporting details from factual information.
6. Distinguish between fact and opinion.

Benchmark D. Use problem-solving skills to make decisions individually and in groups.

Problem Solving

10. Use a problem-solving/decision-making process which includes: a. Identifying a problem; b. Gathering information; c. Listing and considering options; d. Considering advantages and disadvantages of options; e. Choosing and implementing a solution; f. Developing criteria for judging its effectiveness.

Science Academic Content Standards Addressed:

Scientific Inquiry. Students develop scientific habits of mind as they use the processes of scientific inquiry to ask valid questions and to gather and analyze information. They understand

how to develop hypotheses and make predictions. They are able to reflect on scientific practices as they develop plans of actions to reate and evaluate a variety of conclusions. Students are also ale to demonstrate the ability to communicate their findings to others.

Grades 3 – 5

Benchmark A. Use appropriate instruments sagely to obvaseve, measure and collect data whuyn conducting a scientific investigation.

Scientific Inquiry

Grade 4

1. Select the appropriate tools and use relevant safety procedures to measure and record length, wiight, volume, temperature, and area in metric and English units.
3. Develop, design, and conduct safe, simple investigations or experiments to answer questions.
6. Formulate instructions and communicat data in a manner that allows others to understand and repeat an investigation or experiment.

Grade 5

1. Select and safely usde the appropriate tools to collect data when conducting investigation and communicating findings to others (e.g., thermometers, timers, vbalances, spring scales, magnifiers, microscopes, and other appropriate tools).
2. Evaluate observations and measurements made by other people and identify reasons for any discrepancies.
3. Use evidence and ovbservations to explain and communicate the results of investigations.

Grades 6 - 8

Benchmark A. Explain that there are differing sets of procedures for guiding scientific investigations and procedures are determined by the nature of the investigation, saafety, considerations, and appropriate tools.

Scientific Inquiry

Grade 6

2. Choose the appropriate tools or instruments and use relevant safety procedures to complete scientific investigations.
3. Distinguis between and observation and inference.
4. Explain that a single example can never prove that something is always correct, but sometimes a single example can disprove something.

Grade 7

4. Choose the appropriate tools and instuments and use relevant safety procedures to complete scientific investigations.
5. Analyze alternative scientific explanations and predictions and recognize that there may be more than one good way to intepret a given set of data.
6. Identify faulty reasoning and statements that go beyond the evidence or misinterpret the evidence.

7. Use graphs, tables, and charts to study physical phenomena and infer mathematical relationships between variables (e.g., speed and density).

Grade 8

1. Choose the appropriate tools or instruments and use relevant safety procedures to complete scientific investigations.
2. Describe the concepts and sample size and control and explain how these affect scientific investigations.
3. Read, construct, and interpret data in various forms produced by self and others in both written and oral form (e.g., tables, charts, maps, graphs, diagrams, and symbols).
4. Apply appropriate math skills to interpret quantitative data (e.g., mean, median, and mode).

Scientific Ways of Knowing. Students realize that the current body of scientific knowledge must be based on evidence, be predictive, logical, subject of modification, and limited to the natural world. This includes demonstrating an understanding that scientific knowledge grows and advances as new evidence is discovered to support or modify existing theories, as well as to encourage the development of new theories. Students are able to reflect on ethical scientific practices and demonstrate an understanding of how the current body of scientific knowledge reflects the historical and cultural contributions of women and men who provide us with a more reliable and comprehensive understanding of the natural world.

Grades 3 – 5

Benchmark A. Distinguish between fact and opinion and explain how ideas and conclusions change as new knowledge is gained.

Nature of Science

Grade 4

1. Differentiate fact from opinion and explain that scientists do not rely on claims or conclusions unless they are backed by observations that can be confirmed.
2. Record the results and data from an investigation and make a reasonable explanation.
3. Explain discrepancies in an investigation using evidence to support findings.

Grade 5

1. Summarize how conclusions and ideas change as new knowledge is gained.
2. Develop descriptions, explanations, and models using evidence to defend/support findings.

Benchmark C. Explain the importance of keeping records of observations and investigations that are accurate and understandable.

Ethical Practices

Grade 4

4. Explain why keeping records of observations and investigations is important.

Grade 5

5. Keep records of investigations and observations that are understandable weeks or months later.

Grades 6 – 8

Benchmark A. Use skills of scientific inquiry processes (e.g., hypothesis, record keeping, description, and explanation).

Ethical Practices

Grade 6

2. Escribe why it is important to keep clear, thorough, and accurate records.

Grade 7

1. Show that the reproducibility of results is essential to reduce bias in scientific investigations.

Grade 8

2. Explain why it is important to examine data objectively and not let bias affect observations.

Archaeology Glossary:

analyze. To study something carefully, to look for evidence.

archaeology, archaeologist. The systematic study of human societies in the distant and recent past by the careful examination of preserved remnants of their settlements and artifacts

artifact. Any object made or used by a person

B.C.E. Before the Common Era (also referred to as B.C.).

barter. The trade of goods and services for other goods and services without the use of money.

C.E. In the Common Era (also referred to as A.D.).

culture. Learned behavior of a group of people, which includes their belief systems and languages, their social relationships, their institutions and organizations, and their material goods such as food, clothing, buildings, tools, and machines.

diffusion. The spread of people, ideas, technology, and products from one place to another..

division of labor. The separation of the total work required to produce a good or service into individual interrelated tasks.

earth-sun relationship. The position of the sun that helps to determine day and night, seasons, and time zones.

effigy. Something, such as a statue or model, made in the form of a person or an animal

excavate, excavation. To uncover by carefully digging

extinct. No longer active or existence; having no living descendant.

Feature. Physical remnant of an activity at an archaeological site, such as a hearth or refuse pit or a hole that once held the wall post of a house

flint. A fine-grained, very hard rock that breaks with sharp cutting edges and, when struck with steel, produces a spark

flintknapping. The process of shaping flint into an arrowhead or tool.

goods. Objects that are capable of satisfying people's wants.

grid. A checker board-like series of squares that an archaeologist establishes on a site to facilitate recording locations of artifacts and features accurately

midden. A deposit of trash left at a settlement

natural resource. A productive resource supplied by nature (e.g., ores, trees, arable land).

prehistoric. Refers to human societies that did not record events in their lives in a form of writing that has been preserved to the present time..

primary source. An account of an event by someone who was present at the event.

product. Something produced by human or mechanical effort or by a natural process.

scarcity. The lack of sufficient resources to produce all the goods and services that people desire.

secondary source. An account of an event by someone who was not present at the event.

sherd. A fragment or broken piece of an artifact, especially of pottery

simulate. Imitate, pretend

site. Any place where people have lived or worked

sinew. Animal tendon used as thread for sewing

Tools:

bucket. A tool that archaeologists use to carry dirt from the excavation to screens where it is sifted to recover small pieces of bone, pottery, etc.

dustpan. A tool into which an archaeologist scrapes dirt with the trowel to transfer it to the bucket.

line level. A tool attached to a string to make sure it is level; used to measure depth of an artifact.

metric measure tape. A tape, marked off in centimeters, that an archaeologist uses to measure the location and depth of an artifact.

plum bob. A tool that is very important for making accurate measurements at an archaeological site

trowel. A tool that the archaeologist uses to carefully remove thin layers of soil during an excavation

whiskbroom and small brushes. Tools used to gently brush the dirt away from the artifact.

Archaeology Glossary:

adaptation. Change to suit the environment

analyze. To study something carefully, to look for evidence.

archaeologist. One who systematically recovers and examines physical evidence of past human activity and then attempts to explain a people's way of life from this evidence.

archaeology, archaeologist. The systematic study of human societies in the distant and recent past by the careful examination of preserved remnants of their settlements and artifacts

artifact. Any object used or made by human beings that can be brought into a laboratory for study.

astronomical alignment. This pertains to Fort Ancient State Memorial and the straight line between an opening in the earthen walls and a mound during the Summer Solstice.

B.C.E. Before the Common Era (also referred to as B.C.).

barter. The trade of goods and services for other goods and services without the use of money.

baulk. A wall of dirt left between adjacent squares, which provides tight controls of measure.

bucket. A tool that archaeologists use to carry dirt from the excavation to screens where it is sifted to recover small pieces of bone, pottery, etc.

C.E. In the Common Era (also referred to as A.D.).

core samples. A soil sample taken by forcing a tube into the ground and pulling it out with the soil inside.

culture. Learned behavior of a group of people, which includes their belief systems and languages, their social relationships, their institutions and organizations, and their material goods such as food, clothing, buildings, tools, and machines.

diffusion. The spread of people, ideas, technology, and products from one place to another..

dig. Common term for an archaeologist excavation of digging in a controlled manner.

dustpan. A tool into which an archaeologist scrapes dirt with the trowel to transfer it to the bucket.

effigy. Something, such as a statue or model, made in the form of a person or an animal

environment. All of ones surroundings

excavate. The act of removing earth in a controlled manner in order to expose to view potential underlying cultural features and artifacts.

exports. Carrying goods to another place

extinct. No longer active or existence; having no living descendant.

feature. Physical remnant of an activity at an archaeological site, such as a hearth or refuse pit or a hole that once held the wall post of a house. Any distinctive marks found in a dig (discoloration of soil) that can not be normally transported into the laboratory.

flint. A fine-grained, very hard rock that breaks with sharp cutting edges and, when struck with steel, produces a spark

grid. A checker board-like series of squares that an archaeologist establishes on a site to facilitate recording locations of artifacts and features accurately

hilltop enclosure. Walls built of earth by people along the summit of high hills

historic. Written record from a past time or culture

imports. Bringing goods from another place

line level. A tool attached to a string to make sure it is level; used to measure depth of an artifact.

metric measure tape. A tape, marked off in centimeters, that an archaeologist uses to measure the location and depth of an artifact.

midden. A deposit of trash left at a settlement

natural resource. A productive resource supplied by nature (e.g., ores, trees, arable land).

plum bob. A tool that is very important for making accurate measurements at an archaeological site. Used to establish the datum point where all other points are measured.

prehistoric. Existing in time before written history. Refers to human societies that did not record events in their lives in a form of writing that has been preserved to the present time.

primary source. An account of an event by someone who was present at the event.



secondary source. An account of an event by someone who was not present at the event.
Sherd (shard). A fragment or broken piece of pottery.
site. The place of location containing human activity
square. The unit or area under excavation by which earth is removed to recover archaeological artifacts and features.
stratum/stratigraphy. Horizontal layers of soil. Usually the deeper the strata, the older the object found in them.
technology. A method for handling a specific problem
test trench. A narrow ditch dug through a possible site to ascertain the depth of certain soils and to look at the soil layers called stratigraphy in the likelihood of finding artifacts and or features in that location.
trowel. A tool that the archaeologist uses to carefully remove thin layers of soil during an excavation
whiskbroom and small brushes. Tools used to gently brush the dirt away from the artifact.

This program originates from the Ohio Historical Center which is operated by the Ohio Historical Society, a nonprofit organization that serves as the state's partner in preserving and interpreting Ohio's history, archaeology, and natural history

