Archaeology Interest Project Patch

For Cadette and Senior Girl Scouts of
Black Hawk Council

Created by Jolene Kuehn

Required for all Cadettes/Seniors: 2 skill builders, 1 technology, 1 service project, 1 career and 2 additional activities taken from any section.

Please read the background information booklet and skim through the glossary. This will provide you with the background information needed to earn this Interest Project Patch.

Skill Builders (2)

- Learn the definition of Archaeology and how it differs from the related fields of Paleontology, Geology, and History.
- Find out how Archaeologists make discoveries about the past. Learn about a recent archaeological discovery in your state, country, and in the world. Compare them. How are they different or the same.
- Archaeologists make maps of archaeological sites and artifact locations. Practice map making in your backyard or school yard. Be sure and map both natural and cultural (human made) objects.
- Learn why Archaeology is important, and why you should be a good "steward" to archaeological sites. Learn about some federal laws that help to protect archaeological sites. Find out information about the following laws.
    1) The Antiquities Act of 1906
    2) Historic Sites Act of 1935
    3) National Historic Preservation Act (NHPA) of 1966
    4) Archaeological Resources Protection Act (ARPA) of 1979
    5) Native American Graves Protection and Repatriation Act (NAGPRA) of 1990
- Make a time-line for your state. Start with the oldest known inhabitants on one end and work your way up to the present. Add approximate dates and some developments in technology on your time line.
- Work on you family's genealogy. In writing down you family history, think about how archaeology could help you understand the everyday life of your ancestors.

Technology (At least 1)

- Learn about how archaeologists date sites and artifacts. Be able to define and tell about the following archaeological dating techniques.

1) Radio Carbon Dating
2) Dendrochronology
3) Relative Dating
4) Statigraphy
5) Archaeoloagnatism

- Find out what tools an archaeologist uses during an excavation and how they use them. Find out what tools an archaeologist uses in the lab.

- Try you hand at experimental archaeology! Study the way in which prehistoric peoples made tools. Try your hand at flint knapping and make a stone tool. Learn how to make cordage (rope), or make a clay pot.
- Research and prepare a Native American meal. Corns, beans, squash, peppers and wild rice were all cultivated in the Americas for thousands of years. Remains of these foods are found at archaeological sites. Prepare a Native American dish.

Service Projects: (At least 1)

- Volunteer at a local museum. Many local or state museums have volunteer programs that offer training to work as a museum docent or guide, or to work on the archaeology collection.
- Volunteer to do a presentation to a school or after school club. This would allow you to share what you have learned about archaeology.
- Volunteer to help monitor or work at an archaeological site. Contact your local historical society or the State Archaeologist where you live.
- Visit a lab or archaeological site, help to wash artifacts as they come in from the field.
- Participate in a grave yard study.

Some states need help in recording information from old cemeteries. In Wisconsin, call or writhe the Wisconsin State Old Cemetery Society, 1562 N. 119 Street, Wauwautosa, WI 53226. The current Archivist (as of 09/01) is Robert Felber (414) 355-6252. Each county in Wisconsin has a representative who may be able to help you.

OR

Help to maintain a cemetery that is in disrepair. Contact the caretaker or owner of the cemetery to get permission. They will also help you determine what needs to be done, and the laws and regulations that go along with it.

OR

Do a cemetery study to learn more on your own. (You will still need to ask for permission first) Start by recording the ages of the graves and making a map of the headstones. What can be deduced from the graves and your map? Are most of the graves recent, or older? All the graves from one time period clustered together? In what time period do you find most of the graves? Do any of the deaths have similar dates that would indicate an epidemic? Is there an average life span in the cemetery? Is the average life span change in different time periods? What sort of decorations do the stones have? Do they change through time? What else can you learn from the gravestones?

Career Exploration: (At least 1)

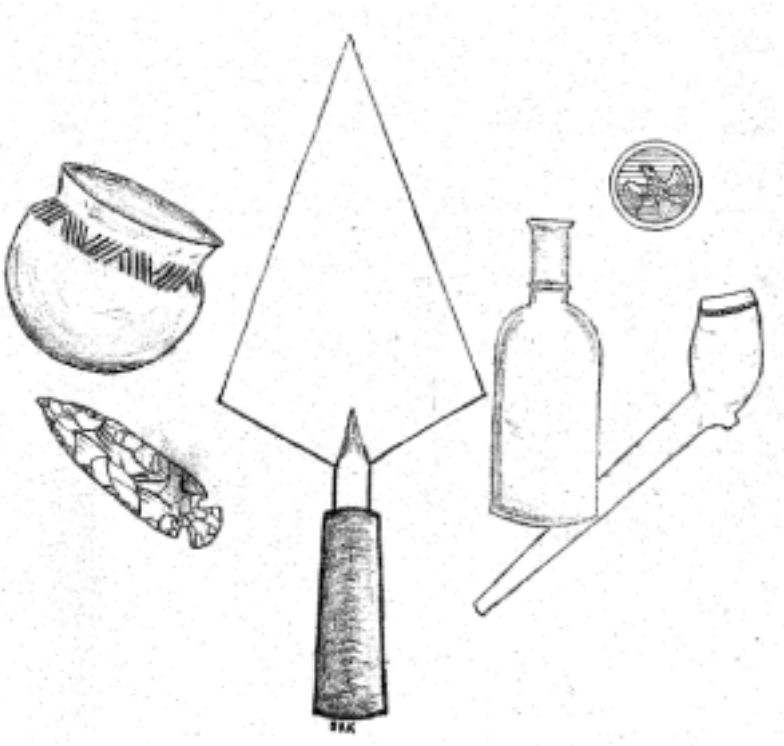
- Talk with an archaeologist. Interview them and find out why they chose this career path. Find out about the classes they found the most helpful in school and what kind of education they needed to advance in their field.

- Pick an area of science, math or social studies that you are interested in. Archaeology borrows techniques and methods from many other fields. Find out how archaeologists use that science in the lab or the field. Here are some examples of fields/topics to choose from: Geometry, Chemistry, Geology, History, Botany or Zoology

- Visit a Historic Site in your area. Find out how Archaeology has assisted the site staff in interpreting the history of the site.

Archaeology Interest Patch
Informational Booklet
For Cadette and Senior Girl Scouts

By Jolene Kuehn



Girl Scouts of Black Hawk Council
2710 Ski Lane
Madison, WI 53713
800-236-2710
608-276-8500

Table of Contents

What is Archaeology?

Archaeology is the study of people who have lived in the past. Archaeologists study people who lived in the past through the objects that they left behind. These **material remains** are things like broken dishes, metal spoons, arrowheads, food remains, or even a garbage heap. Archaeologists look through these material remains or objects to try and get a picture of what life was like for the people who left these objects or artifacts behind. **Artifacts** are any objects that are made, used, or modified by humans. The *relationship* between the artifacts and where the items are found is just as important, if not more, than the artifact itself. Archaeologists are like detectives, piecing together pieces of the past.

Archaeology is a subfield or branch of Anthropology, which is the study of people. The other branches are Physical Anthropology, Cultural Anthropology, and Linguistics (See the Glossary for definitions).

Archaeology is further divided into different subfields. The first is **Prehistoric** Archaeology. Prehistoric means "before writing" and in Wisconsin, this relates to the study of the Native Americans who lived here before written records. This time period began about 12,500 years ago and ended about 1600 AD, when Jean Nicollet arrived in Green Bay (1634). **Historic** Archaeology is the study of past people who had written records. In Wisconsin, historic people included the immigrants who came here from Europe and who brought writing with them and the Native Americans who lived here after 1600 AD. **Classical** Archaeology is a form of Historic Archaeology. If you are a Classical Archaeologist, you study ancient civilizations in Europe, the Middle East, or other areas. The last subfield is **Underwater** Archaeology. As you may be able to guess, this kind of archaeology deals mainly with shipwrecks and associated artifacts.

Archaeologists find and record artifacts and features at **archaeological sites**. **Features** are artifacts that are immovable, such as fire hearths, house foundations, or other activity areas. An archaeological site is a place where human activity took place and material remains were left behind. These places might be a village or town, but could also be a temporary camp or cemetery. Essentially, it is a place where people have been and have left evidence that they were there. The relationship between artifacts and features and where they are found is called **context**.

Artifacts that are found at archaeological sites may have been lost, thrown away, or purposefully put in a protected place. They can be thousands of years old, or just a few decades old. Artifacts can be broken and in pieces, or may be found intact. As you can guess, most of the time artifacts are found broken. Artifacts can be made of bone, stone, metal, glass, or clay. They may be clothing items, items used for cooking or food storage, tools and utensils or personal items, such as jewelry.

The materials that artifacts are made of depend on how old they are. For example, if you have a site that was occupied by prehistoric Native Americans, you may find flakes of stone from **flintknapping**, stone tools, and the remains of clay storage vessels. A more recent site may have artifacts such as window and bottle glass, nails, **mortar,** and brick, or other modern artifacts.

Food remains are in a special category. Plant remains (such as seeds and nutshell) are referred to as **floral** remains and animal remains (such as bone, shell, and fish scales) are called **faunal** remains. Human remains are also studied by archaeologists.

Over time, artifacts left by one group of people can be buried or trampled by another group. Over hundreds or even thousands of years, artifacts and soil can build up. Usually, this means that the oldest archaeological sites and artifacts are underneath more modern ones. This is the **Principle of Superposition**. **Stratigraphy** is the order in which layers have formed in an archaeological site. In general, the oldest artifacts will be in the bottom layers, while the youngest layers will be on top. Unfortunately, artifacts do move around between and within layers. Rodents burrowing can disturb the soil and can move artifacts around, as well as move the soil itself.

Frost heaving, caused when water in the soil freezes and moves upwards, may displace soil and artifacts. People can also move artifacts around, through farming, construction and other activities.

How do Archaeologists find Archaeological Sites?

Archaeologists find sites in a variety of ways. Sometimes land owners will report finding artifacts on their property; other times construction, farming, or erosion will uncover sites. Archaeologists will often do an archaeological **survey** if artifacts are reported, or if an area of land is slated for construction. A survey is a systematic search for archaeological sites. It may include surface inspection if an area is plowed farmland, or through **shovel testing.** Shovel tests are small round or square holes that are dug in the ground. The dirt from the shovel test is screened, and the archaeologist looks for artifacts in the screen. Shovel tests may be done across a whole area in a grid-like pattern to determine whether a site is located on a property. The soil deposition (how much soil accumulates over time) is the determining factor in how deep the shovel tests need to be dug. In some areas, the soil may not accumulate as fast. In other areas, such as flood plains, the soil will build up a number of feet each year.

Once an archaeological site is located a research design is developed. This research design is used to answer any questions that the archaeologist may have, or to determine whether a site is of importance. Excavation is the primary way in which archaeologists learn about sites. Excavation usually takes place in large square or rectangular **excavation units**, which are dug in arbitrary levels. The excavators use tools such as shovels, screens, trowels, string, measuring tapes, buckets, and bags. Before any digging begins, a grid or series of square excavation units is laid out and the site is mapped. This grid helps the archaeologist keep track of the horizontal and vertical location of everything found at a site.

Archaeologists use many tools in their work. In addition to the ones listed above, the most important are the notebook and records kept during field work. Since archaeologists essentially destroy a site as they excavate, they must keep track and make maps of everything that they find. The relationship of artifacts and features found is especially important.

Related Fields of Study

Archaeology borrows from many other fields and disciplines. **Paleontology** is the study of the fossil remains of plants and animals. People often confuse this field with the field of Archaeology, especially on television and in movies. An easy way to keep the two straight is to realize that it takes millions of years to make a fossil (when a bone or other organic material is replaced by stone or mineral) and that people were not yet in existence when dinosaurs were around. Time is a large factor separating the two fields. The only similarity is that they both require digging, but even that similarity is not close. Archaeologists dig in soil, while Paleontologists dig in rock. Sometimes an extinct animal is found in association with artifacts left by humans. This would still be considered archaeology, because the animal remains are associated with artifacts and other evidence of human activity. People did not exist during the time of dinosaurs.

Archaeology borrows from **History**, especially when dealing with historic sites. Maps, journals, diaries, books, and letters are often used to find the location of historic sites. An interesting note about historic writing: when people recorded information about the past, they didn't include everything that was happening in their lives. Also, books, newspaper articles, and other writings were often about prominent people. This means that the lives of the everyday "average" person is often forgotten or overlooked. Archaeology helps to put the pieces of the puzzle back together and helps historians to fill gaps in history. Written records can also help to date an archaeological site or artifact.

Geology is a similar field of study that can be used in archaeology. Geology is the study of the earth's crust, which includes the rock, soil, and terrain. Knowledge in this field can be helpful to an Archaeologist in many ways. A **projectile point** or **arrowhead** made by prehistoric people may be made of a certain kind of rock that is not available locally. In this case, either the projectile point or the material to make it was obtained through trade with Native American groups from other areas. The type of soil in an area can also be a useful clue to the type of **preservation** that you might have at an archaeological site.

Protecting the Past

Why do archaeologists study the past? The past can give us information about the history of people and how they lived. The study of Archaeology can give us information on the food people ate, their technology, the diseases they suffered, and what their belief systems. Archaeology is a science that actually destroys what it is studying. This is one of the reasons that is important not to disturb an archaeological site, unless you are a trained archaeologist or working with one.

An archaeological site is like a time capsule, with artifacts that tell a story, and those stories are beginning to disappear. That is why protecting archaeological sites are so important. Here are some ways that you can help to protect archaeological sites.

- Never dig for artifacts unless you are working with a Professional Archaeologist. Archaeologists have to go to school for many years to learn analysis and excavation techniques. Interpreting what artifacts mean or represent is a very significant part of Archaeology. So, don't be a **Pothunter!** (See definition below)
- If you discover artifacts, take a picture or make a drawing, but then leave the artifact in place. If you can, make a map of where you found the object. Then, contact your local historical society, or in Wisconsin contact the Office of the State Archaeologist at (608) 264-6495.
- If you see someone else who is digging for artifacts illegally, especially on public land, report what you have seen. If it is in a park, tell a park ranger, site manager, or other responsible official.
- Volunteer with local historical societies to help protect archaeological sites from **looting**, pot hunting, or vandalism.

There are several Federal laws that help to protect archaeological sites. See the *Skill Builders* section of the Cadette and Senior Girl Scouts Interest Patch for details on how to find out more about these laws. Here are some of the basics to get you started.

- **Antiquities Act of 1906**. This law protects artifacts and archaeological sites on public lands. In particular, this law focused on prehistoric sites and sites out west.
- **Historic Sites Act of 1935**. This act protects sites that have exceptional value and authorizes them to be protected as national historic landmarks. Several National Park service programs operate under this Act.
- **National Historic Preservation Act of 1966 (NHPA**). This act provides for federal grants and protection to the state and local levels. This Act was granted because more archaeological sites and historic buildings were being destroying as a result of economic development than through Pothunting or vandalism
- **Archaeological Resources Protection Act (ARPA) of 1979**. The Archaeological Resources Protection Act was created in response to looting and vandalism of archaeological sites. It prohibits unauthorized excavation of archaeological sites and artifacts on Federal and Tribal lands, and establishes civil and criminal penalties for violations.
- **Native American Graves Protection and Repatriation Act (NAGPRA) of 1990**. NAGPRA clarifies ownership of Native American cultural items from Federal or Tribal land; cultural items include human remains, burial items, and sacred objects. It establishes a process for returning cultural items to Native American tribes.

A **Pothunter** is someone who steals artifacts from or damages an archaeological site. These people take what they want from an archaeological site and leave the rest, ruining the context in which the artifacts are found and destroying the picture of the past. Pothunters either keep the artifacts for themselves or sell them for money. Either way, they remove a piece of the archaeological puzzle and remove artifacts from public knowledge and view. It is information that is lost forever.

How Old is This?

Archaeologists are able to date artifacts and archaeological sites through a variety of methods. Some methods are chemical tests that are very expensive. Some of these tests can only be done on certain kinds of artifacts, and only with special equipment. Other methods are more basic and can be done by using the written record or by looking at where artifacts lie in the soil. Sometimes it is only possible to determine if one object is older or younger than another. This can often be estimated from the style of objects and their position in the soil. This is one of the reasons that the context of artifacts and features is so important.

One of the latter methods is called **Stratigraphy**. This is the layering of deposits at Archaeological sites. Cultural remains and natural sediments become buried over time; the basic principle is that the oldest layer is on the bottom, while the youngest layer is on top. **Seriation** is a dating method that relies on the fact that the popularity of cultural traits will change and peak over time. Styles of music, clothing, and artifact types all have peaks in popularity and then gradually fade away. In this dating method, the scientist will look at a "slice of time" in graph form to see what types of cultural traits are the most popular. A familiar example is music recordings. In the 1950s, records were widespread, used by everyone. In 1960's, 8-track tapes began to be used, and competed with records in popularity, then came cassette tapes and now compact disks. So, if you have an **artifact assemblage** that has 8-tracks and records, it probably dates to the early 1960's. If you have an assemblage with some 8-tracks, many cassettes, and no compact disks, it likely dates later in time, such as the 1980's.

Cross- Dating or **Relative Dating** is another way for archaeologists to date sites and soil layers through **diagnostic** artifacts. **Diagnostic** artifacts are indicative of a particular time period and/or cultural group of people. For example, prehistoric pottery with grit temper is diagnostic of Native Americans from the Woodland time period. In **Cross-Dating**, archaeologists assume that artifacts dated at one archaeological site will be of the same approximate age when found at another site.

The most popular dating method used in Wisconsin is probably **Radiocarbon Dating.** This dating method was first used in the 1950's and revolutionized the field of archaeology. It can be used to date **organic** remains such as charcoal, bone, or plant remains and can be used to date remains up to approximately 40,000 years old. This method measures the radioactivity that is given off by carbon 14 atoms or it counts the atoms. Throughout life, living creatures take in radio active carbon as they breath; this stops when they die and the radio carbon starts to decay. Older objects are less radioactive than younger objects. Although this method is fairly accurate, specimens can become contaminated. The amount of radiocarbon in the atmosphere has changed over time, so the dates are always represented as a range. For example, a piece of bone radiocarbon to 2,000 B.P. +/- 100 years. Thus, an archaeologist would state that the piece of bone was between 2,100 and 1,900 years old.

Dendrochronology or **tree ring dating** is a method that can be used on wooden objects. By counting the annual (yearly) rings and matching up ring patterns to a tree that has been cut down at a known date, Archaeologists can determine the age of a wooden artifact. One of the shortcomings of this method is that not all wooden objects survive. This is especially true in acidic, northern climates such as Wisconsin. In the United States, this method is often used in the dry, arid Southwest where wooden objects do survive. Wooden objects will also survive in wet bogs in Florida.

There are many other methods of dating artifacts and archaeological sites. This section was meant to get you started, but does not represent everything that you need to know about dating techniques. To complete the technology section of your interest patch, please make a trip to your local library or check on the Internet for more information.

Time Periods in Wisconsin

Archaeologists and other historians often refer to a prehistoric date as being B.P. or B.C./A.D. B.P. means Before Present. For example, if an Archaeologist said that a site dates to 3,000 years B.P., it means that people lived at the site 3,000 years ago. B.C. means before Christ, or before the Christian Era. This dating system reflects our own calendar system in which Christ's birth is marked at zero. A.D. refers to the Latin term *anno domini*, which refers to time passed since the birth of Christ. For example, the year that this booklet is being written is 2002, or 2002 A.D. If an archaeological site is dated as 3,000 years B.P., we could also express that as 998 years B.C. We can also express this mathematically 3,000 –2,002 = 998 years.

Archaeologists divide the prehistory and history of Wisconsin into a number of different time periods. We'll start with the oldest time period and end with the most recent. Archaeologists have named these time periods based on the technology and other traits that are represented in the archaeological record. These are not the names that the people from these time periods called themselves, rather, they are the names that Archaeologists have given them. Also, since there was no state of Wisconsin until 1848, these groups of people did not have the same territorial boundaries as we have today.

The changes between these time periods are gradual or **time transgressive**. What this means is that not everyone adapted new forms of technology at the same time. Let's take the example of pottery. Not everyone throughout the state adopted the use of pottery at the same time. Therefore, the Woodland time period began in different areas of the state at different times.

Paleoindian: 12,000-8,000 BC

These are the first people present in Wisconsin and are the earliest Native Americans. These people were **nomads,** which means they moved seasonally across the landscape, and did not occupy large villages or other long-term campsites. We find evidence of their presence in Wisconsin through large, finely-made spear points and other stone tools; they did not have pottery.

Since this was so long ago, we don't have a lot of archaeological evidence from this time period. We do know that these people hunted large **extinct** game such as mammoths and mastodons. These people were once known as big game hunters, but recent archaeological evidence shows that they also hunted smaller animals such as deer and other mammals. Paleoindians most likely gathered plants and lived by the seasons, hunting deer and other animals in the fall and gathering wild plants and fishing in the summer.

Archaic: 8,000-500 BC

During the Archaic, Native American groups became more distinct, occupying all of North America. Archaic Native American groups still hunted for food, but they also gathered and used plants and aquatic resources such as fish and shell fish. They lived in small, mobile groups of people who moved around the landscape according to the seasons. There were more people in Wisconsin during this time period than when the Paleoindians lived here.

There were many technological changes during this time period. The first **milling stones** date to this time period, providing the first evidence of plant processing, perhaps for grinding seeds into a mush or meal.

Groundstone tools, such as axes or adzes used for wood working first appear duing this period, as do the first recognizable fishing tools. Copper artifacts appear during the Archaic, indicating metal working technology. Domesticated dog burials are also found at Archaic sites. Although there was a lot of change in technology during this time period, the people still did not have pottery nor did they farm.

Woodland: 500 BC-1600 AD

The beginning of the Woodland time period is characterized by three distinct changes: the adaptation of ceramics (pottery), the use of burial mounds and plant cultivation. The manufacturing of pottery is the main technological change defining this period. During this time period, people began to make pottery vessels out of local clay and **tempered** them with grit or crushed rock. Tempering pottery made them less likely to break when firing and also made the walls of the pot a lot stronger. These pots were made with a cord wrapped paddle and decorated with various designs such as stamping, pinching, incising, and impressing. These pots were roughly cone-shaped in form.

It was during this time period, and possibly a little earlier, that you begin to see the use of mounds and mound groups in Wisconsin. Most, but not all, **conical** and **linear** mounds were used for burials. Some may have been used as territory markers. Later in this time period we see effigy mounds, which are mounds that are shaped like animals. Some effigy mounds also contained burials. Those without may have served as clan totems.

Plant Cultivation also began during this time period. Plant cultivation means that people were selectively growing and modifying wild plants to be used as a regular source of food. Some important Native American plant foods include squash, corn, and wild rice. Many plants were also important sources of medicine.

Oneota: 900 AD-1600 AD

The Oneota (pronounced Own-ee-owe-ta) people lived in large villages along waterways and lake shores. In the southern part of the state, the Oneota were farmers who grew corn, beans, and squash (the three sisters). In the northern part of the state, the Oneota were unable to farm because of the short growing season. Here they concentrated on hunting, fishing, and plant gathering; wild rice was also an important dietary item in northern Wisconsin.

The Oneota made distinct pottery vessels that were tempered with crushed mussel shell. Both their lifestyle and their style of pottery differed from the Woodland peoples. Their pottery is best described as jars which were used for food storage and for cooking. The jars were scraped smooth, rather than treated with a cord-wrapped paddle like the Woodland people. The jars were squat, round-bottomed jars with wide mouths and flaring rims. The Oneota people also decorated their pottery in a distinct way, often with geometric, trailed or scrolling lines.

Aztalan: 1100 AD-1300 AD

Aztalan is an unusual archaeological site in Wisconsin. Sometime about 1100 AD, a group of Native Americans of the Mississippian Culture moved into Wisconsin from the south, most likely from Illinois. These people built a palisaded village and ceremonial center on the Crawfish River in Jefferson County. Their lifestyle was very similar to other Native American groups in the southeastern part of the United States, Illinois, and Indiana, but unlike any other groups that were found in Wisconsin.

Aztalan was a huge village which covered 21 acres of land. Inside the palisade walls, which were surrounded by watch towers, were homes, two platform mounds, and a ceremonial area. This site was only occupied for about 100-200 years.

Archaeologists are uncertain as to what happened to this group of people. These people were thought to have either moved south or were assimilated into local Native American groups. Early scientists mistakenly believed that this village was connected to the Aztec Indians in Mexico. This is why the site is known as Aztalan.

Historic Period: 1600- the present.

The land we now know as Wisconsin changed when Nicollet first arrived in Green Bay in 1634. This is considered to be the "formal" beginning of the historic period, although various white explorers may have made their way through the area sooner. The Native American groups were fascinated with European trade goods, while Europeans were interested in the numerous furs that were available. Pottery manufacture must have slowed as iron pots and kettles were acquired for cooking and food storage. Items of European manufacture, such as iron knives, axes, cloth, ornaments, muskets, and glass beads were just a few of the trade items that changed the lives of the various Native American groups forever. The trade items changed through the historic period, with some items falling into disfavor when new items were introduced. Items of Native manufacture became scarce as new, more desirable items were introduced.

Many early traders and settlers wrote about their encounters and interactions with Native American peoples. These records are a valuable source of information on a vanished way of life. During the later historic period, Euro-American settlers migrated to Wisconsin, as farmers, miners, and loggers. Many towns and settlements arose which are no longer in existence. Historical archaeologists in Wisconsin often investigate early homesteads, logging camps, mining towns, and other early settlements to find out about frontier life in the state.

For more information about this time period, and others, check your local library or history books. This section was meant to be an introduction to the time periods in history, and was not meant to be complete.

Glossary

Anthropology	The study of people, broadly speaking, and aspects of human society and culture.
Archaeology	The study of past peoples and how they lived, through the objects or artifacts left behind.
Archaeological Site	Any place where human activity occurred, and material remains were left behind.
Artifact	Any object or item made, modified, or used by people.
Artifact Assemblage	A grouping of artifacts found at a specific archaeological site; are representative of the activities and culture of the people who lived at the site.
Association	The idea that artifacts found together were likely used together and are of the same age.
Attribute	Characteristics or properties of an artifact, such as size, color, shape, or material.
Classification	Arrangement in groups of categories according to established criteria. Used by archaeologists to see patterns related to culture.
Conical	A description of the shape of a mound; round in shape.
Context	Location of an artifact at an archaeological site, and how it relates to other artifacts, and to the site as a whole.
Cross-Dating	A relative dating method that assumes that similar artifacts found at different sites will date to the same time period.
Culture	The learned ways of life shared by a group of people.
Cultural Anthropology	The study of human cultures; one of the major subfields of anthropology.
Diagnostic	A term applied to artifacts that are indicative of and unique to a particular time period or cultural group.
Ethnography	The study of the life ways of a group of people through the study of written records or oral accounts.
Extinct	No longer existing.
Faunal	Refers to animals or animal remains.
Feature	An archaeological item which is non-portable; generally refers to an activity area or facility. Features include hearths, roasting pits, garbage pits, house foundations, and burials.
Flint Knapping	A process used to make stone tools, in which pieces of fine-grained chert or flint are chipped and shaped into a tool, such as a knife or arrowhead.
Floral	Refers to plants or plant remains.
Geology	The study of the earth's crust, including the rock, soil, and terrain, and the various processes which affect the earth.
Groundstone Tools	Stone tools or items which are manufactured through grinding or light pecking, rather than through flint knapping. Examples inlcude axes, adzes, and bannerstones.
Historic	A relatively recent time period for which written records are available. In Wisconsin, this refers to the past 400 years, since the 1600s.
Hypothesis	A proposed explanation accounting for a set of facts that can be tested by further investigation.
Inference	A conclusion derived from observation.
Linear	A description of a mound shape; straight and long; the opposite of conical.
Linguistics	The study of human languages.
Material Remains	The objects and items used or modified by people. Another term for artifacts.
Midden	A trash heap or other association of artifacts not constrained within a small feature.
Milling Stone	A type of rough stone used for grinding and processing food (plants) items.
Mortar	A historic building material, used to hold together brick, stone, and similar material.
Nomads	A group of people who travel from place to place on a daily or seasonal basis; they do not settle in one location on a permanent basis.
Observation	Recognizing or noting a fact or occurrence.

Paleontology	The study of fossils, including both plant and animals.
Petroglyph	A design or picture chiseled or chipped out of a rock surface.
Physical Anthropology	The study of human beings and their ancestors as biological organisms; focuses on how humans evolved as a species.
Pictograph	An image or design painted on a rock surface.
Pothunter	Someone who steals artifacts from or damages an archaeological site; also called a looter.
Prehistoric	Refers to the period prior to the use of written records, or to a society which does not utilize written records or similar forms of documentation; literally means "before writing."
Preservation	To keep intact or from harm.
Projectile Point	A term used by archaeologists to refer to spearpoints and arrowheads.
Provenience	The exact place at a site in which an artifact is located.
Radiocarbon Dating	An absolute dating method that measures the amount of decayed radioactive carbon in organic material to determine its age.
Relative Dating	A way of dating archaeological material which only provides an approximate estimate of the relative age of the items (younger or older than other material).
Seriation	A dating method that relies on the assumption that the popularity of cultural traits will change over time, and evolve through periods of growth and decline.
Stratigraphy	The order in which layers have formed at an archaeological site; an important aspect of relative dating.
Superposition Principle	Essentially, that older artifacts and sites will lay deeper in the ground, or stratigraphically below, younger sites and deposits.
Temper	Shell, sand, or crushed stone mixed with clay for pottery making; temper adds strength to the clay during firing, and prevents cracking.
Time Transgression	The idea that innovations in technology and culture will occur in different areas at different times. For example, the development of pottery did not occur in all areas of Wisconsin simultaneously.
Underwater Archaeology	The archaeology of shipwrecks

Archaeology Activities

The Context Game

Objective: To play a game that demonstrates the importance of context at an archaeological site.

Materials: Five index cards or pieces of paper for each girl, paper clips or rubber bands

- On five separate index cards have each person write the name of one object that is in her bedroom. Objects should include commonly found items (bed, teddy bear, lamp, tennis shoes) as well as more unique items (running shoes, trophies, special photos) which represent themselves, and may not be found in every room. Have them put a symbol, such as a star, cross, or circle on the upper left hand corner of all five of their cards. This will help signify whose cards they are for later.

- Have each participant rubber band their five cards together. Designate someone to collect and re-distribute the cards to each person, making sure that the girls do not receive their own.

- Have each participant read the card to themselves and try to figure out to whom the cards belong based on the clues. They should then check with that person to see if they are correct. If they are mistaken, that's okay.

- Have each girl take two random cards off the top. These will no longer be needed for the game. Put the rubber band or paperclip back on the cards and hand them back for redistribution.

- Passed the cards out again. The girls should not receive the same cards as they did before.

- Have each person read the cards to themselves, and continue the game in the previous manner.

- Try removing one more card and doing the process again.

Discuss the following questions: Does the activity get more difficult as you remove more cards? Was this an easy process to begin with? How hard would this be if you just had one card?

This activity demonstrates the importance of context. Each "artifact" from a girl's room is a piece of the puzzle. When pieces of the puzzle are removed, it makes it harder to piece together the story of the past. This is why *context* or the relationship that artifacts have to one another is so important. Imagine piecing the puzzle together if you only had one artifact!

This game is a good example of why stewardship and preservation of archaeological sites and resources is so important. As sites are looted or destroyed, additional information about past peoples and how they lived is lost, making it more difficult to understand the past. If given the opportunity, please help educate others on the importance of leaving artifacts and archaeological sites alone.

Garbage Can Archaeology

Objective: By examining the layers in a trash can, participants will learn about the *Law of Superposition.* This law states that the lower soil layers are generally older than the upper layers.

Materials: Two full garbage cans (no wet, smelly or potentially toxic garbage please), rubber gloves, empty garbage cans or bags, paper and pencil.

- Pick two garbage cans from two different rooms. Make sure that there is nothing gross or smelly in the garbage cans. (You can also simulate this part, if need be by creating a "bag of trash" with various objects from around the house.)

- Split your group into two teams, with one garbage can per team.

- Have each team pretend that they are excavating the garbage can. Start with the top layer, and remove the "artifacts" one by one. Have someone be the recorder and write down what every object is. Put the artifacts that have been recorded into an empty trash can or garbage bag.

- When down to the last "artifact." Have the teams answer these questions.

    Which objects are older? How do you know?

    From what room do you think this garbage can came?

    What can you tell about the people or person who used this garbage can?

- Have everyone wash their hands!

This activity emphasizes the Law of Superposition. This law states that the oldest materials at an archaeological site will be at the bottom, while the youngest will be towards or at the top. This activity also shows how important context is at an archaeological site.

Rock Art

Objective: To simulate pictographs which were created by Prehistoric peoples in Wisconsin.

Materials: Rock Art Reference books, Brown butcher paper, bleach, water, Q-tips.

- Explore a variety of rock art images in various reference books which can be checked out of the library.
- Discuss why people of the past may have made these pictographs and what some of these figures may represent. Discuss how the images may have different meanings for different groups of people.
- Create your own pictographs. Dilute bleach with water. (Be careful not to get it on your clothes!) Using the Q-tips as paint brushes, paint pictographs onto the butcher paper. Create a sheet with typical Native American rock art images, and then a sheet with your own, unique symbols and pictures. Try to create a story or a message. Share your pictographs with others to see if the message you have created can be deciphered.

Alternative Activity: Create petroglyphs on clay or plaster of paris, instead of painting. Various pointed tools can be used to create various signs and symbols, such as those seen prehistorically.

This activity allows individuals to explore an early art form. It also shows how archaeologists analyze symbols and objects to try and piece together the story of the past. Early rock art served to convey messages between peoples, and led to the rise of written languages.

What is an Artifact?

Objective: To understand that an artifact is any object that is made, modified, or used by humans.

Materials: Various objects (see below), rulers or measuring tapes, paper and pens or pencils.

Some examples of objects:

paper cup	baby rattle	carrot peeler
thimble	pencil	other kitchen utensils
ball of string	computer disk	
dice	kitchen spatula	
scissors	penny	

Any objects that you can collect, will do. Try and include a few objects that may be familiar unfamiliar to the participants. A wide variety of items is preferable.

- Begin by holding a discussion about artifacts. What are artifacts? (See definition above, or in glossary.) You may wish to use an example from the movie, *The Little Mermaid*, if you are familiar with it. In the film, the little mermaid was unfamiliar with a fork that she found on a sunken ship. She named this unknown object a "dinglehopper." The group will analyze everyday artifacts as if they have never seen them, just as an archaeologist might do with artifacts found at an archaeological site. Be creative, even if the girls do recognize the artifact; what other uses might it have? Do some items have meaning in various ways (functional, religious, symbolic)?

- Split the group into teams of twos or threes. Each group should receive paper and pens or pencils. Have the teams describe each object and list the object's attributes (see glossary for definition). The teams should record this information, as well as the measurements of width and height (any other measurements that the teams wish to add may be useful).

- After all of the teams have been through all of the artifacts, have the teams name their objects. If it is an object with which they are already familiar, they may come up with a new name, based on the description of the object. Record the name of the object on their paper.

- Have each team discuss how the objects might be used based on their attributes. For example, an object with a flat, hard edge could have been used for pounding.

- When complete, have the teams share their descriptions. There are really no right or wrong answers, since most of this activity is about making observations and using your imagination. Have each team share why they may have chosen a certain name for an object.

- If time permits, have the groups discuss any relationships between the objects they examined. For example, they may find that all of the kitchen items are made of metal, which may be significant. Some objects they examine may be obsolete, or rarely used today (e.g., a manual can opener, versus and electric can opener). Discussion of how technology and styles change can be related to archaeological dating techniques and cultural change.

Bibliography

Curriculum and Activity Books

Elliott, Rita Folse (editor)
1992 Used Archaeology: Practical Classroom Ideas for Teachers, by Teachers. *Early Georgia* 20(1):1-145. Activity guide, ethics, and narratives for use with K-12. Available for $6 from the Department of Anthropology, Attention: Publications, University of Georgia, Athens, GA 30602.

Few, Joan, and K. C. Smith (editor)
1995 *Teaching Archaeology: A Sampler for Grades 3-12.* Second edition. Society for American Archaeology, Washington, D.C. A free publication available through the Society for American Archaeology, 900 Second St. NE, #12, Washington, DC 20002-3557. (202) 789-8200.

Holliday, Diane Young, and Bobbie Malone
1997 *Digging and Discovery: Wisconsin Archaeology.* SHSW, Madison, WI. Student copy is $7.95 and the teacher's guide is $20.00. These can be purchased directly at the Wisconsin Historical Society Museum Shop at 30 North Carroll, Madison, WI (608) 264-6555.

McNutt, Nan
1998 *Project Archaeology: Saving Traditions (PAST), Archaeology in the Classroom.* Sopris West, Inc., 1120 Delaware Avenue, Longmont, CO 80501. (303) 651-2829. Curriculum for Middle School and Gifted Elementary School Students. Available from the publisher for $24.95.

Schermer, Shirley J.
1992 *Discovering Archaeology: An Activity Guide for Educators.* Office of the State Archaeologists, Iowa City, IA. Available for $6.95 from The University of Iowa, Attention: Publication Order Service, 2222 Old Hwy 218 South, Iowa City, IA 52242. (800) 235-2665.

Smith, S. J., J. M. Moe, K. A. Letts, and D. M. Paterson
1993 *Intrigue of the Past: A Teacher's Activity Guide for Fourth through Seventh Grades.* Bureau of Land Management, U.S. Department of the Interior. Available for $15 for NSTA (National Science Teacher's Association). (800) 722-NSTA.

1995 *The Intriguing Past: Fundamentals of Archaeology: A Teacher's Guide for Fourth through Seventh Grades.* Bureau of Land Management, U.S. Department of the Interior, Price unavailable. From the Bureau of Land Management's Imagination Team, Heritage Education Program, PO Box 758, Dolores, CO 81323. (303) 882-4811.

Children's Books

*Children's Books can offer simple explanations of archaeological concepts. They also offer excellent drawings, maps and graphs that make them worthwhile at any age.

Cork, Barbara, and Struan Reid
1984 *Archaeology*. The Usborne Young Scientist Series. Usborne Publishing Ltd., Usborne House, 83-85 Saffron Hill, London, EC1N 8RT.

Duke, Kate
1997 *Archaeologists Dig for Clues*. Let's-Read-and-Find-Out Science series. HarperCollins Children's Books, New York. Stage 2

Laubenstein, Karen,, and Ron Roy
1997 *Archaeology Smart Junior: Discovering History's Buried Treasures*.
Princeton Review, New Jersey.

Panchyk, Richard
2001 *Archaeology for Kids: Uncovering the Mysteries of Our Past*. Chicago Review Press, Illinois. For ages 9-12.

Reference Books and other Resources.

Jaukowsky, Martha
1980 A Complete Manual of Field Archaeology: Tools and Techniques of Field Work for Archaeologists. Prentice-Hall, Inc. Englewood Cliffs, New Jersey.

Willey, Gordon R., and Jeremy A. Sabloff
1994 *A History of American Archaeology*. Third Edition. W. H. Freeman and Company, New York.