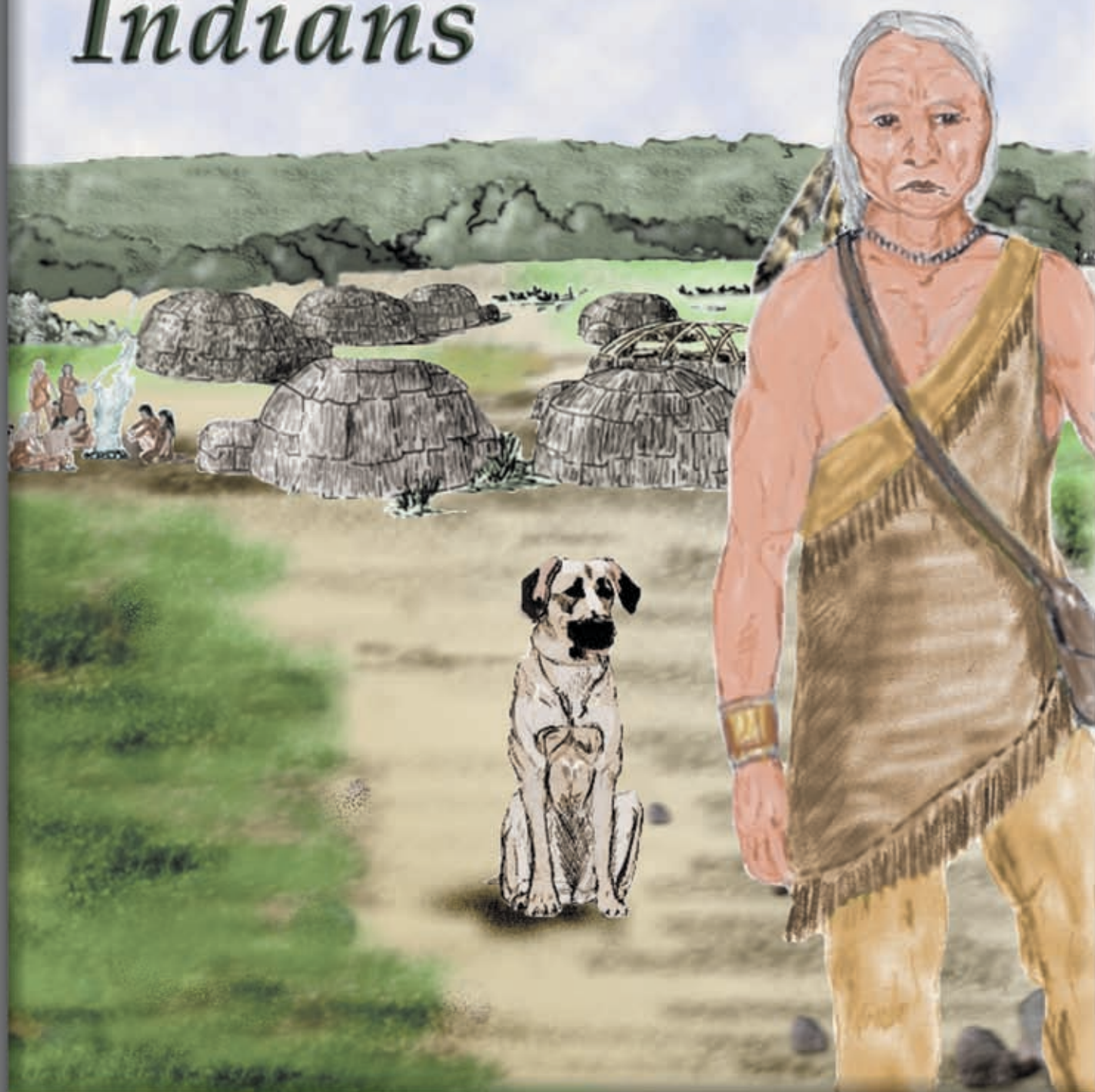


The Mystery of The Monongahela Indians



As part of the U.S. 219 Meyersdale Bypass project, and in keeping with the provisions of the National Historic Preservation Act, an archaeological survey of the project area was conducted to determine the impact of the roadway construction on cultural resources. The survey identified 68 archaeological sites, of which 21 were evaluated for their eligibility to the National Register of Historic Places. Eight of these sites were ultimately selected for intensive data recovery excavations. The artifacts recovered from the archaeological excavations belong to the State of Pennsylvania and are permanently stored at the Pennsylvania Historical and Museum Commission in Harrisburg, Pennsylvania. This booklet presents some of the results of research and excavations conducted as part of the project.

Special thanks to the communities of Meyersdale and Summit Township, Pennsylvania for their support, interest, and contribution to the success of the archaeological investigations.

This work was sponsored by:
**The United States Department of Transportation,
The Federal Highway Administration**
and
The Pennsylvania Department of Transportation
Engineering District 9-0
1620 North Juniata Street
Hollidaysburg, PA 16648

Written By: Varna G. Boyd and Kathleen A. Furgerson
Illustrated By: Simon J. Lewthwaite and Jennifer A. Sparenberg
Graphic Design By: Julie A. Liptak
Edited by: Katherine Marie Benitez (age 13) and Amy Kristina Benitez (age 11)

Produced By:
Greenhorne & O'Mara, Inc.

The Mystery of the Monongahela Indians

Table of Contents

Who Were The Monongahela?	3
What Is Archaeology?	5
What Was Daily Life Like?	7
Where Did They Live?	9
What Did They Eat?	12
What Did They Wear?	14
What Technology Did They Have?	15
Did They Have A Government?	17
Did They Trade With Other Native American Groups?	18
What Were Their Burial Customs?	19
What Happened To The Monongahela?	20
Glossary	21

Suggested Activities

Timeline	4
House Building	11
Pottery Making.....	16
Necklace Making	19



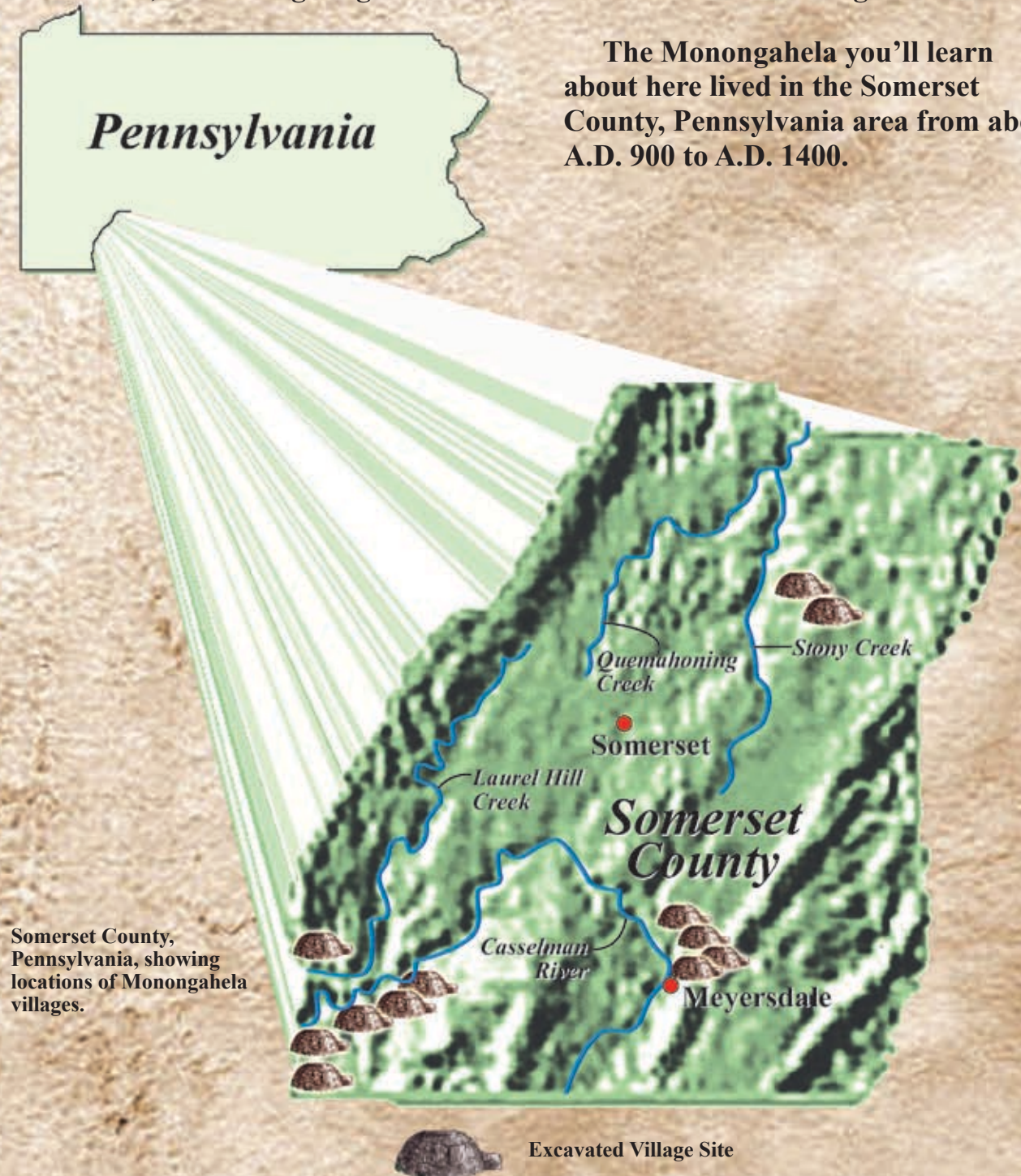


Who Were The Monongahela?

Many years ago, in the area we now call Pennsylvania, lived a Native American group known as the Monongahela (Muh-NON-guh-hay-la). They inhabited southwestern Pennsylvania and nearby areas between 400 and 1,000 years ago.

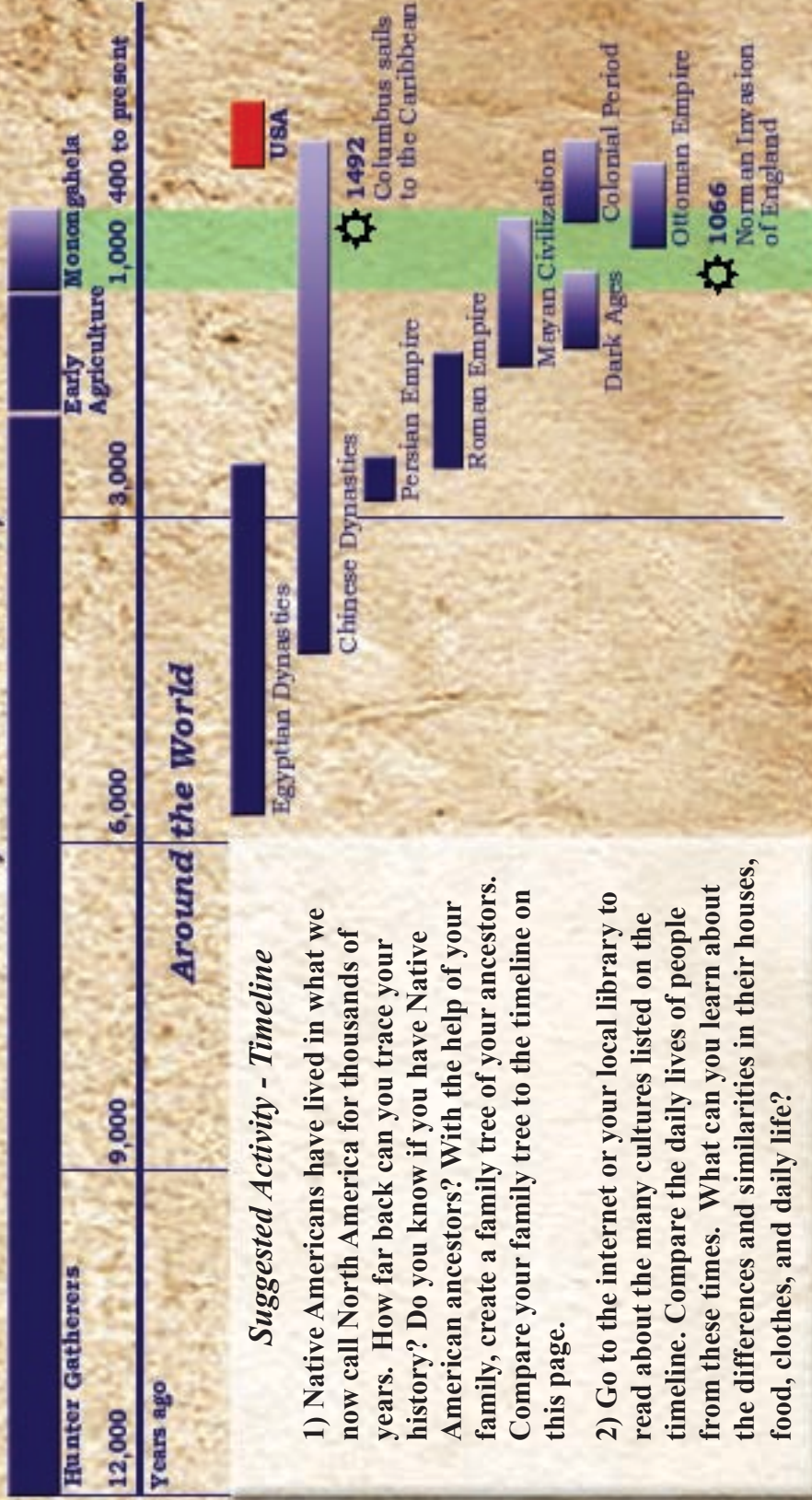
Because there are no Monongahela alive today to tell us what they called themselves, archaeologists gave them their name after the Monongahela River.

The Monongahela you'll learn about here lived in the Somerset County, Pennsylvania area from about A.D. 900 to A.D. 1400.



Somerset County, Pennsylvania, showing locations of Monongahela villages.

Pennsylvania Prehistory



Suggested Activity - Timeline

- 1) Native Americans have lived in what we now call North America for thousands of years. How far back can you trace your history? Do you know if you have Native American ancestors? With the help of your family, create a family tree of your ancestors. Compare your family tree to the timeline on this page.
- 2) Go to the internet or your local library to read about the many cultures listed on the timeline. Compare the daily lives of people from these times. What can you learn about the differences and similarities in their houses, food, clothes, and daily life?

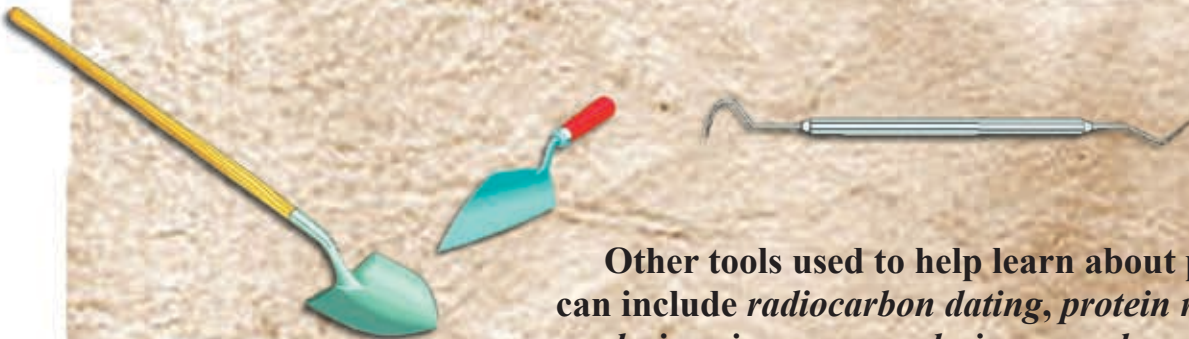
Native Americans lived in the Somerset County area for at least 12,000 years. For much of this time they were *nomadic gatherer-hunters** living in temporary or semi-permanent camps. Approximately 2,000 years ago some Native American groups began to *domesticate* plants, and eventually settle more permanently. However, no permanent villages existed in Somerset County until the Monongahela settled in the area about 1,000 years ago. Since historic documents do not tell us about the Monongahela, archaeology is the only way we can learn about them.

* Words in *italics* are defined in the glossary at the end of the book.

What Is Archaeology?

Information about the Monongahela is being gathered and analyzed by archaeologists. Archaeology is the study of our human past through the examination of *artifacts* and patterns found in the ground. Archaeologists study *cultures* dating from tens of thousands of years ago to the present. Many tools help find clues about past cultures. The tools used to *excavate sites* include:

- ❖ trowels and shovels – to carefully excavate the ground
- ❖ dental picks – to clean away dirt from fragile artifacts and bones
- ❖ brushes – to sweep away dirt
- ❖ dustpans – to collect loose dirt
- ❖ screens – to sift the dirt to find artifacts
- ❖ measuring tapes – to record the location of artifacts and *features*
- ❖ surveyors transits – to record the location of sites and make maps
- ❖ cameras – to keep a photographic record of the excavations



Other tools used to help learn about past cultures can include *radiocarbon dating*, *protein residue analysis*, *microwear analysis*, *zooarchaeology*, and *ethnobotany*. Archaeologists record what they find to preserve the information for future research.

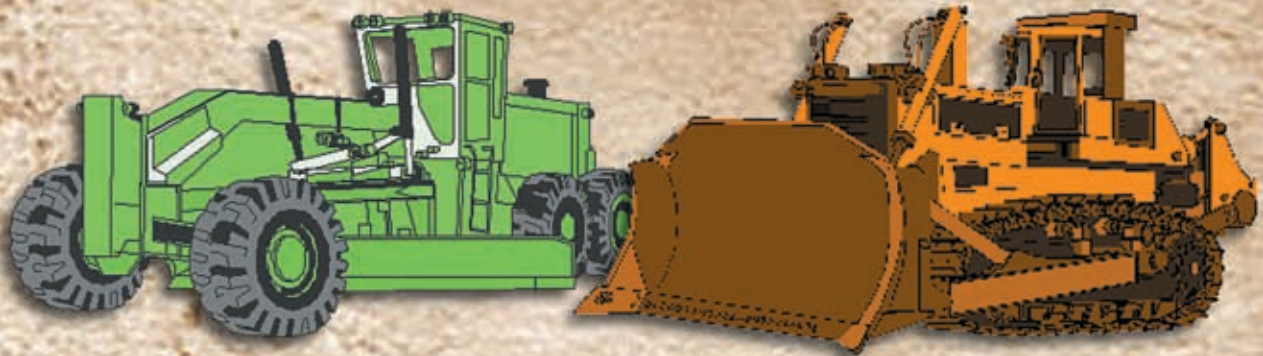


An archaeologist taking careful notes.



A raccoon skull (*Procyon lotor*)

Many archaeological sites are excavated because they will be destroyed by new developments such as roads, shopping malls, and houses. Federal and state laws help protect archaeological resources from being lost. For example, before a highway is built, archaeologists survey to see if any sites are present. If important sites will be destroyed, archaeologists excavate them to recover information about the sites. As a result, many archaeologists today work with federal and state agencies to ensure that sites are protected.



Archaeologists excavate sites where the Monongahela lived, looking for features and artifacts left by the Monongahela. By studying these features and artifacts, archaeologists learn to answer questions about Monongahela life, such as:

- ❖ What types of houses did they build?
- ❖ What did they eat?
- ❖ What kinds of clothes did they wear?
- ❖ How did they make tools to survive?
- ❖ How did they dispose of their trash?
- ❖ How did they treat their dead?
- ❖ What kind of government did they have?
- ❖ What other Native American groups did they communicate with?



Excavation of a Monongahela house using small tools.

What Was Daily Life Like?

Daily life for the Monongahela was tied to the seasons, much like it is for farmers in today's world. Most of the effort in the spring through the early autumn would have been on growing crops such as corn. Men, women, and children participated in the planting and harvesting of crops, but women, children, and the elderly were responsible for tending the crops during the growing season.

Trips away from the village were also necessary to hunt, gather wild plants, and collect materials to make houses and tools. Men were responsible for most of the hunting, although, as with many of life's daily chores, cooperation of everyone was needed. Men and women butchered the animals, and women were responsible for preserving meat for the winter months and preparing food for meals. As much time was spent gathering wild plant foods as was spent on hunting. Women were responsible for gathering wild fruits, nuts, and plants, though children and men would have helped.



The Monongahela, like people today, had to provide for basic needs such as shelter, clothing, and food. Daily life within the village included the upkeep of the houses, preparation of meals, making tools, mending clothing and broken tools, and spending time telling stories and playing games. They manufactured tools from stone, bone, clay, and wood.

Monongahela household items included:

- ❖ grass/*rush* mats for sitting, drying food, etc.
- ❖ animal skins for bedding
- ❖ bark containers/pails
- ❖ baskets for a variety of tasks
- ❖ clay cooking and food storage pots
- ❖ *mortars & pestles*
- ❖ dried food
- ❖ fishing gear
- ❖ hunting tools
- ❖ eating utensils, bowls, ladles, stirring paddles
- ❖ woodworking tools
- ❖ weapons
- ❖ hide working tools
- ❖ sewing kits
- ❖ clothing and ornaments
- ❖ toys and games
- ❖ smoking pipes and tobacco
- ❖ fire making kit
- ❖ farming tools



A Monongahela Clay pipe with decorations.



Fishing hooks made out of bird bones.



Artist's reconstruction of a Monongahela pot, found in a burial.

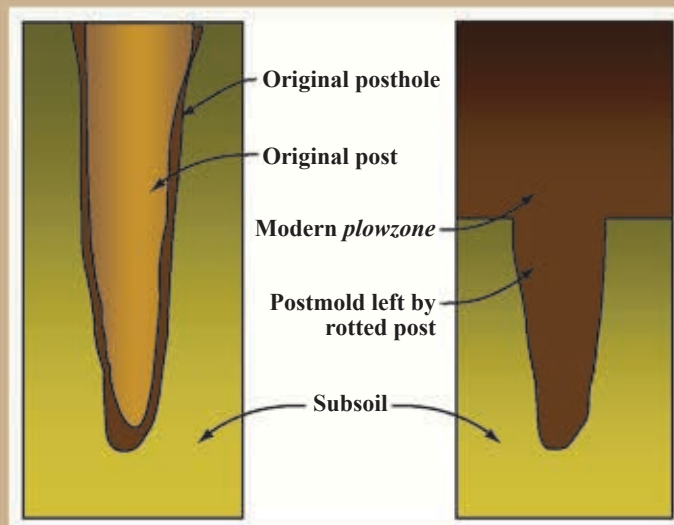
Where Did They Live?

The Monongahela lived in round, dome-shaped houses 9 feet to 30 feet in diameter. To build houses for shelter, they had special tools to cut the wood and dig holes in the ground to support the wood frames of the houses. They would have used stone axes to cut down small trees for house posts, and sharp knives to trim the posts.

These houses were made by cutting down the small trees and pushing the cut end into the ground. The trees were put in the ground in a large circle; then the tops were bent together and tied. Archaeologists know the houses were round because of the patterns the rotted poles left in the ground. Also, the early European settlers in other parts of the country documented what they saw, which helps archaeologists understand and interpret what they find. Poles were then bent around the outside of the frame to make the house more stable. Large pieces of tree bark were cut and placed over the frame, like shingles on a roof, for protection against bad weather. A hole was left at the top of the roof to allow smoke from the campfire to escape out of the house. During the summer, *cattail* or rush mats covered houses and kept the rain from dripping inside, but allowed air to circulate.

There was not a lot of furniture inside of the houses. A cooking or heating hearth was located in the floor in the center of the house. The walls were lined with sleeping benches constructed from sticks and lined with animal skins or mats made from plants such as grasses or rushes.

Archaeologists know the houses were round because of the patterns in the ground called postmolds. Postmolds are the remains of a rotted or removed post.





House reconstructed from postmolds

The houses were arranged in large circles to form a village. The center part of the village, called a central plaza by archaeologists, was left open for group or ceremonial activities. A large fence, called a stockade, surrounded some villages to help protect against raids from unfriendly groups. The Monongahela often threw away their trash in the area between the ring of houses and the stockade. This trash area is known as a *midden*, and contained many artifacts, such as animal bones, pottery, stone tool fragments, *debitage*, and plant remains.



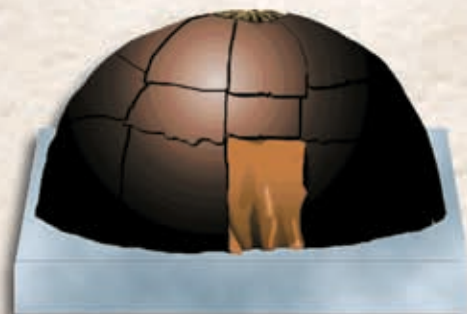
Food had to be preserved and stored to last through the harsh winter months when no plants were available, and when animals were hard to find. The Monongahela had storage rooms attached to their houses, similar to a kitchen pantry, where they stored dried and preserved foods. Sometimes these storage rooms were also used for cooking.



Reconstructed free standing storage facility.

Suggested Activity – House Building

Look at the pictures of the houses and try to build a model of a Monongahela house. Perhaps use a square of styrofoam as a base (you could paint it green for grass or brown for dirt). Collect twigs or sticks from your yard to use as the frame (push the sticks into the styrofoam to anchor your house). Use string or thread to tie the frame together. Use bark, or cut squares of cloth or brown paper grocery bags to cover your house.





What Did They Eat?



The Monongahela had to hunt, gather, and grow their own food. Archaeologists look for the remains of food when they excavate. Often, dirt samples are collected to take back to the laboratory for processing because the food remains can be quite small and only seen under a microscope.



Animal remains from Monongahela sites show that people ate wild animals such as :

- ❖ deer
- ❖ bear
- ❖ rabbit
- ❖ raccoon
- ❖ opossum
- ❖ fox
- ❖ turkey
- ❖ fish
- ❖ turtle



Wild plant remains from Monongahela sites indicate that they also gathered and ate wild plants such as raspberry, blueberry, *chenopodium*, plum, strawberry, and nuts such as acorn, butternut, hickory, and walnut. Growing crops for food was one of the most important aspects of Monongahela culture, and important crops included corn, beans, squash, and sunflower. Archaeological evidence for these foods includes burned plant remains as well as charred residue from cooking pots.



What Did They Wear?

Archaeologists don't know what the Monongahela wore because clothing is not preserved in the ground, but they can make some very good guesses based on what the early Europeans saw when they came to the New World. Deer skins were probably the main form of clothing. Men wore moccasins, leggings, and breechcloths made from animal skins, and in the colder weather they wore shirts made from animal skin, and robes with animal fur. Women also wore moccasins and a short skirt in the warmer months, and deer skin dresses and robes during the colder months. Children probably wore little clothing until they grew older, and then wore clothing like their parents. Clothing for special occasions was decorated with beads made from animal bone, shells, feathers, animal fur, and paint.

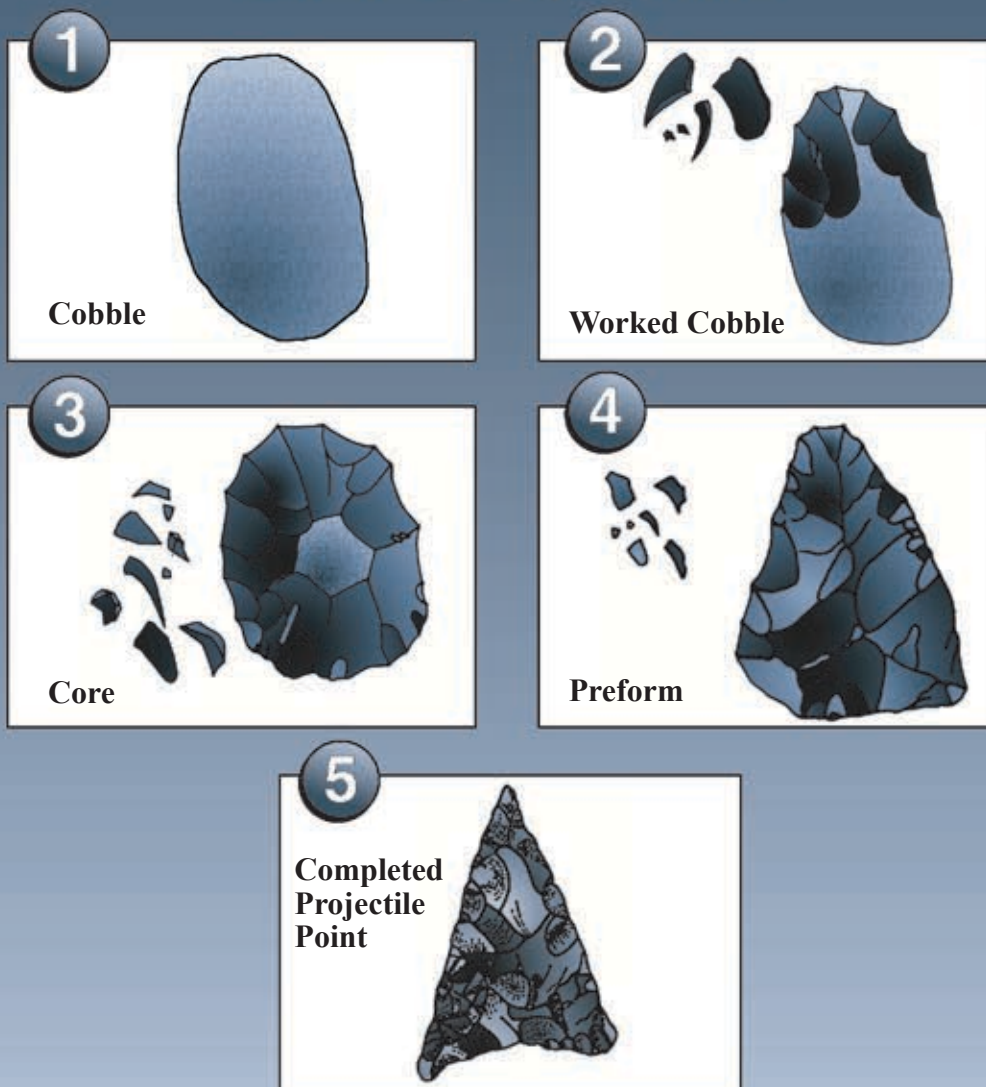
To make their clothes, the Monongahela made sewing *awls* and needles from animal bones. Awls were commonly made from the leg bone of a deer. Awls and drills were also made from stone. Other tools used for preparing animal hides for clothing include stone and bone scrapers.



What Technology Did They Have?

The Monongahela, like Native Americans thousands of years before, made stone *projectile points* to hunt wild game. They also had other stone tools, such as knives, to cut up meat and hides. The process of making a stone tool is called *flintknapping*. First they would select a good rock that would chip nicely. To chip the stone, they would use other rocks called *hammerstones*, creating large *flakes* which could be fashioned into tools. Sometimes they would also use wood, antler, or bone to further refine the edges of the tools.

Flintknapping sequence



Clay pots were used for cooking and storage. To make the pots, the Monongahela found good clay, and usually added a *temper* to make the clay stronger. They built the pots from hand by using coils, slabs, or pinching the clay to get the form they wanted. Then they paddled the pot to bond the clay, thin the walls evenly, and further shape the vessel. The paddle was usually wrapped with *cord*, leaving an impression of the cord in the clay. Sometimes they would also decorate the pots with designs incised into the clay. The pot was then fired in a pit, or an open air fire, to make it hard and ready for use.



Suggested Activity - Pottery Making

Build a model cooking pot from clay using the pictures here as a guide. You can try mixing in a little sand to the clay for temper. Build the pot by coiling or pinching it into a bowl shape. Decorate it by wrapping cord around a wooden spoon and gently paddling the clay. Also, you can use a stick or your fingernail to make decorative lines and marks in the clay.



Did They Have A Government?

The Monongahela did not have a complex government like today, with presidents or queens. Instead, the Monongahela had what is referred to as an *egalitarian* society, where everyone had a say in how the village was run. Archaeologists know this because the houses within the village were similar in size, most houses had their own food storage, and there were no obvious differences in the way people were buried. This tells archaeologists that each household controlled its own resources, though cooperation between families was necessary for the good of the village.



Did They Trade With Other Native American Groups?

Historically known Native American trails in the Meyersdale area may have been used by the Monongahela for trading with outside groups. Such trails include the Turkeyfoot Path, which may have connected the Meyersdale area with other river valleys. These trails were probably the same ones used for hundreds of years by prehistoric Native American groups.

The Monongahela traded with Native American groups all around them. Archaeologists know this because they find stone flakes and tools made from rocks from far away parts of the country. Since it was too far for the Monongahela to travel by foot, special items were traded between many Native American groups. Also, when archaeologists excavate a site, they often find large numbers of stone flakes that can be found locally, while stone that comes from far away is present in smaller numbers. Objects that were traded were highly valued because of their rarity, and some may have held special ceremonial meaning.



What Were Their Burial Customs?

When people died they were usually buried within the village area, and children were often buried under the houses. Perhaps the Monongahela believed that by burying the dead nearby, the spirits would protect them.

The graves were usually oriented east, facing the rising sun. Generally, the graves were clustered in one area within the village, often in the southeastern portion of the village. Sometimes people were buried with personal items that meant something to them in life, or things that indicated their status in the village. Items found in Monongahela burials include stone tools, bone and shell beads, ceremonial pots, and pipes.



A Celt



A Gorget



An Elk Tooth Pendant



A Bird Bone Bead

Suggested Activity – Necklace Making

The Monongahela made necklaces from animal bones or shell. Make your own necklace out of shell, clay, or store bought beads. Try to pick natural colors that would look like animal bone or shell. You can also add feathers to your necklace to decorate it. Try to find a natural fiber to string your beads.

What Happened To The Monongahela?

No one knows exactly what happened to the Monongahela in the Meyersdale area. Archaeologists do know that by about A.D. 1400 the Monongahela had left the Meyersdale area. Further west in southwestern Pennsylvania, the Monongahela culture lasted until around A.D. 1625. The Meyersdale Monongahela could have moved west and joined other Monongahela groups, or could have moved elsewhere and joined another Native American group.

In order to solve the mystery of the Monongahela, archaeologists continue to study Monongahela sites to answer many questions:

- ❖ Where did the Monongahela come from?
- ❖ What language did they speak?
- ❖ What was their religion?
- ❖ What was their social structure?
- ❖ How do the Monongahela sites in the area relate to one another?
- ❖ How did the Monongahela interact with other Native Americans?
- ❖ Are they related to any Native American groups today?
- ❖ Why did they leave the Somerset County area?
- ❖ Did they leave because of environmental stress?
- ❖ Did they leave due to warfare?

- ❖ And, where did they go?



Glossary of Archaeological Terms

- Artifact** – any object that is made or modified by humans.
- Awl** – a tool made from stone or bone that is used to make holes for sewing.
- Cattail** – a tall marsh plant with flat leaves used to make mats.
- Celt** – a stone tool shaped like a chisel or axe and used for cutting.
- Chenopodium** – a wild plant used for food. The chenopodium leaves were cooked and the seeds were ground into flour.
- Cord** – string made by twining plant fibers or tree bark. Multi-purpose item used, for example, in making pottery, constructing houses, and fishing.
- Core** – a piece of stone from which other pieces of stone are chipped to make stone tools.
- Culture** – patterned human behaviors associated with the shared beliefs and customs of a particular group. Within a culture there is usually a specific language, religion, social organization, economic system, and political system in which the people participate.
- Debitage** – the byproduct of stone tool manufacturing.
- Domesticate** – a formerly wild plant that has been adapted by humans as a food crop.
- Egalitarian (e_-gal-e_-ter_-en) Society** – a social or governmental system in which all people participate and leadership is informal.
- Ethnobotany** – identification of plant remains and how humans used them. This analysis helps archaeologists learn about past diets and environments.
- Excavate** – to carefully dig.
- Feature** – a physical remnant of human activity, such as a cooking hearth.
- Flake** – a type ofdebitage produced during the manufacture of stone tools.
- Gatherer-Hunter** – a nomadic lifestyle where people gathered wild plants and hunted wild animals for their food.
- Gorget** – a decorative stone pendant.
- Hammerstone** – a cobble used to strike off flakes from another rock during stone tool manufacture.
- Microwear Analysis** – the microscopic identification of types of wear on stone tools from use on plants, wood, bone, meat, or hide.
- Midden** – a trash disposal area.
- Mortar and Pestle** – a mortar is a stone base on which food is pounded or ground. A pestle is a stone tool used to pound or grind the food onto the mortar.
- Nomadic** – a type of lifestyle where people frequently moved from place to place.
- Plowzone** – soil disturbed by plowing and farming activities
- Preform** – an unfinished stone tool.
- Projectile Point** – a chipped stone artifact used to tip an arrow or spear.
- Protein Residue Analysis** – the microscopic identification of plant and animal blood residue left on pottery or stone tools.
- Radiocarbon Dating** – a method of estimating the length of time since the death of an organism by measuring the rate decay of carbon.
- Rush** – a wild marsh plant used to make floor mats or house coverings.
- Site** – a place where there is evidence of past people's activities.
- Temper** – a material added to clay to make stronger pots, such as sand, shell, or rock.
- Zooarchaeology** – the identification of animal remains and how humans used them. This analysis helps archaeologists learn about past diets and hunting practices.

For Further Information About Archaeology Contact:

**The Pennsylvania Historical and Museum Commission
Bureau for Historic Preservation
Box 1026
Harrisburg, PA 17108-1026
(717) 783-8947**

**The Society for Pennsylvania Archaeology, Inc.
Membership Information
PO Box 386
Bethlehem, CT 06751-0386
www.siftings.com**

**Society for American Archaeology
900 2nd Street N.E. # 12
Washington, D.C. 20002-3557
www.saa.org**

or

Contact Your Local State Archaeological Society