

LAKE CHAMPLAIN'S FIRST NAVIGATORS

“Few subjects invoke such heated arguments in New World prehistory as do the origins of Native American populations.”

Dennis Stanford, *Clovis Origins and Adaptations: An Introductory Perspective*, 1991

Lake Champlain, near Benson, VT. From *Ladies Repository Magazine*.



THE FIRST AMERICANS

LCMM and Dr. Fred Wiseman

Migration to the Americas

The migration of people into the Americas is a hotly debated topic in archaeology today. Numerous theories have been proposed and new archaeological sites continue to be discovered and re-interpreted, yielding new and exciting evidence on the arrival, spread and behavior of the “First Americans”. Traditionally it is believed that Native American populations originated somewhere in Asia, and sometime around 18,000-13,000 years ago at the end of the last Ice Age (60,000-10,000 years ago), or end of the Pleistocene era, migrated over a land bridge connected eastern Siberia to Alaska, called the Bering Land Bridge. Much of the world’s water was tied up in large continental glaciers at this time, and ocean levels were 120m lower than today, exposing land that is today totally submerged under our oceans. This “ice free corridor” would have provided an access route for people and animals to cross from one continent to another. Hunter-gatherer populations of Asia would have followed large game, such as woolly mammoth, as they migrated across the land bridge, and ultimately both human and animal populations spread across all climates, latitudes and longitudes of North and South America within roughly 1,000 years. Other more recent theories would have the Native ancestors, migrating from Eurasia by boat along the Pacific (or even Atlantic) sea-ice margins, or even across the open Pacific.

Archaeological sites discovered in South America and North America are continually challenging this single migration “land bridge” theory, as they demonstrate that people occupied places around the two continents prior to the land bridge becoming available for migration. (i.e. Monte Verde, Chile) Additionally, the land bridge theory assumes that the primary mode of transportation for these migrating peoples was on foot, even as it is well known that there were advanced maritime societies with vessels capable of crossing the Pacific and Atlantic oceans. The idea that there were likely multiple migrations of people into the Americas is an acceptable theory today to most archaeologists, though it is not yet known or agreed upon in a definitive way. Mitochondrial DNA evidence from the Human Genome Project is confounding all of these archaeological models, and forcing archaeologists to rethink the peopling of the New World.

BC Before Christ
AD Anno Domini
Both of these terms rely on the Gregorian Calendar
BCE Before the Common Era
BP Before Present
Because the “present” changes, 1950 was adopted as the constant. Hence, BP means years before 1950.
ya Years Ago

Timeline: Paleoindian, Archaic, Woodland

| | |
|-------------------------|----------------|
| Paleoindian | 11,300-9000 BP |
| Archaic - Early | 9000-6000BP |
| - Late | 6000-2900 BP |
| Woodland - Early | 2900-2100 BP |
| - Middle | 2100-950 BP |
| - Late | 950-400 BP |
| Contact | 400BP |

BACKGROUND

The Champlain Valley's cultural history began nearly 11,300 years ago, when Paleoindians moved into the region following the retreating Laurentian ice sheet of the last Ice Age. Native Americans have been living in the Champlain Valley continuously from that time to the present. The lake has served as a resource for food, water, tools, spiritual guidance, and transportation. During prehistory, Native Americans lived in small campsites and villages along the lake's shoreline, utilizing specific techniques and tools to extract the lake's resources.

Paleoindian Period (11,300-9000 BP)

The first Native Americans, called Paleoindians, probably moved into the Champlain Valley from the Hudson Valley or the southern Connecticut River Valley after the last continental glacier had retreated from the region about 11,300 BP. Their movement seems to have been gradual, brought about by both population growth and the northward migration of plants and animals in the wake of the receding Laurentian ice sheet. The tundra environment of the Champlain Valley supported a lush growth of tundra vegetation, attracting a wide variety of animals including mastodons, mammoths, and large herds of caribou. The first Paleoindian settlers in the region were hunters of these large herd animals and explorers of the Champlain Valley as they followed game into uncharted territories as the glaciers receded to the north. It may be that the tundra was actually on the wane when the first settlers came in, perhaps and open spruce parkland had moved into the area.

Paleoindians were semi-nomadic groups that moved around seasonally to hunt game and gather wild plants within their territory. They ranged over large areas of the Champlain Valley, following the seasonal migration routes of the tundra's herd animals. These animals moved back and forth between the upland and lowland regions. Paleoindian campsites have been found along the ancient shoreline of the Champlain Sea, as well as places with a good view of the surrounding territory and sometimes in close proximity to a wetland.

Perhaps most of the people lived near the Champlain Sea, with its rich marine resources. No direct evidence has been found to suggest how Paleoindians used the marine resources of the Champlain Sea, but it is unlikely that they ignored the large populations of seabirds, fish, and marine mammals. The Paleoindians of the Champlain Valley were known to have been expert mariners. The discovery of a Paleo-Indian fluted point, made from Ramah quartzite, a rock only found in northern Labrador, has proven that they had the wherewithal to travel hundreds of miles along the ice-choked margin of late Pleistocene North America that lay between the Champlain Sea and Northern Labrador. It is likely they used skin boats, since suitable trees were rather scarce in the tundra/parkland environment.

Very few Paleoindian sites have been discovered throughout the Champlain Valley; and this period remains somewhat of a mystery for much of the Northeast. The lack of these sites could be attributed to small populations, and the antiquity of these peoples. Much of the things they may have left behind did not survive in the archaeological record of so long ago. Much of what we know is based upon the large stone spear points (approx 3 inches) made of exotic (from as far away as Pennsylvania and Labrador), as well as locally available stone materials. This demonstrates that Paleoindians either traveled far distances to find quality sources to produce their stone tools or had developed long distance trade networks. Paleoindian sites in the northeast (Ipswich, MA, Bullbrook site) do indicate that Paleoindian bands from around New England likely met periodically to exchange goods, marriage partners and renew ties with one another. A recent discovery of a full Paleoindian village on a sloping hillside near the Foxwoods Casino in Connecticut, is causing us to greatly rethink our previous ideas about the social complexity of northeastern Paleoindian lifeways.



BACKGROUND

All in all, the most widely accepted culture to first occupy the Americas were groups of big game hunters that created fluted Clovis projectile points. They are called Clovis after the archaeological site where the large spear points were first found with extinct mammoth bone, in Clovis, New Mexico. These “specialized” Clovis hunters and their spear points have been found throughout North America and in parts of South America, indicating that this type of technology was an advantageous adaptation used wherever large game roamed. Though “Clovis” points found in the northeast differ slightly than those found in the west, the large leaf shaped fluted spear points have been found across the continent. They indicate the Clovis Paleoindian culture was similar across North America, and these groups focused on hunting large game animals with their large spearpoints that were specially designed for this task.

Most of the large game that roamed North and South America during this period would soon become extinct, and it is debatable as to whether or not Paleoindian hunters caused these extinctions by over-hunting, or if these animals were unable to adapt to the climate change as the world warmed up at the end of the ice age, or if it was a combination of the two. In the Champlain Valley, many of the tundra animals of the Early Paleoindian period that survived the climate change, such as caribou and Musk Ox, migrated northward as climates warmed, but large mammoths, mastodons, moose-elk and others did die out completely.

Collectively, Paleoindians probably hunted not only now-extinct megafauna but caribou, deer, elk, beaver, tortoises, birds, and other small animals. Moreover, they were certainly not just hunters but collectors of seeds, roots, shellfish, and fish. During the Late Paleoindian period, hunter gatherer groups across the continents became more regionally adapted and projectile point types differ from region to region. The fluted Clovis point disappeared with the extinction of megafauna, but the fine and distinctive stone-working that characterized them persisted well into the next millennia..

Late Paleoindians in the Champlain Valley are a bit more of a mystery, since only recently have sites been discovered that yielded Late Paleoindian projectile point types. For some time, it was thought that the Champlain Valley was not occupied during the Late Paleoindian period, but now that perspective is changing as more and more sites are discovered. It is believed that certain climatic or geomorphic processes active during this time may have obliterated or obscured the human evidence from this period. The forests of the Champlain Valley became more dense during the Late Paleodindian period, and temperatures became nearly 13 degrees warmer and drier than the Early Paleodindian period. Therefore, animal species, plants and animals and water courses all adjusted, as did Paleoindian technology and their selection for optimal camp locations.

Archaic Period (9000-2900 BP)

The Paleoindian way of life changed as the warming climate affected the wildlife and plants in the region. Over 100 species of large mammals, such as the mammoth, mastodon, and moose-elk, became extinct. Other animals, including the caribou and musk ox, moved north with the tundra as the Champlain Valley became densely forested. The animals upon which the Paleoindians depended for food, clothing, and shelter were no longer available to them, and the Paleoindians effectively adapted to the forested environment that was developing in the region.

The animals that remained in the forested landscape were generally smaller and more solitary in their habits, making hunting techniques quite different. By 9000 BP, the Paleoindians had developed a new

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way of life that is today called the Archaic culture, which characterized the period from 9000 to 2900 BP. This period is further divided into the Early Archaic (9000-6000BP) and the Late Archaic Period (6000-2900 BP). These subdivisions are largely a reflection of changes that archaeologists have noted in artifact assemblages and subsistence strategies (Haviland and Power 1994:38).

The archaeological record suggests that Archaic people in general did not range over large areas as did the Paleoindians before them. Instead, these people carried out most of their activities in specific watersheds, utilizing the watercourses as highways. They seasonally migrated, having summer/spring camps and winter/fall camps. Lake Champlain played a very important role as a transportation route between watersheds, a source of food and water, and as a highway for the transport of ideas, people, and materials. The people of the Champlain Basin had a high level of interaction with groups in the Great Lakes, the St. Lawrence Valley, the Maritime Provinces, the Connecticut River Valley, and the Hudson Valley. The quick movement of ideas and technologies was possible through the use of watercraft, since the geomorphology of the Champlain Valley allowed for easy access by water to these regions. Indeed these “exotic” traits, have led some archeologists to speculate that the early and middle Archaic periods were characterized by large social and economic trading spheres, and the Champlain Basin was part of a wide and complex social world.

The Early Archaic is identified through the transition from lanceolate, or leaf shaped Paleoindian style projectile points, to what are called bifurcate-based projectile points. Additionally, Archaic groups began to settle into their environment even more so than Late Paleoindians, and maintained a more sedentary lifestyle. Early Archaic groups were also larger in size and re-occupied village or camp sites seasonally year after year. Most significantly, there are a number of cemetery sites from this time period. In almost every instance, the burials are covered in a red pigment called ochre. This naturally occurring mineral was a popularly used ritual material at many Native American burials across North America. The Early Archaic witnessed the first appearance of this ritual material in the northeast.

As the climate continued to warm, ice melt and the continued rebound of the land caused changes in drainage systems during the Archaic and an increase in wetlands along rivers and lake margins. This complex climatic/geomorphic process caused an increase in deer, turkey grey squirrel, bear, elk, turtle, snakes, muskrat, otter, mink and fox populations, as well as fruit and nut bearing trees such as acorns, hawthorn and elderberry. As a result of this changing landscape, the optimal places to get food and set up camps changed between the Paleoindian and Archaic periods. We note that archaeological sites from the Archaic period are not usually located in the same places as the Paleoindian sites for this reason.

Archaeological sites from this time period are found all over the landscape. This demonstrates that people were exploiting all the resources the land had to offer, and this may have resulted in specialized tool styles and types that distinguish different cultural traditions of this time period. The equipment employed for the procurement and processing of food included a variety of stone, native copper, shell, antler, and bone tools and accessories, some of which were introduced from outside the Champlain Valley. The presence of a large variety of woodworking tools suggests that complex watercraft were used for travel, fishing, and probably other hunting activities. (Haviland and Power 1994:83).

The artifacts of the Late Archaic are divided into three cultural traditions, which again are based on projectile point styles: Otter Creek, Laurentian and Susquehanna Traditions. It is uncertain if these cultural traditions coexisted and made different styles of tools, or if these different styles represent the same culture that changed over the Late Archaic time period is uncertain. While populations did

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increase over the Archaic period, by the end of the Late Archaic it appears that populations either declined or there was a significant change in site locations.

Many Late Archaic sites exhibit many maritime, lacustrine and riverine cultural traits. Located in close proximity to the lake and wetlands, a plethora of specialized hunting and processing tools have been found at these sites. These include plummets used for sinking fishing nets, bolas used to capture birds in mid-flight and slate stone tools believed to have been used for processing fish.

Though the beginning of the Late Archaic there was a population explosion likely influenced by the increase of hemlock and hardwood forest, more deer, elk, bear and turkey. By 3,000 BP there was a major decline in nut and fruit bearing trees in the area as the climate became significantly colder. This transitional stage between the Late Archaic and the Woodland period appears to begin with a decrease in population. However, in sites like the Boucher Site in the Northern Lake Champlain Basin, a significant social and technological complexity remains. The Woodland era would bring about significantly different technologies and lifeways than observed for the previous Paleoindian and Archaic periods in the Champlain Valley.

Woodland Period (2900-400 BP)

The Woodland Period was, in some ways, the most complex prehistoric period in the Champlain Valley. Native Americans in the region had previously developed a cosmopolitan culture based on the selective borrowing or interchange of ideas and innovations with other people with whom they had come in contact over the past 9000 years. The people of the Woodland Period, built on this foundation and were becoming more sedentary in their living habits, gathering into substantial settlements on the floodplains of the major rivers that drain into Lake Champlain. The subsistence patterns of prehistoric Champlain Valley residents gradually changed from mobile hunting and fishing to a dependence upon horticulture and the gathering of a greater diversity and quantity of wild plant foods. This period is further divided into the Early Woodland Period (2900-2100 BP), the Middle Woodland Period (2100-950 BP), and the Late Woodland Period (950-400 BP), based upon observed changes in artifact assemblages and subsistence strategies (Haviland and Power 1994; Thomas 1994).

Temperatures at the end of the Late Archaic period dropped, and therefore many trees and other plant and animal resources that flourished in the warmer environment either migrated or died out in the region. This change in available resources would have affected populations and settlement patterns, particularly evident in the Early Woodland period. However, overall the climate of the Woodland period did gradually warm up to what we experience today by the time Europeans arrived in the 1600s.

The Early Woodland period saw the first production of pottery and probably the bow and arrow for the first time in the Champlain Valley. Pottery is a rather cumbersome technology for a mobile population, and the presence of it suggests that groups were more permanently settled.

The bow and arrow became popular by this time and mostly replaced the spear and atlatl. The bow and arrow required a smaller projectile point, and thus points from this time period are rather small. Additionally, the bow and arrow was much easier to carry, required less movement when setting off a shot, and therefore would startle the animal less. It also was more accurate than the hunting weapons used before.

Woodland period archaeological sites exhibit many more complex items of material culture. Certainly

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artifacts from this period are not as old, and therefore may have survived better in the archaeological record. But also, as people settled into villages, they were able to create and keep items that made life a bit easier, and did not have to be moved around annually. Additionally, archaeologists have learned a lot about the Woodland period through storage pits that were used in villages. These pits were often used as garbage bins after some time, and we can learn a lot from a group of people's garbage, in what archaeologists call a midden.

By Middle Woodland times, Lake Champlain may have become the boundary between two distinct cultural groups, the ancestors of the Iroquois to the west and the ancestors of the Western Abenakis to the east. By the Late Woodland or Contact Period, the Champlain Valley was home to the St. Lawrence Iroquoians, the Western Abenakis, and the Mahican. Currently archaeologists do not understand when, where, or why the different groups moved into the Champlain Valley, since boundaries between the Champlain Valley's native groups are impossible to define with the current archaeological data. Much analysis of the archaeological data collected throughout the valley remains to be completed in order to learn more about each of these groups and how they utilized Lake Champlain and its natural resources.

The Late Woodland period ends with a time of the most significant cultural change, when Europeans arrived to the area. At this time there were settled villages along such rivers as the Winooski and Missisquoi Rivers where horticulture was practiced. Native peoples began to grow corn, beans and squash and live in larger structures called longhouses.

Wiseman, Frederick M 2001 *The Voice of the Dawn: An Autohistory of the Abenaki Nation*. University Press of New England, Hanover.

Haviland, William A. and Marjory W. Power 1994 *The Original Vermonters: Native Inhabitants, Past and Present*. University Press of New England, Hanover.

LAND BRIDGE AND MIGRATION

LCMM

Grade Level 4-12

Content Areas Social Studies, Science

VT Grade Expectations VT H&SS 12: Students show understanding of human interaction with the environment over time by...

- Describing how patterns of human activities relate to natural resource distribution.

NY Standards NY Social Studies Standard 3: Key Idea1: Performance Standard:

- Map information about people, places, and environments
- Investigate why people and places are located where they are located and what patterns can be perceived in these locations
- Describe the relationships between people and environments and the connections between people and places.

Duration 50 minutes

Learning Goals **Students will learn about the earliest immigrants to the Americas, how and why they migrated and distributed themselves across the Americas.**

Description

1. Discuss how archeologists learn about human migration by finding and studying the things early people left behind. Possible guiding questions:
 - What kinds of things do people leave even when they are gone?
 - Of those things, which will last the longest?
 - What can we learn about the people from what they leave?
2. Project a transparency of the Land Bridge map on an overhead and copy it for students, if desired.
3. Discuss how during the end of the Ice Age ocean levels were lower, exposing land now below modern sea levels, and the glaciers began to melt. Note the connection between Asia and North America at the Bering Strait and the land passage between the receding Rocky Mountain and Laurentian ice fields.
4. Describe how this was a slow process and that over time herds of animals and the people who hunted them gradually worked their way through this passage and spread out across the lands of the Americas.
5. Draw arrows on the map to mark migration routes.
6. Discuss why people would tend to migrate to new lands. Guiding questions might include:
 - What physical or climate conditions might lead animals and people to move to a new area?
 - What kind of adaptations would people have to make as they migrated to different parts of America?
 - What would some of the problems or benefits of migration be?

Assessments Maps should be checked for accuracy. The teachers will monitor student participation in the discussion. Students could be asked to respond in writing to one or all of the guiding questions for the lesson summary.

LAND BRIDGE AND MIGRATION (CONT'D)

Materials/Resources

Land Bridge/Human Migration Transparency, student maps, overhead Projector. The Map provided is reproduced from NOVA's online programming *America's Stone Age Explorers*. On their website is also a great interactive version, too.

Special Considerations

The concluding questions could be assigned as a writing assignment. It is important to note that there are several theories about human migration. The land bridge theory is supported by the archeological record, but may not be entirely accurate or explain all the human groups in the Americas. This is a good opportunity to discuss how we build and modify our understanding of the past through the gathering of evidence over time.

Researching other migration theories would be a good topic for interested individuals or small groups.

This map is reproduced from NOVA's online programming *America's Stone Age Explorers*.
Make sure to check out their interactive version!



Map from PBS - NOVA
America's Stone Age Explorers

PEOPLE IN THE CHAMPLAIN VALLEY TIME LINE

LCMM

| | |
|-------------------------------|---|
| Grade Level | 4-12 |
| Content Areas | Social Studies |
| VT Grade Expectations | <p>VT H&SS 10: Students show understanding of past, present, and future time by...</p> <ul style="list-style-type: none"> Constructing time lines of significant historical developments in the nation and world, designating appropriate equidistant intervals of time and recording events according to the order in which they occurred. Interpreting data presented in time lines. |
| NY Standards | <p>NY Social Studies Standard 1: Key Idea 2: Performance Standard:</p> <ul style="list-style-type: none"> Distinguish between near and distant past and interpret simple timelines. Describe the reasons for periodizing history in different ways Investigate key turning points in New York State and United States history and explain why these events or developments are significant |
| Duration | 50 minutes |
| Learning Goals | Students will recognize the relative amount of time different human groups have lived in the Champlain Valley. |
| Description | <ol style="list-style-type: none"> Use a white/chalk board or roll of paper to designate a time line. Label the left terminal point "Receding Glaciers" and the right terminal point "Today" Divide the time line into 12 equal parts representing 1000 years each. Mark the area between 12,000 and 9,000 years ago as the "Paleolithic Period". Discuss the characteristics of the land and life style of the people during this initial period. Mark the area between 9,000 and 3,000 years ago as the "Archaic Period." Describe the changes in the land and life style of the people. Mark 3,000 years ago to today as the "Woodland Period." Mark 400 years ago "European Arrival." Mark 230 years ago "United States" If you started with a typical 20 foot white/chalk board, European arrival and the formation of the United States should take up just a few inches on the right hand side of the board. Discuss student's impressions about the relative time different groups of people have lived on the land of the Champlain Valley. |
| Assessments | Informal assessment based on student participation. |
| Materials/Resources | White/Chalk Board or roll of paper 20-30 feet long. |
| Special Considerations | A key idea of the Champlain Quadricentennial Celebration is that sophisticated cultures existed in the region long before European Contact 400 years ago. |

THE EARLIEST PEOPLE IN THE CHAMPLAIN VALLEY

LCMM

Grade Level 4-12

Content Areas Social Studies, Science, Language Arts

VT Grade Expectations

VT H&SS 8: Students connect the past with the present by...

- Explaining differences between historic and present day objects in the United States and/or the world, evaluating how the use of the object and the object itself changed over time.
- Describing ways that life in the United States and/or the world has both changed and stayed the same over time, and explaining why these changes have occurred.

VT H&SS 12: Students show understanding of human interaction with the environment over time by...

- Identifying ways in which people in their community adapt to their physical environment, and discussing how these adaptations have both positive and negative effects.
- Recognizing patterns of voluntary and involuntary migration in the U.S. and world.

VT S 36: Students demonstrate their understanding of Equilibrium in an ecosystem by...

- Explaining how one organism depends upon another organism to survive.

NY Standards NY Social Studies Standard 1: Key Idea 2: Performance Standard:

- Investigate key turning points in New York State and United States history and explain why these events or developments are significant

Duration 50 minutes

Learning Goals **Students will learn about the characteristics of prehistoric people in the Champlain Valley and how their life styles changed over time.**

Description

1. Discuss the terms Paleo and Archaic.
2. Have students read “Early Peoples of the Champlain Valley”.
3. Have students fill in the data matrix as they read.
4. Review the gathered information to fill in any missing areas and clarify any confusions.
5. Discuss each characteristic of the matrix.
6. Guiding questions:
 - How did changes in the environment affect cultural and technological development?
 - What cultural characteristics remained the same and which evolved over time?
 - What kind of evidence remains to inform us about the lives of these people?

Assessments Informally assess completeness and accuracy of notes.

Materials/Resources Early Peoples article & worksheet

Special Considerations Discussion questions could be assigned and assessed as a writing task before or after the class discussion.



EARLY PEOPLES OF THE CHAMPLAIN VALLEY

For thousands of years the land that now forms the Champlain Valley was covered with a thick layer of ice. These glaciers were thousands of feet thick. The landscape would have looked like a huge field of snow with only the highest mountain tops sticking out above the ice sheet. No people lived here.

PALEOLITHIC PERIOD

About 20,000 years ago the world warmed and the ice began to slowly melt. As it melted, it left behind the mountains, rivers and lakes that we know today. At first the land was bare. No plants could live under the ice, so it took a long time for the first plants to begin to grow. At first it was grass and small bushes that could live in the poor soil and cold air. But these plants were the food for many kinds of large animals that lived in herds. As the land warmed and grasses grew, herds of mammoths, mastodons, moose elk, caribou, and musk oxen grazed on the grass. Seals and walrus lived along the shores of the salty Champlain Sea and fish and crustaceans lived in its waters. With these animals came the hunters.

The first people were hunters who lived in small family groups. They worked together and used spears with stone points to kill the animals. The animals provided them with everything they needed to live. The meat from the animals was their food, from the skins they made clothes and shelters, and from the bones they made tools. When an animal was killed the meat would be cut up with stone knives, cooked and eaten or stored until it was needed. Skins would be staked out on the ground and scraped clean with stone or bone tools. When they were dry and softened by rubbing, they could be cut and sewn with bone needles. Clothes, tents and sleeping skins were needed to keep warm in this cold environment. People lived in small camps and moved along with the herds of animals so they only had what they could carry with them.

ARCHAIC PERIOD

As time passed it continued to get warmer and the forests began to grow. The land lifted and the valley was cut off from the ocean. Fresh water filled Lake Champlain and new kinds of animals lived in its waters. The large herds of animals died out or moved further north. The animals that lived in the forest were smaller and harder to hunt. The people had to find new ways to find food and make the things they needed to survive.

To hunt smaller, faster animals, they needed better weapons. The atlatl was a special throwing stick that enabled the hunter to throw his spear further and faster. The stone points of these weapons were smaller for the smaller animals they hunted. They also used traps to catch animals that were hard to hunt and hooks and weirs to catch fish in the streams and lakes. The first dugout canoes were made to travel on the streams and fish in the lakes and ponds. Birds could be hit with stones or tangled with a bolo. There was also new food from the trees. Many kinds of nuts and berries grew in the forest and could be gathered when they were ripe. The trees provided wood for their shelters and from the bark they could cover their homes and make baskets and containers. They still used the skins from animals for clothes and the bones

for needles and tools. The people lived near the lake for spring and summer fishing, then moved into the forests for autumn and winter hunting.

WOODLAND PERIOD

The four seasons we know today caused people to develop even better ways to live in the great forests and along the streams and lakes. The bow and arrow replaced earlier weapons for most hunting. With a bow a hunter could hit animals from an even greater distance with very little motion to frighten it. Fishermen continued to use bone and wooden hooks, but the heavy dugout canoes were gradually replaced with fast, lightweight canoes with bark skins. The new birch bark canoes made it easier to travel long distances and to carry the canoes from stream to stream. Woodland people began to trade with other groups all over the waterways of the northeast.

In addition to the plants that could be gathered from the woods, people learned to plant crops. Squash, corn and beans were grown in the summer time and preserved for the winter. Bark and stone containers were replaced with pottery. Pots made of clay could be put right on their fires and could be buried in the ground without rotting. This made it easier to cook and preserve food.

Once people started planting crops, they stopped moving as often. Larger villages were built so that the crops could be cultivated all summer long. With more food, populations increased and hunting parties began traveling greater distances to find game. Different groups began to form the First Nations. There was active international trade with each other, but they also found themselves fighting as well. Many wars were fought between First Nations during this period. The weapons used for hunting were also used for warfare. Some villages were protected with walls of logs around them. Some people were forced from their traditional lands and move to new areas. The Woodland nations of the Iroquois League and the nations of the Great Council Fire were well developed around the Champlain Valley when Europeans arrived in 1609.

TODAY

Today's descendants of these early peoples of the Champlain Valley still hunt and fish. Many have changed with the times, using guns instead of bow and arrow, and utilizing modern fishing equipment. Though some continue the traditional techniques and cultural ways while keeping in this modern age. A boatbuilder may make traditional birch bark canoes, even if they use power tools in a workshop!



EARLY PEOPLES OF THE CHAMPLAIN VALLEY

Name _____ Date _____

Using the information from the article Prehistoric Peoples, describe the characteristics of the Paleolithic, Archaic, and Woodland peoples according to each category (Time Period, Environment, Diet, Tools & Technology, and Other Artifacts).

TIME PERIOD

DIET

ENVIRONMENT

TOOLS & TECHNOLOGY

OTHER ARTIFACTS



PALEOLITHIC



ARCHAIC



WOODLAND

| TIME PERIOD | DIET | ENVIRONMENT | TOOLS & TECHNOLOGY | OTHER ARTIFACTS |
|-------------|------|-------------|--------------------|-----------------|
| | | | | |
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ENVIRONMENTAL ADAPTATION

LCMM

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| Grade Level | 4-12 |
| Content Areas | Social Studies |
| VT Grade Expectations | <p>VT H&SS 8: Students connect the past with the present by...</p> <ul style="list-style-type: none"> • Describing ways that life in the United States and/or the world has both changed and stayed the same over time; and explaining why these changes have occurred. • Investigating how events, people, and ideas have shaped the United States and/or the world; and hypothesizing how different influences could have led to different consequences. |
| NY Standards | <p>NY Social Studies Standard 1, Key Idea 1: Performance Target:</p> <ul style="list-style-type: none"> • Explore the meaning of American culture by identifying the key ideas, beliefs, and patterns of behavior, and traditions that help define it and unite all Americans. |
| Duration | 50 minutes |
| Learning Goals | People adapt to their environment to meet their basic needs. Students will speculate on how their life style would evolve if a major element in their environment were to change. |
| Description | <ol style="list-style-type: none"> 1. Discuss how people meet their basic needs of providing food, insulation (shelter, clothing, heat, etc.) and safety. 2. Divide students into work groups of 3-5. 3. Give each group a different scenario describing an environmental change. 4. Ask students to discuss all the ways in which the environmental change would affect the way they met their basic needs. Have someone in the group record their ideas on the worksheet of basic needs. 5. Following a sufficient work period, have each group share the environmental change they explored and the changes they thought would result. 6. After each group reports, invite the rest of the class to question or add to the results of the group. 7. Following the report of each group, summarize how people are constantly adapting to changing environmental conditions by inventing new technology or ways of doing things so that they are able to meet their basic needs. |
| Assessments | Informal assessment of group work or have students write a personal summary of their discussion for scoring. |
| Materials/Resources | Environmental change scenario cards |
| Special Considerations | This activity will vary considerably depending upon the sophistication of students. Teachers may wish to extend the activity by exploring student-generated scenarios. |

What If?

All fossil fuels run out. There is no coal, oil or natural gas left. How would this affect the ways we meet our basic needs?

What If?

The temperature of the world decreases. Temperatures are now below freezing from September to July. How would this affect the ways we meet our basic needs?

What If?

Life expectancy increases. Everyone now lives to be at least 100 years old. How would this affect the ways we meet our basic needs?

What If?

A disease kills all the insects in the world. How would this affect the ways we meet our basic needs?

What If?

Electromagnetic storms in space disrupt all electrical power on Earth. No electrical devices will work anymore. How would this affect the ways we meet our basic needs?

BASIC NEEDS RESEARCH

LCMM

| | |
|-------------------------------|--|
| Grade Level | 4-8 |
| Content Areas | Social Studies |
| VT Grade Expectations | <p>VT H&SS 3: Students design research by...</p> <ul style="list-style-type: none"> Identifying resources for finding answers to their questions Planning how to organize information so it can be shared. <p>VT H&SS 4: Students conduct research by...</p> <ul style="list-style-type: none"> Following directions to complete an inquiry. Asking questions and observing during the investigation process. Recording observations. <p>NY Social Studies Standard 1, Key Idea 1: Performance Target:</p> <ul style="list-style-type: none"> Explore the meaning of American culture by identifying the key ideas, beliefs, and patterns of behavior, and traditions that help define it and unite all Americans. |
| NY Standards | <p>NY Language Arts Standard 1: Key Idea1: Performance Indicator:</p> <ul style="list-style-type: none"> Select information appropriate to the purpose of their investigation and relate ideas from one text to another Select and use strategies they have been taught for notetaking, organizing, and categorizing information Compare and synthesize information from different sources |
| Duration | 5-10 50 minute periods |
| Learning Goals | For classes wishing to focus on research skills, this activity will provide a structure so that students can collectively learn about and report on characteristics of Native American lifestyle. |
| Description | <ol style="list-style-type: none"> Assign or allow students to form study groups of 2-3. Assign or allow students to choose topics to research. Possible topics: Foods, Clothing, Shelter Provide students with initial source material to initiate the research period. Students should be encouraged to use multiple research sources, appropriate to their age, to expand upon the provided information. Students should be given several days to gather and consolidate information on their topic. Students should prepare a written report or oral presentation for other students. Research groups share the findings of their research. |
| Assessments | Use standard assessment rubrics for oral or written reports. |
| Materials/Resources | Access to reference materials |
| Special Considerations | Teachers will need to provide additional instruction on research methodology that is appropriate for their students. |

BUILDING BIRCH BARK CONTAINERS

LCMM

| | |
|-------------------------------|--|
| Grade Level | K-12 |
| Content Areas | Social Studies, Science |
| VT Grade Expectations | <p>VT H&SS 8: Students connect the past with the present by...</p> <ul style="list-style-type: none"> Explaining differences between historic and present day objects in the United States and/or the world, evaluating how the use of the object and the object itself changed over time. Describing ways that life in the United States and/or the world has both changed and stayed the same over time, and explaining why these changes have occurred. |
| NY Standards | <p>NY Social Studies Standard 1, Key Idea 1: Performance Target:</p> <ul style="list-style-type: none"> Explore the meaning of American culture by identifying the key ideas, beliefs, and patterns of behavior, and traditions that help define it and unite all Americans |
| Duration | 50 minutes |
| Learning Goals | Students will learn about early cultures by reproducing one of their important artifacts. |
| Description | <ol style="list-style-type: none"> Discuss the kinds of materials that were available to Woodland people and the importance of birch bark as a resource for building all kinds of objects. The teacher or students will need to gather sheets of birch bark. Cut birch bark into container pattern. Cut container rim strips. Fold container into finished shape. Sew together stems of birch bark skin. Place container rim in place. Sew birch skin edges to rim. Decorate container with traditional designs. Discuss the advantages and limitations of birch bark containers and how they were used then and how they might still be useful today. |
| Assessments | Project assessment rubric (see page xx) |
| Materials/Resources | Sheets of birch bark, thin strips of wood or flexible twigs |
| Special Considerations | If birch bark is not readily available in your area, heavy construction paper could be substituted. |

HUNTING TOOLS, TRAPS AND TECHNIQUES

LCMM

Grade Level 4-12

Content Areas Social Studies, Science

VT Grade Expectations

VT H&SS 8: Students connect the past with the present by...

- Explaining differences between historic and present day objects in Vermont, and identifying how the use of the object and the object itself changed over time.
- Describing ways that life in the community and Vermont has both changed and stayed the same over time.

VT R - 16 Analyze and interpret informational text, citing evidence as appropriate by...

- Connecting information within a text or across texts
- Synthesizing information within or across text(s)
- Drawing inferences about text

NY Standards

NY Social Studies Standard 1, Key Idea 1: Performance Standard:

- Explore the meaning of American culture by identifying the key ideas, beliefs, and patterns of behavior, and traditions that help define it and unite all Americans

NY Reading Standard 1, Key Idea 1: Performance Standard:

- Select and use strategies they have been taught for note taking, organizing, and categorizing information
- Support inferences about information and ideas with reference to text features, such as vocabulary and organizational patterns.

Duration 50 minutes

Learning Goals **Students will learn about the operation and uses of different kinds of tools, traps and techniques used for hunting.**

Description

1. Discuss how agriculture, hunting and gathering were the primary occupations of food acquisition. Emphasize that hunting was an important job, not a sport.
2. Distribute articles and worksheets to students.
3. Review the guiding questions for the different hunting techniques.
4. In small groups or individually have students read the article on hunting techniques and have them take notes by answering the guiding questions as they read.
5. When everyone is finished, discuss students' responses and clarify any omissions or disagreements.

Assessments The teacher should informally monitor whether students are able to find information from the article and accurately respond to the guiding questions.

Materials/Resources Hunting article, Hunting worksheet

Special Considerations It is important that students understand that Native Americans had great respect for the animals and plants that they depended upon for sustenance. Harvesting animals was an important part of the economic system and Native Americans understood and appreciated their own place in the food web and natural systems.

HUNTING

For the First Navigators of the Champlain Valley, hunting was not a sport, but a way of life. Although more than half of the foods that Native Americans ate came from plants, hunting was still a very important way to get food, as well as materials for clothing, shelter, and decoration. A successful hunter could feed and clothe his family; an unsuccessful hunter might starve.

Tools and techniques changed over time, and based on the types of animals that were being hunted. The earliest Native Americans in this region, the Paleoindians, had different tools than the people who lived in the Archaic or Woodland time periods.

Big Game Hunting

The first people arrived in the region along the shores of the Champlain Sea created by the melting glaciers. It was colder then and the land had fewer trees. Instead there were wide open plains of tundra grassland between the mountains.

This was the perfect place for large herds of grazing animals like caribou, mammoths, mastodons, and musk oxen. The people followed the herds in their seasonal migrations.

Hunting large herd animals was most effective by small family hunting bands. A young or weak animal would be separated from the herd, surrounded and killed. The weapon for these animals was the spear. Hunting spears came in different sizes depending upon the game to be killed. Some were for throwing like a javelin, others for repeatedly stabbing. They would have a wooden shaft with either a sharpened bone or stone head. Once the animal was killed, it would be cut up and skinned with stone knives. The skins would then be scraped and cleaned using stone and bone scrapers. Usually, all that archaeologists find from the Paleoindian hunters are their stone tools.



John Morris of Grand Isle getting ready to shoot at the annual Atlatl Championship at Crown Point Historic Site. Visit <http://www.historicvermont.org/>

Stalking

As the land warmed, forests began to grow and the large herd animals moved further north or died out. Now only smaller game remained, like deer, moose, bear, and small water birds and mammals. These animals were more solitary and harder to find and kill. Weapons that could kill from a greater distance were needed; this led to the introduction of the atlatl. The atlatl was used with a light throwing spear or dart. It was a wooden handle that extended the length of the arm, much like a tennis racket or baseball bat does today. The dart fit into a notch or hook in the atlatl so that when it was thrown forward the atlatl gave it a little extra power and speed. With an atlatl the hunter could stalk his prey until he was close enough for a throw.

Because the atlatl allowed the dart to go farther, the hunter didn't have to be as close.

Two other throwing weapons were the sling and bola. The sling was a strip of leather with a small pocket that could be folded over a smooth stone. The sling was swung around and then let go, sending the stone toward its target at great speed. This weapon was used on birds and small mammals. The bola was used mostly for birds. Several strands of cord were joined together. At the end of each strand was a weight. Like the sling, the bola would be swung around to generate speed and then launched

In addition to food, Native Americans used animals for:

CLOTHING

Animal hides were used to keep people warm. They made skirts, dresses, leggings, and moccasins from hides and furs.

SHELTER

Hides were used to make tents. Sinew (a thin band that connects muscle and bone) was used to lash things together.

TOOLS

Animal bone was used for many types of tools.

DECORATION

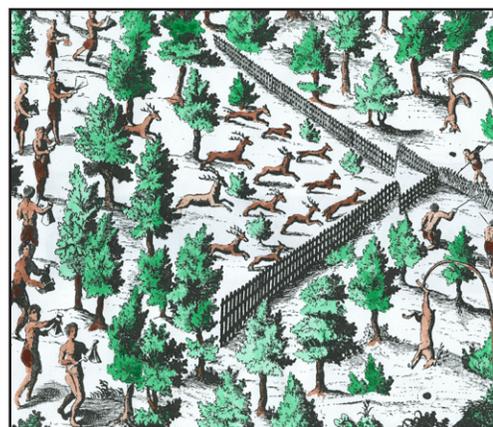
Teeth and claws were used for personal adornment and jewelry.

toward its target. As it flew, the different strands of the bola would spread out covering a wider area. When it hit its target, like a large water bird, the cords would wrap around the body or wings and tangle it up. Once it fell to the ground, the hunter could use a club to kill it.

By the Woodland period, the hunting weapon of choice was the bow and arrow. Although spears were still used sometimes for moose and bear, the bow and arrow was the most effective tool available for most game and the hunters of this period became very skilled in using it. The bow was made from a straight section of maple, spruce, hickory or ash four to five feet long. The string was made of twisted hemp, sinew, gut or hair. Arrow shafts were about two feet long, with feather fletching to help them fly straight, and stone, bone or copper head. The bow and arrow allowed the hunter to shoot game from further away and fire with less movement. Special barbed arrows with a fishing line could be used for shooting fish and blunt arrows were often used for birds and small mammals.

Trapping

Another way to harvest animals was to set traps in the woods along well-used animal paths. The deadfall trap was in wide use for larger animals. The trap was built by propping heavy logs up with a support stick. Rocks, for extra weight, could be added on top of the log to make it more deadly. Bait was placed on the support stick. When an animal pulled on the bait, the support stick would pull away and the logs and rocks would collapse, killing or trapping the animal underneath. The trap could be large or small for different size animals.



Driving animals. Wiseman Collection.

Samuel de Champlain saw the use of another trap, the spring pole snare. A young tree was bent down and held to the ground with a cord tied to a setting stake. The other end of the cord was attached to a noose or net that was laid out carefully on the ground. A bait stick was placed so that when an animal pulled on the bait, the setting stake would release, the tree would spring upright, and the noose or net would be pulled closed around the animal. These traps were commonly used for birds and small mammals.

Game Calling

Another way to get the animals to come to the hunters was by game calling. Game calls could be made of birch bark, wood or bone. These materials were fashioned into horns and whistles that imitated the sounds of the animals. Sometimes the hunter would even use their hands cupped over their mouths to make the right gobble or call. The hunter would hide, use the game call, and wait for the animal to come where he was. Decoys were also used for hunting birds, such as duck skins stuffed with grass. These decoys would attract birds to land near where the hunters were hidden.



Moose Call. Wobanakis Heritage Center.

Early people killed only what they needed for food. They understood that they had to keep the herds of animals healthy and productive for the good of the animals and their own survival. Families were often responsible for a certain territory and only they could hunt in that area. There were also seasonal hunts, especially in winter when moose or deer could be more easily caught in the deep snow by hunters on snowshoes. People adapted over time to the changing environment, adjusting their tools and hunting techniques to what was most successful.

HUNTING

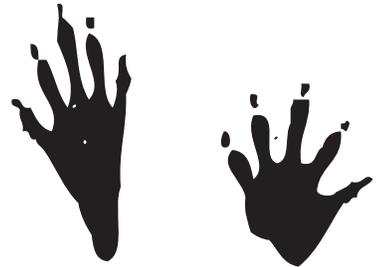
Name _____ Date _____

Directions: Read the article "Hunting." Choose two types of traditional hunting techniques and answer the questions below.

Kind of hunting _____

Gear used _____

How were animals caught _____



Racoon Tracks

Kind of hunting _____

Gear used _____

How were animals caught _____



Coyote Tracks

What hunting technique seems most effective? _____

How was traditional hunting different than it is now? _____



Red Fox Tracks



Turkey Tracks

HUNTING PROJECT

LCMM

Grade Level 4-12

Content Areas Social Studies, Science

VT Grade Expectations VT H&SS 3: Students design research by...

- Identifying resources for finding answers to their questions
- Planning how to organize information so it can be shared.

VT H&SS 4: Students conduct research by...

- Following directions to complete an inquiry.
- Asking questions and observing during the investigation process.
- Recording observations with words, numbers, symbols, and/or pictures.

NY Standards NY Social Studies Standard 1, Key Idea 1: Performance Target:

- Explore the meaning of American culture by identifying the key ideas, beliefs, and patterns of behavior, and traditions that help define it and unite all Americans

Duration Independent Project

Learning Goals **Students will learn about the operation, construction and uses of different kinds of tools and traps.**

Description

1. Discuss the various hunting and fishing tools that have been introduced in class discussions and readings.
2. Invite students to work individually or in groups to research and build a working model of one of the devises.
3. Review the project assessment criteria and safety issues related to the construction and handling of projects. Possible choices:
 - Bow and Arrow
 - Atlatl and Dart
 - Spear
 - Deadfall Trap
 - Springpole Snare
 - Traditional Fish Hooks and Line
 - Fishing Spear
 - Fishing Weir
 - Moose or Bird Call
4. Have students demonstrate the proper use of their model.

Assessments Use the project assessment Rubric (see page xx).

Materials/Resources Access to research materials.

Special Considerations Students will be asked to find materials they need themselves. However, the teacher or school may be able to support student who have difficulty providing what they need. This is intended to be an interesting and creative project. Teachers should encourage students to choose a project they are interested in. There is probably no reason why several students or groups could not work on the same device.

Agriculture

The first people to arrive in the Champlain Valley were big game hunters known as Paleoindians. They followed the herds of large animals as they migrated and eventually arrived at the shores of the Champlain Sea about 12,000 years ago.

The land had few trees and was covered mostly with tundra grasses and scrubs. It is likely that they hunted animals, and gathered seasonal berries and perhaps edible roots from these plants. The bands moved often to follow the herds of animals, so there was no agriculture at this time.

As climate warmed, the forest grew. The large herds of animals either disappeared or moved further north. The people who remained and adapted to these changes were called Archaic people. The animals that lived in the forest were fewer and harder to catch. Deer, moose, bear, and other small mammals became the source of meat. The Champlain Valley was no longer connected to the ocean and fresh water formed the early Lake Champlain. Fish were available from these fresh waters, especially in the springtime. The trees provided new foods like butternuts, acorns, beechnuts, chestnuts, hawthorn and elderberries, and a variety of edible leaves, roots, and flowers. These plant foods became more important in the diet of Archaic people as the supply of meat was reduced.

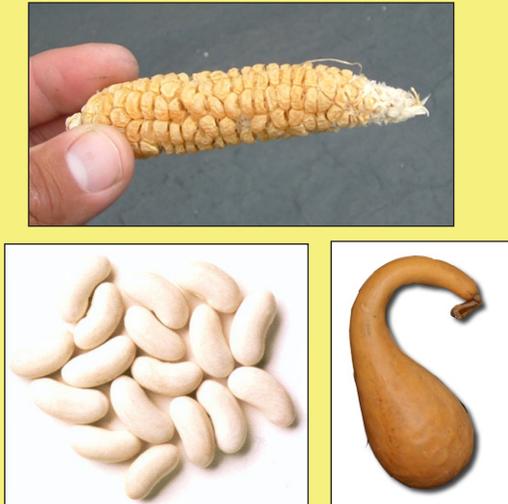
It was not until the Woodland period that agriculture was introduced into the Champlain Valley. The Woodland people still hunted the same animals and gathered the same nuts and berries as the Archaic people, but gradually seed crops from the south made their way to the northern people.

Natural clearings or areas where the trees had been burned down would be prepared for planting. Small hills would be dug, fertilized and planted with the seeds. Men helped with preparing the fields, but women were responsible for planting, caring for, and harvesting the crops. Growing crops provided a reliable source of food that could support a growing population.

In areas where the weather and soils were good, agriculture became the most important food source. Since people had to live in one place while the crops grew, village life began to replace the traveling hunting camps of earlier times. It also meant that the animals near the villages were killed quickly and hunting parties had to travel greater distances from the village to find meat. With enough food, the population grew and more land was needed in order to spread out.

Conditions were not as good for agriculture outside of the basin of the Champlain Valley. The land was rugged and the growing season shorter. Agriculture and the "Three Sisters" became an important part of their diet. The eastern and northern people planted crops and lived in villages, but continued to live in smaller bands for part of the year to ensure success in the traditional hunting and gathering of food from the forests. The population in these areas remained smaller and easy to support with the food that could be grown, gathered and hunted.

When Europeans arrived, they found that many fields were already cleared and learned from the First Nations people how to farm successfully in their new environment. Only slowly did European style farming transform the landscape of the Champlain Valley.



The Three Sisters

The most important crops were known as the "Three Sisters" - corn, beans, and squash. The seeds were often planted together in what we call today "companion planting." The corn grew into a tall stalk that could support both the ears of corn and the vines of the bean plants. The squash grew along the ground with large wide leaves that kept the ground moist and free of weeds.



Agriculture

Name _____

Date _____

Early people gradually became farmers as well as hunters and gatherers. As you read the article list the foods that are mentioned on the matrix below.

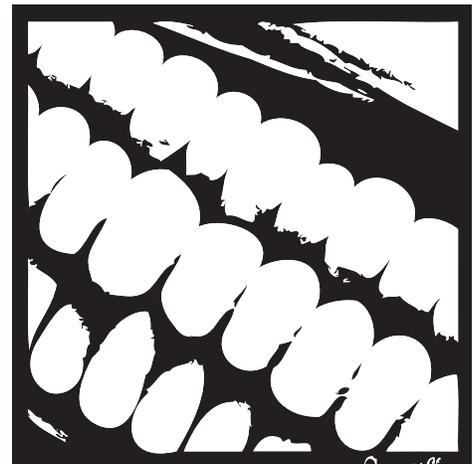
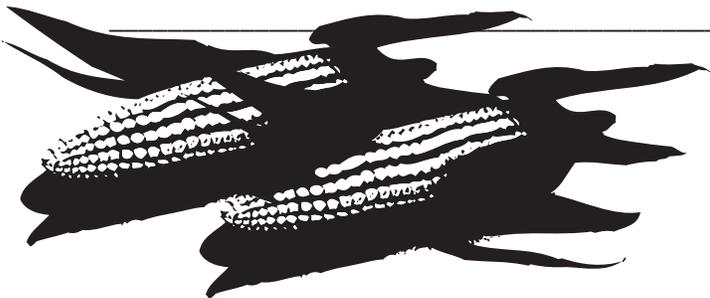
What are the Three Sisters? _____

What are some of the advantages of growing crops for food? _____

The weather is generally colder in the north with a shorter growing season. How would this affect agriculture?

How would the homes of farmers be different from hunters?

Tending crops was mostly done by women. How did this make their lives different from men?



TRADITIONAL FISHING

LCMM

| | |
|-------------------------------|---|
| Grade Level | 4-8 |
| Content Areas | Social Studies |
| VT Grade Expectations | <p>VT H&SS 8: Students connect the past with the present by...</p> <ul style="list-style-type: none"> Explaining differences between historic and present day objects in the United States and/or the world, evaluating how the use of the object and the object itself changed over time. <p>VT R 12: Demonstrate initial understanding of informational texts by...</p> <ul style="list-style-type: none"> Using information from the text to answer questions related to main/central ideas or key details. <p>VT R 16: Analyze and interpret informational text, citing evidence as appropriate by...</p> <ul style="list-style-type: none"> Drawing inferences about text <p>NY Social Studies Standard 1, Key Idea 1: Performance Target:</p> <ul style="list-style-type: none"> Explore the meaning of American culture by identifying the key ideas, beliefs, and patterns of behavior, and traditions that help define it and unite all Americans. |
| NY Standards | <p>NY Language Arts Standard 1: Key Idea1: Performance Indicator:</p> <ul style="list-style-type: none"> Select and use strategies they have been taught for notetaking, organizing, and categorizing information Relate new information to prior knowledge and experience |
| Duration | 50 minutes |
| Learning Goals | Students will recognize different traditional fishing techniques, the gear, and advantages and disadvantages of each approach. |
| Description | <ol style="list-style-type: none"> Discuss the importance of access to water and fish in the diet of Native Americans. Distribute articles and worksheets to students. Review the guiding questions for the different fishing techniques. In small groups or individually have students read the article on fishing techniques and have them take notes by answering the guiding questions as they read. Discuss students' responses and clarify any omissions or disagreements. |
| Assessments | The teacher should informally monitor whether students are able to find information from the article and accurately respond to the guiding questions. |
| Materials/Resources | Traditional Fishing Article, Traditional Fishing Worksheet |
| Special Considerations | This activity could be done as an independent homework assignment. It also could be extended with a demonstration of modern fishing gear and techniques. |

Traditional Fishing



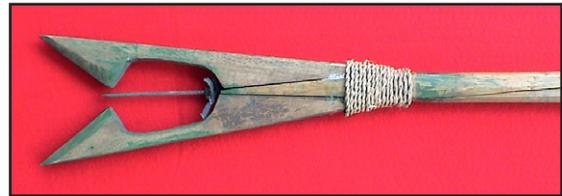
Lake Sturgeon (*Acipenser fulvescens*). Fish Artwork by Ellen Edmondson and Hugh H. Chrisp, NYS DEC.

One of the reasons Lake Champlain became such a good place to live for the First Navigators was because of the abundance of life that lived along its shores and in its waters. Early people brought with them the basic tools they needed to harvest the fish from the lake, which became an important part of their seasonal diet and influenced their life style in many ways.

Unlike sport fishing today, traditional fishing was a matter of harvesting food. The techniques and tools that were used made it as easy and efficient as possible to catch as many fish as were needed. Early fishermen understood that they were part of the food web and it was important for them to make sure they didn't catch more fish than they could actually use.

Nodamagwojik Alnobaiwi (Spear Fishing)

Spear fishing is probably the earliest form of fishing in the Champlain Valley, especially in the spring when fish swim upstream to spawn. Many early villages were located near falls or rapids where the water shallows and the fish were easier to see and spear.



Fishing Spear. Wobanakik Heritage Center.

Nodamawogan (Pronged Spear)

The traditional fishing spear was between 8-12 feet long. It had three prongs bound to the shaft by rawhide or bark lashings. The central spike was a sharpened bone, such as the leg bone of a deer or moose. On each side were two wooden prongs with barbs that were designed to hold the fish on the spear until it could be lifted from the water. The size, shape and distance between the prongs was different for different sizes of fish. The fisherman would stand above a shallow place where he could see fish pass by and drive the spear into the fish's body. He would lift it out of the water, spread the prongs to release the fish and throw it on shore or into a basket.



Replicated 15th century style socketed harpoon tip. Wobanakik Heritage Center.

Astahiganiz (Small Harpoon)

A harpoon is a spear with a point that separates from the spear shaft once it becomes embedded in the fish. A hand line is attached to the point so that when it is driven into the body of a fish, the fisherman can pull the fish in with the line. Harpoon points were made of bone and had a barb that held them in the body of the fish until it could be pulled in. The small harpoon would be used for fish like walleye, northern pike, or muskellunge that were too big to lift with a pronged spear.

Astahigan Kabassa (Large Harpoon)

The large harpoon was the tool needed for the largest fish, the sturgeon. It worked the same way as the small harpoon, but was larger and heavier. It may also have been used for hunting sea mammals like seals. Large fish were often hunted at night by the light of a torch. Fish would be attracted by the light and swim within range of the fisherman's spear.



Ash splint basketry fishing trap. Wobanakik Heritage Center.

Adelahigan Alnobaiwi (Fishing Weirs)

A fishing weir is a kind of trap. It could be made of stone or wood. It was typically built part of the way across a stream like a low stone wall or fence. Water could pass through or over the weir, but fish were funneled into a small, shallow area or wooden cage. Once there, they could be easily speared by the fisherman. Sometimes a Adelahigan (basket trap) was placed at the end of the weir funnel. Fish could swim into the trap but not out. The whole basket could be lifted out of the water and emptied on shore.

Oman Cawapeniganatagw Alnobaiwi (Line Fishing)

In the spring and fall most fish move to deeper waters where they can't be speared. To catch fish in deep water, fishermen needed to use bait and lures to attract them to their hooks and lines.

Cawapeniganal (Bone Fish Hook)

Bone fish hooks were used in ancient times. A large bone would be cut and shaped with stone tools. The size of the hook depended upon the size of the fish the fisherman was after. The hook would be attached to a fiber or rawhide line and baited with a piece of meat or fish. Later, bone hooks were replaced by metal hooks that were brought by Europeans as trade goods.

Senigan (Stone Plummet)

Fiber and rawhide fishing lines usually don't sink, so a weight was needed to drop the line down to the depth where the fish were. A stone was shaped to serve as a sinker, drawing the line, hook and bait to where the fish waited.

Rod and Reel

During the Nineteenth Century European fishing rods, reels, lines and hooks gradually replaced traditional fishing tools and methods. Fishing weirs and traps were outlawed. Although the tools and methods were similar to those used by other fishermen, fish continue to be an important part of First Nation peoples' diets into modern times.



Chief of the Wabanacus of Highgate Springs. Wiseman Family Collection.

Traditional Fishing

Name _____

Date _____

Directions: Read the article "Traditional Fishing." Choose two types of traditional fishing techniques and answer the questions below.

Kind of fishing _____

Gear used _____

How were fish caught _____

Kind of fishing _____

Gear used _____

How were fish caught _____

Why were different kinds of fishing techniques developed? _____

What fishing technique seems most effective? Why? _____

How was traditional fishing different than it is now?

TRADITIONAL WATER CRAFT

LCMM

| | |
|-------------------------------|--|
| Grade Level | 4-8 |
| Content Areas | Social Studies |
| VT Grade Expectations | <p>VT H&SS 8: Students connect the past with the present by...</p> <ul style="list-style-type: none"> Explaining differences between historic and present day objects in Vermont, and identifying how the use of the object and the object itself changed over time. Describing ways that life in the community and Vermont has both changed and stayed the same over time. <p>VT R 16: Analyze and interpret informational text, citing evidence as appropriate by...</p> <ul style="list-style-type: none"> Connecting information within a text or across texts Synthesizing information within or across text(s) |
| NY Standards | <p>NY Social Studies Standard 1, Key Idea 1: Performance Standard:</p> <ul style="list-style-type: none"> Explore the meaning of American culture by identifying the key ideas, beliefs, and patterns of behavior, and traditions that help define it and unite all Americans <p>NY Reading Standard 1, Key Idea 1: Performance Standard:</p> <ul style="list-style-type: none"> Select and use strategies they have been taught for notetaking, organizing, and categorizing information |
| Duration | 50 minutes |
| Learning Goals | Students will recognize the three different types of traditional water craft, their construction and uses. |
| Description | <ol style="list-style-type: none"> Discuss the importance of waterways in the daily life of early people and transportation between communities. Distribute water craft articles and worksheets to students. Review the guiding questions for each water craft. In small groups or individually have students read the article and have them take notes by answering the guiding questions as they read. When everyone is finished, discuss students' responses and clarify any omissions or disagreements. |
| Assessments | The teacher should informally monitor whether students are able to find information from the article and accurately respond to the guiding questions. |
| Materials/Resources | Water craft articles, Water craft worksheets |
| Special Considerations | <p>This activity could be done as an independent homework assignment.</p> <p>The activity could be extended with a discussion about why we rarely see these types of craft and how they have been replaced in modern times.</p> |

TRADITIONAL WATERCRAFT

Lake Champlain and its connecting waterways have been the highways for exploration, migration, communication, and commerce since the glaciers began to melt 12,000 years ago. To use the waterways, people of the valley have used a variety of water craft to transport themselves and their possessions.

Magoliboliol (Skin Boat)

The shores of the Champlain Sea and young Lake Champlain were barren much like the arctic today. There were few trees big enough to use as building materials. However, there were an abundance of land and sea animals. The animals were used for food and their hides and bones could be used for construction of boats. Bone from large sea animals like whales and wood from small trees were used to form a frame like the skeleton of the boat. Hides from seals, walrus, or caribou would then be stretched over the frame to form the skin of the boat. The whole boat would be sewn together using sinew or gut lashings. The result was a strong, lightweight boat that used the materials that were available.

Woleskaolakw (Dugout Canoe)

As the climate continued to warm, the forests grew around the lake. Eventually huge pine trees, more than three feet in diameter, were available for a new kind of boat. Dugout canoes were made from the trunk of a single tree. Because early boat builders had no metal tools, the trees had to be felled by burning and chipping away at their trunks. Once a tree was felled, fire and stone chipping tools would be used to hollow and shape the boat. Then the vessel would be waterproofed by further burning the interior or by coating the inside with bear grease. While most dugout canoes were probably small and used for fishing and gathering water plants, they could be built as large as the trees would allow. Dugout canoes were fast and durable, but took a long time to make and were not easy to move over the land between bodies of water because they were so heavy. Several dugout canoes have been found sunken in ponds around Vermont.



A dugout canoe in use during the early 20th century. Private Collection.



Native American spear fishing in a birch bark canoe. LCMM Collection.

Wigwaol (Bark Canoe)

The most sophisticated water craft on early Lake Champlain was the birch bark canoe. These canoes were fast, lightweight, durable, and used extensively throughout northeastern America. In fact, it was a birch bark canoe that carried Samuel de Champlain and his men onto Lake Champlain in 1609. Canoes could be shaped differently for lakes or for rivers. They could be small, for only one person, or large enough to carry war parties long distances. Although different kinds of bark could be used, birch bark was the best.

The materials for a bark canoe would be gathered from the forest. A large sheet of birch bark would

be peeled from a tree, white cedar wood for the ribs and lining, spruce roots for stitching and lashing, and spruce-gum to seal the seams. The birch bark would be laid out between stakes and weighted down with stones to give the canoe its basic form. Long gunwales would be carved and lashed together to form the edge of the canoe's sides. After soaking in water, carved ribs would be put in place to hold out the body of the bark hull. Thin strips of cedar would be split and placed between the ribs and the bark skin to make the boat more stiff. The skin was sewn together and lashed to the frame. The spruce gum was boiled into a sticky tar that was painted on the seams to make them watertight. Finally, the canoe would be decorated with paint, carving or inlay.



Crooked Knife, or belaghagenigan, used for cutting cedar strips for the canoe's gunwales.
Wobanakik Heritage Center.

In general, it took a family of canoe builders about a week to build a sixteen-foot canoe. The canoe lasted for about a year and was easy to repair with materials available from the forest.

Birch bark canoes dominated lake travel for many years. They were much better suited to travel in the region than the heavy, clumsy boats brought by Europeans. They continued to be used by explorers, fur trappers, traders and travelers of all sorts until the present day. Although many fine examples remain and new boats are still being built today, most of the large white birch trees that they were made from are gone.

Paddles

The Odaogan (canoe paddle) was split from cedar, ash, cherry, or maple and carved to shape by hand. The types of paddles used in the late 18th century had leaf-shaped blades and upper hand hold (also known as a pommel). The pommel of the mid 19th century Abenaki paddles are long and wedge shaped. More recent ones from the early twentieth century become progressively shorter and more flared, approaching the modern "Old Town" form by the 1940's. Before the coming of power tools, it took one person nearly as long to make a paddle as it took a group to make the canoe, but it lasted longer.



Wiseman, Frederick M 2001 *The Voice of the Dawn: An Autohistory of the Abenaki Nation*. University Press of New England, Hanover.





Name _____

Date _____

Read the article "Traditional Water Craft" and take notes on each type of boat as you read.



Boat Type 1

Abenaki Name _____ English Name _____

What are the materials the craft is built from? _____

What were the good things about this type of craft? _____



Boat Type 2

Abenaki Name _____ English Name _____

What are the materials the craft is built from? _____

What were the good things about this type of craft? _____



Boat Type 3

Abenaki Name _____ English Name _____

What are the materials the craft is built from? _____

What were the good things about this type of craft? _____

BUILDING A BIRCH BARK CANOE



A cedar tree is stripped of its bark and then split into thin strips for the gunwales and frames.



The gunwale assembly is lashed together by ash strips, which were first soaked for softening.



A rough frame is constructed and the birch bark is wrapped around it, with the white side facing inward. Stakes around the exterior hold the correct shape, while rocks sit atop a temporary building frame to keep everything in place.



Cedar splints are used for planking the interior, giving it strength.

Although the bark itself is watertight, the seams must be sealed. Traditionally, spruce gum was used, often mixed with animal lard. The mixture is heated into a liquid and then applied to the exterior.



The frames are soaked in hot water and then bent into the proper shape and held with strapping to dry.



The circumference of the birch tree chosen for this size canoe is not large enough to wrap from gunwale to gunwale, so patches are used to complete the form, sewn to the main hull with spruce root. These roots must first be boiled to loosen and remove the bark. The holes are "pre-drilled", and then the roots are fed through using a blanket stitch.



The completed canoe. It is being paddled by people reenacting Samuel de Champlain's arrival on Lake Champlain in 1609.

This is part of a birch bark canoe exhibit entitled "Lake Champlain's First Navigators". This canoe can travel to your school or community. Find out how by calling LCMM at (802) 475-2022.



Lake Champlain
MARITIME MUSEUM

BUILDING A BIRCH BARK CANOE

LCMM

| | |
|-------------------------------|---|
| Grade Level | 1-12 |
| Content Areas | Social Studies, Science |
| VT Grade Expectations | <p>VT H&SS3-4:8 Students connect the past with the present by...</p> <ul style="list-style-type: none"> Explaining differences between historic and present day objects in Vermont, and identifying how the use of the object and the object itself changed over time |
| NY Standards | <p>NY Social Studies Standard 1, Key Idea 1: Performance Standard</p> <ul style="list-style-type: none"> Explore the meaning of American culture by identifying the key ideas, beliefs, and patterns of behavior, and traditions that help define it and unite all Americans |
| Duration | 50 minutes |
| Learning Goals | Students will learn about the importance of birch bark canoes in Woodland cultures by constructing a model canoe. |
| Description | <ol style="list-style-type: none"> Discuss the importance of lakes and streams in providing transportation routes for Woodland people and how birch bark canoes were the lightest, fastest vessels available. The teacher or students will need to gather sheets of birch bark in advance. Cut birch bark into canoe skin pattern. Cut gunwale wood strips and thwart to length. Sew together stems of birch bark skin. Tie gunwale ends. Place mid-ship thwart and glue or lash in place. Fit gunwale to birch bark skin edges. Sew birch skin edges to gunwales. Decorate canoe with traditional designs. |
| Assessments | Project assessment rubric |
| Materials/Resources | Birch bark sheets, wooden strips |
| Special Considerations | Measure load capacity of canoe models/identify load to weight ratio |

DRAMATIZING THE BUILDING OF BIRCH BARK CANOES

Joan Robinson, Flynn Center for the Performing Arts

| | |
|------------------------------|---|
| Grade Level | 3-8 |
| Content Areas | Social Studies |
| VT Grade Expectations | <p>VT H&SS3-4:8 Students connect the past with the present by...</p> <ul style="list-style-type: none"> • Explaining differences between historic and present day objects in Vermont, and identifying how the use of the object and the object itself changed over time |
| NY Standards | NY Social Studies Standard 1 – explore the meaning of American culture |
| Duration | 30 minutes |
| Learning Goals | Students use pantomime to demonstrate their understanding of the many steps of building a birch bark canoe. |
| Description | <ol style="list-style-type: none"> 1. Identify the many tools that were used to build birch bark canoes. Find or draw pictures of these tools so that all students share the same ideas of these tools. 2. Explain that pantomime means to express an idea with only body movements and facial expressions. Then form a circle and ask one student to pantomime using one of the tools, then pass it on the next student who will do the same, continuing this process until everyone has had a turn. Encourage the students to maintain the tool's weight, size and if applicable, texture, as it is passed. Repeat using other tools. 3. Divide the students into groups of four, and cast them as two males and two females. Instruct each group to find a space in the room where they will construct an imaginary birch bark canoe. As you list the materials and tools necessary, ask the groups to decide where each are located within their playing space. 4. Instruct the students to pantomime the various steps outlined on page 63 and 64, as you narrate. Keep the students active by avoiding long descriptions, and when men and women are doing separate jobs, give instructions so that they may work simultaneously Example: All of you work together to peel the bark of the birch tree. Now, women make slashes in the bark of spruce trees and fasten bark pails to collect the pego or spruce gum. Men, split wood from maple and cedar trees and carve them the gunwales for the canoe... End the narration by having them get in the finished canoe and paddle into the lake on its maiden voyage. 5. When the canoe is built, reflect upon the process by asking such questions as: <ul style="list-style-type: none"> • How did it feel to build this canoe? • Which parts of the building process do you think takes the most skill in real life? • What tools do we have now that would make the process easier? • What part was the hardest to imagine? • What acting skills did you use to make it seem real? |
| Assessments | <p><i>Formative:</i> During the narration observe the actions. Clear up any misunderstandings you observe as you go through the process.</p> <p><i>Summative:</i> See reflection questions at #5 of Description and Sequence.</p> |

LESSON

Materials/Resources

Illustrations of the tools used in 1600's to make birch bark canoes.

Special Considerations

If students are having a hard time imagining the various materials and processes, add more descriptions of size, weight, smell, texture, difficulty to maneuver, etc..

This technique is one of many included in the Flynn Center's *Words Come Alive!* publications, created with teachers through its professional development program of the same name. The *Words Come Alive!* toolkit features drama and movement techniques designed to help students strengthen reading comprehension. Supplements to this *Words Come Alive!* toolkit, three booklets were published of lesson plans that present ways that the techniques have been applied: *Picture Books Come Alive!*, *Novels Come Alive!*, and *Creating Performances in Dance, Storytelling and Theater*. For more information and/or to order copies, go to the Flynn's website: http://www.flynncenter.org/education_pages/words.shtml or call 802-652-4548.

Flynn teaching artists are also available to lead *Words Come Alive!* workshops in classrooms on topics related to Lake Champlain. Contact education@flynncenter.org or 802-652-4548 for more information.

THANKSGIVING FEAST

LCMM

Grade Level K-12

Content Areas Social Studies

VT Grade Expectations

VT H&SS 8: Students connect the past with the present by...

- Describing ways that life in the community and Vermont has both changed and stayed the same over time.

VT H&SS 3: Students design research by...

- Identifying resources for finding answers to their questions
- Planning how to organize information so it can be shared.

NY Standards

NY Social Studies Standard 1, Key Idea 1: Performance Target:

- Know the roots of American culture, its development from many different traditions, and the ways many people from a variety of groups and backgrounds played a role in creating it.

NY Language Arts Standard 1: Key Idea1: Performance Indicator:

- Select information appropriate to the purpose of their investigation and relate ideas from one text to another
- Select and use strategies they have been taught for notetaking, organizing, and categorizing information
- Compare and synthesize information from different sources

Duration Time will vary

Learning Goals **Students will learn about traditional foods by preparing, cooking and eating them.**

Description

1. Discuss the foods that early people hunted, gathered and grew. It was customary among most nations to have special Thanksgiving feast days. Ask how the traditional foods might be prepared for eating.
2. In groups or individually have students do research to locate traditional recipes.
3. Have the class choose the menu for the feast.
4. Organize the class for cooking, perhaps having each group prepare a different dish.
5. When the dishes are prepared, have each group report to the class what it is and how it was prepared.
6. Enjoy the feast.
7. Discuss with students how each dish is similar or different from foods they eat today.

Assessments Informal assessment of participation

Materials/Resources Varies

Special Considerations Teachers will have to determine what is reasonable for their classroom situation. Possible modifications might include: making a single dish for the hot lunch program; having students prepare dishes at home and bring them to school; making a single dish each day for a week. This is a great internet research project for students. The following list of recipes is just a sample of what is possible.

Pemmican

Ingredients:

2 ounces dried beef jerky
blender or food processor
rubber spatula

4 dried apple slices
handful of raisins, dried
cranberries, or dried cherries

wax paper
rolling pin

Directions:

Grind the dried beef jerky in the blender until it is chopped very finely. Add the dried fruit and raisins. Grind until fine. Empty the mixture from the blender onto a sheet of wax paper. Lay another sheet of wax paper on top and roll over the top sheet with a rolling pin until the pemmican is approximately 1/8 inch thick. Let dry between the wax paper a day or two in the sun. To dry in an oven: Flip the pemmican from the wax paper into a pie tin. Set the tin in a 350 degree oven for two hours, turning over several times as it dries.

When completely dry, break off pieces to eat as a snack. Store leftover pemmican in a sealed container or plastic bag in the refrigerator.

Boiled Corn

Ingredients:

30 cornhusks, green or dried
1 or 2 cups of boiling water
shallow baking pan

3-quart pot, 3/4 filled with water
1 cup cornmeal
1-quart bowl

mixing spoon
1/2 cup honey
slotted spoon

Directions:

Put the cornhusks in the baking pan and cover with hot water. Bring pot of water to a boil. Pour cornmeal flour into the bowl and mix in 1 cup boiling water. Stir until it reaches the consistency of oatmeal. If too thick, add more boiling water and keep stirring. Stir in the honey. Open one of the wet cornhusks. Drop 2 spoonfuls of the corn mix into the center. Fold the sides of the husk over the corn mix and fold over the ends to form a little packet. Tear off a strip of another husk to use as a string. Tie the husk packet together. Fill other husks to make more packets. Gently drop the packets into the boiling water. Boil for 15 to 20 minutes. Lift them out with a slotted spoon. Cut the husk string, open the packets, and enjoy!

Wild Green Salad

Ingredients:

| | | | |
|--|---------------------------------|--|--------------------|
| assortment of wild & cultivated greens | 1/4 cup vinegar | 1 to 2 teaspoons of dill weed, chopped | small bowl |
| large bowl | 1/3 cup sunflower or peanut oil | 1 tablespoon honey | fork or wire whisk |
| | | | bowls and utensils |

Directions:

Collect the greens (try dandelions and nasturtiums). Rinse the plants in cold water. Tear the plant parts into small pieces and put in a large bowl. Mix all the remaining food ingredients in a small bowl. A fork or wire whisk will blend them well. Pour over greens in the large bowl. Toss and serve.

Succotach

One could argue this is the original "American food." While this recipe always contained the corn and beans, the squash was a common addition. These three ingredients were called the "Three Sisters," by the Native Americans. The corn grows tall, allowing the bean vine to twine around her stalk. The bean fixes the nitrogen in the soil, and the squash has big leaves that hold in moisture.

Yields: 5 one-cup portions

Ingredients:

| | | |
|---|--|--|
| 1 tbsp vegetable oil | 1 cup green or golden summer squash, chopped | 2 cups canned Lima beans, drained or frozen lima beans, thawed |
| 2 cups fresh or frozen corn | 2 garlic cloves, minced | 1/2 cup chicken or vegetable broth |
| 1/2 cup yellow onion, chopped | 1 tbsp ground cumin seed | 2 tbsp fresh cilantro, chopped |
| 1 large red bell pepper, chopped | 1/4 tsp black pepper | |
| 1 jalapeno or other small hot chili pepper, diced | 1 tsp salt | |

Directions:

Place a large sauté pan on high heat until very hot. Add 1 tsp of the oil, the corn, peppers, and onion, then sauté until the vegetables start to brown and caramelize slightly. This should only take about 5 to 7 minutes. Add the remaining oil, squash, cumin, salt, black pepper and garlic. Cook for another 3 minutes on medium heat. Add the broth, cilantro, and lima beans. Simmer until all the vegetables are tender. It should take about 5 minutes.

Butternut Squash Soup with Roasted Pumpkin Seeds

Squash is a staple for many Native American tribes. Young squash are baked or boiled, blossoms are battered and fried, and leaves are wrapped around other foods for cooking. Pumpkin seeds are often formed into balls with dried fruits, nuts and maple syrup in what's known as pemmican, the trail mix of many tribes.

Ingredients:

| | |
|---|-----------------------------------|
| 2 large butternut squash, skin and seeds removed, cut into 2-inch pieces | 1 tablespoon honey |
| Sea salt to taste | 1/2 cup pumpkin seeds |
| | 1/3 cup chopped chives or parsley |

Directions:

1. Place squash in a heavy saucepan and cover with water. Cook until tender, about 20 minutes; drain and reserve liquid.
2. Purée squash, in batches, in a food processor or blender until smooth. (Be careful as the squash is hot!) Add some reserved liquid to the processor if the squash becomes too thick to puree.
3. Return puréed squash to saucepan in which it was cooked and slowly reheat. If soup is too thick, stir in some of reserved cooking liquid. Season to taste with a pinch of salt, and sweeten with honey if necessary (sometimes the squash is not as sweet as it should be).
4. Place pumpkin seeds on a baking sheet in a 350°F oven and roast about 10 minutes until fragrant.
5. Ladle soup into warm bowls and garnish with pumpkin seeds and chives.

Iroquois Soup Recipe

Serves/Makes: 4

Ingredients:

| | | |
|--------------------------------|-----------------------------|-------------------------------|
| 4 large mushrooms, sliced | 1 clove Garlic, crushed | 1/4 teaspoon Salt |
| 20 ounces cans beef consommé | 1/2 teaspoon Basil | Haddock fillets, 12 oz |
| 2 tablespoons Yellow corn meal | 1 each Onion, thinly sliced | 10 ounces Baby lima beans |
| 2 tablespoons Minced parsley | Fresh ground pepper, dash | 1/3 cup Dry sherry (optional) |

Directions:

Place the mushrooms, consommé, corn meal, parsley, garlic, basil, onion, pepper and salt in a large saucepan, and simmer, uncovered, for 10 minutes. Add haddock, lima beans, and sherry and simmer 20 minutes, stirring occasionally, breaking haddock into bite-sized pieces. Serve hot.

For these recipes and more:

Pemmican, Boiled Corn, and Wild Green Salad Recipes from www.teachersfirst.com

Succotach Recipe from www.americanfood.about.com

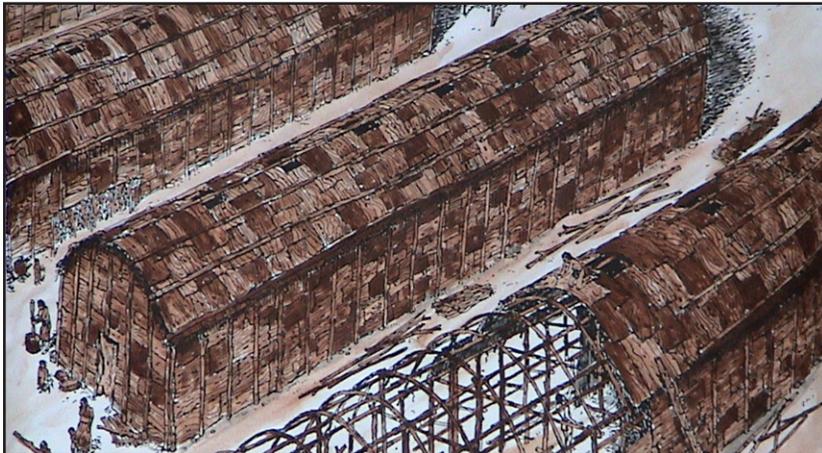
Butternut Squash Soup Recipe from www.metroactive.com (Originally printed in Nov 1996 issue of *Metro*)

Iroquois Soup Recipe from www.cdktichen.com

VILLAGES & LONGHOUSES

LCMM and Dr. Fred Wiseman

The Iroquois (including Mohawk) were a Matrilineal society. This means that ancestry and living situations were based on women's lineage (i.e. a man would come to live with his wife's family). The Abenaki were ambilocal and patrilineal and therefore a married couple could live with either the husband or wife's family, depending upon where there was enough space and lineages were traced through the male. This is pertinent to understanding how Native American groups such as the Iroquois and Abenaki of the Champlain Valley settled down into their villages. The matrilineal establishment of villages was likely the result of the fact that women were in charge of the crops that villages cultivated, and therefore the women had a strong tie to the actual land that the village was established. The Iroquois were, in general, more horticultural than the Abenaki, except perhaps for the large villages along major floodplains such as Missisquoi. The Abenaki may have been more focused on hunting and gathering territories, and therefore in order to maintain a balance of carrying capacity, a newly bonded husband and wife would live where they were not placing an added pressure on the capacity of the family land. Additionally, the Abenaki were more egalitarian, while Iroquois decision making was carried out by the women. Women made all village decisions, however, they would also elect men as members of the war council and men made war decisions.



Longhouses. Wobanakik Heritage Center.

Longhouses villages of the Abenaki and Iroquois settlements became common with the advent of horticulture, and food storage was a major factor in year round survival. In the Middle Woodland period longhouses may have had two hearths, meaning two to four families lived in the multi-family dwelling. At the time of European contact the number of hearths in a longhouse may have been as many as 12, whereas four to six became customary.

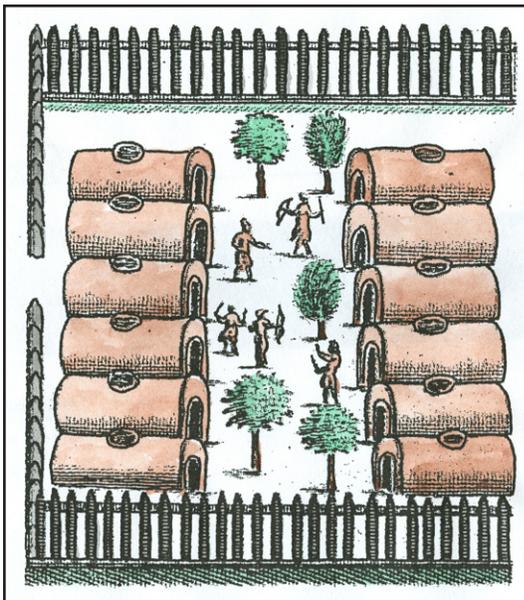
Longhouses were anywhere from 20 to 100 feet long or even greater, and roughly 20-30ft wide.

Historic accounts, as well as archaeological evidence, have helped us understand what a typical Iroquois or Abenaki village of longhouses may have looked like. Jacques Cartier described the "Iroquois" village of Hochelaga along the St. Lawrence in 1535. (This village site has not been relocated, and was not extant shortly after when other explorers came through the area, so the ethnicity of the inhabitants has not been confirmed archaeologically.)

There are some fifty houses in this village, each about fifty or more paces in length, and twelve or fifteen in width, built completely of wood and covered in and bordered up with large pieces of bark and rind of trees, as broad as a table, which are well and cunningly lashed after their manner. And inside these houses are many rooms and chambers, and in the middle is a large space without a floor, where they light their fire and live together in common. Later they withdraw to their chambers, men with their women and children.

BACKGROUND

Longhouses, as the name implies, were long rectangular buildings with a rounded or half domed roof. To build a longhouse, tree trunks or poles were first stuck into the ground to serve as the frame and support. These trunks left behind what are called “postmolds” in the archaeological record. Since the space where the post was stuck into the ground will look different from the soils and sediments around them, archaeologists can reconstruct the size and position of the longhouse based on this evidence. Also, the interior of the longhouses were divided into multiple family sections or “rooms,” each with their own hearth. Each hearth room was occupied by one or two families, each with their own private area. The head female or oldest woman in the family would live in a communal space of the central hearth in Iroquois longhouses, since the grandmother’s family and female members of the lineage would occupy the same longhouse. For the Abenaki, the eldest family members would live in this location. The location of hearths, like postmolds, would leave behind evidence in the archaeological record and look different from the soil and sediment around it, allowing archaeologists to identify where the hearths were located. Also, storage pits in the long houses lined with bark or reeds, used to store food or dispose of garbage, and are also easily identified in the archaeological record, much like hearths.



A historic engraving of a Native American community. Wiseman Collection.

The features of the longhouse that do not leave behind archaeological evidence are known from historic resources and Native American oral tradition. Long houses did not have windows, and the only openings were doors for entering and exiting, as well as a series of smoke holes in the roof to allow the smoke from each hearth to exit. The roofs of longhouses were arched or rounded with layers of birch, elm, cedar or other bark creating a shingled roof and bound together with spruce root. These openings of the structure could be closed off using animal hide flaps. The longhouse was tall, about 15-20 feet high. This allowed room for the storage and drying of corn and other foodstuffs, as well as an area for smoke to hover before it escaped, keeping it above the inhabitants, but providing a place to smoke and preserve foodstuffs. In order to further insulate these longhouses, insulation of evergreen boughs were used, or stones were heated in large outdoor fire pits, and brought inside to warm the house.

Longhouses and the villages did not last long; after 10-20 years the structures may have begun to rot. The use of an area may have become difficult to manage with the accumulation of garbage as well as the depletion of the surrounding resources, so villages would move on. Things such as firewood would have become harder to get close to the village, as well as the depletion of soils in cultivated fields. The construction of a large longhouse village had a huge impact on the surrounding environment. Hundreds or thousands of trees had to be cut and cleared to make space for structures, farming land and of course for wood to build. A location in second-growth beech-maple forest was preferable to a forest of very old and large diameter trees, regardless of how fertile the underlying soil was. Trees were cut down using only stone tools and fire, until the introduction of European metal tools, and this was a lengthy process. They were also fell by girdling-which is to strip the bark off of the base of the tree, and then let the tree die. It was then easier to cut and burn the tree. For this reason trees could not be too big for construction purposed, and therefore older growth forests were not impacted.



BACKGROUND

Large trees were necessary however, as the source of large sheets of bark, which were used to cover the longhouses and in other construction projects. These sheets of bark can be easily stripped from the trees in the warming weather of spring, as the trees begin to bud and the sap begins to flow. Polished stone axes and flint knives, as well as antler, bone, and hardwood wedges and chisels are among the tools that probably were used in this work.

Some Iroquois and Abenaki villages were protected by palisades and even lookout towers. Palisades were wooden walls of upright logs (called “pales”) that encircled the village and used a substantial amount of wood to construct. Many villages were also on rivers, and surrounded by horticultural fields for added visibility and protection.

Wigwams were constructed similarly to longhouses, but were substantially smaller. They were likely more temporary seasonal structures. The Abenaki women were in charge of constructing these temporary shelters that were used when groups ventured out for the winter from the longhouse village.

HOUSE AND VILLAGE

LCMM

Grade Level K-8

Content Areas Social Studies

VT Grade Expectations VT H&SS – 8 Students connect the past with the present by...

- Explaining differences between historic and present day objects in the United States and/or the world, evaluating how the use of the object and the object itself changed over time.
- Describing ways that life in the United States and/or the world has both changed and stayed the same over time; and explaining why these changes have occurred.
- Investigating how events, people, and ideas have shaped the United States and/or the world; and hypothesizing how different influences could have led to different consequences.

NY Standards NY Social Studies Standard 1, Key Idea 1: Performance Target

- Explore the meaning of American culture by identifying the key ideas, beliefs, and patterns of behavior, and traditions that help define it and unite all Americans

Duration Time will vary

Learning Goals **Students will learn about “Longhouse” society by creating a typical Woodland period village.**

Description

1. The class should be divided into “Families.” Each family could be from 2-4 people, depending upon the size of the class; there should be at least 8 family units. These families should then be formed into “Extended Families” of 3-4 nuclear families.
2. Discuss how in Woodland society families lived in a section of a Longhouse that was occupied by several related families. In this project each family will build their own section of the longhouse that will hold each extended family.
3. Discuss the considerations for locating a village. Things to consider would include:
 - Access to water for drinking, transportation and food
 - Access to forests for gathering wild foods and hunting
 - Access to tillable land for agriculture
 - A defensible location in case of attack by an enemy
4. A section of the classroom, a large sheet of plywood, or a section of the playground could be designated for the model village. Water sources, open ground, and forest areas should be laid out and marked. The landscape could be drawn like a map or terraformed using soil, salt and flour, or paper Mache. (The scale you use depends upon the size of your class, the space you have available, the skill of students, and the degree of detail you want. A scale of ¼”=1’ would yield individual houses 5” square and longhouses about 2’ long for 5 families (10-20 students). This would allow for plenty of interior detail if desired. A smaller scale would allow for less interior detail, but a much larger village in the same space.)

LESSON

5. Village houses were essentially half domes (Quonset hut) built side by side into longhouses. The floor area of each house was about 20' square. There are at least three methods of model construction depending upon the amount of time and skill of the students:
 - Frame the structure of the house using twigs, heavy electrical wire, or thin strips of cardboard. Add interior details to the framework. "Shingle" the structure with real or simulated birch bark made of heavy paper.
 - Cut arched end pieces from cardboard. Place wigs, thin strips of wood, or wire horizontally between the end pieces. Add interior details to the framework. "Shingle" the structure with real or simulated birch bark.
 - Cut arched end pieces out of cardboard. Cut a single rectangular cardboard piece to curve over the end pieces to form the outside roof. Paint or cover the arch with real or simulated birch bark.
 - Each family group can build their house separately and then join three or more together into extended family longhouses. Interior details might include: Sleeping platforms and bedding; Hanging storage platforms; Grain storage pits; Cooking hearths; Smoke holes in the roof.
6. Arrange the longhouses on the village plan leaving space for common areas. Outside details might include: Lodge Poles, Drying Racks, Mortar and Pestles, Tanning Frames
7. Some villages were protected with a palisade of logs encircling the village. Model trees, grass, garden plots, canoes, etc. can be added to the landscape.
8. Discuss how the village design helped Woodland people meet their basic needs. How is this similar or different from homes and villages today?

Assessments

A written essay or constructed response quiz would be appropriate. Possible questions might include:

- What were the important elements of a Woodland house and village?
- How were Woodland houses constructed?
- How were Woodland houses and villages similar or different from houses and villages today?

Materials/Resources

Display area or plywood base
Twigs, wire, or cardboard
Birch bark or heavy paper
Paint, glue, scissors

Special Considerations

If students are skilled and interested on showing the details of their work, the house models could be half shingled to expose the interior.

| | |
|-------------------------------|---|
| Grade Level | 4-8 |
| Content Areas | Social Studies |
| VT Grade Expectations | <p>VT H&SS 8: Students connect the past with the present by...</p> <ul style="list-style-type: none"> • Explaining differences between historic and present day objects in the United States and/or the world, evaluating how the use of the object and the object itself changed over time. • Describing ways that life in the United States and/or the world has both changed and stayed the same over time; and explaining why these changes have occurred. <p>VT R 12: Demonstrate initial understanding of informational texts by...</p> <ul style="list-style-type: none"> • Using information from the text to answer questions related to main/central ideas or key details <p>VT R 16: Analyze and interpret informational text, citing evidence as appropriate by...</p> <ul style="list-style-type: none"> • Synthesizing information within or across text(s) |
| NY Standards | <p>NY Social Studies Standard 1, Key Idea 1: Performance Target:</p> <ul style="list-style-type: none"> • Explore the meaning of American culture by identifying the key ideas, beliefs, and patterns of behavior, and traditions that help define it and unite all Americans. <p>NY Language Arts Standard 1: Key Idea1: Performance Indicator:</p> <ul style="list-style-type: none"> • Select information appropriate to the purpose of their investigation and relate ideas from one text to another • Use a wide variety of strategies for selecting, organizing, and categorizing information |
| Duration | 50 minutes |
| Learning Goals | Students will learn about the decorative, ceremonial, and political use of wampum and how it was made. |
| Description | <ol style="list-style-type: none"> 1. Discuss the importance of writing in our culture. Ask how we might communicate and remember information if we did not have a writing system. Introduce the idea of wampum as one way in which First Nations people were able to communicate and record information. 2. Distribute Wampum articles and worksheets. 3. Review the questions and any unfamiliar vocabulary. 4. Have students read the article and take notes on their worksheets. 5. Students should answer questions related to the production and use of wampum. 6. Discuss student responses, clarifying and adding as needed. |
| Assessments | The final constructed response could be assessed for reading comprehension. |
| Materials/Resources | Wampum articles, worksheets |
| Special Considerations | It is important to note that some uses of wampum are considered sacred and should be respected as such. The article could be read aloud to younger students. |

WAMPUM



Wampum is a tradition decorative art with great importance for First Nations people. It was made of small shells strung together into strings or belts. Because the white and purple shells that it was made from were rare and difficult to make into Wampum, it was highly valued for decorations and ceremonial purposes. Wampum was valued, used, and traded among all the First Nations of the northeast.

Making Wampum

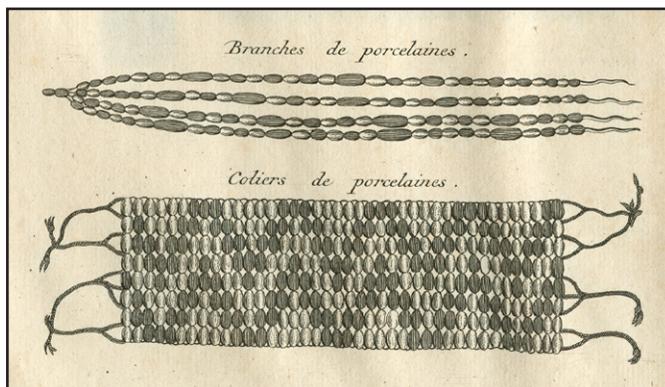
Wampum beads were made from the shells of the quahog (*Venus mercenaria*) and the whelk (*Busycon carica*). The beads could be either tubular or flat discs. The shells had to be ground to shape and drilled so that they could be strung together. Before the introduction of metal tools from Europe, this was a difficult and time consuming task that required great skill. Once the beads were formed, they were strung together into patterns using natural fibers like sinew. The beads were either white or purple and could be arranged into geometric or pictorial patterns in a string or belt.

Wampum as Decoration

Wampum was often used as decorations. Necklaces and hair thongs, arm bands, and wristlets were all made as ornaments for people to wear. Wampum was also sewn or woven to decorate clothing. It could be used alone or in combination with porcupine quills or glass trade beads. Because of its value, it was often given as gifts or traded.

Ceremonies using Wampum

Because Wampum was valuable it was often used for special occasions and ceremonies. It was considered a sign of respect to give Wampum as a gift. It was also included in important rites of passage like a birth, puberty, marriage, and death. Some groups would give a young man a string of Wampum as a sign of manhood. If a man was interested in a woman as a wife, he would send her a string of wampum to indicate his interest. If she was agreeable she would keep all or some of the string. If she were not interested, she would send the string back.



Engraving of wampum. Source Unknown.

Political Uses of Wampum

Nations throughout the northeast used wampum for recording political ceremonies and messages. There were two types, strings and belts. Strings were given to messengers who were sent to different communities to gather leaders for important meetings. The bearer of the wampum string was respected and protected on his journey. A wampum string could be quickly made or disassembled and usually represented a short or specific message.

Wampum belts were wider and more elaborate. They signified important treaties or historical events. The pattern of the beads was a mnemonic tool to help a specially trained custodian memorize and recite the message encoded in the belt. This information was carefully passed down to new custodians over the years to ensure that the meaning was not lost. Through the wampum belts, cultural and historical information was recorded.

Later Uses of Wampum

The introduction of metal tools made wampum much easier to produce. For a time European colonists used it as a form of money. Some First Nations people adopted Christianity and wampum was used in religious expression. However, once European writing systems were introduced, many of the important messages once recorded in wampum patterns were written on paper.

Most uses of wampum faded away by the end of the nineteenth century. However, there is renewed interest today and a revival of the decorative, ceremonial, and political use of these beautiful shell beads.



Tribal Elder Frederick Wiseman performs a wampum reading at LCMM. LCMM Collection.

WAMPUM



Name _____

Date _____

Use the space below to take notes on the article about First Nations use of Wampum.

List three uses of Wampum.

1. _____ 2. _____ 3. _____

What were the two kinds of shells used for Wampum? _____

Name three decorations made from wampum.

1. _____ 2. _____ 3. _____

What Ceremonial events might include wampum?

What were the two types of wampum used for political purposes?

1. _____ 2. _____

Why was wampum valued? _____

What did the pattern in the wampum belt do? _____

Write a short essay describing one of the uses of wampum.

| | |
|-------------------------------|---|
| Grade Level | K-8 |
| Content Areas | Social Studies |
| VT Grade Expectations | <p>VT H&SS 8: Students connect the past with the present by...</p> <ul style="list-style-type: none"> Explaining differences between historic and present day objects in the United States and/or the world, evaluating how the use of the object and the object itself changed over time. |
| NY Standards | <p>NY Social Studies Standard 1, Key Idea 1: Performance Target:</p> <ul style="list-style-type: none"> Explore the meaning of American culture by identifying the key ideas, beliefs, and patterns of behavior, and traditions that help define it and unite all Americans. |
| Duration | 1-3 50 minute periods |
| Learning Goals | Students will learn about wampum and decorative bead work by constructing strings or belts of beads. |
| Description | <ol style="list-style-type: none"> The teacher will need to assemble or have students provide a collection of beads for the class. These could be macaroni of various sizes and shapes, natural materials collected outside, or commercial glass and plastic beads. Discuss with students the role wampum played in First Nations cultures. If desired, have students think about a pattern that they can create that will help them remember a story or important event (e.g. birthday, age, vacation, $3 \times 7 = 21$). Have students lay out the pattern of beads on their work space before they begin to join them together. Use string to join the beads together. Several strings can be joined together into a belt, or a belt can be woven on a beading loom. Have students share what their beadwork means and how the patten helps them remember. |
| Assessments | Informal assessment of students ability to conceptualize and encode a message. |
| Materials/Resources | Variety of beads, string, scissors (beading loom optional) |
| Special Considerations | This activity could be done as a class or as an independent learning center over the course of a few days. |

Grade Level 4-12

Content Areas Social Studies, Reading

VT Grade Expectations VT R 12: Demonstrate initial understanding of informational texts by...

- Using information from the text to answer questions related to main/central ideas or key details
- Organizing information to show understanding

VT R - 16 Analyze and interpret informational text, citing evidence as appropriate by...

- Connecting information within a text or across texts
- Synthesizing information within or across text(s)
- Drawing inferences about text

NY Standards NY Language Arts Standard 1: Key Idea 1: Performance Indicator:

- Gather and interpret information from children’s reference books ,magazines, textbooks, electronic bulletin boards, audio and media presentations, oral interviews, and from such forms as charts, graphs, maps, and diagrams
- Select information appropriate to the purpose of their investigation and relate ideas from one text to another
- Select and use strategies they have been taught for notetaking, organizing, and categorizing information
- Relate new information to prior knowledge and experience

Duration 50 minutes with possible extension for research

Learning Goals **Students will learn about Native American spirituality by reading and listening to examples of creation stories. They will compare and contrast these stories with each other and beliefs from other cultures.**

Description

1. Discuss with students how every culture has beliefs that guide their thinking and behavior. Among these beliefs are creation stories that describe where they came from, there relationship with other living things, and their purpose in life.
2. Distribute the Iroquois and Abanaki stories and worksheets; or play *The Story of Ojhozo*, as told by Joe and Jessee Bruchac.
3. Have students read or listen to the stories and answer the worksheet questions.
4. Share student responses clarifying and adding as needed.
5. Ask students how these creation stories compare with modern scientific thought or other creation stories they are familiar with.
6. Optional – Have students research creation stories from other Native Americans or world cultures. Apply the same questions in analyzing the stories.

Assessments The final question can be scored as a response to literature.

Materials/Resources Creations Stories and worksheets

Special Considerations Teachers need to be aware of and sensitive to students’ own religious/philosophical beliefs. More sophisticated students might also be interested in a discussion of how “science” is also a belief system.

IROQUOIS CREATION STORY

There are many variations of this tale.
This one was reproduced from the website of the Iroquois Museum.

Before our world came into being, human beings lived in the SkyWorld. Below the SkyWorld was a dark watery world with birds and animals swimming around. In the SkyWorld was the Celestial Tree from which all kinds of fruits and flowers grew. Today, the Shad tree is known as the Celestial Tree because it is the first flowering tree in the northeast in the springtime.

The wife of the Chief of the SkyWorld was called Skywoman. One night, Skywoman who was expecting a baby, had a dream in which the Celestial Tree was uprooted. When she told her husband the dream he realized that it was a very powerful message and that the people of the SkyWorld needed to do everything they could to make it come to pass.

Many of the young men in the SkyWorld tried with all their might to uproot the tree, but failed. Finally the Chief of the SkyWorld wrapped his arms around the tree and with one great effort he uprooted it. This left a great hole in the crust of the SkyWorld. Skywoman leaned over to look into the hole, lost her balance and fell into the hole. As she slipped she was able to grasp a handful of seeds from the branches of the Celestial Tree. As Skywoman fell, the birds and animals in the water below saw her and decided that she would need help so that she would not be harmed. Geese flew up and caught her between their wings and began to lower her down toward the water. The animals saw that Skywoman was not like them and would not be able to survive in the water.

Each of the animals dove into the water trying to bring up earth from the bottom for Skywoman to land on. Many animals tried and failed. When it seemed like all had tried and failed, tiny muskrat vowed to bring up earth or die trying. She went down, deep, deep, deep, until she was almost unconscious, but was able to reach out with one small paw and grasped some earth before floating back to the top. When muskrat appeared with the Earth, the Great Turtle said it could be placed on his back. When the tiny bit of earth was placed on Turtle's back, it began to grow larger and larger until it became the whole world.

The geese gently set Skywoman on the earth and she opened her hands to let the seeds fall on the soil. From the seeds grew the trees and grass and life on Earth had begun.

In time, Skywoman gave birth to a daughter, Tekawerahkwa, who grew to be a lovely young woman. A powerful being called West Wind fell in love with Tekawerahkwa and took her as his bride. In time she became pregnant with twins sons. Tekawerahkwa's sons were very different; one (Bad Mind) had skin as hard as flint and was argumentative and the other (Good Mind) was soft skinned and patient. Flint was impatient to be born and decided to use his sharp flint-like head to cut his way out of his mother's body. While his gentle brother was being born the natural way, Bad Mind was forcing his way through his mother's armpit which killed her. When Skywoman saw the lifeless body of her beautiful daughter she was terribly angry. She asked her grandsons who had done this awful thing and Bad Mind lied and placed the blame on his good brother, Good Mind. Skywoman believed him and banished Good Mind. Fortunately, Grandfather was watching Good Mind and came to his aid. Grandfather taught Good Mind all he needed to know about surviving on the earth and set him to work making the land beautiful.

Skywoman placed the head of her daughter in the night sky where she became Grandmother Moon and was given power over the waters. From her body grew our Three Sisters, corn, beans, and squash. Good Mind made all the beauty on our earth - he created the rivers, the mountains, the trees. He taught the birds to sing and the water animals to dance. He made rainbows and soft rains. Bad Mind watched his brother creating beauty and was envious. He set out to create the opposite of all the good his brother had made. He put dangerous rapids in the rivers, created destructive hurricanes and powerful tornadoes. When Good Mind planted medicinal plants, Bad Mind planted poisonous roots and deadly berries.

One day, while Good Mind was away creating more things of beauty, Bad Mind stole all the animals and hid them in a big cave. When Good Mind returned to find that all of his creatures were gone he was very sad. A tiny mouse told him what his brother had done, so Good Mind went to the cave and caused the mountain to shake until it split so that the animals could emerge. Good Mind was very angry with his brother and they fought. Bad Mind used an arrow and Good Mind used a deer antler as weapons. When Good Mind struck Bad Mind with the deer antler it caused flint chips to fall from his body. Their battle raged for many days and finally Good Mind won. He banished Bad Mind to live in caves beneath the earth where he waits to return to the surface.

THE TALE OF OJIHOZO, AS TOLD BY JOE AND JESSE BRUCHAC

Long Ago, in olden times it was.

After Great Mystery made stars and Night Traveler, the Moon; and Sun; and the Earth. Great Mystery cleaned Creation's hands. And Sacred Dust fell to earth. Where Sacred Dust had fallen, earth started to stir. Then Sacred Dust came together. First, Dust made two hands. And then, with those hands, Sacred Dust made two arms and then one torso and one head.

Great Mystery saw this one who from Sacred Dust shaped himself sitting there, and he asked, "Who are you?"

Then Great Mystery asked again, "Who are you?"

And Ojihozo said, "I am now One Who Talks."

Then Ojihozo or The Talker, he has had many names, he tried to move.

But he could not stand.

So The Talker pushed against the ground in the direction of the Sunrise Land. But still he could not stand. However, he pushed stones and rocks together into a great pile in our land as he pushed. So he tried again.

He pushed against the ground in the direction of the Sunset Land. But again, he could not stand. However, he made a great pile of stones and rocks there in the Mohawk Land also.

So Ojihozo put his hands on top of these great piles he made. Today we call those great piles of stones he made the Green Mountains in the Dawnland; and those we call the White Mountains, the Adirondacks in the Sunset Land.

And he pulled, but again he could not stand.

But his fingers made great channels in those mountains. We call those grooves he made in the land today the Winooski or Onion Land River. And the Black Water River, Dead Creek, and Otter Creek, and White River. Indeed, with his hands, Ojihozo made all the rivers in our land as he tried to stand.

So great mystery called Ojihozo The One Who Tried to Move About on his Buttocks. Because Ojihozo forgot he had not made his legs. So The One Who Tried to Move About on his Buttocks made his legs and stood. Where he sat, there was a great hole in the earth. This hole, which filled in from the water from those rivers, is now called the Double, or Between Water, Lake Champlain.

So it is.

CREATION STORIES

Name _____

Date _____

Read (or listen to) the Iroquois and Abanaki creation stories. Read both stories before you try to answer any questions.

What are some things that both stories have in common?

What are some of the things each story explains?

Iroquois

Abanaki

Think about one of the stories. If you believed this was how the world was created and the way things should be, how would it affect the way you behaved?
