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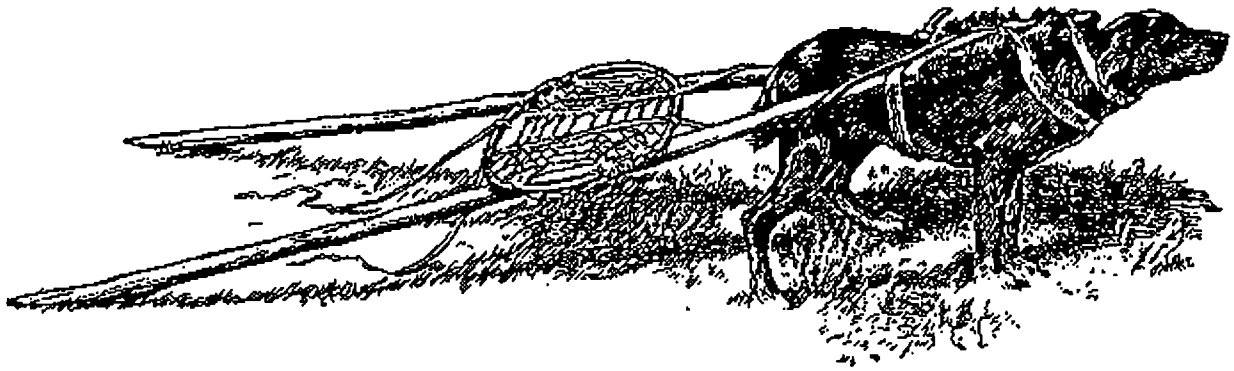
ABSTRACT

This guide provides history and social studies teachers, at all grade levels, with information and activities about the American Indians of the Northern Plains who lived in the area of the Knife River where it enters the Missouri River. Located in what is now North Dakota, this area is the Knife River Indian Villages National Historic Site. The Knife River Indian Villages National Historic Site, established by Congress in 1974, was once the homeland of the Hidatsa and Mandan Indians. The most famous visitors to the site were Meriwether Lewis and William Clark during their 1804-1805 winter encampment at Fort Mandan (North Dakota). The area contains archaeological sites, including the remains of three villages that once were occupied by several thousand people, areas where small groups camped for short periods of time, trails, burial sites, and many different activity areas. The guide is divided into the following units: (1) History; (2) Subsistence; (3) Housing and Transportation; (4) Arts, Crafts and Clothing; and (5) Games and Recreation. Each unit provides background information, questions for classroom discussion, and suggested activities. The guide also offers 23 illustrations and 5 maps; a list of suggested items for a trunk collection; a 25-item selected bibliography; a quiz; and a second quiz with answers. (BT)

Knife River Indian Villages National Historic Site



Teacher's Guide

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Knife River Indian Villages National Historic Site

Teacher's Guide

Dear Educator:

Thank you for your interest in the Teacher's Guide to Knife River Indian Villages National Historic Site. A great deal of time and effort went into making it a quality, usable curriculum based document for educators. It is also a valuable resource for all those interested in learning more about the American Indians of the Northern Plains.

The Teacher's Guide was made possible through a grant from the National Park Foundation's Parks as Classrooms program. We hope it is valuable to you and your students. If at all possible, please call us at (701) 745-3309 to arrange a tour for your class.

INTRODUCTION

The purpose of this Teacher's Guide is to provide history and social science teachers, at all grade levels, with information and activities about the American Indians of the Northern Plains, who lived in the area of the Knife River where it enters the Missouri. This area is now Knife River Indian Villages National Historic Site.

This TEACHER'S GUIDE contains the following:

This Teacher's Guide is a composite of many people's work. Paraphrasing from many sources has been done to help with clarity and accuracy. If you need specific information, please contact us at (701)745-3309 and we will be glad to provide the exact bibliographic references or information on where you can get further details.

Knife River Indian Villages National Historic Site was established by Congress in 1974. This area was once the homeland of the Hidatsa and Mandan Indians. The park, which consists of 1758 acres of land on both sides of the Knife River, is located one quarter mile north of the town of Stanton and 60 miles northwest of the capital city of Bismarck.

Many groups of people used this area for hunting, as great herds of bison came to the river for water. The Hidatsa and Mandan lived near the confluence of the Knife and Missouri Rivers in earth-covered, dome-shaped structures called earthlodges.

The Knife River was named for a type of locally available flint. For thousands of years this quartz material was used by American Indians for making tools. Knife River flint, as it became known, was widely traded and has been found in archeological sites as far as New York, Missouri, Ohio, and Alberta, Canada.

The most famous visitors to the Knife River area were Lewis and Clark during their 1804-1805 winter encampment at Fort Mandan, located a few miles south on the east side of the Missouri. The Hidatsa village, AWATIXA (ah-wah-tee-Kah), was the home of Sakakawea (Sah-gah-gah-wee-ah) and her husband, Toussaint Charbonneau. They were hired by Lewis and Clark as interpreters to accompany them to find a northwest passage to the Pacific Ocean. This village was later visited by other famous traders and travelers such as Alexander Henry, John Bradbury, Henry Brackenridge, Prince Maximilian, and artists Karl Bodmer and George Catlin.

Nearly decimated by smallpox in 1837 and constantly harassed by the Sioux, the Hidatsa and Mandan were forced to abandon the Knife River area in 1845. The park contains numerous archaeological sites, including the remains of 3 villages which once were occupied by several thousand people, areas where small groups camped for short periods of time, trails, burial sites, and many different activity areas.

Specific information on the culture and lifeway of the Hidatsa and Mandan peoples contained in this Teacher's Guide should prove useful in your history and social science classes. We would like to further develop and improve the Teacher's Guide so it can be used as an aid in teaching these subjects. Any comments will be given full consideration when the Teacher's Guide is reprinted.

Please send your comments to:

Superintendent
Knife River Indian Villages NHS
P.O. Box 9
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Knife River Indian Villages National Historic Site
Teacher's Guide

UNIT 1...HISTORY

Archaeologically, prehistory and history are divided and further sub-divided when enough information is available to deem it necessary. Cultures or groups of people are placed in the different divisions of the past, making it easier for us to understand when a particular culture existed in relation to the other ones.

The time periods archaeologists use to classify human habitation of North America are:

Early Prehistoric Period (19,000 to 7,500 Before Present)

Paleo-Indian People (11,500 to 7,500 BP)

Middle Prehistoric Period (7,500 to 1,400 BP)

Archaic People (7,500 to 2,400 BP)

Early and Middle Woodland People (2,400 to 1,400 BP)

Late Prehistoric Period (1,400 BP to the year 1738)

Late Woodland People (1,000 BP to)

Plains Nomadic People (1,000 BP to)

Plains Village People (1,000 BP to)

(Note: all three of these groups continued to live into the Early Historic Period.)

Historic Period (1738 to present)

Identified tribes and Euroamericans

(Note: the date 1738 is chosen for the beginning of the historic period in this area. This was the first documented visit to the people living along the upper Missouri River by Euroamerican Pierre la Sieur de la Verendrye.)

EARLY PREHISTORIC PERIOD:

Archaeologists believe that the first people to live in North Dakota were Indians descended from those who may have crossed the Bering Strait during the last period of glacial action.

These people hunted large animals such as mammoths, but we know little else about the way they lived. In North Dakota, the earliest remains of these people dates to about 11,500 BP. However, other groups were possibly here before that time.

These early Indian people are called Paleo-Indians. They followed herds of giant buffalo and mammoths, so they did not live in any one place for very long and were probably quite few in number. Because of this we know little about Paleo-Indian people. We do not know, for example, the kinds of homes they used or anything about their family life.

MIDDLE PREHISTORIC PERIOD

The Indians who lived in North Dakota during this period, the Archaic people, were also hunters. Their game, however, was smaller. In the thousands of years since the glaciers retreated, the prairie animals had changed. The giant buffalo had been replaced by smaller buffalo, and then by the even smaller modern buffalo. The animals of this time period were much like those of today.

Archaic people lived in small groups or bands. They were hunter/gatherers and traveled year-round to follow herds of game and find plants to eat. To live on the move, the Archaic people had to have homes that could be put up or taken down quickly. They probably solved this problem by using conical, hide-covered tents, or tipis.

Much evidence of Archaic Indians can be found in North Dakota, but it is often buried. Archaeologists have located places where these people lived, killed game animals, and worked. At these sites are found tools made from stone or from animal bones which included dart points, scrapers, knives and grooved hammers.

A new weapon used during this period was the atlatl (at-lat-tul). This device was a short stick with a hook on one end. A short, light spear or dart was placed in the hook and slung much the same as an athlete might throw a javelin. With this device, a spear could be thrown further and harder, thus helping the hunters bring down more game. Atlatl darts were tipped with smaller, triangular points of stone. They were usually notched at the base for attachment to the dart.

About 2,000 BP, a third kind of culture appeared in what is now North Dakota. Their houses were usually built of wooden oval frames that were covered with hides or grasses. Each house was about ten feet wide and twenty feet long. Remains of villages of these woodland houses are found throughout North Dakota. The Woodland people hunted, just as earlier groups had done. However, they also began to plant and grow crops for food. Another difference between Woodland and earlier people was pottery. Woodland people used clay to make pots for cooking and other purposes. These pots were shaped, dried and then hardened by placing them in fires. Each pot was about two feet tall, one foot across and had a pointed bottom.

They also differed from earlier native populations in the way that they buried their dead. Early plains people had placed their dead on raised platforms or under low piles of rock. The woodland people buried their dead in the ground and then built cone-shaped or round mounds over the graves. In the mounds were often placed goods that the departed person was thought to need in an after-life such as weapons, tools, jewelry, and pots. The pots placed in burial mounds were

usually much smaller and more highly decorated than those used for daily activities. Burial mounds are usually located on high points overlooking river valleys. Some of the mounds are shaped like animals and are called effigy mounds.

Woodland people also traded often with other groups. At places where Woodland people lived, archaeologists find sea shells or parts of such shells made into beads, masks and pendants. This probably indicated that the Woodland people were part of a trade network that reached very far from the northern plains. Another thing found at Woodland period sites is copper, probably from Minnesota, or Wisconsin. The copper is made into beads, knives and axes. It is the first evidence of use of metals by Indians in this area.

LATE PREHISTORIC PERIOD:

The Late Woodland culture was very similar to the Early and Middle Woodland. These people still raised crops, gathered food such as wild rice, roots, berries and hunted deer and buffalo. However, they spent more time fishing and ate more fish than the Early and Middle Woodland cultures. Some burial mounds and buffalo jump sites in North Dakota may be evidence of the Late Woodland peoples.

The Late Woodland people used pots with rounded bottoms and made small triangular arrow points. The pots with rounded bottoms may have been hung over fires, not placed on the coals as was done earlier. The small points were probably used with the bow and arrow. Although archaeologists don't know for sure, the Late Woodland people probably were the ancestors of the Assiniboine and Chippewa tribes. Later, other groups of Late Woodland people moved into North Dakota. These people were Sioux or Dakota Indians who were pushed west onto the plains and later became nomads.

The Plains Nomadic people were also living in North Dakota during the Late Prehistoric period and the early part of the Historic Period. These people moved often, following massive herds of bison. They may have developed from some Woodland people who moved onto the plains from the east and changed their way of living to fit their new homeland.

Nomadic people lived in tipis. To obtain food, they hunted animals, and gathered berries, roots and seeds. Sometimes the small groups joined together to hunt, but usually they stayed in very small bands and followed the bison herds. Because they traveled almost constantly they came into contact with other groups with whom they traded. As a result, they obtained things from people who lived far from the plains. During these centuries, more people lived on the plains than before. As a result, archaeologists find evidence that Plains Nomadic people lived all over North Dakota. Some of this evidence includes tipi rings, or circles of large stones that were used to hold down the edges of the tents. They also find buffalo jumps, places where the people mined flint for arrow points, and places connected with daily life. The Plains Nomads usually "buried" their dead on scaffolds.

Since these people were constantly moving, they did not carry or waste many material goods. The sites where they lived or camped usually have very few artifacts. As a result, archaeologists must search these sites with great care to be sure that all the material is recovered for

investigation. Special sites, such as flint quarries or buffalo jumps, may contain large amounts of material, but the artifacts found at these places tell us little about daily life. Because artifacts are scarce, tribal identifications are difficult. Most likely, the people who we call Plains Nomads were ancestors of the Sioux or Dakota, Assiniboine, Crow, Cheyenne, and perhaps the Arapaho and Blackfeet.

Some groups living in North Dakota during the Late Prehistoric Period were called Plains Village people. These people are the ones who lived at Knife River Indian Villages and are the ones archaeologists know the most about. There is one major reason why so much more is known about the Plains Village people than about the Late Woodland and Plains Nomadic culture. Many of this group's village sites were located along the Missouri River; when these sites were to be flooded by the Garrison and Oahe reservoirs during the 1950's and 1960's, special efforts were made to excavate the locations before they were destroyed. The villages along the Knife River were also investigated at this time. Because they would not be destroyed by the construction of the Garrison dam they were left intact, later to be protected as the Knife River Indian Villages National Historic Site. These sites provided much evidence of how the Plains Village people lived. The sites were also large and easy to find.

Plains Village people originally lived in the woodlands to the east. They may have left their original homelands to escape other Indian groups. For example, the group which became the Mandan moved from the area of southern Minnesota and northern Iowa to the plains river valleys in South Dakota about 1,000 BP; they then moved slowly north along the Missouri River until they reached North Dakota. The Hidatsa appear to have moved from central Minnesota to the area of Devils Lake in northeastern North Dakota. About 400 BP they started moving to the Missouri River valley and eventually settled near the Mandan. The Arikara (Ah-rick-ah-rah) moved into South Dakota in the 1400's, but did not move into North Dakota until much later.

Another group, the Cheyenne, may have moved from Minnesota to southeastern North Dakota and lived in Ransom County as a Plains Village people some 300 BP. They later moved west; when they did, their culture changed, and they became nomads.

HISTORIC PERIOD:

TRADITIONAL HISTORY

Until the Europeans arrived in North America, the Indians preserved their history orally. This oral tradition took the form of story telling. Often a person who had a very long story to tell, for example the story of a tribal group's migration into an area, might have a hide with symbols drawn on it which reminded him of the different parts of the story. Story tellers were well respected members of their tribal unit because without their ability to keep the history, the group would lose its roots.

Story telling not only passed on the tribal history but was also how many bits of information were passed from one generation to the next. Stories were also told as entertainment but they usually had some form of moral or message which the listener was to learn.

Another topic of story telling was of war or hunting exploits. These stories were often repeated and were a way of keeping one's prestige. The recounting of one's coups fits into this category. When a warrior was able to touch an enemy in battle and escape, a coup was counted. This feat of daring was something to be proud of and the story of how the coup was counted would be retold at different events and celebrations.

While the precise origins of the Hidatsa are not known, these people probably began to appear with other agricultural groups along the upper Missouri River about 1,000 BP. These people undoubtedly originated in the eastern part of North America and gradually moved to the Great Plains. According to Hidatsa legends and tradition, they originated in the Devils Lake area. Their ancestors climbed a grape root that was growing beneath the waters there, and emerged on the surface of the earth. It is interesting to note that many cultures have a common belief that their ancestors lived beneath the surface of the earth, and came out by either climbing a root, or in some instances, by climbing a grape vine. In most of these stories, only part of the tribal group emerges before the vine or root is broken by a large or pregnant woman. In such cases, they believe that a part of their ancestral group is still beneath the surface of the lake (Hidatsa) or beneath the ground (Mandan). In time, the Hidatsa migrated to the west, and according to their beliefs, met the Mandans near the mouth of the Heart River.

CONTEMPORARY HISTORY

One reason for the difficulty in tracing the origins of the Hidatsa is that they have been identified by a variety of names. One such name, Minitaree (there are several spellings), was given to them by the Mandan. Minitaree means "people across the water". Hidatsa, which they call themselves, may mean "people of the willows," or may refer to the villages at the mouth of the Knife River (Figure 1) . A third name, applied by French trappers, was Gros Ventre (Grow Vaunt), which translates to "big bellies".

At some time following the meeting and settlement of the Hidatsa with the Mandan on the Heart River, there was an argument between some of the Hidatsa women over the stomach or "paunch" of a white buffalo. While the details are lost in antiquity, it is believed that this argument caused one segment to leave the tribe and move further west. This 'splinter' group formed the Crow tribe and settled in what is now Montana.

The Hidatsa remained along the Missouri, becoming closely associated with the Mandan, who probably taught them many of the agricultural practices associated with the river tribes. The Hidatsa maintained a stronger hunting tradition than either the Mandan or the Arikara.

It is probable that the Hidatsa arrived at the Missouri in three separate groups at different times. The first, called the Awatixa (Ah-wah-tee-Kah), came perhaps as early as 450 BP and probably joined the Mandan at Scattered Village on the Heart River, where the city of Mandan, North Dakota is now located. The Awatixa had been primarily agricultural, earthlodge people, living along the Red River and later along the Sheyenne River in eastern North Dakota.

The second contingent were the Awaxawi (Ah-waw-caw-wee), who came about 300 BP and settled in the vicinity of the Painted Woods, south of Washburn, North Dakota. Later they moved

upstream and established themselves near the mouth of the Knife River.

The third and last group was the Hidatsa proper, who came from near Devils Lake some time between 1700 and the arrival of the first white people about 1738. As late as 1765, some Hidatsa were living near the mouth of the Heart River; however, when Lewis and Clark made their exploratory trip west in 1804, the Hidatsa were all living in three villages near the mouth of the Knife River.

The reasons for the migrations of the three Hidatsa sub-groups are rather vague. Perhaps the resources in their home areas had been exhausted, or pressure from other groups forced them to move on. Tribal migration was difficult. The dog was the only beast of burden until about 250 BP in this area. At this time, the arrival of the horse allowed loads to be larger and distances covered to be farther.

ARRIVAL OF EUROPEAN AMERICANS

Pierre de Sieur de La Verendrye, was the first white man to visit these people along the Missouri and leave a record in 1738. After Verendrye, many trading expeditions from the French-Canadian Northwest Company and the British Hudson Bay Company arrived at the Mandan/Hidatsa villages from Canada. The Spanish made some attempts to establish a series of posts along the Missouri and some individuals, such as Jacques D'Eglise, in 1790, were licensed to hunt along the Missouri. The Spanish supported the formation of the Missouri Company in St. Louis, but two attempts to ascend the Missouri failed. A third attempt led by John Evans in 1796 did result in some contact, but his accomplishment was to dislodge a French-Canadian trader, Rene' Jesseaume, from his trading house and to raise the Spanish flag.

Much confusion existed in these years, as to what nation this area belonged. This confusion was not resolved until the purchase of the Louisiana Territory by the United States and the exploratory trip made by Meriwether Lewis and William Clark. They wintered (1804-05) on the east bank of the Missouri, a few miles downstream of the Knife River. Over the winter there was much visiting between the expedition and the villagers.

During the early years of the fur trade, events occurred which had a devastating effect on the Indian tribes of the upper Missouri. Smallpox epidemics decimated the Village Indians in 1781, 1801, 1837, and 1856. Origins of the epidemics of 1781, and 1801 are uncertain, but it is possible they were spread through annual trading rendezvous or the theft of horses from Spanish sources in the Southwest.

Epidemics of 1837 and 1856 were triggered by contagion from the steamboat passengers on the St. Peter's and the Clara, who had come up the Missouri River from Saint Louis.

The most profound effect on the villages was the loss of individual specialists within their culture--the pottery makers, the arrow makers and the political and ceremonial leaders. A population estimate of Mandan, Hidatsa and Arikara prior to 1837 is about 7,000 people. Approximately 5,000 smallpox related deaths occurred, the Mandan being the heaviest sufferers.

There was a balance of power shift among the northern Plains Indians following each epidemic. Migratory hunting tribes forced the Mandan and Hidatsa to merge their villages. Greatly reduced by disease and with the Sioux encroaching, the Mandan and Hidatsa made the decision, in 1845, to move further north along the Missouri to a site called Like-A-Fishhook. Located on the north side of the Missouri on a projecting bluff, this new village could be easily fortified by erecting a stockade on the landward side of the point. The next year, the American Fur Company established Fort Berthold, so named in honor of the Berthold family of St. Louis, who were very active in the fur trade.

As the reservation system developed in the United States following the Civil War, the Mandan and Hidatsa were joined by the Arikara. During the next few years, most of the remaining scattered members of these three tribes moved to the Fort Berthold vicinity for mutual benefit and protection. The villages at the Knife River, as well as others, were abandoned and left to disintegrate. The people of Fort Berthold lived together for many years, following their ancient agricultural practices on the rich bottom lands of the Missouri River floodplain. In 1934, they officially became the Three Affiliated Tribes. In the middle 1900's, a series of dams were built which forced them to move to the plains above the river valley. This brought about considerable change in their way of life, and many of the most sacred places and historic sites of these people are now under the waters of Lake Oahe and Lake Sakakawea.

TRIBAL ORIGINS; AN ANTHROPOLOGICAL VIEW

The Mandan and Hidatsa are of Siouan language stock, indicating some similarity in origin, while the Arikara are Caddoan speakers.

The origins of the Mandan, like those of most Native American people, are lost in the shrouds of time; however, it is likely that they lived in the Ohio River Valley at one time and began their westward migration from there, arriving in the Missouri River territory as early as 800 BP.

The Arikara are unique among the three tribes in that they had their origin in the south and moved north. In the early years they lived along the Loup River in Nebraska. In the seventeenth century, they separated from the Skidi Pawnee and either migrated or were driven northward, following the Missouri River through what is now South Dakota. In 1804, they were located along the Missouri, between the Grand and Cannonball Rivers, in three large villages. From there, they gradually moved north eventually joining the Mandan and Hidatsa.

The Hidatsa apparently came from the east, settling for some time in and around the Devils Lake area, before making their move to the Missouri River.

QUESTIONS:

What are some evidences we find of ancient people in North Dakota?

What are some reasons that people such as a tribe of Indians might migrate from one place to another?

Before writing, how did people keep track of their history?

What resources did the Mandan, Hidatsa and Arikara use along the Missouri River to live?

How might people's lifestyles alter when changing from nomadic hunter/gatherers to sedentary agriculturalists? How would your life today change if you had to move often?

How did life change for the Mandan, Hidatsa and Arikara when they began trading with Euroamericans?

ACTIVITIES:

Each week choose one thing that signifies the events of that week and decide on a symbol to represent it. Draw it on a piece of paper. Add a new symbol each week. Then, once a month, referring to the symbol, tell the history of the past few weeks. This could be done each day, rather than each week, if you wish. Native Americans used this system as their form of history. Often, their symbol represented an entire year.

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UNIT 2...SUBSISTENCE

SUBSISTENCE - existing; the means of supporting life; the source from which food and other items necessary to exist are obtained.

Different groups of people have developed different strategies to accomplish the task of supporting life. For example, some cultural groups developed a system of agriculture while other groups followed the migrations of large game animals. Hunting animals and gathering wild plants and fruits occupied little time over the course of a year as opposed to agriculture. Agricultural subsistence occupied much time and used a different set of skills than those of the Hunter/Gatherer groups.

Agriculture is one form of adaptation people have made to gain large supplies of food. The Mandan, Hidatsa and Arikara of the Missouri River valley in what is now North Dakota developed a way of life which heavily relied on agriculture. Corn, beans, squash and sunflowers were the main crops. Some crops like melons, gourds and tobacco where also grown, but these were not as important to the subsistence pattern as "the big four".

PREPARING THE GARDEN

Fields or gardens of the Hidasta, Mandan, and Arikara were in the bottom land along the Missouri River. Untimbered prairie was never used because the soil is too hard and dry. Each family had its own garden. Gardening was done by the women of the villages. When a location of the plot was decided, boundary markers of stones, stakes, etc. were placed at the corners of the area to be prepared. Buffalo Bird Woman, a Hidatsa born in 1839 at the Knife River village known as Awatixa, said that the fields were kept sacred and people did not wish to quarrel over ownership. Once a field was established, a person causing a land dispute would be seen to be quarrelsome and selfish, and would bring some evil to their family. So disputes were settled quickly, by making a payment to the person whose land was being disputed.

Grass, brush and most of the trees in the area being prepared were clear cut in the fall of the year. The trees were cut so they would fall all in one direction, where they were left to dry. The object of felling trees in one direction was to make them cover as much ground as possible. Early in the spring, this dry material was burned off. This burning eliminated the trash and returned some nutrients to the soil. Also, burning the roots of the brush loosened the soil aiding in the cultivation process. Before this firing, all the dry grass, leaves and brush were raked away from the edges of the garden so the fire would not spread to the surrounding timber and prairie (Figure 2).

Following the burning, the ground was worked using a digging stick. Digging sticks about three and a half feet long were often made of ash wood, sharpened on one end to a three-sided point. This sharpened end was then rubbed with buffalo fat, wrapped with dry grass and charred in a

fire to harden it. The point of the digging stick was forced into the ground about one hand length and then pushed back on to pry up the soil.

PLANTING THE CROPS

The first crop to be planted in the spring was the sunflowers. These were planted about the middle of April, as soon as the ground could be worked following the spring thaw. The women would scoop the soil into a hill by hand or hoe. The hill was patted firm, using the palm of the hand. Three seeds were planted in each hill. They were planted all together to the depth of the second joint of the woman's first two fingers. The hills were placed eight or nine paces apart around the edges of the fields, giving a pleasant appearance to the gardens.

American Indians used wild plant development to tell them when it was time to plant. Corn was planted when the gooseberry came into full leaf. The corn planting was a major undertaking as corn was the primary crop. It has been estimated that for the Big Hidatsa village there were 1,000 acres of crop land.

The Rev. Gilbert L. Wilson gives the following account of planting among the Hidatsa: "Corn planting began in the first half of May, after sunflower seed had been planted. The field was raked free of debris and the stalks of last year's crop, and the dried piles of debris were burned. The corn was planted in hills, three or four feet apart, seven or eight kernels in a hill. The earth was loosened with a wooden digging stick, or with a hoe. Each corn hill stood exactly where a hill had stood the year before. A second planting of corn was made when the juneberries were ripe to ensure a quantity of late roasting ears. "Beans were commonly planted between the corn hills. As soon as weeds appeared after planting, the field was hoed. A second hoeing, and hilling up of the plants followed soon after."

"Rotation of crops and fertilization were not practiced, but when a field began to fail, it was let lie fallow for a couple of years. The value of the ashes left from burning over a newly made field was understood."

"Indians insist that corn culture by hoe is much harder now, owing to the abundance of weeds that have been brought in by white men." After the corn had been planted, bean and squash planting started. Squash was planted in late May through early June. The squash seed was sprouted before planting. A piece of tanned buffalo robe about 2 and one half feet long and eighteen inches wide was placed on the floor of the earthlodge, fur side up. Red grass leaves were dampened with water, spread out and matted together in a thin layer on the fur. Two double handfuls of seeds were wetted but not soaked, and mixed with sage and buckbrush leaves. This mixture was then placed on the grass mat, which was folded over and around it. The buffalo robe was then rolled into a bundle and bound. This kaku'i kida'kci or "squash-thing-bound" was hung from a post of the earthlodge where it would stay warm. After two days the bundle was opened, some tepid water was sprayed on the seeds, they were re-bound and hung for one more day, at which time the seeds were sprouted nearly one inch long and ready to plant. When the seeds were sprouted, they were removed to a bowl of damp earth in which they were taken to the garden to plant.

The ground about fifteen inches in diameter was loosened for each hill. Care was taken so that each hill was in the place where there had been a hill the year before. Four seeds were planted in each hill in two pairs. The pairs were about twelve inches apart and the two seeds in each pair, a half inch apart. The seeds were planted in the sides of the hills as the sprouts were tender and could not break through the hard soil of the top of the hill if it had been rained upon.

Bean planting followed immediately after squash planting. Bean hills were interspersed among the corn hills or planted in open ground. The beans grown were pole type so they used the corn stalks for them to vine. Poles were placed over the hills if grown in open ground. Three beans in each hand, held between the thumb and first two fingers, were buried in the side of the hill about two inches deep. The two groups were about six inches apart.

TENDING THE GARDENS

Hoeing started immediately after the planting was finished in June and was kept up continuously until late in the summer. This usually gave time to hoe the whole garden twice. The hoeing was often mixed with other labors of the day. The women usually got up with the sun, around 4am, and went immediately to the gardens; they worked until the sun was well up, when its heat began to be felt. Later after regular household duties were completed, the women would return to the hoeing. This work would not be considered mere drudgery as garden plots were close enough together to permit friendly visiting. The women usually sang as they worked. Some young men were sure to be attracted by the presence of the young women.

Toward the end of summer, when the corn was beginning to form ears, a garden was seldom left unattended in the daytime as the blackbirds and crows were constantly a threat to the maturing corn. Birds were not the only threat to the garden produce. Boys nine to eleven years old were "expected" to steal some green corn ears to roast by fires in the woods. When caught, they were scolded but the parents were not asked to pay damage for the theft.

Watcher's stages or brush shelters were constructed for the convenience of those attending the gardens (Figure 3). Here some young girls were stationed, singing, gossiping, and working at some sort of sewing; or perhaps a mother and her daughters brought out their lunch and spent the day there. If a woman was childless, she might be accompanied by her nieces to the garden where they could have their lunch and spend the day.

The size of the gardens varied among families. Usually each healthy, mature female of a family had her own garden plot and was helped by her daughters. These plots were expanded annually until they reached the maximum workable size. The smallest gardens were about one and one half to two acres, and the largest perhaps as big as ten acres. Fences made of willows or brush often surrounded the garden plots to keep foraging animals from the tender green shoots.

HARVESTING THE CROPS

The people were rewarded for their labors late in July or early in August with the first bounty from the garden: squash. The squash harvest began when the squashes were about three and one quarter inches in diameter. Squash was picked every four days. The first picking was naturally

small and was consumed by the harvesting family. The second picking was larger, being enough for the family and a small surplus. Each picking increased until the fifth or sixth, at which time the quantity began to decrease. Pickings were made before sunrise. Squash which were not cooked and eaten fresh were sliced and dried for later use. The forth picking of squash (twelve days after the first picking) signaled the beginning of green corn harvest. This was early in the harvest moon, when the blossoms of the prairie goldenrod were full, bright yellow: about the end of the first week in August (Figure 4).

Green corn was like the corn we eat today. Most of the corn was allowed to dry on the stalk to be stored for use later in the year. Green corn was boiled on the cob; shelled from the cob and boiled; or shelled from the cob, pounded in a corn mortar and boiled to make a mush or gruel (Figure 5).

By far the largest amount of corn was harvested after it had dried on the stalk. All the dried ears were gathered into piles. The day following the picking of the corn, a feast was given for those who came to help with the job of husking. The husking season was looked upon as a time of joviality, and youths dressed themselves for the occasion. The husking season lasted about ten days. As a husker came upon a ear of corn which was still green, he would place it in a separate pile. These would spoil if stored, so these ears belonged to the husker. As especially well formed or large ears were found, they were set aside for braiding. For this purpose the husk was cut off, leaving the three thin leaves. About 50 ears were braided to form a string and hung on the drying stage near the earthlodge of the family. The smaller less favorable ears were carried home in baskets (Figure 6). Here they were placed on the platform of the drying stage and allowed to dry for eleven days.

When the corn was dry the ears were struck with flails or sticks to remove the grain from the cobs. Beans were threshed in the fall after the pods had dried. Vines were pulled up and gathered in a cleared area where they were laid on the ground, roots up, spreading them out a little. After about three days, half an old tipi cover was spread out near the dry vines. The cover was used as a threshing floor. A heap of dry vines about three feet high was placed on the cover, then the heap was trampled with moccasined feet to shake the beans loose from their pods. Beans were threshed on windy days so winnowing could follow immediately. The beans were dried one more day following the winnowing. After this final drying, the beans were stored in sacks.

Although sunflowers were the first crop to be planted in the spring, they were the last to be harvested in the fall. The sunflowers were ready for harvest when the little petals that covered the seeds fell off, exposing the ripe seeds. To harvest, each head was cut from the stem and tossed into a basket worn on the harvester's back. The heads were hauled to the earthlodge where they were spread, face down, on the flat part of the roof around the smoke hole to dry. After four days of drying, the heads were placed on a skin and flailed. When this was finished, another supply of heads was brought in to dry and thresh. This was usually accomplished by the end of October.

STORING FOOD

Dry beans, corn, squash and sunflower were stored in cache (pronounced Cash) pits following

their harvest (Figure 7). Bell or jar shaped in profile, cache pits could be dug in about two and one half days and were often five feet or more deep. Usually two women worked together making a pit or storing produce in one. Using a short-handled hoe, earth was raked into a wooden bowl. When the bowl was full it was borne away to be emptied. Below the neck, the pit would expand in diameter to perhaps six feet across. The bottom of the pit was covered with dry willow sticks fitted evenly and snugly together. Over the willow floor, thoroughly dried grass was spread to a depth of about four inches. The walls of the pit were then lined three to four inches thick with dry grass. This grass was held in place with about eight willow sticks placed vertically against the walls and fastened in place using dead willow pins.

A bullboat cover was then fitted into the bottom of the pit. Now the pit is ready to be used for storage. Strings of braided corn were laid around the outside of the pit. Shelled corn was poured in the middle. Dried squash might be placed in the center of the loose corn, thus protecting it from any chance of dampness. When the pit was filled to the neck, a circular cover, cut from the flank skin of a buffalo bull was snugly installed. Grass was placed over this cover. Then split logs were fitted into the neck of the pit. The whole of the neck was then heaped full of dry grass which was trampled down hard. Then a second cover of bull hide was fitted and covered with ashes and refuse to hide any sign of the pit.

HUNTING AND FORAGING

The systems used by the Hidatsa, Mandan, and Arikara in their agriculturally based society were quite complex. Ideas of planting times, techniques, nurturing the crops, and harvesting and storing were all important to ensure adequate supplies of food. This food base was supplemented by hunting and foraging.

Because of their huge numbers, the buffalo were an important part of the food supply of not only the nomadic tribes but also the agriculturally based Mandan, Hidatsa and Arikara. Buffalo are relatively docile animals which tended to herd. Buffalo hunting was not considered a sporting event (Figure 8). Charms, superstitions and ceremonies emphasized that the hunt was a solemn undertaking controlled by the supernatural forces. Buffalo calling ceremonies were used by the Hidatsa and Mandan in order to charm nearby herds into coming closer to the villages.

It was reported by early observers that such ceremonies always worked since they went on and on, sometimes several weeks, until the buffalo appeared. When word was received that a herd was nearby, most camps did not immediately rush into the hunt. Such a serious undertaking as the hunt, upon which the well being of the entire group depended, could not be gambled on the whims of the individual hunters. If the hunters spread out indiscriminately, each trying to procure a buffalo for his own lodge, a major herd might be scattered leaving the whole group near starvation. To ensure a cooperative group effort, a governing council made up of experienced hunters and those with spiritual power, planned and kept the discipline on each hunt. Young men and boys went on the hunts as cooks, fire tenders, porters, etc., to gain experience in the workings of a hunt before they were allowed to partake in the actual hunt. Techniques ranged from simple shooting of individual animals to complicated systems involving decoys, carefully constructed traps, individuals hunting on foot to entire villages organizing drives and jumps which would supply great numbers of animals in a single outing.

A very early method of group hunting was the foot surround, in which a long line of men on foot gradually encircled a herd and then moved in for the kill. About 1750, the horse was introduced to the people living on the northern plains. This animal changed many of the techniques used earlier for procuring buffalo meat. Very quickly hunters learned to ride horses directly into a group of buffalo and herd one away. After the one was cut from the herd, the rider would approach very near and shoot the animal with bow and arrow. Highly trained horses called buffalo runners became very valuable. This form of hunting replaced many older proven techniques because even with the herd dispersed, great distances could be covered using horses.

While the buffalo was the most important animal to the Indian of the Upper Great Plains, there were a variety of other animals that furnished much meat for the Missouri River valley dwellers. The black-tailed (mule) deer was one such animal. This animal has a tendency to stop after it has been initially flushed, usually turning broadside to the hunter for one look before going over a rise, making it relatively easy to hunt. Indian hunters were aware of such movements and would wait for this moment before releasing their first arrows. The white-tailed deer is more wary and the hunters would let fly immediately whenever they startled one. These animals were important not only for food, but also because their hides could easily be tanned and used for many items of dress and costume. Elk were hunted in much the same way as deer. Tanned elk hides were prized for moccasins and costume parts because they are thicker and larger. Big horn sheep were uncommon, so whenever a hunter was successful in harvesting one of these animals, much care was taken in the treatment of the hide and meat. Antelope have a "herd instinct", and were generally taken in a pound or trap. This was accomplished by driving the group over the edge of a bluff or cliff into a trap set at the bottom.

The butchering of antelope was similar to that of deer. The liver and kidneys were frequently eaten raw, while the butchering was being done. Although the hide was important, usually the freshly butchered meat was protected with it until transported back to the village.

Bird hunting was done by younger boys with the bow and arrow. If a boy hunted alone, he kept all of his game. If two boys hunted together, each was entitled to the game of the other. If there were more than two, the one who picked up the game kept it. Birds such as mourning doves, bob-o-links, blackbirds and other smaller songbirds were hunted. Meadow-larks were not usually hunted, since there were some fears of eating them.

Birds were given to either the boy's grandmother or mother, who would place them in the fireplace ashes and cover them with coals. When the roasted birds were removed from the ashes, the feathers and skin would fall off, the entrails would be removed, and the birds were ready to eat. They were considered a delicacy. Small game such as gophers, prairie dogs and rabbits were hunted and were relished as being good food.

The people who lived along the Missouri River were not as dependent upon fishing as some of the tribes along the Columbia River and coastal areas, but fish did form a part of their diet. The main method of procurement was the fish trap. Only certain men who had purchased the right made these fish traps. These rights were sacred. Traps could be made by the ones with the right to do so for other's use, but this would also have to be purchased. In general, the traps were four willow mats consisting of one hundred willows each, attached to twelve willow poles stuck in

the mud of the bottom of the river in an area where the water was about three feet deep. Sticks with leaves left on were put near the trap. Rotten meat was attached to the gate of the trap to attract the fish. When the leaves of the trap shook, the trap was full and the gate was closed. The man would then enter the trap and scoop out the fish using cone-shaped willow baskets.

There was no attempt to preserve fish; they were eaten at the time they were caught. Fish trapping was undertaken in the fall and catfish were the main catch. Usually the fish were boiled without skinning. This preparation not only produced a welcome change from their usual corn and meat but also created a strong broth which was enjoyed with the meal.

When food was in adequate supply three meals were taken daily. A main dish made of dried corn pounded into a coarse meal, boiled with meat, was the usual fare. A change could be made by adding beans, squash, sunflowers, berries, different herbs or whatever was ripe in the season. There was a general order to the serving, with the more highly respected individuals eating first. The woman doing the serving ate last. If the food supply was not sufficient, she would refrain from eating, although she might cook something for herself later. Whenever a guest entered the lodge, food was offered (Figure 9).

As a general rule, meat was eaten daily. Often the cooked ribs of a buffalo might be kept beside the fire so that anyone might take a piece when hungry. One method of roasting was by suspending a side of a buffalo over a fire using a rope fastened to the top of the lodge. The fire would be maintained and the side of meat pushed and twisted by the cook once in a while so that it would swing and turn gently in the heat. This difficult task was usually the work of men.

The drying of meat was the most widely used method of preservation. The meat would be cut into chunks, then sliced in thin layers. These long, thin pieces would then be hung on racks in the sun to dry. At times the meat might be partially roasted and dried over a fire. The meat was cut just thin enough so that flies could not lay eggs in it. Also the use of a fire discouraged insect activity.

To make pemmican (a high energy, light, compact food), dried meat was pounded with a heavy hammer stone in a mortar. The pounded meat was then mixed with tallow, bone marrow and pounded dried berries. Molded into small bars or balls and carried when traveling, pemmican could be stored for long periods of time in buffalo paunch (stomach) bags or other small containers such as the tough layer of tissue around the buffalo heart.

Not much was wasted in food processing. For example, the bone fat would be extracted by splitting the long bones and boiling. The grease floating on the surface of the water would be skimmed off and collected or the water might be cooled allowing the grease to harden. Bone grease was often stored in a section of the large intestine of the buffalo. The bone broth that was left was usually used as a warm drink with meals.

Box elder sap provided a drink with a flavor similar to maple syrup. In addition, there were a number of teas: one from the inner bark of the elm tree, another from the bark of wild roses.

Many wild berries were used. Crushed with a stone hammer or mortar, the pulp, pits, and skin

were worked together, and formed into balls. They were allowed to dry before eating. Considered a special treat, these would last for an indefinite period, although they would ordinarily be eaten during the winter.

QUESTIONS:

How did the Hidatsa, Mandan, and Arikara preserve meats and vegetables?

How did the Hidasta, Mandan, and Arikara prepare food for eating?

What are some agricultural products for which we are indebted to Native Americans?

Compare today's farming methods with those of the past.

Compare the sources of energy or power used today with those used in the past.

List animals which once lived in North Dakota.

ACTIVITIES:

Plant beans. Record their growth.

Prepare traditional foods using traditional methods.

Make traditional farming tools: scapula hoe, willow rake, digging stick, antler rake.

Experiment with drying foods: corn, squash or meat. Record your observations and results.

Construct hunting equipment such as a bow, arrows or traps.

Build a fish trap model.

List uses for bone grease, past and present.

Forage for things that can be eaten.

Make sunflower seed balls.

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UNIT 3...HOUSING and TRANSPORTATION

HOUSING

When most people think of the American Indian and his dwelling, the familiar tipi (sometimes spelled tepee or tepee) comes to mind (Figure 10). While the Hidatsa, Mandan and other dwellers along the upper Missouri did use the tipi for shelter while hunting or traveling, their principal dwelling was the earthlodge (Figure 11). The earthlodge probably had its origins in the eastern part of North America. This structure may have developed from the long house. These long rectangular bark or grass covered structures were very adequate for woodland areas but would not have been satisfactory in the harsh environment of the Plains.

The basic structure consisted of four large cottonwood logs set vertically in the ground, with heavy cross-members connecting the top of one with that of the next, to form a square (Figure 12). Around this, in a circle, smaller upright logs were placed. The tops of these were connected to each other by cross beams also. Then a series of smaller but longer beams were laid between the inner square and the outer circle to support the roof, and from the outer circle to the ground to create walls. After the main rafters were set in place, smaller branches would be laid over them to provide a fairly solid layer. Next, willow branches were laid over this and layers of grasses and sod were placed on top. A layer of clay packed on the outer roof made the earthlodge impervious to rain or snow.

The earthlodge lasted from seven to perhaps ten years. When it became evident that a lodge was deteriorating past any further use or repair, several members of the family (women, blood relatives) were invited to participate in the wrecking operation. There was a belief that every time a lodge was destroyed a storm would appear, so the people always tried to begin on a clear day with no wind. As was the case with the original building, the women did most of the work, while the men helped with the heavy lifting, such as with main uprights or large beams. Much of the material was salvaged and reused. Due to the scarcity of wood in this area, that which could not be reused in the new lodge was saved for firewood.

There was a general plan for the arrangement of the interior of an earthlodge (Figure 13). As with the tipi, there was a certain etiquette or protocol to be followed when activities or ceremonies took place within the lodge. This was true with nearly all tribes, no matter what the type of dwelling. The place for the male leader of the household was directly opposite the door (Figure 14). It was impolite to cross between the fire and any person without asking permission. When smoking a pipe, it was passed only to the left. Tipis were erected so that the door and smoke flaps faced east or southeast.

Within the earthlodge, there was a section opposite the door that was reserved as a sacred place (Figure 15). This was the place for medicine bundles, a shrine, or anything related to religion. In the central portion of the lodge was the cooking fire, with seats located in a small semi-circle

around the fire pit. The opening of the semi-circle would face the sacred place. Beds of family members were located around the outside of the earthlodge. These beds were built somewhat like an old "four poster" bed, with privacy drapes made from hides or blankets draped over frames. A small corral, just large enough to contain a few horses was located inside the doorway. Cache pits were located in the earthlodge for storage of food reserves. Often, a sweat lodge was located within the lodge. This small willow framework was draped with hides or blankets. Heated stones were placed within this structure, and water was splashed on the stones to create steam. When a ceremony or other major event was to take place, the leaders would enter the sweat lodge in order to purify themselves for the impending rites.

While the tipi was not the principal type of dwelling for the people of the Knife River Villages, it was used as an alternate style of housing especially when hunting or traveling or when repairing an earthlodge. The tipi covering was made from buffalo hides. June was the best time to procure hides for the tipi cover. The summer buffalo cow hide was the best because it was fairly large, did not have any heavy fat layers, and its hair could be removed quite easily. Approximately thirteen hides were used in the average size tipi cover. Nearly one fourth of one mile of stitching was required to fasten the hides together.

Only certain women performed particular duties in making a tipi cover, and only a few did the cutting and matching of the skins. This knowledge was passed on within the family, or was conditionally sold to someone else. In some tribes, this was a right possessed by only one woman in the village.

Preparing hides was heavy manual labor. First, the hides were fleshed by carefully scraping the inside layers away. Next, they were dehaired either by scraping with an elkhorn scraper or by causing the hair to slip. This slipping was accomplished by soaking the hide in water or burying it in damp soil for several days. This procedure loosened the hair making it easy to remove. Next, the skin was washed thoroughly, and a mash made of brains (and sometimes the liver) of the animal was completely worked through the hide over a period of several days. While the hide was drying, it was carefully worked to retain the softness of the tanning process. This softening of the hide continued until it was completely dry. The hide was now ready for assembly into the tipi cover.

A skin tipi might last two to three years, depending upon the amount of traveling done, and the weather during its use. New covers were very light in color. As time went on, the top portions became darkened with smoke from the fires inside, even though the fires were kept small. After replacing the cover, the old one was cut up for moccasin soles and other useful items. Leather of this kind was nearly indestructible and permanently waterproofed because it had been so thoroughly smoked.

One kind of pine tree was so commonly used for tipi poles that it acquired the name "Lodge Pole Pine". The people from the Knife River Villages traveled to Montana and the Black Hills of South Dakota to cut poles. Trading groups also

supplied these poles. In general the number of poles used on a tipi ranged from twelve to seventeen. Some groups used a three pole foundations while other groups used four poles for their foundation. After the foundation poles were lashed together and erected, additional poles were laid into the crotches created. A space was left on the side opposite the door (the back) for the lifting pole. The cover was attached to the lifting pole at the top. Then cover and lifting pole were fitted into place. The two sides of the cover were drawn around the framework and pinned together. Then the cover was staked in place and the poles were adjusted to pull the cover tight. The door usually opened to the east, perhaps because of prevailing winds and weather from the west or to catch the morning sun.

TRANSPORTATION

For thousands of years, Native Americans traveled on foot. Until the introduction of the horse a few hundred years ago, the only animal used as a beast of burden was the dog. Dogs were bred from wolf stock and were found with every tribe by the time white men arrived. Since the Hidatsa and Mandan did not have the wheel, their dogs dragged a triangular wooden framework called a travois, which carried loads up to one hundred pounds (Figure 16). Dogs were being utilized to haul firewood into the last earthlodge village, Like-A-Fishhook, as late as the 1860's.

It is interesting to note that it is believed the horse originated on the North American Continent. Thousands of years ago, the ancestors of the horse disappeared from North and South America, leaving no survivors. The horse was reintroduced to North America by the Spanish during their conquest of what is now Mexico and the southwestern United States. When the Indians acquired this large or magic dog, they were able to make the adaptations necessary to allow drastic changes in their lifestyle. Hunting methods changed from operations on foot to ones of great skill and excitement. The ability to move large loads over long distances allowed the Indians more mobility than they had ever known.

Horses reached the upper Missouri region about 1750, when the Hidatsa and Mandan were living in permanent villages. The horse allowed other groups from greater distances to come to the villages to trade as well as to raid the Hidatsa and Mandan (Figure 17).

Nomadic tribes such as the Crow, Cheyenne, and Sioux became some of the finest horsemen the world has ever known. They also became skilled at breeding and caring for horses. The Nez Perce Indians developed one of the outstanding breeds of horse recognized today--the Appaloosa. The use of saddles, bridles, hobbles, and other related items became an important part of Plains Indian culture. The Hidatsa and Mandan even modified their earthlodges to accommodate their best horses during bad weather or in time of siege, by incorporating a small corral just inside the door.

For traveling on the Missouri and Knife Rivers, the Hidatsa and Mandan had the

"bull boat", a round-framed, tub-like boat made from a buffalo hide stretched over a willow framework (Figure 18). Due to its round shape and lack of keel, it was paddled from the front. It was satisfactory for the purpose of crossing rivers or carrying cargo. The Hidatsa hunted upstream from their villages, so after a successful hunt they would load bullboats with dried meat and send them back to the villages on the current of the river. At times as many as twenty bullboats might be lashed together after being filled with meat. The hunters followed their progress from shore as this flotilla made its way downstream. If several boats were traveling together in bad weather or rough water, the occupants would reach out and hold onto each other's boat, thus creating a makeshift barge. When white traders arrived at the villages, they were ferried across the rivers in bullboats, thus keeping their trade goods, horse trappings and clothing dry (Figure 19).

The snowshoe did not develop here, but it was used in several modified forms by American Indians living in North Dakota. Sleds and toboggans were used during the winter; some utilized buffalo ribs as runners and were pulled by two or three dogs.

QUESTIONS:

Describe an earthlodge.

What are some advantages and disadvantages to living in an earthlodge?

Why was the tipi used at certain times of the year by the Villagers?

Which groups of people used tipis all year?

What is the most common and important single method of transportation on earth? Why?

What other methods of travel were used by Native Americans?

What animal made the greatest change in the way of life of the Plains Indian? Why?

Why do people travel from one place to another? Why did Native American have to move from time to time?

What were some of the major problems and obstacles in transportation for these people?

What are some of the differences between travel long ago and today in terms of preparation and time?

ACTIVITIES:

Build a model of an earthlodge.

Build a model tipi.

Build a model of an earthlodge village or tipi camp.

Visit the North Dakota Heritage Center on the capital grounds in Bismarck, ND to see a full size buffalo hide tipi, a bull boat, a fish trap, and much more.

Build a model travois to show how the Indians moved a tipi from one place to another.

On your visit to the Knife River Indian Villages National Historic Site, pay close attention to the reproduction of a full-scale earthlodge, and also to the archeological remains of the villages.

Compare three-pole and four-pole tipi foundations (See Laubin, The Indian Tipi).

Bring in snowshoes or other pieces of equipment which the Indians invented or devised for travel.

Make a model of a bullboat.

Make a pair of snowshoes.

Study the various breeds of horses used today. Which breeds may have been influenced by the Indians? How?

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UNIT 4...ARTS, CRAFTS and CLOTHING

Like all American Indian groups, those people living in the Villages near the confluence on the Knife and Missouri Rivers of North Dakota made tools, housewares, clothing, toys, and musical instruments from things that were available nearby or sometimes farther off if the material was important in the production of the item.

Knife River flint, a dark-brown glassy quartz material, was used extensively by Knife River Indian Villagers in the manufacture of chipped stone tools. The largest concentrations of the material are found in Dunn and Mercer Counties of western North Dakota.

A predictable chipping pattern made Knife River flint valuable as a raw material for stone tool manufacture. Gathered from pre-Ice Age deposits, flint was utilized in tool manufacture not only by the Villagers but by many Native American groups for the past 11,000 years. Arrowheads are what we think of when we think of stone tools, but Native Americans made tools from flint for scraping hides and shaping wood and bone; piercing tools like awls and drills; cutting tools like knives; and chopping tools like axes. People traveled great distances to gather the raw material. It is believed that preshaped tools, called blanks, were locally made and then traded to people living greater distances from the quarries. It was so important a trade item that projectile points made from it have been found in sites as far away as Missouri and Ohio.

The primary flint gathering areas were located about 50 miles west of the Knife River Indian Villages National Historic Site, in present day Dunn County. Archaeological investigation of these areas may answer questions about the lifeways of the people who came here thousands of years ago. Several different techniques were used for the shaping of tools from stone. Two basic techniques are chipping and pecking. Chipped stone tools are made from a pre-thinned piece of material. Pecking was to pound one stone with another stone of equal or greater hardness. This technique was used to make grooved mauls, hammers, "war" clubs, etc.

The Hidatsa and Mandan made pottery as far back in time as their villages can be traced. This continued until the major smallpox epidemic of 1837. Pottery making was a protected right of certain women of the tribe. They made very usable and artistic pots. The pots were made by building up the sides gradually with rolled clay coils. A smooth stone or anvil was held inside the vessel with one hand while the outside was beaten using a paddle. Designs were often carved into the paddle. Designs could also be added by impressing twisted cords, pressing the fingers into the moist clay, using sharpened sticks or bones, or deeply scratching in designs. Clays used for the pottery came from deposits found along the Little Missouri River and from other deposits in the Knife River area. The clay was mixed with water; temper of sand, crushed granite, clam shells or broken bits of pottery was added to keep the pots from cracking when fired.

Painting was an important form of decoration for the Indians of this area. Pigments from the natural colors of clays were mixed with animal fat to form paint. Blood from animals and juices

from plants, and trees, berries, bark, and fruit also produced a wide range of colors. Indian women sometimes extracted the dyes from colored trade cloth by boiling it. This colored extract was then used to dye the material of their choice (i.e. quills). The traders introduced vegetable dyes, which became a valuable trade item since their use was much more convenient.

Most Indian items were decorated in some fashion. Their possessions were not only utilitarian, but also works of art. After painting a buffalo robe (Figure 20), or rawhide, the paint was "fixed" with glue; this glue was made by boiling hide scraping, horns or hooves from buffalo and deer. Porous bones were used as paint brushes. Capillary action draws the paint into a fine pore. When that pore is placed in contact with another material (rawhide, etc.), the paint flows out.

Porcupine quills were used for decorative work on clothing until approximately 1850 when the trade and application of glass beads replaced quills as the decoration of choice. The sewing on of glass beads was an easy adaptation to make because the same designs could be made, more colors were available, and the quills no longer had to be acquired, washed, sorted, and dyed before work could begin. While quill work is beautiful, unique and usually very well done, there were limitations to the colors and designs which could be applied. With the introduction of glass beads of small consistent size, and great variety of color, these limitations were overcome. Most work was without a pre-drawn plan, leading to a feeling that the design belongs to each individual article. While there are many patterns which have definite meanings, the designs were frequently used simply because they were appealing to the woman doing the work. Some designs have been found that show definite European influence. Though most Plains Indian designs are geometric, the Hidatsa used some types of floral designs with no background.

The three tribes (Hidatsa, Mandan, and Arikara) made baskets called "burden baskets" that were used for carrying burdens such as garden produce, berries, firewood or dirt to place on the earthlodge. These baskets were made from the inner bark of elm, ash or box elder woven onto a framework of willow sticks. After the framework and weaving materials (weavers) were prepared, a light colored weaver was wrapped around and around the uprights of the frame. The darker colored weavers were incorporated, weaving down one side across the bottom and back up the other side. This created a checkerboard effect. To make more complicated designs the darker weavers did not go over and under every light one but rather skipped in and out. The light weavers were the inner bark of the box elder which is nearly white. The dark weavers were made by soaking bundles of prepared bark in pools of clay which had water mixed in to bring it to the right consistency. The bark would pick up the color from the clay pool after several days. These darker weavers would be rinsed and then they were ready to be woven into a basket. Small flat baskets, seven or eight inches in diameter, were also made. These were used not only for playing a dice game, but in certain ceremonies.

The clothing of the Hidatsa and Mandan was much the same as that used by other tribes on the Upper Great Plains. The buffalo furnished much of the raw material for clothes as well as thread. The buffalo robe was the basic article of clothing. The robe was worn hair side out during the summer. It was not used to any great extent in the warmer months unless there was a formal council or other gathering of dignitaries. A particular attitude could be emphasized by varying the position and fold of a robe. For example, if a man were addressing a group, he might have his robe pulled up under the shoulders, supporting it with his left hand while he held an eagle wing

fan in his right. Draping it over his entire body and head indicated anger or disapproval of some action. This was also considered a sign of shame.

There were traditional patterns used to show whether the robe belonged to a man or a woman. A typical women's pattern was the "box and border" design, which consisted of a colorful border of geometric figures enclosing a highly colored and pattered box-like design on one side. A man's robe might use a design called the "black war bonnet", a series of concentric circles with small radiating figures made into an elongated diamond shaped design. These indicated eagle feather. This central pattern was often augmented with drawings of horses or other activities associated with the particular man, such as buffalo hunts, which were placed around the outer portions of the robe. In this way, the man was able to display his "war record" and other exploits to others.

During the first few years of life, an infant often had no clothing or costume, but might wear a part of a previously worn robe. Infants were placed in hide bags, where they spent much of their first year of life. Cattail or milkweed down was used for diaper material, and warm sand was sometimes packed around the feet for warmth in winter, At the age of one, children were expected to start walking. Small girls usually wore simple dresses, moccasins and leggings. While these items were often plain, the leggings sometimes had a horizontal strip of quill work on the edge. The moccasins might have a small strip of beadwork or quill work over the instep. Small boys wore shirts, moccasins, and leggings, as well as an occasional breechcloth.

As children grew older, their clothing adopted more defined patterns. For the girls, dresses became important. These dresses were loose-fitting and had considerable variations in their decorations. Porcupine quill work was the major type of decoration. This was replaced by beadwork as soon as traders made beads readily available. Elk teeth were also valuable items. The most highly prized elk teeth were the canines or tusks. There are only two of these canine teeth in each animal, so the incisors or front teeth were sometimes used as well. In later years, when elk were no longer available on the plains, the teeth became a very valuable trade item. Due to the high demand, people used antlers of deer and leg bones of buffalo or cattle to manufacture elk "teeth". Some of these fake teeth were so well made that it requires careful examination to determine whether the teeth are real or not.

A typical pattern of decoration for a dress consisted of a quilled or beaded yoke over the shoulders, with elk teeth distributed over the remainder of the dress. Sometimes the entire dress was covered with elk teeth. There were sometimes as many as 600 teeth on one woman's dress. Leggings and moccasins were also highly decorated.

Nobody is certain of the origin of the moccasin, but it is certainly one of the most comfortable forms of footwear ever devised and it is still the basis for many shoe designs used today. The Hidatsa used the basic plains pattern, with a hard sole and soft upper, although they did sometimes use the soft-soled moccasin.

One good source of material for moccasin soles was the top section of an old tipi cover, which had absorbed the "smoke-from-many-fires" and was virtually waterproof. The upper part of the moccasin was made from soft, tanned buckskin of elk, deer, or sometimes antelope; this upper part could be decorated using quills or beads. Awls made from sharpened bones, often ribs

sections, were used to punch holes for stitches. Sinew was used for thread. Sinew is the fibrous tissue which runs next to the spine and down the legs of four footed animals. Buffalo, elk or deer sinew was commonly used by Indians. Removed at the time of butchering, it is dried and worked by beating and pounding to loosen the fibers. When sinew thread was needed, a strand was removed from the bundle. It was customarily held in the mouth in order to soften. An inch or two at the end was usually left unmoistened in order to provide a stiff needle-like end. This fiber is strong and long lasting. Some moccasins, well over 100 years of age, are perfectly usable today. Sinew was used not only for sewing, but also to attach quill work and beading and to strengthen the backs of bows.

In winter, moccasins were made larger than usual, in order to accommodate an inner lining made of furs or grasses, which insulated the foot. These moccasins had higher flaps. Leggings might be attached to protect the foot and ankle from deep snow.

Indians do not have much facial hair. Hair which did appear was plucked out. A beard or mustache was not considered becoming. A pair of fresh water clam shells were pinched together to pull out the hair. Young boys and girls donned the "owl haircut". Their hair was cut very short except for a tuft left on either side of the head above the ear, which made the children look like owls. At the age of three, the hair style was changed to a single braid hanging down the back. At the age of twelve, the girls began to part their hair and wear two braids while the boys did the same thing when sixteen.

A great deal of importance was placed on personal cleanliness. Everyone went to the river for their morning bath after being awakened by a grandfather singing war songs. In winter, water for washing was brought to the earthlodge by the women (Figure 21). The whole body was sometimes washed with fresh snow in the winter. They believed that this would better condition one for the cold. At other times, baths were taken in an air hole in the ice where open water could be found. On ceremonial occasions, the "sweat bath" was completed by bathing in the river--winter or summer.

Tattooing was practiced by the Hidatsa and Mandan. Women were tattooed on the lower part of the face and neck. The buffalo robe was so often worn by men with the right shoulder and arm exposed that they usually decorated only on the shoulders and right side of the body.

The last known Hidatsa to be tattooed was Poor-Wolf (or Lean-Wolf), who was ninety years of age in 1909. He described the general method used for his own decoration. Several small, sharp pieces of tin were fastened to the end of a hollow bone. The piercing was done free hand, with charcoal being rubbed into the open wounds. Other accounts described drawing the design with charcoal on the skin first, then piercing.

QUESTIONS:

What is temper?

Why is temper important in pottery making?

What are some of the materials used for temper?

What did the Indians use to make paints and dyes?

Why did the Indians decorate their clothing and other items?

What did the Indians use to decorate their hand crafted items.

Why do we use decoration in our clothing and shoes today?

What are some similarities and differences in decorations used today and in the past?

Do you have any clothing or accessories which have Indian designs?

Where did the Indians get the beads for decorating their clothing?

ACTIVITIES:

Build a burden basket using construction paper for the weavers and tubing or sticks for a framework.

Consult craft books on beadwork. Get some beads and experiment with some beaded designs using either a loom or applique.

Bring into class any beadwork or other craft work done by Indians and discuss how it might have been made and or used.

Paint some Indian designs on leather or paper. Make some designs of your own and discuss why they are the size and shape they are.

Experiment with natural dyes. Some possibilities might be onion skins, berries, bark, or roots.

Make some costumes for dolls.

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UNIT 5...GAMES and RECREATION

Like all people, American Indians had to devote considerable amounts of time to economic tasks such as gardening and hunting. They still enjoyed leisure time, however, to practice sports, music, dance, and other art forms. In fact, games and recreation were an important part of Indian culture throughout North America. Many of the games enjoyed by the Hidatsa, Mandan, and Arikara Indians were also played by groups on other parts of the continent. Sports and games not only provided fun and excitement for the participants, but athletic contests such as racing and archery helped to develop physical skills. Some sports invented by American Indians, such as lacrosse, are still played in our culture today.

Among the Village Indians, men, women, and children each had their own forms of amusement. There were also some activities enjoyed by everyone. Children often played by pretending to be adults, much as they do today. By imitating the behaviors of their parents, they learned skills and behavior they would need when they grew up. When not helping their mothers and grandmothers, small girls played in and near their earthlodge homes with their playmates. Buffalo Bird Woman, a Hidatsa, born in a village along the Knife River said, "I look back upon my girlhood as the happiest time of my life. How I should like to see all my little girl playmates again!" Little girls played with dolls made of squash or corn stalks; they also had deerskin dolls stuffed with antelope hair with bead eyes and horsehair braids. Their grandmothers made clothes and cradles for the dolls. Little girls also made little figurines and toy houses out of the clay found near the river. Small girls and boys played with a variety of toys, such as cylindrical wooden tops, dolls and whistles.

Buffalo Bird Woman remembered that in the summertime groups of little girls would gather long willow branches to make a playhouse (Figure 22). Their mothers would give them food such as dried or boiled meat and berries, and they would pretend that they were giving a feast. Sometimes they invited little boys to be their husbands, and they would order them to go and hunt like their fathers did. The boy's mothers would laugh and give them scraps of meat to take back to their play wives. Girls between the ages of twelve and sixteen were fond of a game called "tossing in a blanket" or "foot moving" (Figure 23). This game required fifteen to twenty players. A newly dried buffalo skin was scraped clean of hair. Holes were cut every few inches around the edge, and wooden stakes were thrust through the holes and twisted to make handles. This hide was then placed over a pile of brush and weeds stacked near the edge of the village. Each player would grip a handle and leaning back would pull the skin tight, creating a sort of trampoline. A girl would lie down in the middle of the hide, and then, with a quick pull of the handles, she would be tossed into the air! The object of the game was to see how many times she could be tossed into the air and still land on her feet. She should be able to move her feet many times while in the air, and should turn to the right and left as she landed.

Girls also played several ball games. Using a big, soft leather ball stuffed with antelope hair,

they tried to see who could kick the ball into the air the most times without it ever hitting the ground. (This game is much the same as the modern game of "Hacky-sac".) Some girls could do this more than 100 times! Older women also played this game, using fancy balls decorated with porcupine quills. Prizes were given to the winners. Women and girls also played another ball game where they used long, hooked sticks. Teams tried to move a hide covered ball past their opponents to a goal, which was usually two stakes in the ground.

Little boys often staged "mock" hunts. Some were the hunters and some, pretending to be animals, were the hunted. Their fathers would make them small bows and blunt-tipped arrows, which the boys would shoot at targets or small animals and birds. They built small lodges and set up mock hunting or eagle trapping camps much as their father and uncles did. They also liked to get together and mock raid their own lodges, making off with some meat or other food. Then they took these treats to their play camps and had a feast.

A game similar to "follow the leader" was played at sunset by boys and girls about eight to ten years old. A group of children, either boys or girls or both together, formed a line each taking hold of the shirt or dress of the child in front of them. They would march through the village singing and following their leader under the corn drying stages, around posts, through earthlodges, wherever they were led. At times they would stop and sing in front of a lodge where a group of adults were gathered. This game would allow young people to move around the village and become familiar with places which they may not have been before. It would also keep them in groups so they could more easily be watched by a supervising adult. A similar game for boys was called "follow the bad road". In this game young boys followed each other down a very difficult path. The boys did not hang on to each other in this game. If one of them stumbled or fell, he had to go to the end of the line. This sort of game would develop strength, surefootedness and agility.

Games involving both throwing and running were very popular with Plains Indian boys and men. One such game consisted of throwing a spear or shooting an arrow into a rawhide-laced hoop which was rolled over the ground by an opponent. The score was determined where the spear or arrow came in contact with a series of concentric circles on the hoop. (This game is very similar to one described later, called "tchung-kee".) The hoop and pole game was similar. In this game, two or three boys each with three or four rawhide-laced hoops, played on a team. The teams faced each other about thirty yards apart. The players on one side rolled the hoops forward; opposing players tried to catch the hoops on the points of long lance-like sticks. A hoop caught in this way was then thrown back at the team which had rolled the hoops. Play would continue until all the hoops were caught, at which time the opposing side gave chase to the hoop throwers. This game was played only in the early spring. When the Missouri River ice broke up, the young boys would go to a high bluff over looking the river and throw all the hoops into the water. According to Hidatsa tradition, the hoops would be transformed into dead buffalo after they had passed out of sight around the first bend in the river.

Men and boys played a team game called "shinny". Much like field hockey, this game involved moving a rawhide-covered ball towards a goal by using long, curved sticks. Players were allowed to touch the ball with their feet, but not with their hands. This game was played throughout North America. Sometimes two tribes played against each other, or one band or

village would challenge their neighbors. There might be as many as forty players on a team. Great bets were often placed on these matches. Leaders would choose the teams and oversee the betting. Horses, buffalo robes, guns, knives, and other valuable items were wagered by players on both sides. The winning team would then distribute these goods among its members.

Horse racing and foot racing were also very popular among the men and boys. Many of the Indian villages had horse racing tracks, which often were several miles long. Indians liked horses that were not only fast, but could also run for long distances. They loved to challenge each other to see whose horse was the best runner. After white people came to their country, Indians often challenged them to horse races, and even though the Indian ponies were small and differently formed from the eastern horses, they almost always won these races. Foot racing was also very popular throughout North America. Young men were warned not to smoke, because it caused the runners to become short of breath. Foot and horse races were not only exciting, but they helped to develop stamina, agility and speed. These skills were an important part of warfare and hunting. Betting was also an important part of these races; many valuable items often rested on their outcome.

Perhaps the most popular sport among the Hidatsa and Mandan and other groups as well, was a field game called "tchung-kee" (chun-kee). The village Indians built special tchung-kee grounds just outside of the village. The ground, or clay, was smoothed and packed hard for a distance of about 50 yards, and bushes were planted around the sides as a windbreak. Logs were placed on each side of this alley to keep the playing sticks and balls from glancing off the field. In some cases the Hidatsa and Mandan even constructed this playing surface out of wood, smoothed and joined so as to be as level as a house floor. The game was played in teams, with two opposing men competing in each turn. Each player carried two poles about seven to eight feet long, with bunches of feathers or leather tied onto them at regular intervals. Starting at the same end of the playing area, the men ran together, side by side, each carrying a pole in a horizontal position. One of them then rolled a round, polished stone with a hole in the center in front of them, and each threw his stick, trying to spear the tchung-kee stone. Points were counted for the "deepest" catch, as measured by the feathers or thongs. If neither player had caught the stone on his pole, the one who came closest was considered the winner, and got to throw the stone the next time. This game was played for hours at a time in both summer and winter.

The most popular women's game was called "double ball". This game was played by three teams with two deerskin bags about five inches long, attached together by a thong. These "double balls" were tossed around from sticks about five to six feet long. Of the three teams playing, two were on defense and one on offense at any given time. The goal posts were usually long, low tree branches, often as much as a quarter of a mile apart. To begin the game, the "double ball" was laid on the ground between the teams. At a signal, the players rushed forward, the object being to catch the ball, throw it into the air and then, by passing it to one another, throw it over the goal post. This game was played largely by young, unmarried women.

Some games were played only in the winter. When the weather began to turn cold, the Hidatsa and Mandan moved out of their big summer villages and into smaller ones among the trees by the river. Sometimes a family built two connecting earthlodges, one smaller than the other, called a "twin lodge." The small earthlodges were easier to heat and were often used by the

children as playhouses. On winter evenings, families would gather there around the fire, and listen to the grandfather and grandmother tell stories and legends.

Many games and sports were played on the ice of the Missouri River. A favorite one was played with objects called "ice gliders" or "ice slides". Ice gliders were made of buffalo, elk, or deer ribs; feathers were stuck into one end. Usually geometric designs were carved into one or both sides of the rib bone. A course about 100 yards long was marked off on the ice; the object was to see who could slide the glider the furthest with the most accuracy.

Young women sat on the ice wrapped in buffalo robes and played gambling games. A common one was played by two teams with two to eight players each. As in many such amusements, the object was to slide a game piece to a goal. In this case, a bone thrower made from a buffalo vertebra was used to propel the gaming piece towards the goal, which was a piece of wood about three inches long, notched at each end and painted red. The game piece itself was either a flat, circular river pebble or a small, square piece of buffalo vertebra. Such bone pieces were usually decorated with two carved lines stretching from corner to corner and crossing in the center.

A favorite winter pastime for children was sledding. Young boys and girls coasted over frozen drifts on buffalo robes or on natural sleds created by a section of four or five buffalo ribs still attached to each other. Older children used sturdy sleds made of buffalo ribs bound together with sinew and covered with a buffalo hide pad. These were guided by the sledder's heels.

A wide variety of hand games and gambling games were popular throughout the year and were played by both men and women. One was called "dish raised up". Five bone dice, each marked with a different design, were tossed in a plate-shaped basket. The score was kept according to the points represented by the various design combinations, each being worth a certain number of points. Counting sticks were used to keep track of the score.

A very common type of hand game throughout North American is one in which an object is hidden, either in the hands or in another object such as a moccasin. The object of the game is to guess the location of the game piece. These old games are still played today, especially on the Plains and on the West Coast. This game is played by teams, and is often accompanied by drumming and singing. In one version played by the Mandan, two teams of five sit in front of each other and take turns guessing where their opponents have hidden a game piece. Counting sticks are used to keep track of the score. The rules of this game are outlined later, so that you can play it if you would like.

Summary

Many games and sports were developed and enjoyed by American Indians. Most of their athletic events were strenuous and developed qualities such as stamina, speed, and agility. These skills were necessary for survival in the harsh Plains environment. In addition to promoting physical strength and health, recreational activities provided Native Americans with a chance to interact with their friends and with people from other groups. The gambling, which was such a popular accompaniment to nearly every recreational activity, helped to distribute wealth among the group. Native American societies had many such "leveling mechanisms" which worked to

minimize economic differences between people.

Some of the sports developed by American Indians, such as shinny and lacrosse, are still played by people today. This is only one of the many ways in which American Indians contributed to our society. Can you think of others?

INDIAN HAND GAME

Items needed:

ten scoring sticks
two small rounded flat stones or bone pieces
one bag to keep the game in
one small pouch to keep game pieces in

Optional:

one drum with drumstick
Indian music

Object of the Game:

To hide game piece while team guesses which hand the game piece is in, thereby winning each other's sticks.

To play:

Two teams of equal size stand or sit facing each other. A coin flip determines which team is to hide game piece first. Each team must have their game stick (stake or bet) in front of them. The game begins with a player from the first team hiding the small piece. Team two guesses which hand the piece is hidden in. If they are incorrect, team one gets a stick. If they are correct, team two gets a stick. Then team two gets to hide the piece. This goes on until all the sticks are on one side.

Music:

Indian music can be played during the game to make the game more exciting and interesting. The "hider" moves the piece and hands until the music stops, then the "guesser" guesses. Players can keep time to the music, or even dance to the music. A drum can be beat at the same time. However, the realistic way would be to have an Indian singer with a drum to sing songs.

Suggestion:

The person hiding the game piece should be very clever at hiding the game piece. When the game piece is found by guessing team, the other team should willingly give up the game piece.

FAIRNESS SHOULD BE PRACTICED IN THIS GAME!!!

QUESTIONS:

Why do people play games?

Do we have any sports or games that are like those played by the Indians?

ACTIVITIES:

Look up some of the games such as lacrosse, and discuss the rules and method of play.

Using natural materials make a sled similar to one used by the Indians. (Several ribs may be used for runners, for example.)

Using scraps of leather, make a harness that could be used on a dog for pulling a toboggan, and, if available, hitch a dog to it.

Play some of the games played by Indian children, such as "follow the leader".

Manufacture some "Indian" dice or other gaming pieces and/or counting sticks used for keeping score.

Invent your own scoring method for a dice game. Tell why you developed it as you did.

Make a doll from natural materials: grass, cornstalks, etc.

Make a hoop and pole game.

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ILLUSTRATIONS:

Can use to make overhead transparencies.

Figure:

1 Earthlodges along the Knife River
2 Antler rake
3 Garden watcher's stage
4 Corn husking
5 Pounding corn with pestle and mortar
6 Burden basket
7 Cache pit
8 Buffalo hunt
9 Spoon and dishes of horn and shell
10 Tipi camp
11 Winter camp
12 Earthlodge diagram
13 Inside an earthlodge
14 Elders place in the earthlodge
15 Earthlodge shrine
16 Dog with a travois
17 Horse with a travois
18 Making a bull boat
19 Bull boats
20 Buffalo robe
21 Bladder bucket
22 booth
23 Tossing with a blanket

MAPS:

**Regional map showing Knife River Indian Villages NHS
**Detail of Knife River Indian Villages NHS
**Detail of Big Hidatsa Village
**Trading relationships
**Movement of durable materials

Credits:

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Figure 12 by permission of the American Museum of Natural History, NY, NY. From the publication Reprints in Anthropology, Volume 11: Anthropological Papers of the American Museum of Natural History, Volume XXIII, Part V, THE HIDATSA EARTHLODGE, by Gilbert Wilson.

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SUGGESTED TRUNK ITEMS

C. L. Dill's book, Early Peoples of North Dakota
Cobblestone Publication's, The Story of America's Buffalo
Bone tool
Pottery sherd
Trade items
Dried corn
Dried squash
Dried meat
Arrowhead
Flint knife
Bladder bucket
Toy tipi with board - one side three pole central stake, other side four pole external stake
Sweat lodge model
Earthlodge model
Bull boat model with paddle
Travois
Burden basket
Double ball and sticks
Kick ball
Hoops and sticks
Doll
Indian Hand game

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Dear Teacher,

This quiz may be used at your discretion either on-site or post visit. All of the answers can be derived from the orientation program and the museum area.

1. How long has the Knife River region been occupied?_____

2. What was a common use of stone hammers?_____

3. From where did corn originate and how many varieties were grown by the Hidatsa?_____ _____

4. List 4 uses of the horse._____ _____ _____ _____

5. How long had the Hidatsa lived in this area?_____

6. How many groups of Hidatsa were there and what were their names?
_____

7. When did iron tools arrive?_____

8. Did the Hidatsa build ceremonial lodges?_____

9. What was the use of the mortar & pestle?_____

10. List 3 winter pastimes:_____ _____ _____

11. List 4 items used to make dye:_____ _____ _____ _____

12. What were 5 common items stored in a cache pit?_____ _____ _____ _____ _____

13. When was the "Hoop and Stick" game played?_____

14. What was the purpose of the Bison Dance?_____
_____

15. When did the Hidatsa move to Like-a-Fishhook village?_____

16. What was the common use of a stone axe?_____

17. How did the males gain their community status?_____
_____

18. List 2 uses of a bison bladder:_____ _____

19. What was used to make a Bull Boat?_____

20. What were the 4 major foods grown?_____ _____
_____ _____

21. What was used to smooth an arrow shaft?_____

22. When was the peak trade season?_____

23. List 12 parts of the buffalo used for subsistence:
_____ _____ _____ _____
_____ _____ _____ _____
_____ _____ _____ _____

24. Why was gardening done on the river terraces and not the prairie?
_____

25. Who were the only western Indians to play the game "Tchung-Kee"?
_____

26. What was used to make sled runners?_____

27. What was the use of box-elder and peach-leaf willow?_____
_____

28. Before metal and glass, what was used to make:
Jewelry:_____ Beads:_____

29. What was used to cover the smoke hole of an earthlodge to keep out wind and rain?_____

30. What was used to press tobacco into pipes?_____

31. What was used to create a ripple appearance on pottery?_____
_____

32. What was the first known trade item and where did it come from?
_____ _____

33. What was used to remove flesh and hair from hides?_____

34. Today, the 3 tribes of Hidatsa, Mandan and Arikara are affiliated and known as _____

35. What is the name of their reservation and where is its headquarters?
_____

Extra credit: Knife River Indian Villages NHS is part of what Bureau and Agency of the Federal government?_____ _____

Knife River Indian Villages National Historic Site
Teacher's Guide

Dear Teacher:

This quiz may be used at your discretion either on-site or post visit. All of the answers can be derived from the orientation program and the museum area.

1. How long has the Knife River area been occupied? (11,000 yrs)
2. What was a common use of stone hammers? (Pounding - Crushing)
3. From where did corn originate and how many varieties were grown by the Hidatsa? (South America) (9 types)
4. List 4 uses of the horse. (Hunting) (Hauling) (General transportation) (Warfare)
5. How long had the Hidatsa lived in this area? (500 years)
6. How many groups of Hidatsa were there and what were their names? (Three: Awatixa, Awaxawi, and Hidatsa Proper
7. When did iron tools arrive? (Early 1800's)
8. Did the Hidatsa build ceremonial lodges? (No)
9. What was the use of the mortar & pestle? (Grinding corn)
10. List 3 winter pastimes: (Storytelling) (Game playing) (Passing on of traditional knowledge)
11. List 4 items used to make dye: (Berries) (Bark) (Clay) (Minerals) (Charcoal)
12. What were 5 common items stored in a cache pit? (Corn) (Beans) (Squash) (Meat) (Seed)
13. When was the "Hoop and Stick" game played? (Spring)
14. What was the purpose of the Bison Dance? (To make the herds of buffalo come close to the village)
15. When did the Hidatsa move to Like-a-Fishhook village? (1837)

16. What was the common use of a stone axe? (Construction)

17. How did the males gain their community status? (Hunting) (Warfare)

18. List 2 uses of a bison bladder: (Carry water) (Quill pouch)

19. What was used to make a Bull Boat? (Untanned buffalo hide)

20. What were the 4 major foods grown? (Corn) (Beans) (Sunflower) (Squash)

21. What was used to smooth an arrow shaft? (Sandstone)

22. When was the peak trade season? (Summer)

23. List 12 parts of the buffalo used for subsistence: (Rawhide) (Hooves) (Heart lining) (Skull) (Tail) (Stomach) (Bones) (Hair) Bladder) (Paunch) (Horns) (Tanned hides)

24. Why was gardening done on the river terraces and not the prairie? (Prairie was too hard to till)

25. Who were the only western Indians to play the game "Tchung-Kee"? (Hidatsa)

26. What was used to make sled runners? (Buffalo rib bones)

27. What was the use of box-elder and peach-leaf willow? (Making burden baskets)

28. Before metal and glass, what was used to make: Jewelry: (Shells) Beads: (Bones)

29. What was used to cover the smoke hole of an earthlodge to keep out wind and rain? (Bull boat)

30. What was used to press tobacco into pipes?(Tamper)

31. What was used to create a ripple appearance on pottery?(Grooved wooden paddles or woven rope)

32. What was the first known trade item and where did it come from?(Flint) (60 miles west of KNRI-Dunn County)

33. What was used to remove flesh and hair from hides? (Flesher)

34. Today, the 3 tribes of Hidatsa; Mandan and Arikara are affiliated and known as (The 3 Affiliated Tribes)

35. What is the name of their reservation and where is its headquarters? (Fort Berthold, New Town, ND)

Extra credit: Knife River Indian Villages NHS is part of what Bureau and Agency of the Federal government? (DoI) (NPS)

Figure 1. Earthlodge along the Knife River

Figure 2. Antler Rake

Figure 3. Garden Watcher's Stage

Figure 4. Corn husking

Figure 5. Pounding corn with mortar and pestle

Figure 6. Burden Basket

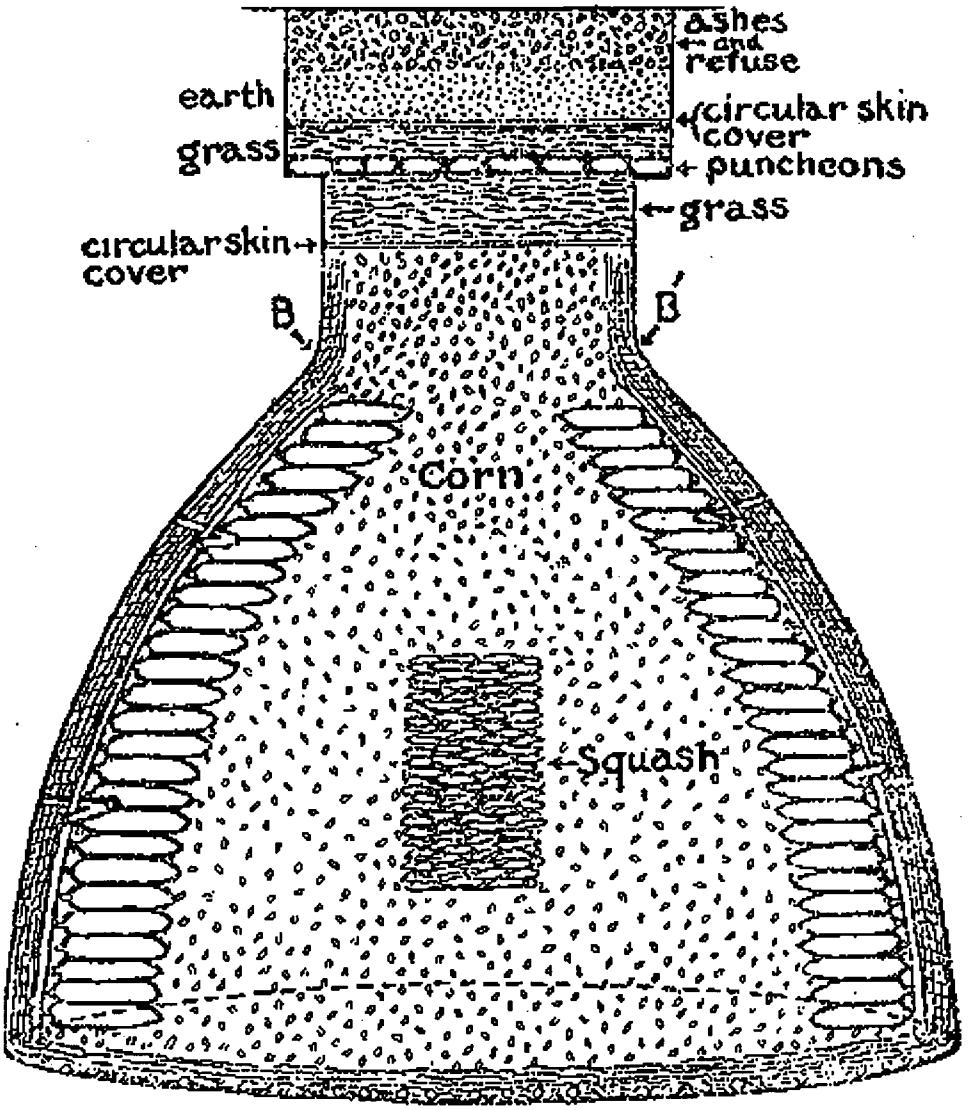


Figure 7. Cache Pit

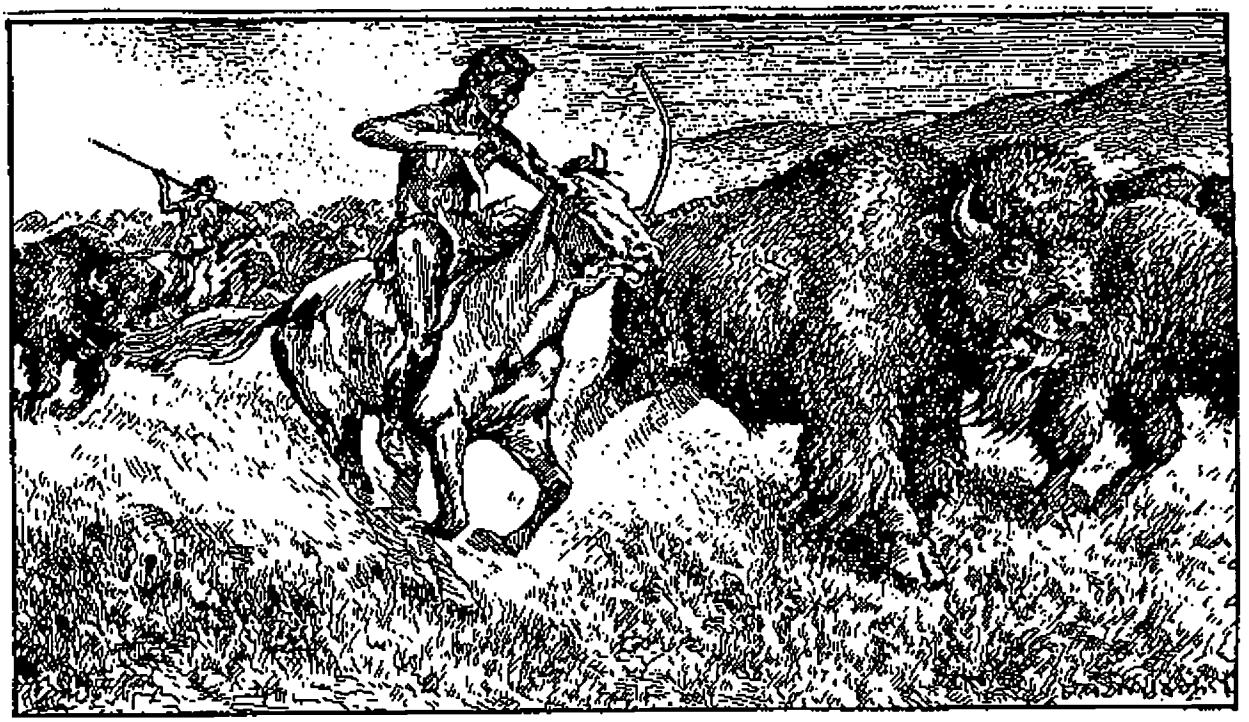


Figure 8. Buffalo Hunt

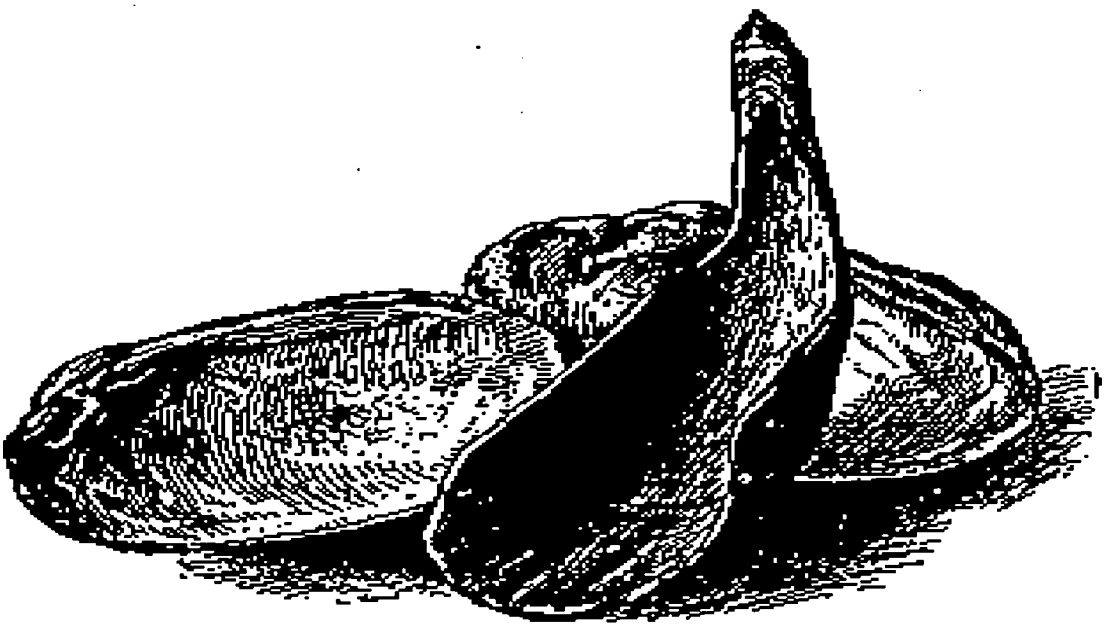


Figure 9. Spoon and dishes of horn and shell

Figure 10. Tipi Camp

Figure 11. Winter Camp

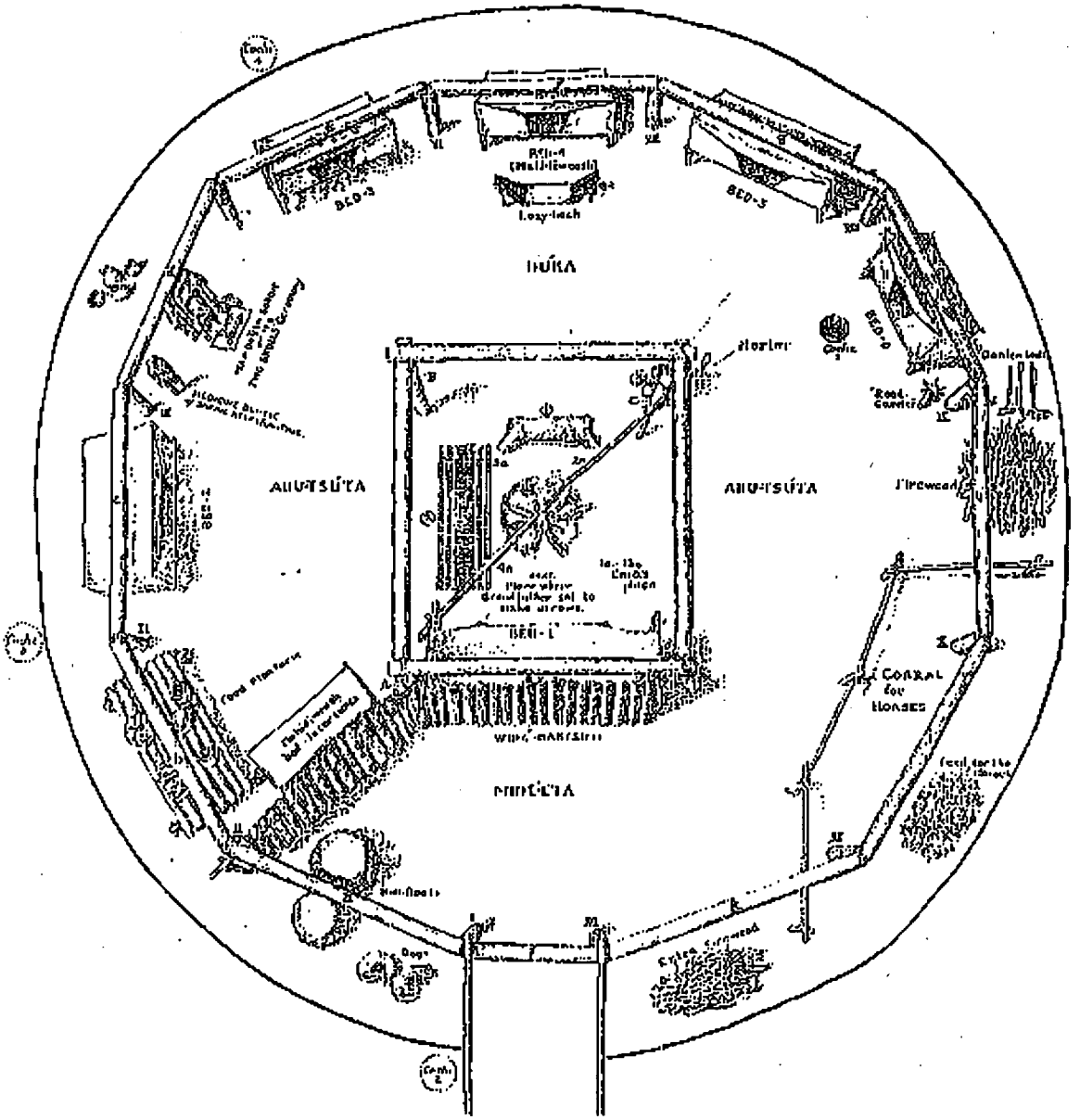


Figure 12. Earthlodge Diagram

Figure 13. Inside an Earthlodge

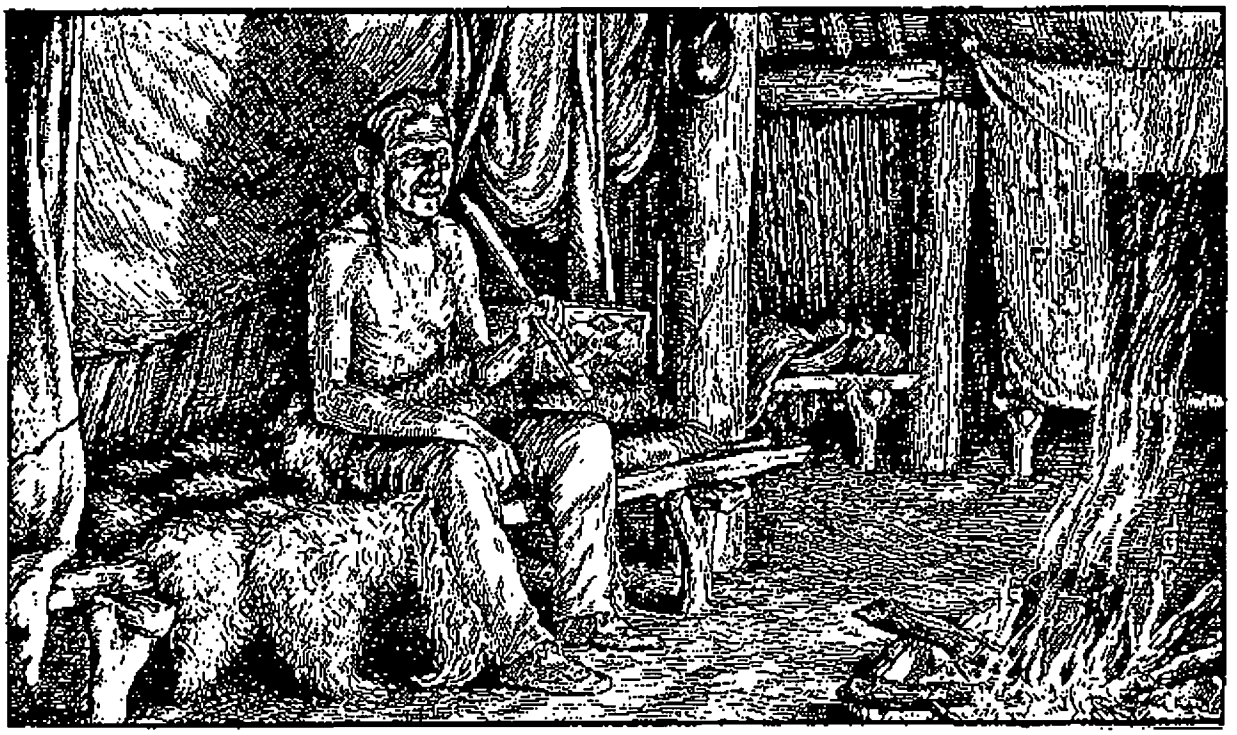


Figure **14. Elders place in the earthlodge**

Figure 15. Earthlodge Shrine

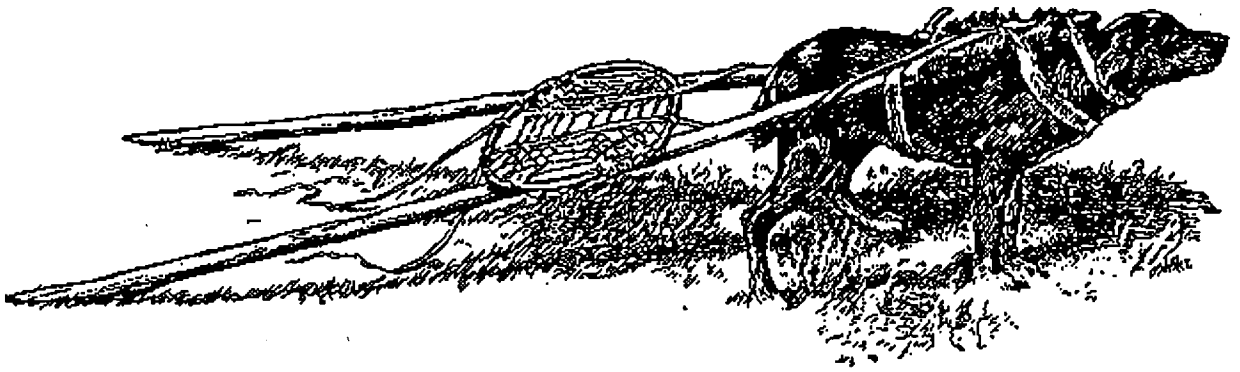


Figure 16. Dog with Travois

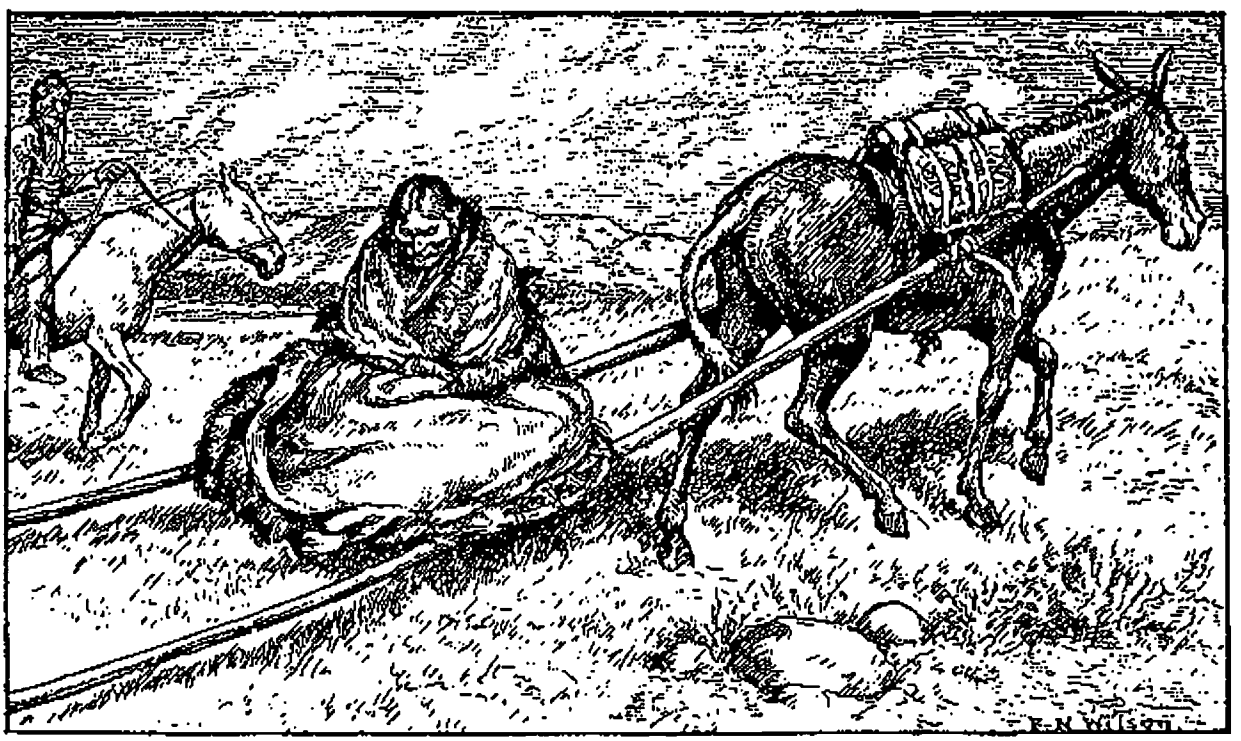


Figure 17. Horse with a Travois

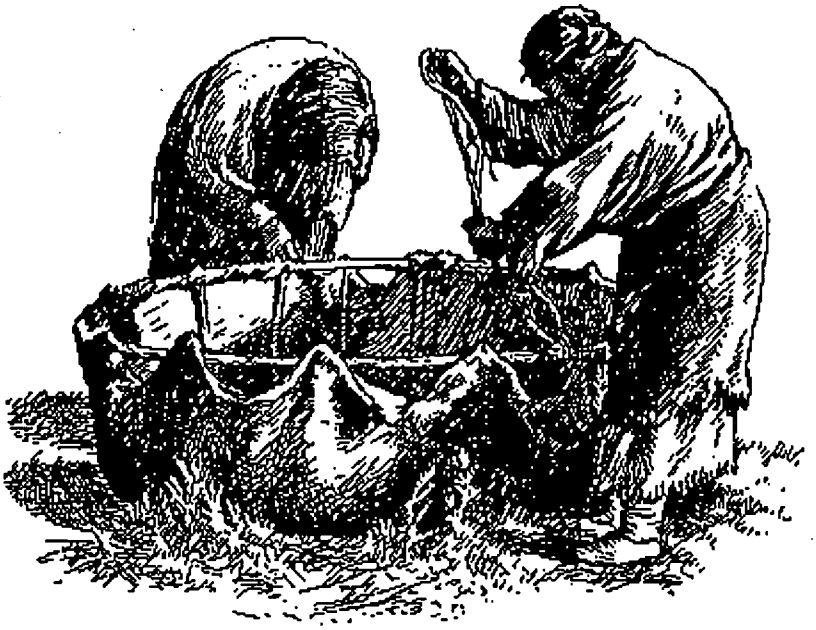


Figure 18. Making a Bull Boat

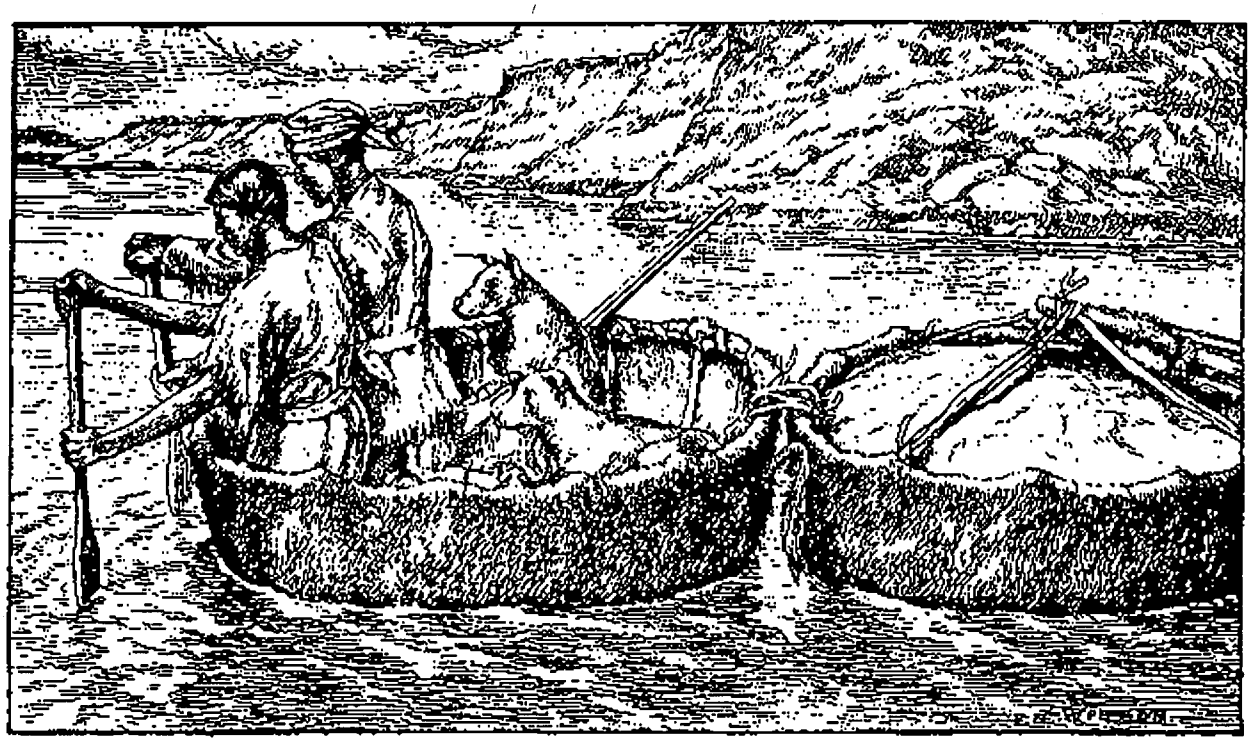


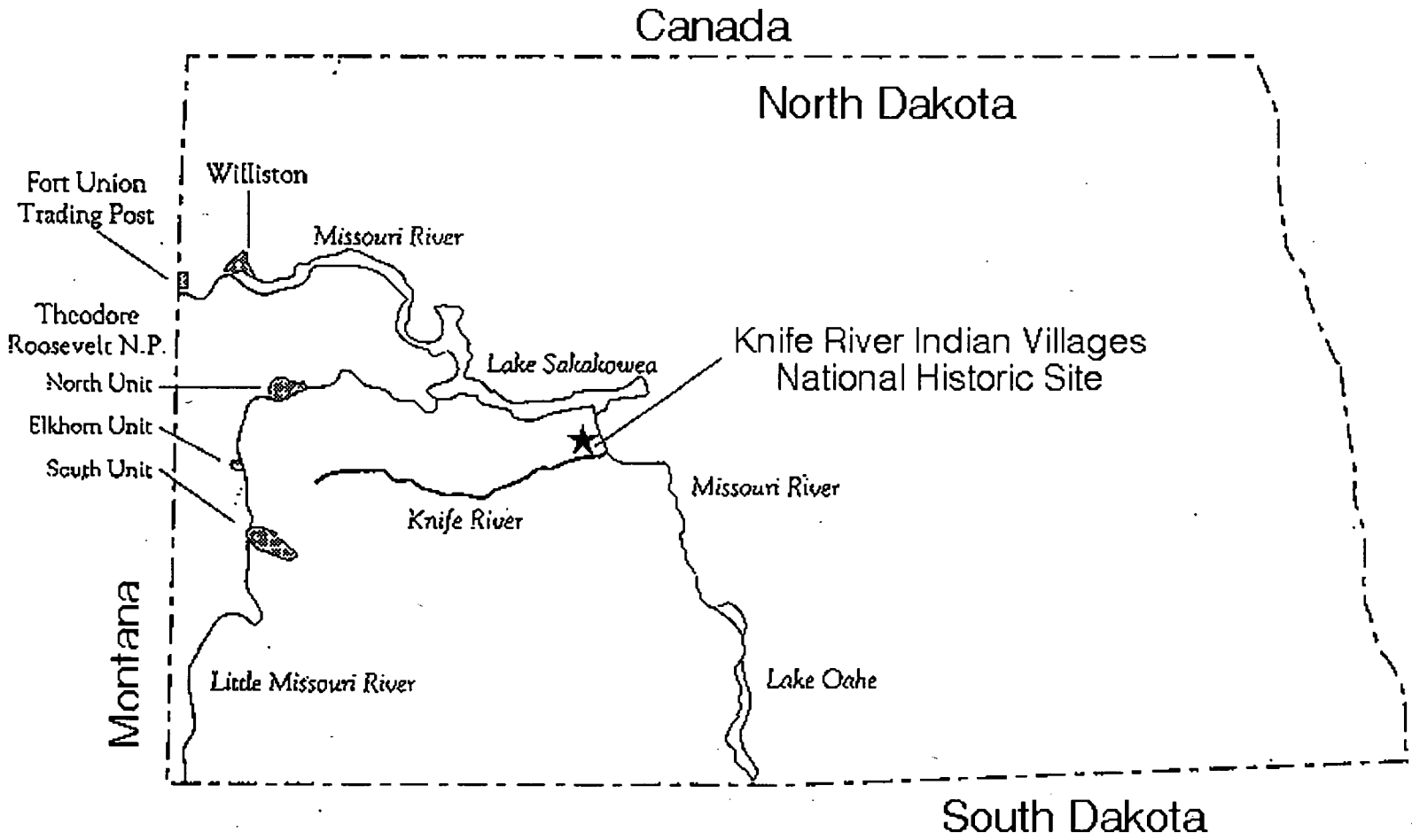
Figure 19. Bull Boats

Figure 20. Buffalo Robe

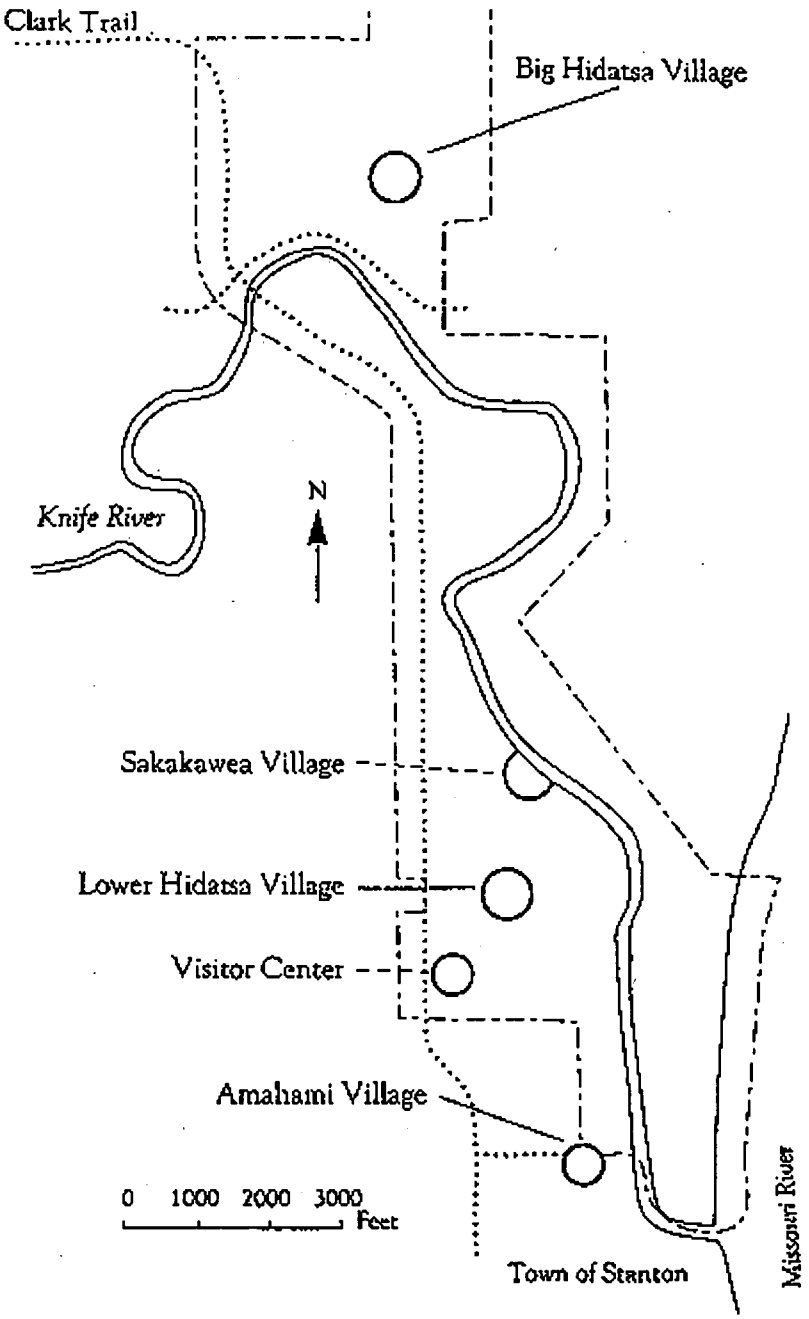
Figure 21. Bladder Bucket

Figure 22. Willow Booth

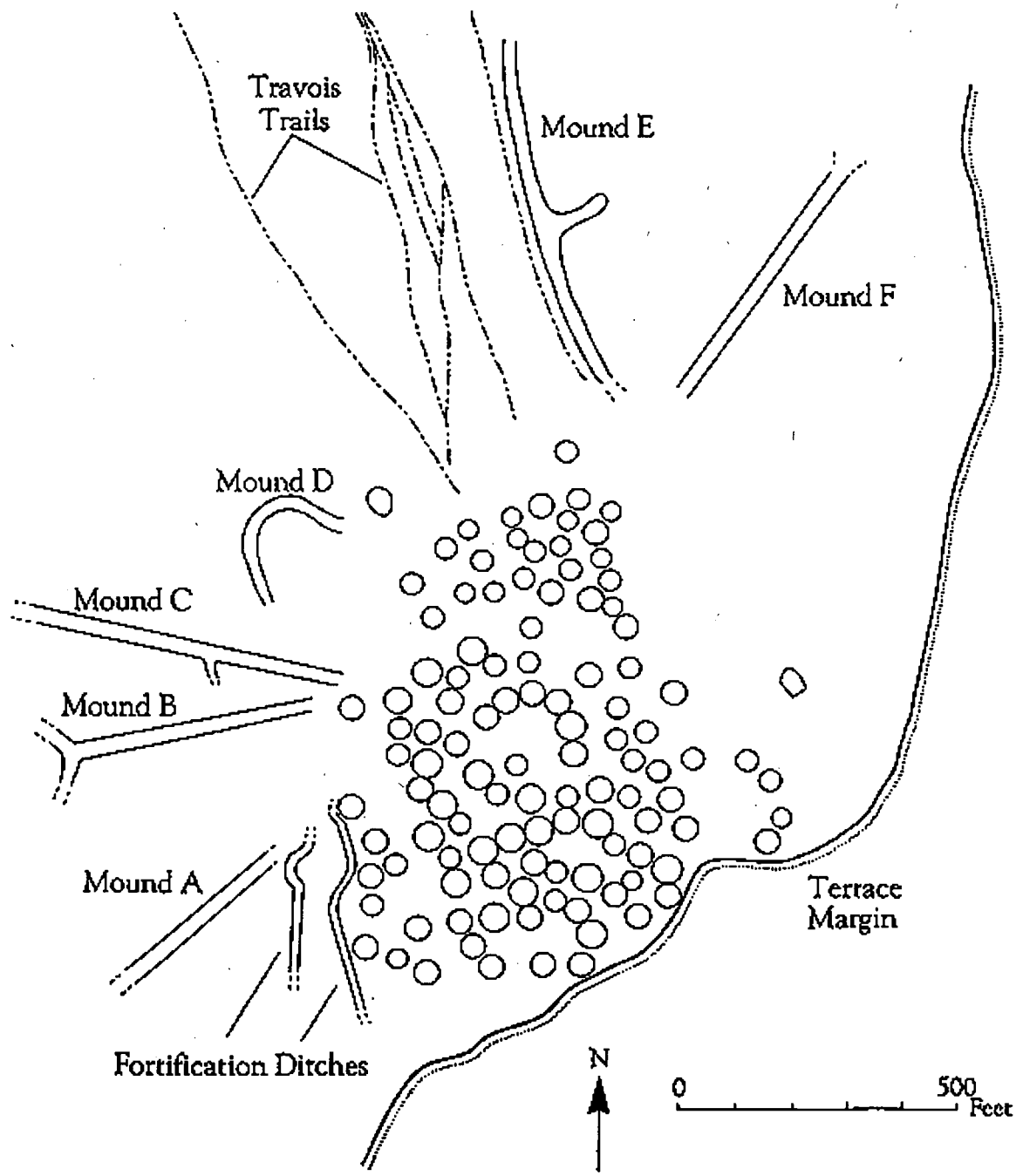
Figure 23. Tossing with a Blanket



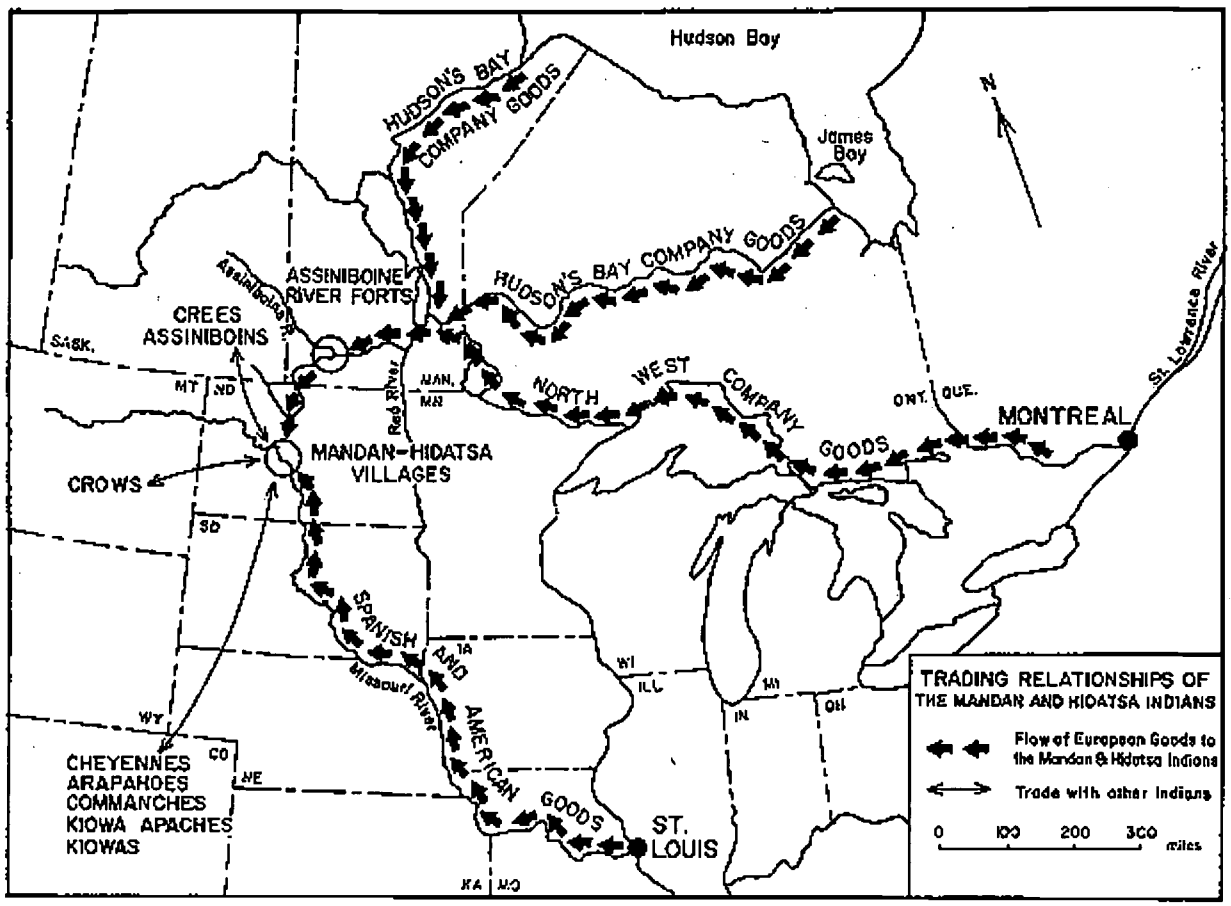
Regional Map showing Knife River Indian Villages National Historic Site



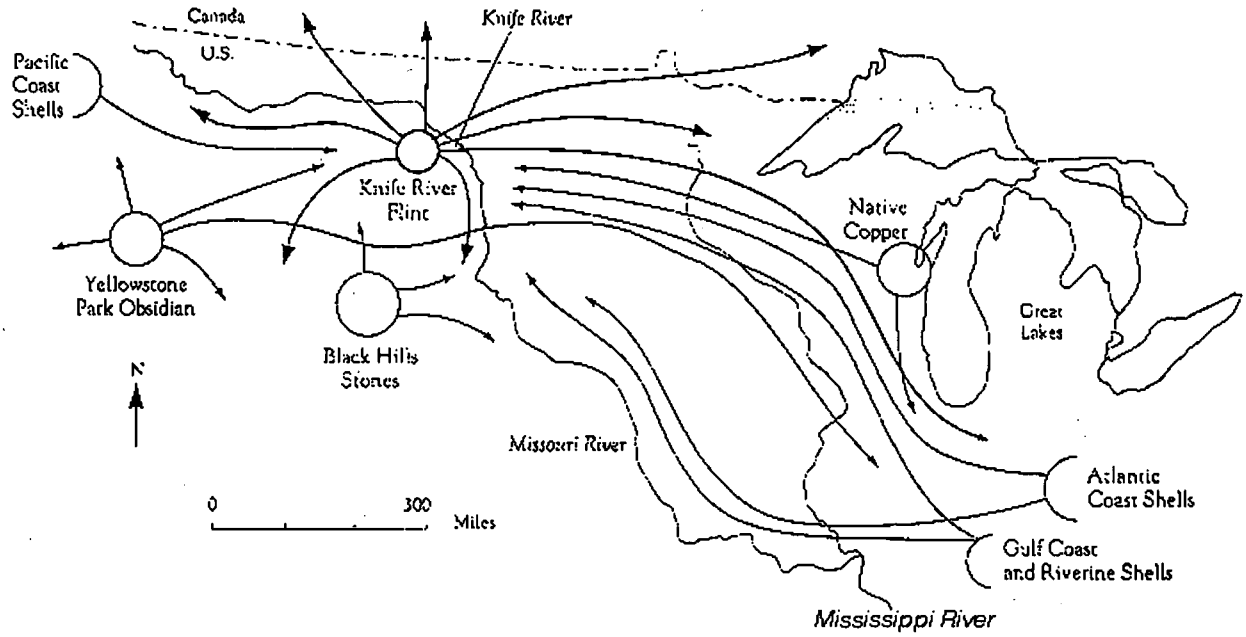
Detail of Knife River Indian Villages National Historic Site



Detail of Big Hidatsa Village



Map of Trading Relationships of the Mandan and Hidatsa Indians



Movement of durable materials within the Northern Plains prehistoric trading system

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