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## Goals and Materials

### GOALS

Kit users will:

- acquire knowledge about how the Plains Indians used the buffalo.
- gain an understanding of people and animals living in a natural setting.
- develop skills in getting information from objects.

### MATERIALS

This kit contains:

Atlatl	2 Buffalo track molds
Bladder	Buffalo scat
Scapula (shoulder blade bone)	Arrow
Horn spoon	Awl
Rawhide	Sinew
Parfleche (rawhide container)	Hair rope
Tail	Buffalo robe sample, hair on
Jawbone	Buffalo hair
Vertebrae (neck bone)	Buffalo hide sample, hair off
Hump bone	8 Posters
Rib bone	<i>Buffalo Drive</i>
3 Foot bones	<i>Hunting Buffalo Camouflaged with Wolf Skins</i>
3 Bone paintbrushes	<i>Buffalo Chase in Winter</i>
2 Buffalo teeth	<i>Buffalo Hunt, Surround</i>
Flesher (bone tool)	<i>Buffalo Hunt</i>
Buffalo figurine	<i>Life on the Prairie, The Buffalo Hunt</i>
Teacher's manual	<i>How the Indians Used the Buffalo</i>
30 Buffalo head coloring sheets (in teacher's manual)	<i>South Dakota Buffalo</i> photo placemat
Flashdrive manual copy (in binder)	5 Journey Cards

## Teacher Resource

The animal we commonly refer to as a buffalo is not really a buffalo at all, but rather the American Bison. The real buffalo – an Indian Buffalo, water buffalo, or carabao – roams wild in southeastern Asia and is the principal draft animal in that region’s rice-growing countries. A massively built, oxlike animal, a water buffalo is dull black with a sparse coat and large horns. These animals are much different than the buffalo that we think of here in South Dakota. In this kit the American Bison will be referred to as the buffalo because people commonly refer to bison as buffalo.

Related to the cow but much larger, the buffalo can weigh up to 2000 pounds. A male bull may reach six and a half feet in height and be ten feet long from snout to tail. The animal lives from twenty to forty years. Buffalo are the largest land animal in North America. Being big does not make the buffalo slow. With its short, strong legs and large lung capacity, a buffalo can outrun a horse and change direction on the move very quickly. The buffalo’s sharp horns can seriously hurt a rider or horse.

Buffalo originally came to North America from Asia, crossing the Bering Strait during the Ice Age. These early buffalo were much larger than the buffalo of today. Other animals also came to North America – camels, woolly mammoths, and a species of the horse. Ancient hunters and harsh weather eventually killed off most of them, but the buffalo survived, and its numbers grew. A single herd or group of buffalo could be several miles wide and fifty miles long. When a massive buffalo herd moved, the ground nearby rumbled.

Just as animals crossed the Bering Strait, so did people. The earliest Plains inhabitants were descendants of those who crossed the Strait 40,000 to 15,000 years ago. Early Plains dwellers hunted buffalo using the natural landscape as well as man-made tools. One hunting method involved starting large grass fires close to ravines. With the wind in the hunter’s favor, the fire caused the buffalo to stampede and run off the cliff into the ravine. Many fires were set each year. These fires helped to keep the Plains treeless.<sup>1</sup> Early Plains dwellers also took advantages of natural occurrences and used buffalo that had drowned by falling through winter ice or in spring floods.

Some early hunting methods continued to be used in more recent times. At buffalo jump sites, the animals were stampeded off a cliff or ravine and then collected at the bottom. Over forty jump-kill sites have been identified in the Great Plains. Some of the names for these places are: Head-Smashed-In, Boneyard Coulee, and Bison Trap.<sup>2</sup> In the winter, buffalo could be hunted by spooking the animals near a frozen river and driving them onto the ice. The buffalos’ weight broke up the ice and they would fall into the water. People of the tribe, including women and children, waited at an opening in the river downstream, where they would retrieve the carcasses. This tactic was still used in the 1800’s.<sup>3</sup> Buffalo caught in deep snow could not escape hunters on snowshoes. Hunters also disguised themselves with buffalo or wolf skins, and crept into the herd with spears or bow and arrows, or they waited by a stream or river for the buffalo to come and drink.

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<sup>1</sup> Francis Haines, *The Buffalo: The Story of American Bison and their Hunters from Prehistoric Times to The Present*, University of Oklahoma Press ed. (Norman: University of Oklahoma Press, c1995), 10.

<sup>2</sup> Time Life Books, *The Buffalo Hunter*, (Alexzndria, VA: Time-Life Books, c1993), 103.

<sup>3</sup> Time Life, 101.

Another hunting method was a *piskin* – a corral or pound. The Indians forced the buffalo into pre-built pens, or into a cul-de-sac or box canyon where they could shoot the trapped animals.

Weapons for hunting buffalo evolved over time. The first hunters used spears, no more than sticks with sharpened rocks attached. Later, the *atlatl* (at-uhl-at-uhl), a spear-throwing tool, increased distance and accuracy for hunters. An atlatl consisted of a stick or paddle about two feet long with a handle on one end and a hook to hold a dart on the other end. Atlatl darts looked like large, flexible arrows. An overhand throw and a sharp snap of the wrist shot the dart forward. It was accurate up to fifty yards, but a skilled hunter could throw an atlatl up to one hundred fifty yards. The atlatl darts penetrated much better than a spear did.<sup>4</sup> The bow and arrow eventually replaced the atlatl.

European explorers brought horses with them when they came to North America in the 1500s. There had been no horses in North America for over 15,000 years, since the earlier Ice Age animals had died out. Horses profoundly changed the way buffalo could be hunted. A rider could keep up with the fast-paced buffalo. With a bow and arrow, the Indians rode up to buffalo on horseback and shot the animals in a vital spot. Later on, guns brought by traders revolutionized buffalo hunting again. Firearms could knock down a buffalo from a great distance, be reloaded quickly and then shot again.

Although some hunting techniques killed more buffalo than could be immediately used, at the time the buffalo population was huge. Even when the buffalo were stampeded off cliffs, the number of animals that died was insignificant compared to the supply. There is no way to know exactly how many buffalo roamed the plains from the 16<sup>th</sup> to the 19<sup>th</sup> century, but estimates put the number between sixty and seventy million.<sup>5</sup> Some scholars are raising questions about what the buffalo's future would have held even without the massive hunting of the 19<sup>th</sup> century. They point out that the herds were overgrazing the grassland. When fully grown, buffalo have no real predators other than humans. Weather did not affect the animals except for the occasional tornado. Buffalo were essentially immune to blizzards or cold weather and bugs and flies have little effect on them.<sup>6</sup> Whether the buffalo herds would have naturally thinned out or not, the demand for buffalo hides hastened the demise of the herds and brought about enormous changes for the tribes who depended on the buffalo.

The buffalo plays a central role in Lakota culture and religious beliefs. One of the most important stories in their culture is that of the Buffalo Calf Woman. Buffalo Calf Woman appeared to the Lakota and presented them with the sacred pipe. She showed them many important spiritual things, including how to pray. As she walked into the sunset, she rolled over four times and turned into a black buffalo, brown buffalo, red buffalo, and the finally a white buffalo. The Lakota believe that the mighty buffalo herd came about and allowed itself to be killed so that they might survive. The white buffalo is a sacred Lakota symbol.

Indians used every part of the buffalo for one purpose or another. Hides made clothing and tipis, horns made cups and spoons, muscles and tendons provided glue and bowstrings. Nothing went to waste. After the kill, buffalo meat had to be prepared right away, especially during the

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<sup>4</sup> Haines, 24.

<sup>5</sup> Albert J. Rorabacher, *The American Buffalo in Transition: A Historical and Economic Survey of the Bison in America*. (St. Cloud MN: North Star Press, [1970, c.1971]), 21.

<sup>6</sup> Dana Close Jennings, *Buffalo History and Husbandry: The Buffalo Ranchers Handbook*. (Freeman SD: Pine Hill Press, 1978), 196.

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summer since there was no refrigeration. Some meat was eaten while it was fresh. Cutting the meat into strips and drying it out in the sun made jerky, which would last a long time without spoiling. Some of the jerky was processed into pemmican - a mixture of mashed jerky and fruit. The pemmican kept even longer than the jerky. Pemmican was often stored in a parfleche; a container made from buffalo rawhide.

Before it could be used, buffalo hide had to be prepared. First, any flesh or fat still on the hide had to be scraped off with a flesher, a tool made from the buffalo's leg bone. Stretching the hide out on the ground made scraping the hide to a consistent thickness easier. Untanned fleshed and dried hide made hard leather called rawhide. Rawhide was used to make parfleches, drums, pouches, and rope. Tanning the hide made soft leather, good for buckskin bags, robes, moccasins, and tipis. To tan the hide, it was spread with a paste of fat, cooked brains, and liver and then dried in the sun.

European explorers in North America saw a land full of riches, and one of those riches was fur. Fur trading became a big industry and the Great Plains had a fair number of trading posts. Buffalo hides were one of the major trade items from the plains. Large hides brought between \$1 and \$3.50.<sup>7</sup>

In the 1860's, railroads brought in around 1,200 workers who required fresh meat every day. The vast buffalo herds supplied the meat. Railroads also brought in hunters who had heard about the amazing buffalo herds and wanted to hunt the animals for themselves. Some hunters would shoot from the train as it passed the herds. This shooting did not supply any meat – it was just for sport. Eventually, it became hard to find a herd close to the rail lines. The railroad split the herd into the southern herd and the northern herd. In 40 years, from 1830 to 1874, the southern herd was wiped out.<sup>8</sup> The meat was rarely taken – possibly the tongue and a few strips off the back. The rest was left for the wolves. In addition to hunters, farmers and ranchers also moved onto the plains. They did not want buffalo grazing on land their livestock needed, so they shot the buffalo to get rid of them.

As hunters destroyed the buffalo, they also destroyed the Indian way of life that depended on the buffalo. The Indians had to move much more often to find the remnants of the buffalo herds that had once roamed the plains. The herd that was once sixty million was reduced to 550 by 1889.<sup>9</sup> The buffalo were almost extinct. Nothing could restore the old herds. The hunters and fur traders moved on to hunt other animals or find a new line of work. The Indians saw their traditional way of life end. As they were forced onto reservations, they could no longer roam the land to hunt.

After the almost total destruction of the buffalo, some people realized they needed to help conserve the buffalo before it was too late. Some states passed laws requiring hunters to keep what they killed instead of leaving it on the ground. The United States government was not all that interested in the fate of the buffalo in the late 19<sup>th</sup> century. Yellowstone National Park held the highest concentration of buffalo, but poaching was a problem. In 1894, there were less than 20 buffalo in the park.<sup>10</sup> The efforts of a few men saved the buffalo from total extinction. These men rounded up some of the few remaining buffalo and raised and bred them even while others were out hunting them. Some also tried persuading Congress to pass tougher laws against buffalo hunting. In the early

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<sup>7</sup> Jennings, 239.

<sup>8</sup> Jennings, 241.

<sup>9</sup> "Buffalo and the Plains Indian", [www.corpcomm.net/~redeye/buffalo.html](http://www.corpcomm.net/~redeye/buffalo.html), (June 12, 2000).

<sup>10</sup> Rorabacher, 55.

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1900's, parks started opening to protect the buffalo. The last of these large parks was Custer State Park. Twenty-five buffalo purchased from South Dakota buffalo conservationist Scotty Philip started the Custer Park herd. Private investors also started to raise buffalo herds.

Today, the buffalo population is around 500,000<sup>11</sup>. While not close to the sixty million that once roamed the plains, the buffalo is no longer in danger of being completely wiped out. With the push today for healthier foods, providing lean buffalo meat is a growing industry. Mighty herds of buffalo once roamed freely, supporting the Indians who used the animal as a way of life. Greed, sport hunting, and changing uses for the land almost wiped out the animals. Thanks to the efforts of a few far-sighted conservationists, buffalo live strong and plentiful once again.

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<sup>11</sup> Jed Portman, "Five Things You Need to Know About the Great American Bison", <http://www.pbs.org/wnet/need-to-know/five-things/the-great-american-bison/8950/>, accessed February 21, 2013.



## ERASING NATIVE AMERICAN STEREOTYPES

(Originally published as the Teacher's Corner in the fall 1990 issue of *AnthroNotes*, vol. 12, no. 3.)

How can we avoid stereotypes about Native Americans when we are teaching, selecting textbooks, or designing exhibits and public programs? Cultural institutions reflect current issues of society. Both museums and schools are wrestling with new sensitivities and concerns with cultural diversity. For instance, at a recent Smithsonian symposium on Contemporary American Indian Art, several Native American artists asked why their paintings and sculpture are rarely shown at fine arts museums, but are more likely to be exhibited at anthropology and natural history museums. Native American artists also question why their work is not combined with other American artists' work in shows on American art (Kaupp, 1990).

In directing an alternative school for Native American children in Chicago, June Sark Heinrich found many misnomers and false ideas presented by teachers as they instructed students about the history and the heritage of Native peoples. She devised ten classroom "don'ts" to help teachers correct these common errors. The D'Arcy McNickle Center for the History of the American Indian at the Newberry Library in Chicago recently began designing a sample checklist for evaluating books about American Indian history.

This *AnthroNotes* Teacher's Corner combines the two approaches. The questions that follow provide teachers and museum educators with ways to evaluate their own teaching and criteria to evaluate the materials they use.

1. Are Native Americans portrayed as real human beings with strengths and weaknesses, joys and sadnesses? Do they appear to have coherent motivations of their own comparable to those attributed to non-Indians?

2. In books, films, comic strips and curriculum materials, do Native Americans initiate actions based on their own values and judgments, rather than simply react to outside forces such as government pressure or cattle ranchers?

3. Are stereotypes and clichés avoided? References should not be made to "obstacles to progress" or "noble savages" who are "blood thirsty" or "child-like" or "spiritual" or "stoic". Native Americans should not look like Hollywood movie "Indians," whether Tonto from the Lone Ranger days or Walt Disney's recent portrayals. Native Americans are of many physical types and also have European, African or other ancestry. Just as all Europeans or African-Americans do not look alike, neither do Native Americans.

Heinrich urges that television stereotypes should not go unchallenged. For example, "when Native Americans fought, they were thought more 'savage' than the Europeans and were often less so. Help children understand that atrocities are a part of any war. In fact, war itself is atrocious. At least, the Native Americans were defending land they had lived on for thousands of years. If Native Americans were not 'savage warriors,' neither were they 'noble savages.' They were no more nor less noble than the rest of humanity."

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Television, especially old movies, often portrays the "Indian" speaking only a few words of English, often only "ugh." Yet anthropologists have carefully documented the complexity of Native American languages. At least 350 different languages were spoken in North America when William Bradford and the rest of the Puritans first stepped ashore in Massachusetts.

Stereotypes can be defused if teachers check their own expressions and eliminate those such as "You act like a bunch of wild Indians" or "You are an Indian giver." In a similar way, do not use alphabet cards that say A is for apple, B is for ball, and I is for Indians. It may seem trivial, but Heinrich argues that such a practice equates a group of people with things.

4. If the material is fiction, are the characters appropriate to the situations and are interactions rooted in a particular time and place? If they are, a particular group such as the Navajo or Chippewa living at a specific moment in history will be more likely to be brought accurately to life.

5. Do the materials and the teacher's presentation avoid loaded words (savage, buck, chief, squaw) and an insensitive or offensive tone?

6. Are regional, cultural, and tribal differences recognized when appropriate? As everyone knows but does not always put into practice, before the Europeans came there were no people here that called themselves "Indians." Instead, there were and still are Navajo or Menominee or Hopi, or Dakota, or Nisqually, or Tlingit, or Apache. Instead of teaching about generalized Indians or "Native Americans," study the Haida, or Cree, or Seminole.

7. Are communities presented as dynamic, evolving entities that can adapt to new conditions, migrate to new areas, and keep control of their own destinies? Too many classroom materials still present Native American traditions as rigid, fixed, and fragile. For example, some filmstrips and books may have titles like "How the Indians Lived," as though there are not any Indian people living today. In fact, over two million Native Americans live in what is now the United States, about half of them live in cities and towns and the other half on reservations or in rural areas.

8. Are historical anachronisms present? The groups living here prior to the 1540's did not have horses, glass beads, wheat, or wagons. Can your students determine why that is the case and do they understand that these items were all introduced by Europeans?

9. Are captions and illustrations specific and appropriate for a specific time and place? (Wrapped skirts in the Arctic, feather bonnets in the North Pacific Coast, or totem poles in the Plains never existed.) Are individuals identified by name when possible?

10. Are the different Native Americans viewed as heirs of a dynamic historical tradition extending back before contact with Europeans? Similarly, Native American groups should not be equated with other ethnic minorities. The fact is that Native American tribes--by treaty rights--own their own lands and have other rights that are unique to the descendants of the real Natives of America, because they are that. No other minority within the United States is in a similar legal position. Native peoples view themselves as separate nations within a nation. U.S. laws and treaties, officially endorsed by U.S. presidents and the Congress, confirm that status.



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11. If you have Native American children in your class, do not assume that they know all about their own ancestry and the ancestry of all Native Americans. All children including Native American children need to be taught about the Native American heritage, which, in a very real sense, is the heritage of everybody living in the U.S. today. Culture and ideas, after all, are learned and not inherent from birth.

### References:

"Checklist," Meeting Ground, Biannual Newsletter of the D'Arcy McNickle Center, Issue 23, Summer 1990. The Newberry Library, 60 West Walton Street, Chicago, Illinois 60610-3380. ("Checklist" was based on criteria provided by Center advisor, Cheryl Metoyer-Duran, UCLA School of Library and Information Sciences.)

Heinrich, June Sark. "Native Americans: What Not to Teach," Unlearning "Indian" Stereotypes, A Teaching Unit for Elementary Teachers and Children's Librarians. The Racism and Sexism Resource Center for Educators, a Division of The Council on Interracial Books for Children, 1977.

Kaupp, Ann. "Toward Gender and Ethnic Equity in Museums." Four Star, Newsletter for the Smithsonian Institution Women's Council 10(2), Summer 1990.

JoAnne Lanouette

Name \_\_\_\_\_

Word Find

J	L	V	M	U	W	T	P	H	R	Q	N	T	A	N	N	I	N	G	I
M	O	C	C	A	S	I	N	S	O	V	L	L	T	X	Z	H	D	R	M
I	P	B	G	H	B	H	R	E	T	R	A	D	I	T	I	O	N	A	L
Y	W	U	B	Q	U	C	U	H	G	A	N	K	P	L	A	R	O	W	B
V	U	C	A	L	F	Q	M	N	B	C	M	S	I	Q	W	S	E	H	R
T	Y	K	U	I	F	O	P	A	T	S	D	P	F	G	H	E	J	I	K
L	Z	S	X	P	A	R	F	L	E	C	H	E	E	C	V	B	N	D	M
Q	L	K	W	E	L	R	T	Y	U	I	O	A	P	D	A	S	D	E	F
G	H	I	J	B	O	W	A	N	D	A	R	R	O	W	E	K	L	Z	X
P	C	N	V	B	N	M	T	P	Y	T	O	I	U	Y	T	R	E	W	Q
R	E	L	K	E	J	B	L	A	D	D	E	R	H	G	F	D	S	J	A
E	M	M	N	V	R	C	A	X	Z	P	O	N	I	U	H	I	D	E	Y
D	T	R	M	B	E	W	T	Q	A	S	D	F	D	G	G	H	J	R	K
A	L	Z	M	I	N	X	L	B	V	B	C	Z	Q	O	U	W	R	K	T
T	L	M	U	S	C	L	E	K	J	R	H	G	F	D	N	S	V	Y	A
O	Y	H	N	O	L	A	K	O	T	A	I	L	C	B	S	S	F	K	L
R	I	E	C	N	V	X	N	Z	K	I	Y	L	W	H	W	J	P	W	M
S	T	O	M	A	C	H	D	L	J	N	H	A	Z	I	I	Q	J	M	O
V	L	P	C	S	Z	X	W	K	O	S	I	N	E	W	Q	P	M	P	K
F	H	G	F	L	E	S	H	E	R	T	V	N	Y	D	X	M	S	A	C

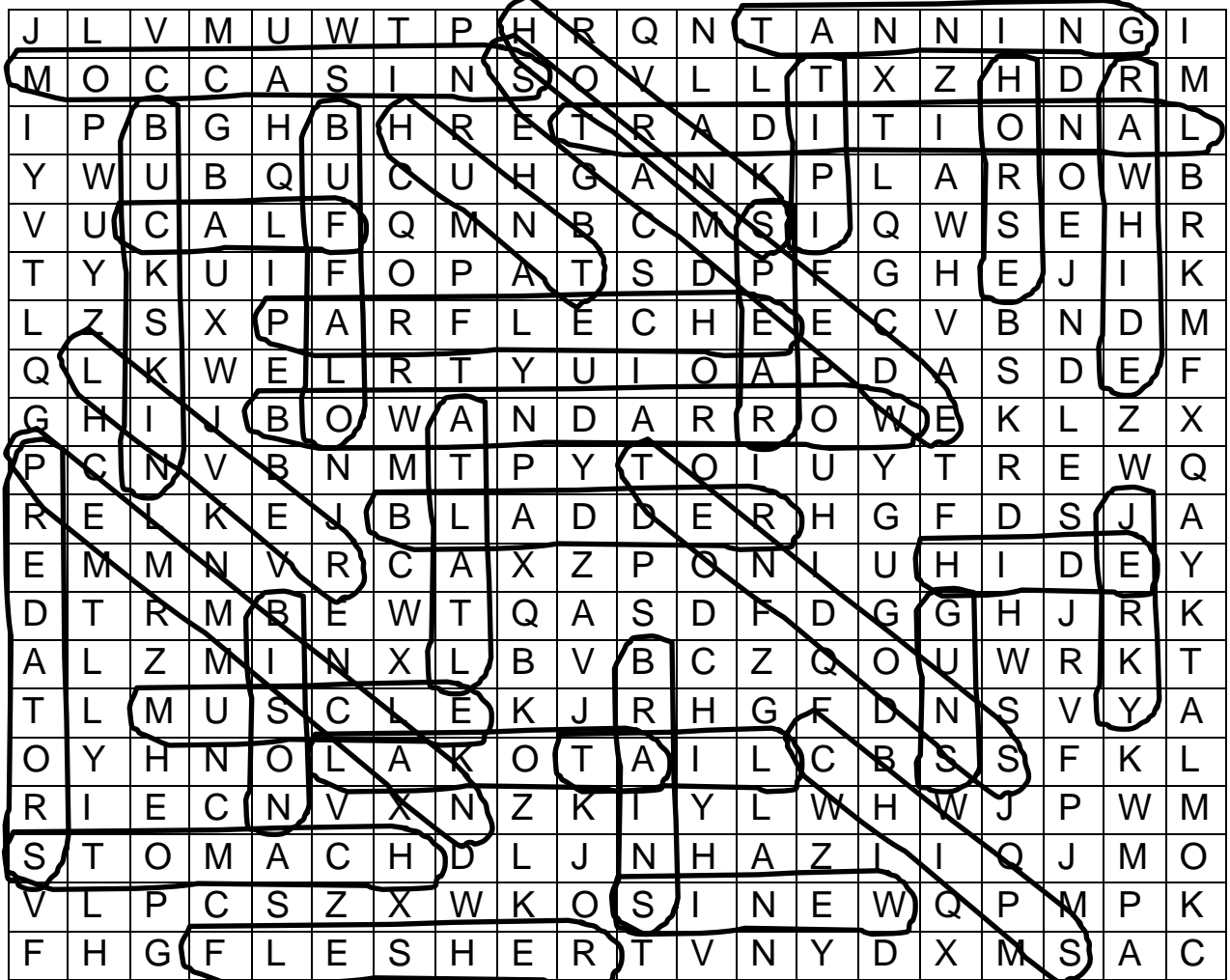
Words run across, up and down, and slanted.

BOW AND ARROW  
 MOCCASINS  
 TRADITIONAL  
 FLESHER  
 RAWHIDE  
 PARFLECHE  
 SPEAR  
 BLADDER  
 CALF  
 PREDATORS  
 CHIPS

PEMMICAN  
 ATLATL  
 BUCKSKIN  
 HUNT  
 SINEW  
 LIVER  
 TIPI  
 STOMACH  
 BRAINS  
 JERKY  
 HIDE

LAKOTA  
 STAMPEDE  
 HORSE  
 TENDONS  
 TANNING  
 BISON  
 MUSCLE  
 HORNS  
 GUNS  
 BUFFALO

Word Find Key



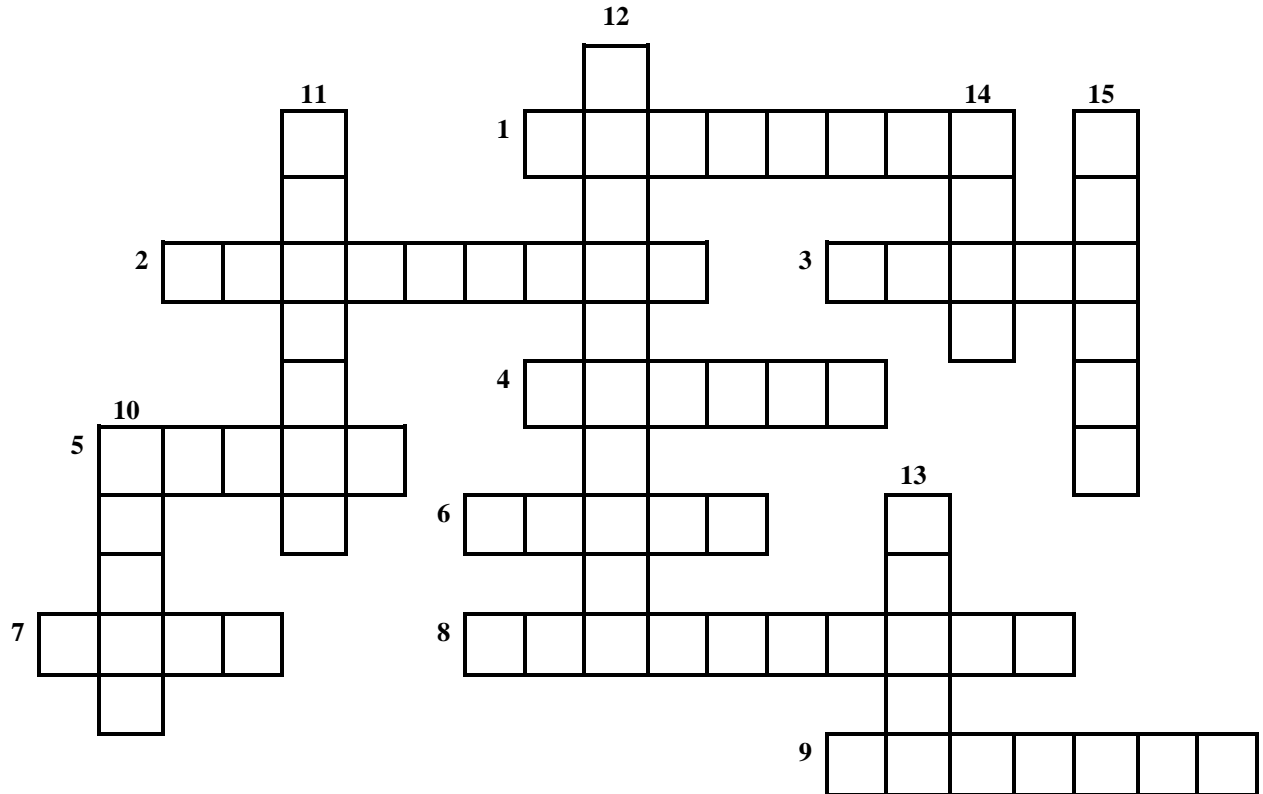
BOW AND ARROW  
 MOCCASINS  
 TRADITIONAL  
 FLESHER  
 RAWHIDE  
 PARFLECHE  
 SPEAR  
 BLADDER  
 CALF  
 PREDATORS  
 CHIPS

PEMMICAN  
 ATLATL  
 BUCKSKIN  
 HUNT  
 SINEW  
 LIVER  
 TIPI  
 STOMACH  
 BRAINS  
 JERKY  
 HIDE

LAKOTA  
 STAMPEDE  
 HORSE  
 TENDONS  
 TANNING  
 BISON  
 MUSCLE  
 HORNS  
 GUNS  
 BUFFALO

### Crossword Puzzle

fly swatter	ceremonies	bladder	headdress	water	tendons	pillow	glue
rattle	skull	knife	spoon	clothing	sinew	rope	



**ACROSS**

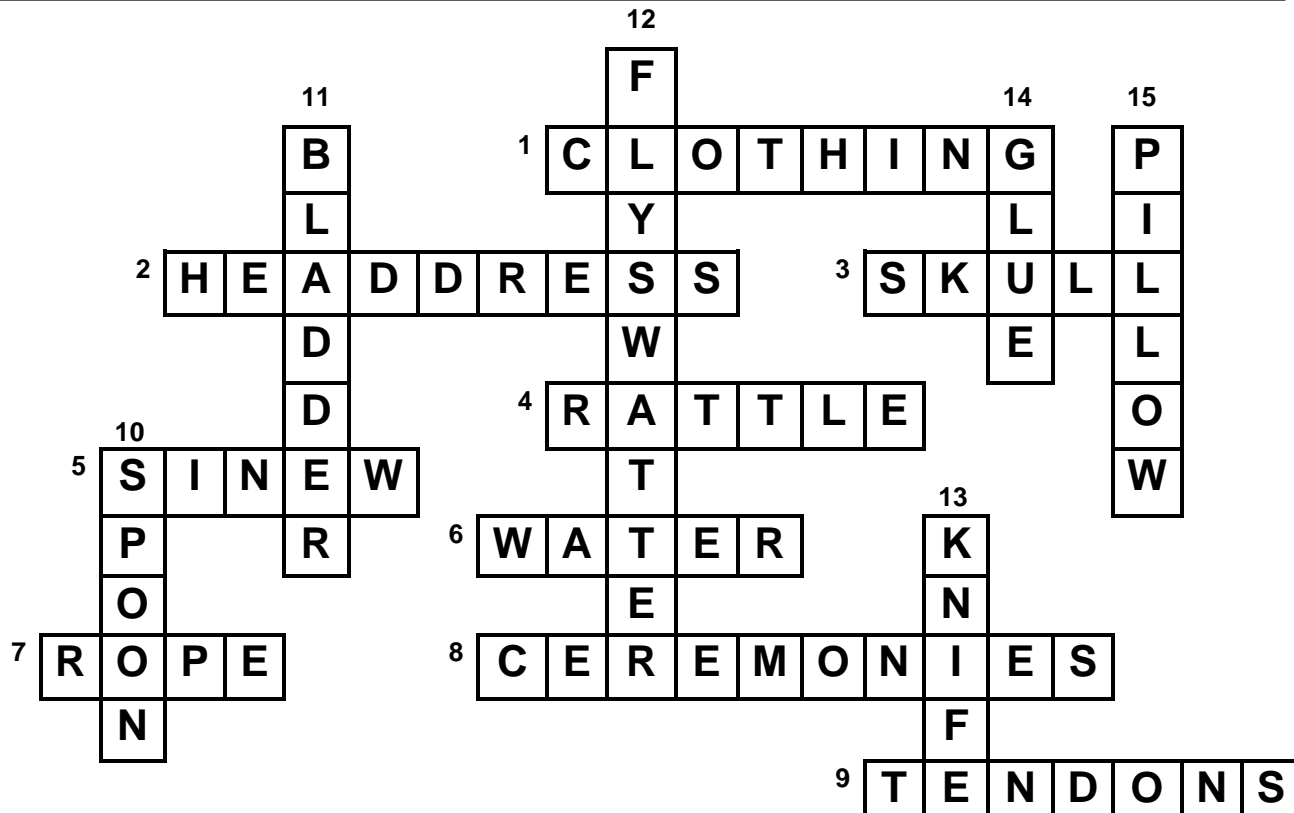
1. Shirts, dresses and other \_\_\_\_\_ was made from tanned hides.
2. An outstanding warrior might earn the right to wear a buffalo horn \_\_\_\_\_.
3. The buffalo \_\_\_\_\_ was an important sacred item.
4. Stringing together buffalo hooves made a good \_\_\_\_\_.
5. \_\_\_\_\_ made strong thread for sewing tipis and other items.
6. A buffalo stomach made a strong, leakproof \_\_\_\_\_ carrier.
7. Braiding buffalo hair made it into a strong \_\_\_\_\_.
8. Special \_\_\_\_\_ helped call the buffalo herd close enough for good hunting.
9. Sinew came from the buffalo's \_\_\_\_\_.

**DOWN**

10. A buffalo horn could be carved into a beautiful and useful \_\_\_\_\_ for dishing up food.
11. The buffalo \_\_\_\_\_ made a good water bag – once it was cleaned well!
12. Swishing it back and forth, the buffalo tail made an excellent \_\_\_\_\_.
13. Some bones could be sharpened into a good \_\_\_\_\_.
14. Boiling the buffalo's hooves made a strong, sticky \_\_\_\_\_.
15. Stuffing buffalo hair into a hide casing made a soft \_\_\_\_\_.

### Crossword Puzzle Key

fly swatter	ceremonies	bladder	headdress	water	tendons	pillow	glue
rattle	skull	knife	spoon	clothing	sinew	rope	



#### ACROSS

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Name \_\_\_\_\_

### Buffalo Uses Word Scramble

bladder	paintbrushes	spoon	clothing	rattle
moccasins	shield	parfleche	glue	toys

1. Buffalo hide makes sturdy \_\_\_\_\_ for walking.

\_\_\_\_\_ 2 \_\_\_\_\_ 8 \_\_\_\_\_

C A S M O C N I S

2. A rawhide \_\_\_\_\_ can hold food or household goods.

\_\_\_\_\_ 7 \_\_\_\_\_

H E L R P A E F C

3. The buffalo \_\_\_\_\_ makes a good pouch for carrying water.

\_\_\_\_\_ 9 \_\_\_\_\_ 4 \_\_\_\_\_

D R A L B D E

4. A buffalo horn can be carved into a handy \_\_\_\_\_ for eating food.

\_\_\_\_\_ 11 \_\_\_\_\_ 13 \_\_\_\_\_

O N P S O

5. The tough hide from a bull buffalo can make a strong \_\_\_\_\_.

\_\_\_\_\_ 10 \_\_\_\_\_

D E H I S L

6. Household items can be decorated with colorful patterns using bone \_\_\_\_\_.

\_\_\_\_\_ 5 \_\_\_\_\_

H B P I T A N R S E U S

7. Buffalo foot bones make good \_\_\_\_\_ for boys and girls.

\_\_\_\_\_ 12 \_\_\_\_\_

Y S T O

8. Tanned buffalo hide makes good dresses and other \_\_\_\_\_.

\_\_\_\_\_ 6 \_\_\_\_\_

G L O C H T N I

9. Boiled bones and hoofs makes sticky \_\_\_\_\_.

\_\_\_\_\_ 3 \_\_\_\_\_

L G E U

10. Stringing buffalo hoofs together makes a noisy \_\_\_\_\_.

\_\_\_\_\_ 1 \_\_\_\_\_

T L T R E A

Bonus question: Fill in the blanks with the numbered letters above to reveal the answer.

11. This animal's true name is \_\_\_\_\_ but they are commonly called buffalo.

1 2 3 4 5 6 7 8 9 10 11 12 13

### Buffalo Uses Word Scramble KEY

bladder	paintbrushes	spoon	clothing	rattle
moccasins	shield	parfleche	glue	toys

1. Buffalo hide makes sturdy \_\_\_\_\_ for walking.

M O C C A S I N S  
2                      8

C A S M O C N I S

2. A rawhide \_\_\_\_\_ can hold food or household goods.

P A R F L E C H E  
7

H E L R P A E F C

3. The buffalo \_\_\_\_\_ makes a good pouch for carrying water.

B L A D D E R  
9                      4

D R A L B D E

4. A buffalo horn can be carved into a handy \_\_\_\_\_ for eating food.

S P O O N  
11                     13

O N P S O

5. The tough hide from a bull buffalo can make a strong \_\_\_\_\_.

S H I E L D  
10

D E H I S L

6. Household items can be decorated with colorful patterns using bone \_\_\_\_\_.

P A I N T B R U S H E S  
5

H B P I T A N R S E U S

7. Buffalo foot bones make good \_\_\_\_\_ for boys and girls.

T O Y S  
12

Y S T O

8. Tanned buffalo hide makes good dresses and other \_\_\_\_\_.

C L O T H I N G  
6

G L O C H T N I

9. Boiled bones and hoofs makes sticky \_\_\_\_\_.

G L U E  
3

L G E U

10. Stringing buffalo hoofs together makes a noisy \_\_\_\_\_.

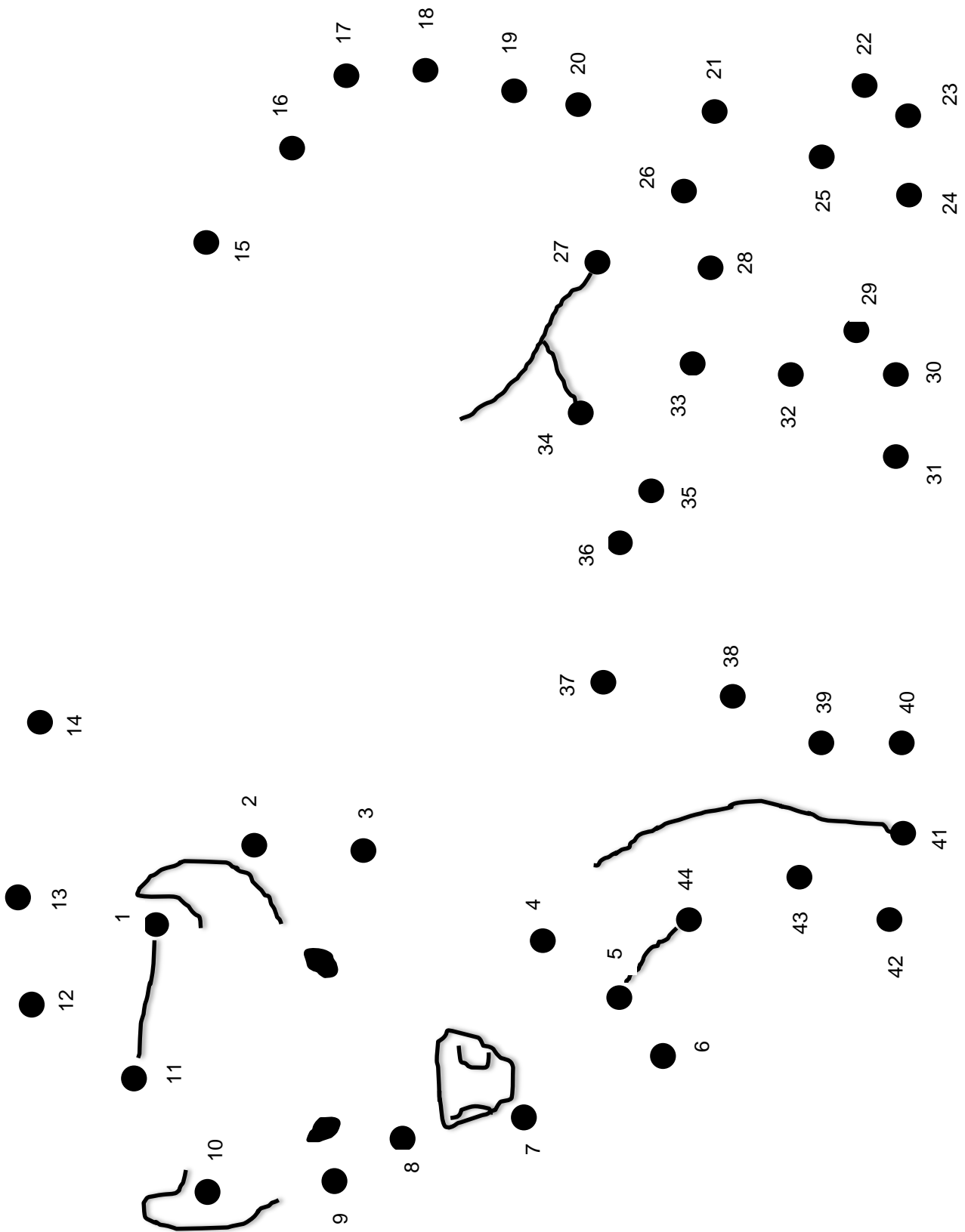
R A T T L E  
1

T L T R E A

Bonus question: Fill in the blanks with the numbered letters above to reveal the answer.

11. This animal's true name is \_\_\_\_\_ but they are commonly called buffalo.

A M E R I C A N      B I S O N  
1 2 3 4 5 6 7 8      9 10 11 12 13





## Learning From Objects

**Objectives:**

- Participants will examine objects.
- Participants will draw conclusions based on direct observation.
- Participants will recognize that much information can be acquired about an object from direct observation.

**South Dakota Social Studies Standards**

K	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>
K.E.1.2		2.US.1.2 2.US.2.1 2.E.1.1	3.E.1.1		5.US.1.1	6.E.1.1 6.W.1.1

**Common Core Language Arts Standards**

K	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>
CC.K.SL.1	CC.1.SL.1	CC.2.SL.1	CC.3.SL.1	CC.4.L.1	CC.5.SL.1	CC.6.SL.1
CC.K.SL.1.a	CC.1.SL.1.a	CC.2.SL.1.a	CC.3.SL.1.c	CC.4.L.1.a	CC.5.SL.1.b	CC.6.SL.1.b
CC.K.SL.1.b	CC.1.SL.1.b	CC.2.SL.1.b	CC.3.SL.1.d	CC.4.L.3	CC.5.SL.1.d	CC.6.SL.1.c
CC.K.SL.2	CC.1.SL.1.c	CC.2.SL.1.c	CC.3.SL.2	CC.4.SL.1	CC.5.SL.2	CC.6.SL.2
CC.K.SL.3	CC.1.SL.2	CC.2.SL.2	CC.3.SL.4	CC.4.SL.1.a		CC.6.SL.4
CC.K.SL.6	CC.1.SL.3	CC.2.SL.3	CC.3.SL.6	CC.4.SL.1.b CC.4.SL.1.c CC.4.SL.2 CC.4.SL.4		

**South Dakota Science Standards**

K	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>
K.P.1.1		2.P.1.1	3.P.1.1 3.E.1.2			

**Timeframe:** 30-60 minutes

**Materials:**

Included in kit

All objects

Object Identification Sheet

**Why Learn from Objects?**

There are many ways to learn about the world. One way is to listen and hear information – auditory learning. Another way to get information is by reading, watching a TV or video program, or looking at photographs – visual learning. This kit lets participants learn in another important way – by handling three-dimensional objects. This develops kinesthetic skills, or learning by touch. Participants can see physically how objects are alike and how they are different. They can consider what use an object may have – is it a stand-in for something, like a live animal or a physical place? Is it an object that

was made or used by people from a different culture? The kit's written information, photographs and three-dimensional objects allow participants to practice all three learning styles.

**Activity Steps:**

1. Arrange the participants so that it is easy to pass objects from one to another. Pass the objects around one at a time, allowing the participants to handle and examine them.
2. While the participants are examining the objects, use the points below to start discussion about the materials, construction and history of the objects. Encourage the participants to share the visual and tactile information they get from the objects. You may ask each participant to consider a different aspect of the object-history, material, etc. Have the participants respond so the entire group can hear and enter into the discussion.
3. After an object has been examined, share the information found on the Object Identification Sheet with the group.

**Materials & Construction:**

- What material is the object made out of? (wood, paper, plastic, rubber, metal, fabric, feathers, straw)
- Is the material made by man or by nature?
- If it is natural, has it been changed by people? (carved, cast, molded, glued, sewed)
- Is the object sturdy or fragile?
- Is the object light or heavy?
- Is the object hard or soft?
- How would you describe the texture of the surface of the object?

**History & Function:**

- What might be the purpose of the object?
- Why might it be included in the kit? What might the object be trying to show?
- Does the object look or feel like something from long ago, or is it something from recent times?
- Is this object still used today?
- What has changed about the object today?
- Was the object used for a special task or occasion or was it an everyday item?
- What questions do you have about the object?
- Where could you find the answers to your questions?

## Object Identification List

Kit 1

- T-2012-001 **Atlatl:** An early weapon, this spear-throwing tool consisted of a stick about two feet long with a handle on one end and a hook to hold a long, flexible spear or dart on the other end. With an overhand throw and a sharp snap of the wrist, the atlatl shot the dart forward with great force. It penetrated much better than a spear thrown by hand.
- T-2012-005 **Bladder:** A buffalo bladder worked well for carrying and storing water and because it was waterproof.
- T-2001-242 **Scapula:** The buffalo scapula or shoulder blade bone had many uses. With a stick for a handle it made an excellent hoe. It could also be used as a tray for holding food or other items.
- T-2001-153 **Horn spoon:** The tough outer part of a buffalo horn made a good container and could be carved into useful items like this spoon.
- T-1996.2.3 **Rawhide:** Rawhide is hard, untanned leather. It was used to make parfleches and other items like drums, pouches and ropes.
- T-1996.1.2 **Parfleche:** Containers made from rawhide, parfleches were used to store food and other items. They could be made flat like this example or made into boxes. They were often painted with colorful designs.
- T-2001-155 **Bison tail:** A bison tail made a good fly swatter or whip. It also worked well for sprinkling water on hot rocks in a sweat lodge.
- T-2012-011 **Jawbone:** A heavy bison jawbone could make a good digging tool or a powerful club.
- T-2012-015 **Vertebrae:** A large cervical neck bone helps hold the bison's large head.
- T-2012-017 **Hump bone:** As with other bones, hump bones could be made into useful tools. The tips could be cut off and fashioned into paint brushes.
- T-2001-143 **Rib bone:** Rib bones could be made into tools and made good sled runners in the winter.
- T-2001-150 **Buffalo foot bones:** Indian children used buffalo foot bones like these as toy  
T-1996.1.060 horses. The large bones were mares and the smaller bones were their foals.  
T-1996.1.168
- Unnumbrd **Bone paintbrushes.** Small pieces cut from the tips of buffalo hump bones made good  
(3 pieces) brushes for painting designs on tipis, parfleches, and other items. The bones absorbed the paint, so each color needed a separate brush.

Buffalo & the Plains Indians  
South Dakota State Historical Society Education Kit

- Unnmbrd (2 teeth) **Buffalo teeth:** Buffalo teeth made good decorations.
- T-2001-146 **Flesher:** When preparing hides, women used fleshers to scrape the muscle and other tissue off the fresh buffalo hide. This flesher is made from a buffalo leg bone.
- Unnmbrd **Buffalo figurine:** Buffalo are the largest mammal in North America. They can grow over six and a half feet tall and weigh over 2000 pounds.
- Unnmbrd (2 pieces) **Bison track molds.** American bison are members of the mammal group known as the even-toed ungulates. This group includes camels, giraffes, cattle, pigs, hippopotamuses, deer, and pronghorn.
- Unnumbrd **Buffalo scat:** Buffalo are grazers, eating grasses, herbs, shrubs, and twigs. Bison are ruminants with a four-chambered stomach that regurgitate their food and chew it as cud. Well-dried buffalo scat or “chips” were collected and burned by both Indians and homesteaders for cooking and warmth.
- T-1996.3.1 **Arrow:** Hunting buffalo with a bow and arrow was a dangerous job. Hunters gave their arrows an individual identifying mark so they could tell which animals they had killed during the hunt.
- T-2001-145 **Awl:** An awl is a sharp, pointed tool used to punch holes in leather prior to sewing. Awls were frequently made from rib or leg bones.
- Unnmbrd **Sinew:** Sinew comes from the back tendon of the buffalo. It is like very tough thread. Sinew was used to sew together hides for tipis and sew clothing. It is still used today by traditional bead workers.
- Unnmbrd **Hair rope:** Buffalo hair could be twisted and braided into a strong rope.
- T-2001-157 **Buffalo robe sample:** This is a piece of a whole buffalo robe. The entire robe would be much bigger. The thick buffalo robe obtained in the winter was called a seasonable robe. It was worth more than a summer robe in trade.
- Unnmbrd **Buffalo hair:** Buffalo hair made good stuffing in pillows or saddles.
- Unnmbrd **Buffalo hide sample:** Tanned buffalo hides with the hair removed were used to make tipis, clothing and household items. It takes about seventeen buffalo hides to make a family tipi.
- T-2012-055 **Poster:** *Buffalo Drive* by William R. Leigh, 1947. Leigh painted a very active and highly dramatic image of a buffalo jump.

- T-2012-058 **Poster:** *Hunting Buffalo Camouflaged with Wolf Skins* by George Catlin, ca 1832.  
Artist George Catlin produced two major collections of paintings of American Indians. Catlin first traveled up the Mississippi River in 1830. In 1838, he went up the Missouri River and visited tribes including the Pawnee, Mandan, Cheyenne, and Blackfeet. The nearly complete surviving set of Catlin's first Indian Gallery painted in the 1830s is now part of the Smithsonian American Art Museum's collection.  
Credit: [www.georgecatlin.org](http://www.georgecatlin.org)
- T-2012-061 **Poster:** *Buffalo Chase in Winter* by George Catlin.
- T-2012-064 **Poster:** *Buffalo Hunt, Surround*, by George Catlin, ca 1832.
- T-2012-067 **Poster:** *Buffalo Hunt* by George Catlin. Indian hunter running the buffalo on horseback.
- T-2012-070 **Poster:** *Life on the Prairie, The Buffalo Hunt* by Currier & Ives, 1862. White hunters running buffalo on horseback.
- Unnbrd **Poster:** How the Indians Used the Buffalo
- Unnbrd **Poster:** South Dakota Buffalo photo placemat

## Buffalo Hunt

### Comparing Images

**Objectives:**

- Participants will identify five different buffalo hunting methods used by the Plains Indians.
- Participants will examine images of the hunting methods for differences and similarities.
- Participants will draw a buffalo hunt image.

**Standards:**

Social Studies Standards						
K	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>
K.E.1.1 K.E.1.2		2.US.1.2	3.US.1.1 3.W.1.1 3.G.2.1	4.W.2.1 4.E.1.1	5.US.1.1 5.G.2.1	6.E.1.1

Visual Arts Standards							
	K benchmarks	1 benchmarks	2 benchmarks	3 benchmarks	4 benchmarks	5 benchmarks	6 benchmarks
Standard 1	1	1	1	1	1	1	1
Standard 2	2	2	2	2			
Standard 3	3	3	3				
Standard 4	2	2	2	1,2	1,2	1	1

**Timeframe:** 30-60 minutes

**Materials:**

In kit  
 6 posters

Provided by instructor or participants  
 Drawing paper  
 Pencils or crayons

**Background Information:**

Of all the animals and plants in nature, the buffalo was the most important to the Plains Indians. Buffalo are the largest land animal in North America. A bull buffalo can get to be 6.5 feet tall and weigh over 2,000 pounds. Cow buffalo are a little smaller. Buffalo can live 20 to 40 years. From tip to tip, a buffalo’s horns can be up to 3 feet apart.

Hunting buffalo was like going to the mall or grocery store today to get everything. Indians felt so closely related to the buffalo that some tribes referred to the buffalo as “father” or “uncle”. The Lakota word for buffalo is *tatanka*. Hunting buffalo was dangerous work. A horse could stumble and throw their rider into the path of a running buffalo. Or, a buffalo might charge a horse and rider, knocking them down. It took bravery to be a successful buffalo hunter.

**Activity Steps:**

1. Arrange the six posters face-down.
2. Have the group brainstorm different ways that buffalo could be hunted.

3. Turn each image over and share the information about the type of hunt depicted.

**Poster 1: Buffalo Jump:** A buffalo jump was a cliff or steep bank over which the animals were driven. Drive lines – rows of rock piles arranged like a funnel – led the buffalo toward the jump. The rock piles were far apart on the prairie and got closer together as they neared the cliff edge. Fast, young hunters would get behind a herd and move it toward the open end of the rock funnel. As the herd got close to the rock piles, a very brave hunter would entice the animals forward by disguising himself and making the sound of a distressed buffalo calf. Once the herd was between the rock piles, hunters hidden behind the rocks jumped up and waved buffalo robes to scare the animals and get them stampeding forward and over the cliff. Others waited below to kill the buffalo.

**Poster 2: Stalking or sneaking up:** Stalking hunters could wear wolf skins as a disguise because the buffalo would let wolves get close. They knew the wolves would not attack a large herd of buffalo. The hunters had to approach from downwind so the buffalo could not smell them and become alarmed. Once the hunters were close enough, they could shoot a buffalo.

**Poster 3: Hunting in deep snow:** In the winter, buffalo caught in deep snow could not move around easily. Hunters using snowshoes could get close enough to kill them.

**Poster 4: Surround:** Hunters formed a large circle around the herd and gradually made the circle smaller and smaller, bunching the buffalo together and milling them around. The hunters could then shoot at the animals on the edge.

**Posters 5 & 6: Running the buffalo:** When horses became widely available, "running the buffalo" became the most popular hunting technique. The chase began when a line of mounted hunters approached the herd at a walk until the buffalo began to move away. The hunters then charged into the herd and killed them with lance, arrow or bullet. One big advantage of a gun was that a buffalo could be shot from a long distance.

4. After all the posters have been revealed, have the group discuss similarities and differences between the images. Discuss:

- What weapons are being used for the hunts?
- Are all the hunters on horseback?
- Are hunters working together in big groups? Small groups? Individually?

5. Let the participants draw their own picture of a buffalo hunt.

## Where Do the Bones Fit? Bison Skeleton Activity

### Objectives:

- Participants will identify seven bison bones.
- Participants will determine where on the bison skeleton the bones are located.

### Standards:

South Dakota Science Standards						
K	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>
	1.P.1.1		3.L.1.2	4.L.1.1		

**Timeframe:** 30-60 Minutes

### Materials:

#### In kit

Scapula (shoulder blade)

Jawbone

Rib

3 Phalanx bones (foot bones)

Thoracic bone (hump bone)

Cervical bone (neck vertebra)

Metatarsal bone (back leg)

Leg bone scraper

#### Provided by participants or instructor

Pencil

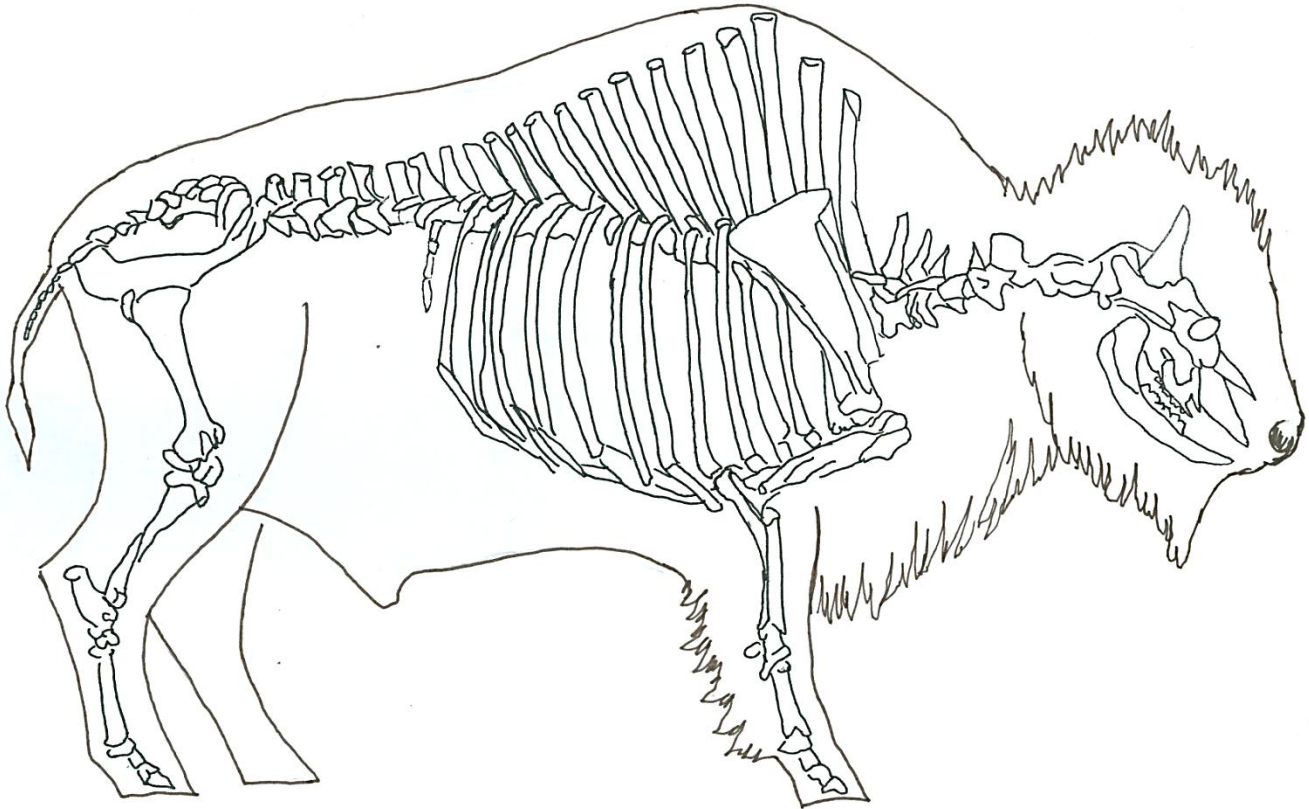
Crayons or colored pencils

### Activity Steps:

1. Give each participant a Bison Skeleton Worksheet.
2. Show each bone to the participants. The bones may be passed around the group.
3. Have participants brainstorm about what each bone is and where it may be located on the skeleton.
4. Working individually or in groups, have participants color in the bone on their worksheets that they feel matches the bone from the kit. When everyone has completed their worksheet, share the answers from the Worksheet Key. (Note: Participants can color rib, hump and vertebra bones that vary from those on the answer key, as long as they are in the correct skeletal space.)
5. Discuss:
  - Are bison bones bigger than human bones? Why?
  - Do humans have some of the same bones as bison – ribs, vertebra, skull? How are human and bison bones different?



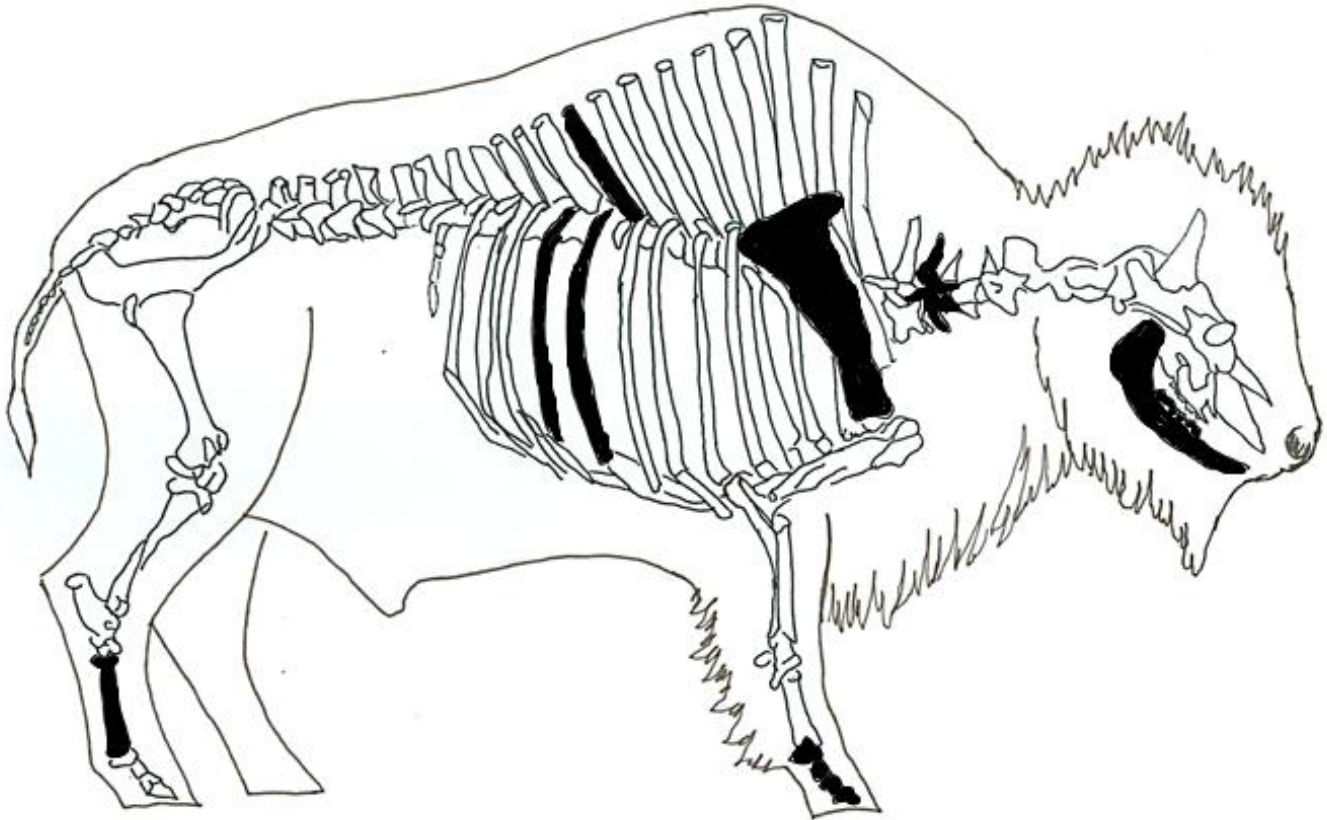
## Where Do the Bones Fit? Bison Skeleton Worksheet



Color in the bones listed below:

1. Scapula (shoulder blade)
2. Mandible (jawbone)
3. Metatarsal bone (back leg bone)
4. Rib
5. Phalanx bones (3) (foot bones)
6. Thoracic bone (hump bone)
7. Cervical bone (neck vertebra)

## Where Do the Bones Fit? Bison Skeleton Worksheet KEY



Color in the bones listed below:

1. Scapula (shoulder blade)
2. Mandible (jawbone)
3. Metatarsal bone (back leg bone)
4. Rib (2 are colored on this key, only 1 needed)
5. Phalanx bones (foot bones) (3)
6. Thoracic bone (hump bone)
7. Cervical bone (neck vertebra)

## How Many Jackrabbits Equal One Buffalo?

Animal Weight Comparisons

### Objectives:

- Participants will identify five creatures that share a buffalo's prairie environment.
- Participants will convert weight from pound to ounces to grams.
- Participants will compare weights and determine how many of each creature weigh the equivalent of one buffalo.

### Standards:

Common Core Math Standards						
K	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>
K.CC.5 K.CC.6 K.MD.2	1.MD.4		3.MD.2	4.MD.1 4.OA.3 4.NBT.5	5.MD.1 5.NBT.5	6.NS.3

**Timeframe:** 45-60 minutes

### Materials:

In kit

How Many Jackrabbits Worksheets 1 and 2

Provided by instructor or participants

Pencil

Scratch paper

### Background Information:

Buffalo shared their prairie environment with a wide variety of other mammals, insects, birds, amphibians and other wildlife. In this activity, participants will identify five creatures that shared the prairie environment and use math skills to compare their weight with that of a buffalo.

### Activity Steps:

1. Give each participant a copy of Worksheet 1.
2. Working either individually, in pairs, or small groups, have participants complete the animal weight table. Calculate the weight of the buffalo, turtle, jackrabbit and coyote to the nearest pound. Calculate the pheasant to the 10<sup>th</sup> (0.0) of a pound and the deer mouse to the thousandth (0.000) of a pound.
3. Give each participant a copy of Worksheet 2. Using the table from Worksheet 1, calculate the number of each creature needed to equal the weight of one buffalo.
4. Discuss:
  - What five creatures in this activity shared the buffalo's environment?
  - What other creatures live on the prairie? Option: Choose some other prairie animals and calculate how many would be needed to equal one buffalo's weight.

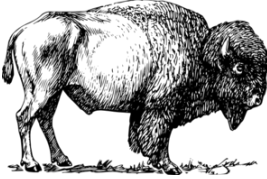


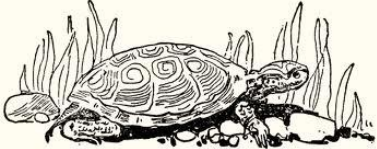


Name \_\_\_\_\_

## How Many Jackrabbits Equal One Buffalo?

Animal Weight Comparisons  
 Worksheet 1

Complete the table below by multiplying and dividing.

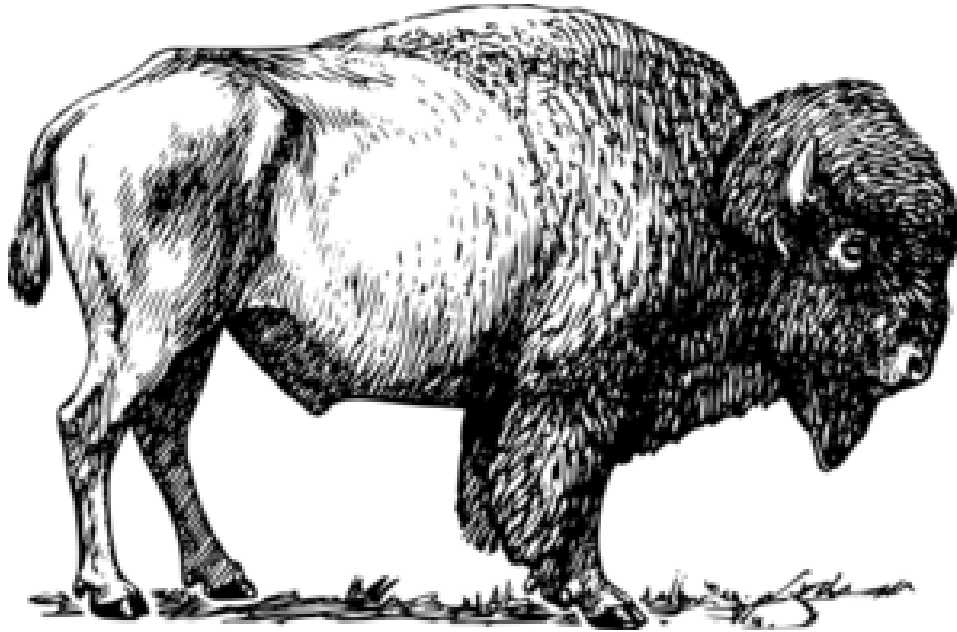
1 pound = 16 ounces = 454 grams
1 ounce = .066 pounds = 28.35 grams

	Pounds	Ounces	Grams
 Buffalo		31,200	
 Pheasant	2.6		
 Coyote			15,890
 Painted Turtle		16	
 Jackrabbit			3,178
 Deer Mouse	.066		






Name \_\_\_\_\_

## How Many Jackrabbits Equal One Buffalo?

Animal Weight Comparisons  
Worksheet 2



A 1,950 pound buffalo equals:




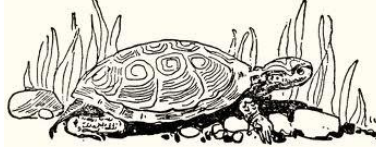

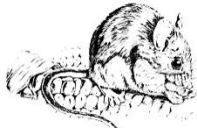
				
How many pheasants?	How many coyotes?	How many painted turtles?	How many jackrabbits?	How many deer mice?

## How Many Jackrabbits Equal One Buffalo?

Animal Weight Comparisons  
 Worksheet 1 KEY

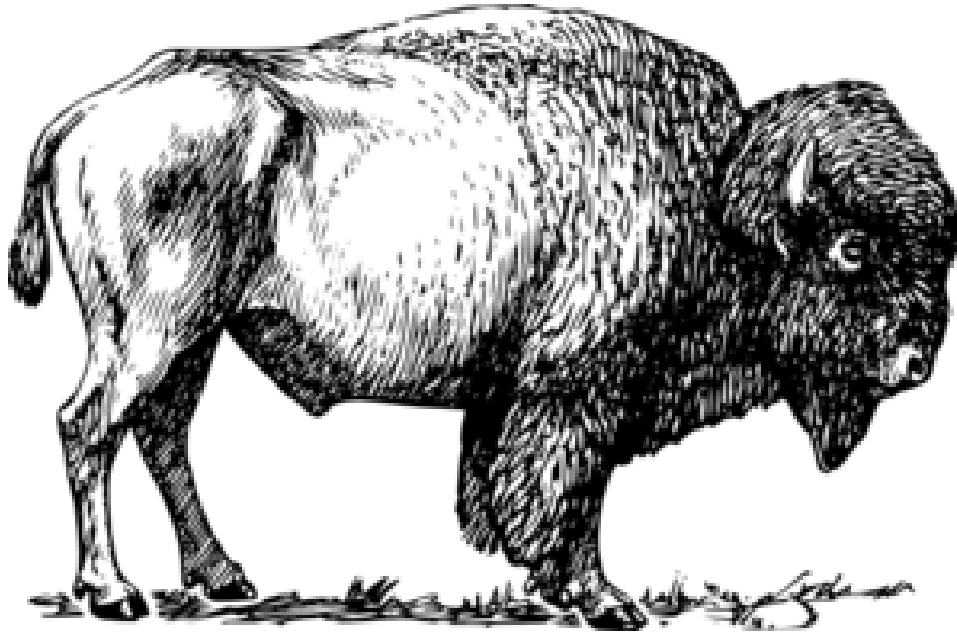
Complete the table below by multiplying and dividing.

1 pound = 16 ounces = 454 grams
1 ounce = .066 pounds = 28.35 grams





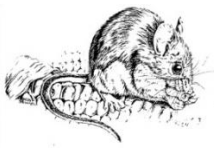
	Pounds	Ounces	Grams
 Buffalo	1,950	31,200	885,300
 Pheasant	2.6	41.6	1,180
 Coyote	35	560	15,890
 Painted Turtle	1	16	454
 Jackrabbit	7	112	3,178
 Deer Mouse	.066	1.06	29.96

## How Many Jackrabbits Equal One Buffalo?

Animal Weight Comparisons  
Worksheet 2 KEY



A 1,950 pound buffalo equals:

				
How many pheasants?	How many coyotes?	How many painted turtles?	How many jackrabbits?	How many deer mice?
750	55.7	1,950	278.6	29,545



## How Big Is a Buffalo?

### Coloring Sheet Activity

**Objectives:**

- Participants will identify and use six different colors
- Participants will follow written color cues to correctly color individual worksheets
- Participants will cooperate to place sheets in order needed to form a buffalo head

**Standards:**

Common Core Math Standards						
K	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>
K.CC.1 K.CC.5 K.MD.3	1.MD.4 1.NBT.1	2.MD.1				

Visual Arts Standards							
	K Benchmarks	1 <sup>st</sup> Benchmarks	2 <sup>nd</sup> Benchmarks	3 <sup>rd</sup> Benchmarks	4 <sup>th</sup> Benchmarks	5 <sup>th</sup> Benchmarks	6 <sup>th</sup> Benchmarks
Standard 1	1,2	1,2	1,2	3	3	3	3
Standard 2	2,3	2,3	2,3	2	2		
Standard 4	3	3	3	3	3	3	3

**Timeframe:** 60 minutes

**Materials:**

In Kit

[30 Buffalo head coloring sheets](#)

(click link for file)

Provided by instructor or participants

Red, brown, black, yellow, light blue, dark blue crayons

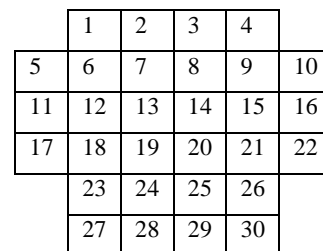
Scissors

Tape

4x4 foot wall space for hanging coloring sheets

**Activity Steps:**

1. Make copies of the coloring sheets for participants. Give each participant at least one sheet to color. All 30 sheets must be completed to create a full buffalo head.
2. Have participants color the sheets using the color indicated for each space. Some spaces are white – they can either be colored white or left uncolored.
3. Once the sheets are colored, have participants cut out the colored square on each sheet.
4. Have participants work together to order and tape the sheets on the wall to create the buffalo head. Start with the bottom row three feet up the wall from the floor to put the buffalo head at the correct life-size height. There are 4 squares on the two bottom rows, 6 squares in the three rows above them, and 4 squares in the top row. Use the numbers in the lower right corner of the squares to determine proper placement.





## Buffalo Fractions

### Objectives:

- Participants will examine a grid to answer math questions
- Participants will use visual clues to determine fractions
- Participants will practice reducing fractions

### Standards:

Common Core Math Standards						
K	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>
K.CC.1 K.CC.5	1.OA.1 1.OA.2	2.NBT.5	3.NF.1 3.NF.3b 3.G.2	4.NF.1 4.NF.2		

**Timeframe:** 30-60 minutes

### Materials:

In kit

Buffalo head coloring sheets  
Buffalo Fractions worksheet

Provided by instructor or participants

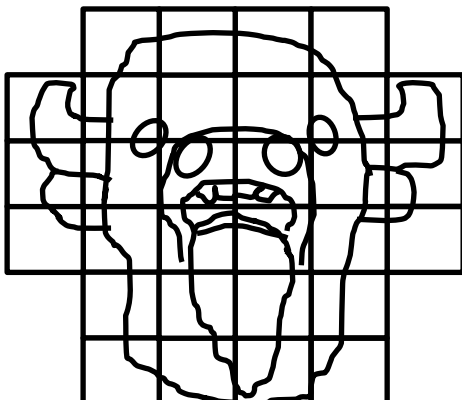
Pencil  
scratch paper

### Activity Steps:

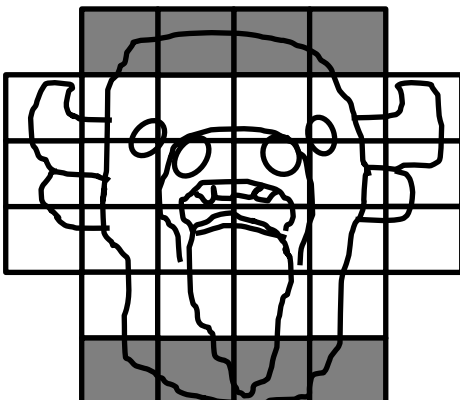
1. Complete the “How Big Is a Buffalo” coloring sheet activity. If possible, allow participants to view buffalo head grid while working on this activity.
2. Give each participant a Buffalo Fractions worksheet. Working either individually, with partners, or in groups, have them complete the worksheet.
3. Review worksheet answers with participants.

Name \_\_\_\_\_

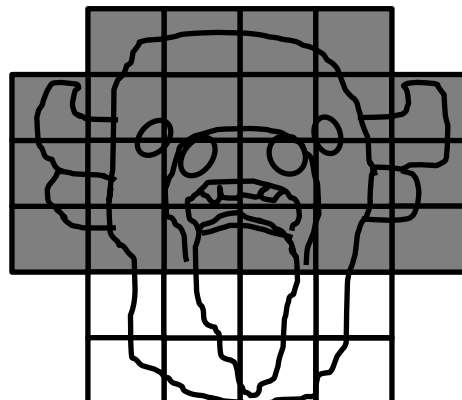
### Buffalo Fractions Worksheet



How many squares are there in one bison image? \_\_\_\_\_

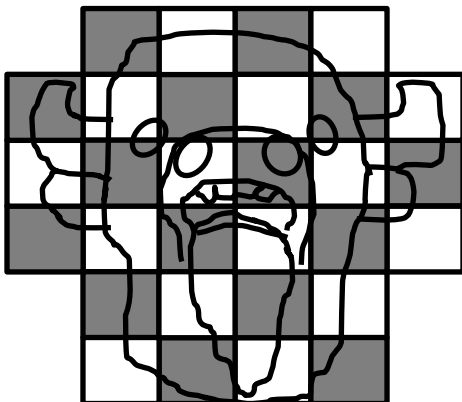


Add the number of squares in the bottom and top rows:  
 \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

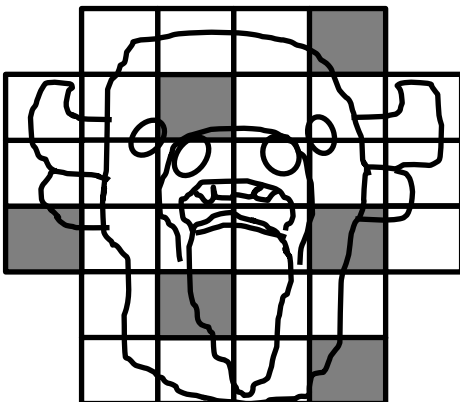


Add the number of squares in the top four rows:  
 \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

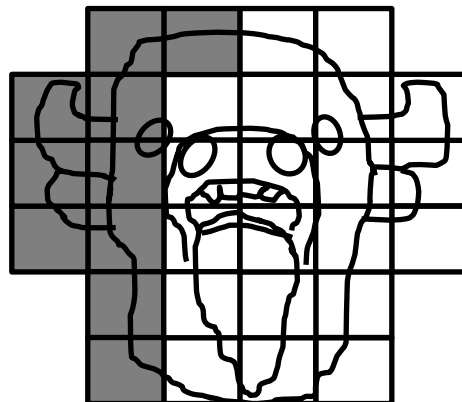
Count the colored squares in each image below to complete the first fraction. Reduce to get the other fractions.



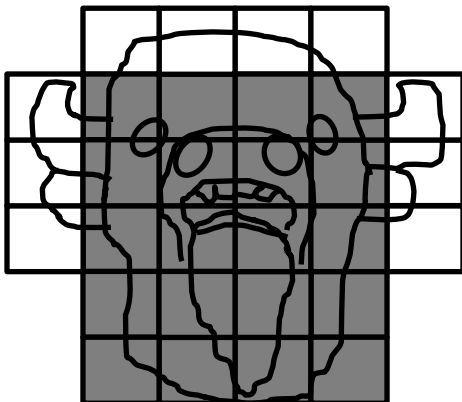
$$\frac{\quad}{30} = \frac{5}{\quad} = \frac{1}{\quad}$$



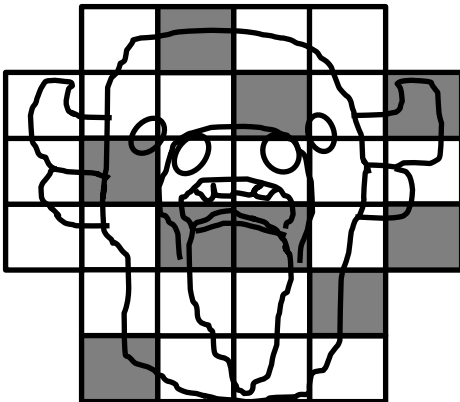
$$\frac{\quad}{30} = \frac{\quad}{15} = \frac{1}{\quad}$$



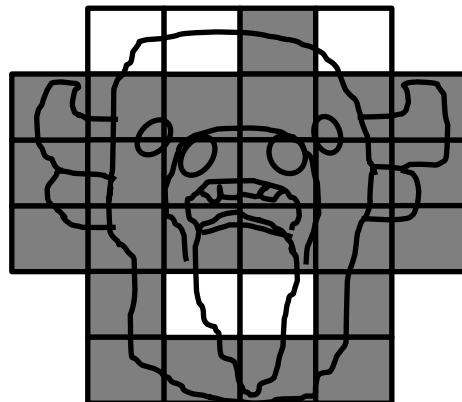
$$\frac{\quad}{30} = \frac{5}{\quad} = \frac{1}{\quad}$$



$$\frac{\quad}{30} = \frac{\quad}{15} = \frac{\quad}{3}$$

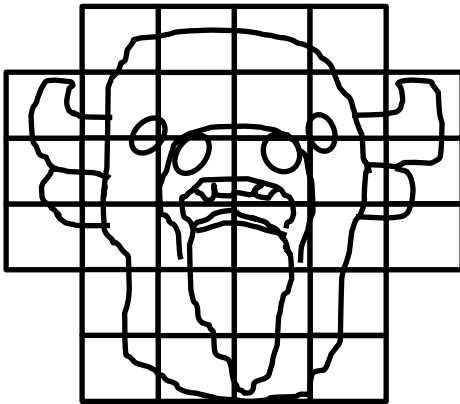


$$\frac{\quad}{30} = \frac{3}{\quad}$$

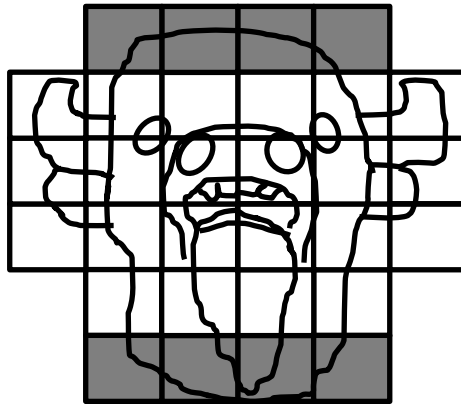


$$\frac{\quad}{30} = \frac{\quad}{6}$$

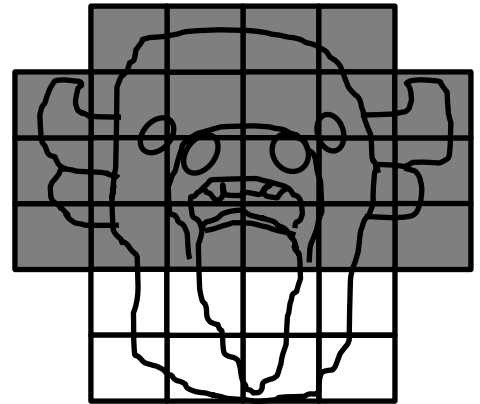
Buffalo Fractions Worksheet Key



How many squares are there in one bison image? 30

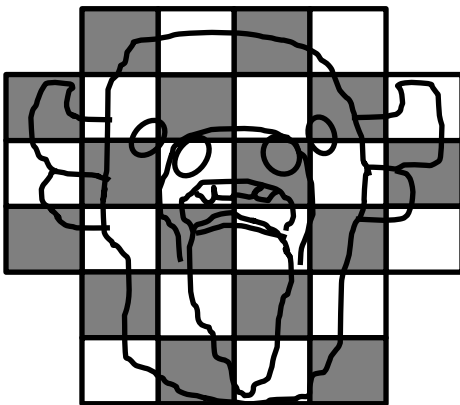


Add the number of squares in the bottom and top rows:  
 $4 + 4 = 8$

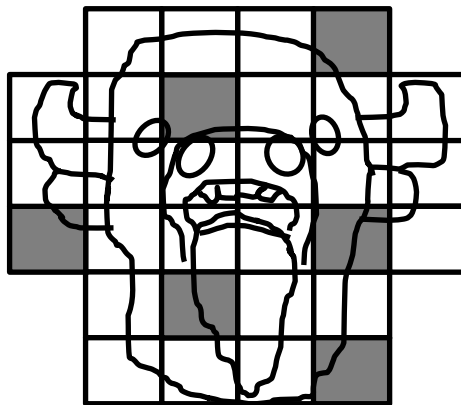


Add the number of squares in the top four rows:  
 $4 + 6 + 6 + 6 = 22$

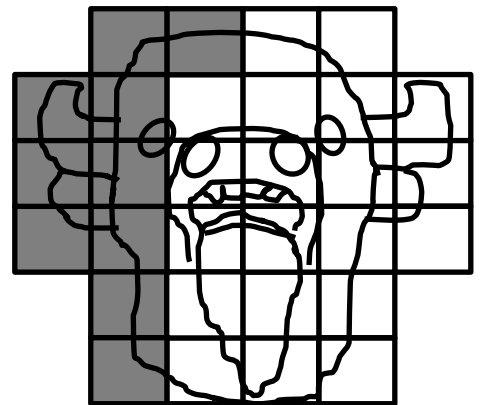
Count the colored squares in each image below to complete the first fraction. Reduce to get the other fractions.



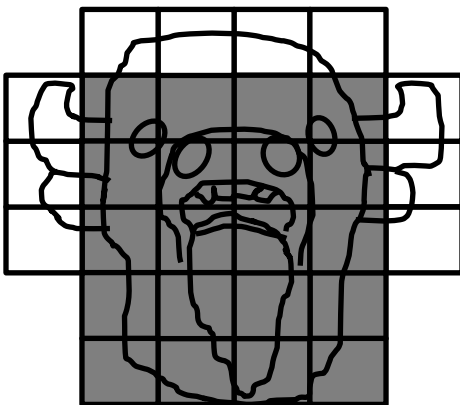
$$\frac{15}{30} = \frac{5}{10} = \frac{1}{2}$$



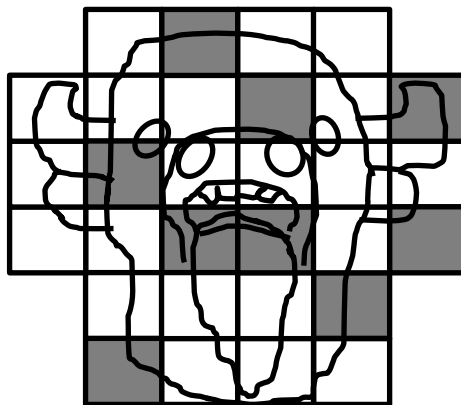
$$\frac{6}{30} = \frac{3}{15} = \frac{1}{5}$$



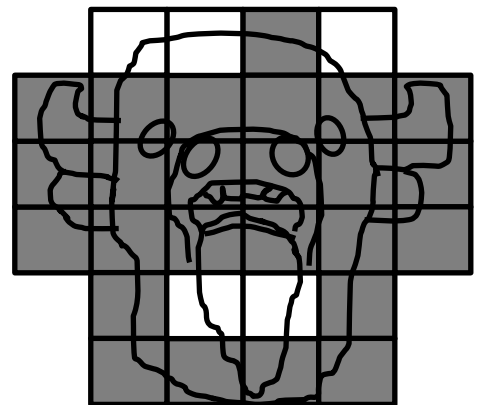
$$\frac{10}{30} = \frac{5}{15} = \frac{1}{3}$$



$$\frac{20}{30} = \frac{10}{15} = \frac{2}{3}$$



$$\frac{9}{30} = \frac{3}{10}$$



$$\frac{25}{30} = \frac{5}{6}$$

## The Journey

### Objectives:

- Participants will identify unpredictable situations wild animals may encounter.
- Participants will make choices about actions an animal may take.
- Participants will practice addition and subtraction skills.

### Standards:

Common Core Language Arts Standards						
K	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>
K.L.1.f	1.L.1	2.SL.1	3.SL.1	4.SL.1	5.SL.1	6.SL.1
K.L.6	1.L.6	2.SL.1.a	3.SL.1.b	4.SL.1.c	5.SL.1.c	6.SL.1.c
K.SL.1	1.SL.1	2.SL.4	3.SL.1.d	4.SL.4	5.SL.4	
K.SL.1.a	1.SL.1.a	2.SL.6	3.SL.4			
K.SL.6	1.SL.1.b					
	1.SL.2					
	1.SL.4					

Common Core Mathematics Standards						
K	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>
K.OA.1	1.OA.1	2.NBT.5				
K.OA.2	1.OA.6					

**Timeframe:** 30 minutes

### Materials:

Included in kit

5 Journey flip cards

Journey activity score sheet

Provided by instructor or participants

Pencil

### Background Information:

Animals encounter many unpredictable situations in their environment. They may eat or drink something that makes them sick, or may run into predators who want to make a meal of them. Bad weather and hunters or trappers also pose hazards. Animals use all of their senses to monitor their environment and stay alive. In this activity, participants will hear about one animal's journey and make choices as to what the animal should do when faced with different challenges. They will add or subtract points on a score sheet based on their decisions.

### Activity Steps:

1. Give each participant a score sheet. The starting number for the score sheet is 13.
2. Set the scene for the activity: "Imagine you are a wild animal. You need to take care of yourself by finding food, water and shelter, and by avoiding hunters and other dangers. Are you up for the challenge"? If possible, do the activity outdoors to really get into nature mode.
3. Instructor will read aloud each Journey flip card, or may have participants read the cards aloud to the group. After each step in the journey, participants must make a choice about what action the animal will take and mark it on their scorecard by choosing A or B.

4. Flip open the card and read the result of the choices made. Each result is given a numerical value to be added or subtracted on the score sheet. Have participants add/subtract as needed.
5. Compare score results and discuss:
  - How did you make a choice for each journey step?
  - What information influenced your decision?
  - Was it hard to decide what to do?
  - Would it be hard to live as a wild animal?
  - How does an animal's senses help it survive?

Below is the information on the Journey flip cards:

The Journey Begins: Stop 1

You open your eyes after napping near a bush. You hear a rustling sound nearby. At first you are afraid, and want to run. You are also curious, and want to find out more about the noise. You are very hungry, and whatever is making the noise may be something you can catch and eat.

- MAKE A CHOICE    A. Run away  
                          B. Find out what is making the rustling noise

If you chose A, and ran away, you missed out on some food. **SUBTRACT 2 POINTS**  
If you chose B and investigated the noise, you found some food. **ADD 3 POINTS**

The Journey Continues: Stop 2

After leaving the bush, you start walking along a river. Soon, the sunshine disappears and heavy clouds roll in. It gets very windy. Lightning flickers in the sky and you feel raindrops splash onto your face. You see a cave up ahead. When you get there, you find a scent that is new to you. You are not sure if you should go into the cave, but the storm is getting bad and you need shelter.

- MAKE A CHOICE    A. Go into the cave.  
                          B. Do not go into the cave. Look for shelter elsewhere

If you chose A and went into the cave, you were shot by a hunter who was already in the cave. You do not die, but your injuries take many days to heal. **SUBTRACT 3 POINTS**

If you chose B and do not go into the cave you found safe shelter elsewhere. **ADD 2 POINTS**

The Journey Continues: Stop 3

After the storm passes, you are tired and need to sleep. The sun comes out again.

- MAKE A CHOICE    A. Lay down in the sunshine in an open field for a nap.  
                          B. Curl up in the shady shelter of a nearby tree for a nap.

If you chose A and took a nap in the sunny field, you were caught by a trapper and put in a cage. You escaped without getting hurt. **SUBTRACT 3 POINTS**

If you chose B, you had a safe nap in the shelter of the tree. **ADD 4 POINTS**

The Journey Continues: Stop 4

After your nap, you wake up feeling thirsty and weak. It has been a long time since you had a drink of water. You begin to walk toward the river. As you walk, you come upon a large pile of something that you have never seen before. It smells like something to eat. You take a bite, and find out it is NOT food!

Suddenly, you feel very scared and want to run. If you run, you must take a different path to the river. You would have to walk farther and might not have enough strength to make it to the river.

- MAKE A CHOICE
- A. Run and take the longer path to the river.
  - B. Stay on the same path and get to the river.

If you chose A, you made it to the river for a drink. The pile that you found was a blanket left by some hunters, but they had already moved on and were no threat.

NO POINT CHANGE

If you chose B, it was a longer walk but you made it to the river for a drink. NO POINT CHANGE

The Journey Ends: Stop 5

You reach the river and take a long drink. The water tastes good makes you feel strong and refreshed. You decide to look for your family and start off in the direction where you usually find them. You come across a scent that seems familiar, almost like your family but just a little different. Should you follow the scent?

- MAKE A CHOICE
- A. You follow the new scent.
  - B. You are suspicious of the scent and go in a different direction.

If you chose A and followed the scent you are in trouble. You have been tricked by a hunter and trapped. SUBTRACT 5 POINTS

If you chose B and went a different direction you found your family! ADD 4 POINTS

Name \_\_\_\_\_

### The Journey Score Sheet

Circle your choice for each journey step below:	13	
1. A.  B.	+	-
	Total:	
2. A.  B.	+	-
	Total:	
3. A.  B.	+	-
	Total:	
4. A.  B.	+	-
	Total:	
5. A.  B.	+	-
	Total:	

## Catching the Prey

### Objectives:

- Participants will recognize the hunting challenges early Plains inhabitants faced.
- Participants will illustrate hunting challenges through role playing as hunter/prey.
- Participants will assess how their various senses help them in each role.

### Standards:

South Dakota Social Studies Standards						
K	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>
	1.E.1.1	2.US.2.1 2.E.1.1	3.US.2.2 3.E.1.1	4.E.1.1	5.US.1.1 5.E.1.1	6.E.1.1

Common Core Language Arts Standards						
K	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>
K.L.1.f	1.L.1	2.SL.1	3.SL.1	4.SL.1	5.SL.1	6.SL.1
K.L.6	1.L.6	2.SL.1.a	3.SL.1.b	4.SL.1.c	5.SL.1.c	6.SL.1.c
K.SL.1	1.SL.1	2.SL.4	3.SL.1.d	4.SL.4	5.SL.4	
K.SL.1.a	1.SL.1.a	2.SL.6	3.SL.4			
K.SL.6	1.SL.1.b 1.SL.2 1.SL.4					

South Dakota Science Standards						
K	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>
	1.L.1.3 1.L.3.1		3.P.3.3 3.L.3.1	4.L.2.1 4.L.3.1	5.L.3.2	

**Timeframe:** 30-45 minutes

### Materials:

Provided by participants or instructor

Blindfold

### Background Information:

Hunting prey was no easy task. Early Plains inhabitants did not have guns, so they had to get close enough to game to get a good shot with a bow and arrow or spear. They used all their senses and knowledge of their environment to sneak up on their prey. The animals they hunted also had keen senses and were not easy to catch. Hearing a twig snap or catching a hunter's scent on the wind could send an animal running – and might mean the difference between eating and going hungry for the hunter and his tribe. In this activity, participants will practice using their senses as both hunter and prey.



**Activity Steps:**

1. Have participants sit in a circle.
2. Choose one participant to be the hunter. Put the hunter in the middle of the circle on their hands and knees, and blindfold them.
3. Silently point to another participant in the circle who will be the prey. The prey enters the circle on their hands and knees and tries to make a complete circle around the hunter and get back to their place without being tagged.
4. If the prey is tagged, they then become the hunter.
5. If the hunter is unable to tag the prey after two rounds, another hunter is chosen.
6. If time allows, let each participant play both hunter and prey roles.
7. Discuss:
  - How did you feel as the hunter trying to catch the prey?
  - How did you feel as the prey when you were trying to avoid getting caught?
  - If you caught the prey, what sense helped you the most?
  - How do you think you would feel if catching prey was your only way to get food? Would it be easy or hard?

## Making a Winter Count

### Objectives:

- Participants will recognize a winter count as a means of keeping track of time and events.
- Participants will create a winter count based on their personal experience.
- Participants will explain their winter count to the group.

### Standards:

South Dakota Social Studies Standards						
K	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>
	1.US.1.1	2.US.1.2 2.US.2.1	3.US.2.1 3.US.2.2 3.W.1.1	4.US.2.1 4.US.2.2 4.W.1.1 4.W.2.1		

Common Core Language Arts Standards						
K	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>
K.L.1	1.L.1	2.L.3	3.L.1	4.L.1	5.L.1	6.L.1
K.L.6	1.SL.1.a	2.SL.1	3.L.3	4.L.3	5.L.3	6.L.3
K.SL.1	1.SL.2	2.SL.1.a	3.SL.1	4.SL.1	5.SL.1	6.SL.1
K.SL.2	1.SL.5	2.SL.2	3.SL.1.b	4.SL.4	5.SL.5	6.SL.5
K.SL.5		2.SL.5	3.SL.2 3.SL.4	4.SL.5		

South Dakota Visual Arts Standards							
Standard	K benchmark	1 benchmark	2 benchmark	3 benchmark	4 benchmark	5 benchmark	6 benchmark
Standard 1	1,3	1,3	1,3	1,2	1,2	1,2	1,2
Standard 3	1,3	1,3	1,3	1	1	1,2	1,2

**Timeframe:** 45-60 minutes

### Materials:

Included in kit

Winter Count Key

Provided by instructor or participants

Drawing paper or brown wrapping paper

Crayons, markers or paints

(An image of the Lone Dog Winter Count can be seen online at  
[http://nmai.sc.edu/sites/1/files/pdf/education/poster\\_lone\\_dog\\_final.pdf](http://nmai.sc.edu/sites/1/files/pdf/education/poster_lone_dog_final.pdf) )

### Background Information:

Europeans divided time into days, weeks, months and years. Northern Plains tribes marked time by counting nights, moons, winters, and generations. One year or “winter” was measured from the first snowfall to the next year’s first snowfall. Designing a symbol for each winter and putting the symbols down in chronological order on hide, paper, or cloth created a winter count.

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The symbols on a winter count depict a memorable event for each year. They serve as a kind of diary for the tribe. The symbols mean little unless someone knows the history and the stories the symbols represent. It was the winter count keeper's job to tell the winter count stories. Winter counts aided the memory of the tribal historian by providing a symbol for an event during a particular year. The memory of that event then triggered other memories.

Lone Dog's Winter Count covers the years 1800-1871. Its symbols are organized in a spiral starting at the center and working counter-clockwise. Lone Dog would have gotten advice from the tribal elders about the event to be used as the symbol for each year.

### **Activity Steps:**

1. Show Lone Dog's Winter Count and share the background information with the group. ([http://nmai.sc.edu/sites/1/files/pdf/education/poster\\_lone\\_dog\\_final.pdf](http://nmai.sc.edu/sites/1/files/pdf/education/poster_lone_dog_final.pdf))
2. Have the group brainstorm about what some of the winter count symbols might mean. Share the explanations for the symbols from the winter count key.
3. Give each participant a sheet of paper and have them create their own winter count. They can choose what years they would like to show – years in school, for example. They will need to create a symbol for each year. Winter counts can be done as a row of symbols as well as the spiral form of Lone Dog's count.
4. Once completed, have the participants share the story behind the symbols on their winter counts with the group. Have them explain how they chose some of the symbols they used.

### Lone Dog's Winter Count



### Lone Dog's Winter Count Key

1. **1800-1801** Thirty Dakotas were killed by Crow Indians. In this chart, black lines always signify the death of Dakotas killed by their enemies.
2. **1801-1802** A human being with many marks was always the sign of an epidemic or some disease such as small pox or measles. The interpretation is, "many died of small pox."
3. **1802-1803** A Dakota stole horses with shoes on. This means the horses were taken directly from the Europeans or from some other Indians who had obtained them from the Europeans as the Indians never shod their horses.
4. **1803-1804** They stole "curly horses" or horses with curly hides, from the Crows.
5. **1804-1805** The Dakota had a calumet dance and then off on a war expedition.
6. **1805-1806** The Crows killed eight Dakotas.
7. **1806-1807** A Dakota kills an Arikara (Ree) just as he was about to capture an eagle.
8. **1807-1808** Red-Coat, a chief, was killed.
9. **1808-1809** The Dakota who had killed the Ree shown in this record for 1806-1807 was killed himself by the Rees.
10. **1809-1810** A chief, Little Beaver, set fire to a trading store and was killed.
11. **1810-1811** This picture has to do with Black Stone, the medicine man. The symbol is a white buffalo skull over his head.
12. **1811-1812** The circle is a dirt lodge, while the interior circles represent heads. Interpreted, it shows that 27 Arikaras or Mandans were killed in a dirt lodge by the Dakotas.
13. **1812-1813** The device is a lasso. Wild horses were run down and caught by the Dakotas.
14. **1813-1814** Whooping cough killed many.
15. **1814-1815** A Dakota kills an Arapaho in his lodge. The symbol represents a tomahawk stuck in the man's skull.
16. **1815-1816** The Sans Arcs make a dirt lodge at Peoria Bottom, near Pierre.
17. **1816-1817** "Buffalo were plenty." The symbol represents a side of buffalo.
18. **1817-1818** A trading post of dry timber was built at Ft. Pierre by Joseph La Frombois.

19. **1818-1819** The measles broke out and many died. (Note that the small pox epidemic represented in 1801-1802 showed larger marks on a human body.)
20. **1819-1820** Another trading post was built by La Conte also at Ft. Pierre.
21. **1820-1821** The trader, La Conte, gave Two Arrow a war dress for his bravery.
22. **1821-1822** This symbol represents a very brilliant meteor falling to earth.
23. **1822-1823** Another trading house was built at the mouth of the Bad River.
24. **1823-1824** The event portrayed is the attack of the US forces, accompanied by the Dakotas, upon the Arikara villages.
25. **1824-1825** Swan, chief of the Two-Kettle tribe, had all of his horses killed.
26. **1825-1826** Many Indians drowned in a horrible flood on the Missouri River. The symbol suggests heads appearing above a line of water.
27. **1826-1827** Indians died a strange death after eating a rotting buffalo carcass while on the warpath.
28. **1827-1828** Dead Arm, a Dakota, was stabbed by a Mandan and lost lots of blood.
29. **1828-1829** A white man named Chadron built a dirt lodge.
30. **1829-1830** A Yanktonai Dakota was killed by Bad-Arrow, or "Blackfoot" Lakota.
31. **1830-1831** Twenty-three were killed in a bloody battle with the Crows.
32. **1831-1832** One European named Le Beau, killed another named Kermel.
33. **1832-1833** Lone Horn broke his leg on a buffalo hunt.
34. **1833-1834** The great meteor shower observed all over the US on the night of Nov. 12 of that year.
35. **1834-1835** The chief Medicine Hide was killed.
36. **1835-1836** Lame Deer shot a Crow Indian with an arrow, drew it out, and show him again with the same arrow.
37. **1836-1837** Plenty of buffalo again.
38. **1837-1838** One hundred elk were killed on a big hunt.

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39. **1838-1839** A dirt lodge was built for Iron Horn.
40. **1839-1840** The Dakotas killed an entire village of Snake or Shoshoni Indians.
41. **1840-1841** The Dakotas made peace with the Cheyenne.
42. **1841-1842** Feather-in-the-Ear stole 30 spotted ponies.
43. **1842-1843** One Feather raised a large war party against the Crows.
44. **1843-1844** The Sans Arcs made medicine to bring the buffalo.
45. **1844-1845** The Minneconjous built a pine fort.
46. **1845-1846** Plenty of buffalo meat, which is represented as hung upon poles and trees to dry.
47. **1836-1847** Broken Leg died.
48. **1847-1848** Two Man was killed.
49. **1848-1849** Humpback was killed.
50. **1849-1850** The Crows stole a large drove of horses (it is said 800) from the Brules.
51. **1850-1851** An old woman was found in the belly of a killed buffalo cow.
52. **1851-1852** Peace with the Crows.
53. **1852-1853** The Nez Perce came to Lone Horn's lodge at midnight.
54. **1853-1854** Striped blankets brought by Europeans to the Indians.
55. **1854-1855** Brave Bear was killed.
56. **1855-1856** General Harney, with a hat, makes a treaty with the Dakotas. This was at Ft. Pierre in the spring of 1856.
57. **1856-1857** A man with four horns holds out the same kind of ornamented pipestem shown in the character for 1804-1805, it being his badge of office.
58. **1857-1858** The Dakotas killed a Crow woman. She is pierced by four arrows, and the peace made with the Crows in 1851-52 seems to have been short lived.
59. **1858-1859** Lone Horn made buffalo "medicine," doubtless on account of the scarcity of that animal.
60. **1859-1860** Big Crow, a Dakota chief, was killed by the Crows.

61. **1860-1861** The elk makes medicine.
62. **1861-1862** Buffalo were so plentiful that their tracks came close to the tipis.
63. **1862-1863** Red Feather, a Minneconjou, was killed.
64. **1863-1864** Eight Dakotas were killed by the Crows.
65. **1864-1865** Four Crows were killed by the Dakotas.
66. **1865-1866** Many horses died for want of grass.
67. **1866-1867** Swan, father of "White Swan," died.
68. **1867-1868** The flag indicates the treaty negotiations at Ft. Laramie that year.
69. **1868-1869** Texas cattle were brought into the country.
70. **1869-1870** There was an eclipse of the sun in August 1869.
71. **1870-1871** The circle is a Crow fort, nearly surrounded, and the weapons used were guns for it is bullets that are flying. All but one of the Crows was killed, and fourteen Dakotas.



## Quill Decorating

### Objectives:

- Participants will identify natural resources used by the Plains Indians
- Participants will show how Plains Indians used natural items in decorating
- Participants will create an original art project

### Standards:

South Dakota Social Studies Standards						
K	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>
	1.E.1.1	2.US.2.1 2.E.1.1	3.US.2.2 3.E.1.1	4.E.1.1	5.US.1.1 5.E.1.1	6.W.1.1 6.E.1.1

South Dakota Visual Arts Standards							
	K	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>
	benchmarks	benchmarks	benchmarks	benchmarks	benchmarks	benchmarks	benchmarks
Standard 1	2	2	2	2	2	2	2
Standard 3	2	2	2			2	2

**Timeframe:** 45-60 minutes

**Materials:** Provided by instructor or participants  
 colored toothpicks\*  
 feathers (optional)  
 Brown wrapping paper or paper bags  
 Glue

\* To color toothpicks, soak flat toothpicks in water for about five minutes and drain. Place toothpicks in small paper cups and add 5-10 drops of food coloring to each cup. A cupful of toothpicks can be dyed at once – just stir them around in the cup to distribute the color evenly. Use a separate cup for each color. Spread dyed toothpicks on paper towels to dry.

### Background Information:

The Plains Indians used materials found in their environment such as porcupine quills as decorating material. Porcupine quills are smooth hollow tubes with a barbed point on one end. After being colored with natural dyes made from plants or minerals, the quills were wrapped, braided, or sewn onto clothing and household objects. Quill designs were often geometric, using bars, oblongs and rectangles. Colored quillwork made clothing and household objects more decorative and personalized.

### Activity Steps:

1. Prior to class, dye toothpicks and cut one shirt shape from brown paper for each participant.
2. Put the colored toothpicks and feathers in a central location.
3. Have participants pick up toothpicks and feathers for their shirt design.
4. Each participant should work out a decorative pattern for their shirt. Toothpicks can be broken into smaller pieces if desired. Encourage participants to experiment and try several different designs before gluing the toothpicks and feathers in place.
5. Display the decorated shirts and have participants describe their design to the group.

## Pebble Patterns

### Objectives:

- Participants will observe and recreate visual patterns.
- Participants will recognize the importance of good observation skills in hunting.

### Standards:

Common Core Mathematics Standards						
K	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>
K.CC.6 K.MD.3 K.G.3 K.G.4	1.MD.4					

**Timeframe:** 30-45 minutes

### Materials:

Provided by Instructor or Participants

30 pebbles or paper pieces in various sizes, shapes and colors. Twigs, leaves and other natural elements can also be used.

Two towels

3 to 5 pattern charts prepared ahead of time.

Paper

Pencil

### Background Information:

Hunting buffalo and other game for food required good observation skills. Tracking wild animals meant looking closely for signs – bent grass, broken twigs on trees, tracks on the ground. Seeing and interpreting these signs could mean the difference between a successful hunt and having food or going hungry. This activity helps hone observation skills.

### Activity Steps:

1. Prepare 3 to 5 pattern charts that use the pebbles or paper pieces to form the patterns. Do this before meeting with the group.
2. Lay one towel down for the playing surface. Arrange one of the patterns on the towel and cover the pattern with the other towel. The number of pieces used and the complexity of the pattern can be adjusted to suit the group.
3. Have participants gather around the playing surface. Explain that this is an exercise in observation and memory. Remove the top towel and let participants see the pattern for 1-2 minutes.
4. Have participants draw the pattern they remember on their paper. Give them 4-5 minutes to do so.
5. Compare the drawings to the pattern chart.
6. Continue with the other prepared patterns. Or, have participants working either individually or in groups create an original pattern for the others to observe and recreate.
7. Discuss:
  - How well did the participants recreate the patterns they saw?
  - Were some patterns easier to remember than others?
  - How do good observation skills help in everyday life? Can those skills be improved?