

The North American Bison Lesson Plan

Topics:

1. The Buffalo (The North American Bison)
2. Plains Indians

Description:

This packet is designed as a preliminary lesson plan for teachers who plan to visit the Woolaroc Museum in Bartlesville, Oklahoma. This specific lesson plan focuses on the buffalo and Plains Indian tribes, both of which are represented at the Woolaroc Museum. The main purpose of these lesson plans is to develop the student's general knowledge of museum material in order to enhance student experience and interest of the museum.

Age/Grade of Audience: Low (Elementary 3-5)

Estimated Time of Lesson Plan:

Objective: Students will...

- Learn different biological and environmental characteristics concerning the North American bison.
- Learn different cultures and customs of the Plains Indians (including their relationship with the buffalo) and compare the Plains Indian communication tools (such as oral history and pictograms) to present day communication tools.
- Apply their knowledge of the bison and Plains Indians in order to complete a fill in the blank worksheet.
- Experience an example of Indian oral history and folklore.
- Create their own storyline through symbols and pictograms.
- Observe bison and Indian artifacts at the Woolaroc Museum and Wildlife Preserve.

This packet includes:

1. Introduction/ Background information of the Buffalo and the Plains Indian Tribes
2. A Lexicon of possible vocabulary words.
3. Maps
4. Worksheet to assess the general knowledge of the buffalo
5. "The Great Race" - Cheyenne folklore story, an example of oral history
6. Buffalo Hide Activity sheet
7. Plains Indian Pictograms
8. Buffalo Hide Template
9. Museum Information

Introduction of the Lesson

Materials:

One Sticky Note for every student in the class.

Activity:

Pass a sticky note to every student in the class. Ask them to write any information they might already know about the buffalo. When they are finished have them place their sticky notes on the board. Discuss some sticky notes with the class. This will give the teacher a good idea of what the kids already know about the buffalo, and it will allow the teacher to have some idea of what material he/she might need to emphasize in this lesson. After completed, begin explaining about the buffalo and the Plains Indian tribes.

Background of the North American Bison

In the Beginning

Around 20,000 B.C. Asia and America were connected by a piece of land called Beringia. The ancestors of the buffalo, the *bison occidentalis*, and other animals such as the moose, mammoth, caribou, and musk ox crossed over the icy land. This specific bison roamed and flourished from 11,000 until it became extinct around 5,000 B.C, leaving the bison we know today, as predecessor. But animals were not the only living creature that crossed into America. People who hunted the buffalo followed their main food source to the New World. Evidence of their presence is found by the stone tools they left behind for killing the buffalo, the Folsom and the Clovis points.

What is a Buffalo?

Technically, the creature we identify as the buffalo is really not a buffalo at all. It is actually called the North American bison. Buffalo are predominantly found in Africa, where as the North American bison is found only in North America. The African Buffalo also has fewer ribs and no hump. But the name, buffalo, is so widely accepted that any challenge to correct the mistake would be useless. The two names are used interchangeably throughout this material. The bison is the largest land animal in all of North America. Like cattle, bison have cloven hooves and travel in herds of twenty to thirty. This makes the bison cousins to the cattle. The male bison is called a bull, whereas the female bison is called a cow. Bulls can weigh up to 2,000 pounds and can reach a height of 6.5 feet, where as the cows can weigh around 1,100 pounds and can reach a height of about 5.5 feet. But size does not prohibit this creature from moving fast and far. Bison can jump six feet vertically and seven feet horizontally. They can also run up to 35 miles per hour.

A Home where the Buffalo Roam...

After traveling from Asia, the North American Bison moved into the Great Plains biome. This massive biome covers land from Canada to Mexico and the Rocky Mountains to the Missouri River. This region has many specific characteristics suitable to the buffalo. The bison's main food source comes from two specific short grasses: blue gramma, and buffalo grass. Unlike cattle, which might stand while they eat, bison keep walking, picking grass up on the way. Many times they hardly chew what they eat before swallowing. Later in the day, the food

will be brought back up from the stomach and chewed it more efficiently before swallowing. A bison eats up to thirty pounds of food each day, and 90% of all food consumed is grass. The other 10% is compiled of broadleaf plants, tree shoots, twigs, and leaves of trees and shrubs.

Plains Indians

The Plains Indians were wanderers, also known as nomads, because they followed the buffalo herds. Most of the time they moved their camp in the summer, spring and fall, but they stayed in one place for winter. At first, while the Indians were nomads, they lived in caves using chipped stone and bones for their tools. Gradually, the Indians began to learn how to plant seeds and grow crops, but they still followed the herds. After a long buffalo hunt, many times the Plains Indians would have a celebration and feast on fresh buffalo meat.

In the 1500's Spanish explorers came up from Mexico into the Great Plains area, in search for cities of gold. With them, they brought horses, a foreign animal to the Indians. From then on horses have become a crucial animal for wars and hunting. They could now follow the buffalo with more ease and swiftness.

Most Plains tribes had a council of leading men that made the decisions for the tribe. The Chief was not necessarily in charge of everything. His main job was to keep the peace. Sometimes the tribes would speak different languages. Native Americans developed a special sign language to communicate.

The Indian and the Buffalo

For over 12,000 years the Bison has been hunted by humans. When Columbus first landed, it is estimated that about 60 to 75 million Bison roamed North America. Over time different explorers, such as the Spanish and the Americans, observed the relationship between the Indians, specifically the Plains Indians, and the bison. The Indians followed the buffalo herds. Wherever the buffalo traveled the Indians followed, taking their temporary homes called tipis with them. The bison was the primary source of supplies and nutrients for the Indians. This single animal alone provided all the necessary materials needed for the Indians to survive.

The Indians had two different methods for hunting the buffalo. The easiest way to kill the buffalo was on horseback with bows and arrows. But before the Spanish introduced horses to America, Native Americans had to rely on different tactics for hunting. One method is the buffalo pound method, where the Indians would corner the buffalo in a ravine and kill them with spears. Another method would be to chase the buffalo off a cliff, either by starting a fire or dressing as wolves to scare them. After the bison had fallen and become maimed, the Indians would finish killing them with bows and arrows.

The Indians, however, respected the Buffalo. Every part of the buffalo was used as food or materials for the tribe. The horns were used for cups or spoons; the hair for headdresses, pillows or ropes. Buckskin was used for moccasins, cradles, bedding, clothes, and tipis. The rawhides were used for pouches and knife cases. And every inch of meat was eaten as food.

There were two main ways the Indians protected their stories and history. The first way was through storytelling. The second way was through pictograms. Pictograms are signs and symbols that are used to express an idea. Besides the practical uses of the hide, for tipis, rugs, and clothes, the buffalo hide also became a material for the Indians to paint pictograms. Often men would wear hides that told stories of raids, while the women painted geometric designs. But

most of the time stories were usually an account of history or folklore of the tribe, each written in pictures and symbols. Tipis also had paintings decorated with signs and symbols.

Reflective/Transition Questions: Compare the Plains Indian's uses of communication to today's communication devices. Here are some possible questions you can ask the kids.

1. What are the some ways the Plains Indians communicated or protected their stories and history? *Pictograms on buffalo hides, story-telling, and maybe even sign language*
2. What is the difference between a typical painting and a pictogram?
3. What are some ways we communicate? *Email, cell phones, etc.,*
4. What are some ways we protect our history or stories? *Books, internet, etc.,*
5. How are they different than the Plains Indians? *Faster, lasts longer, etc.,*

Now show the students an example of Oral History by telling the story "The Great Race"

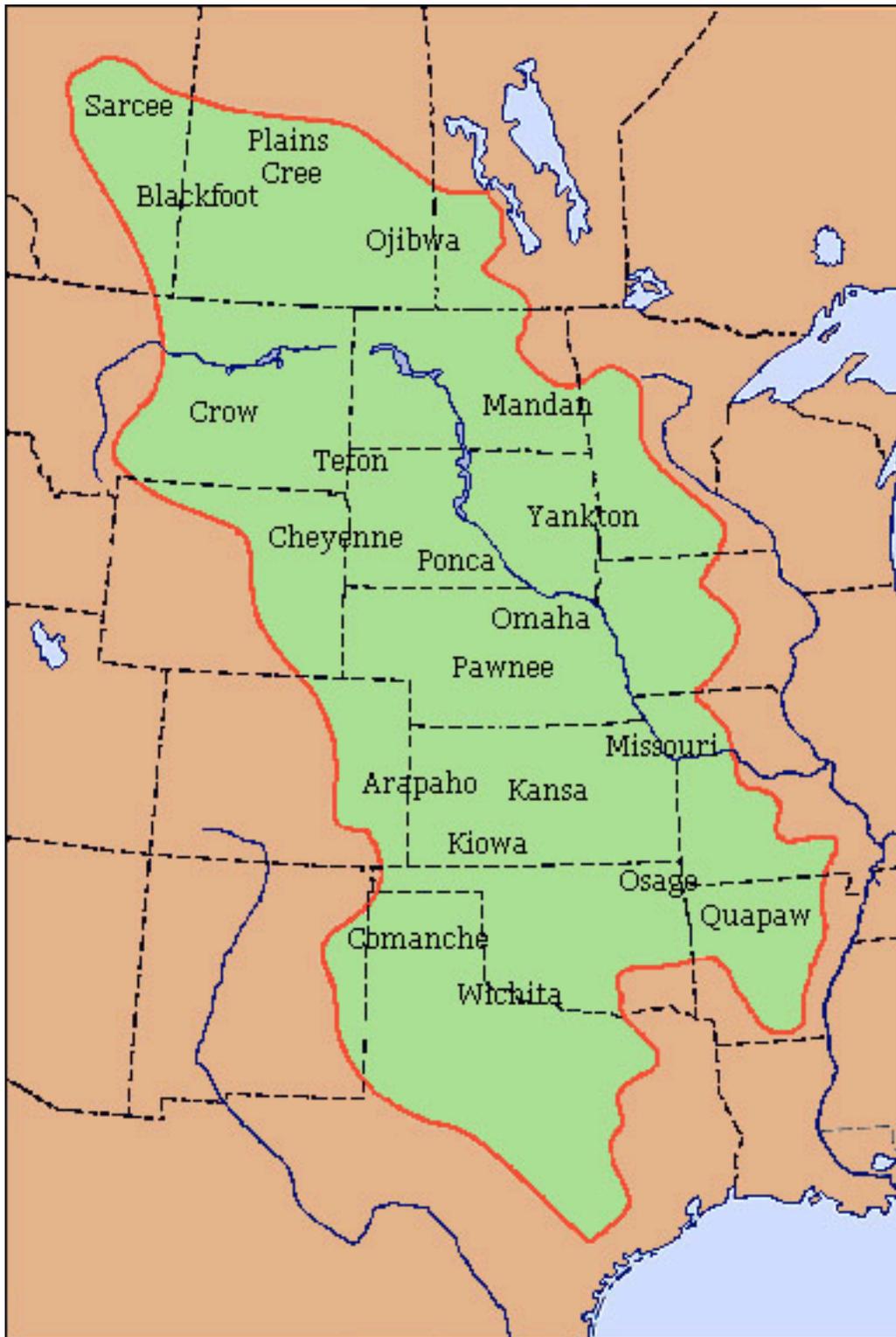
Vocabulary Words

1. **Bison** – buffalo; a North American mammal with a large head and a hump
2. **Cloven Hoof** – split hoof
3. **Bull** – a male bison
4. **Cow** – a female bison
5. **Vertically** – up and down
6. **Horizontally** – left and right
7. **Great Plains** – a large area in the middle of the United States
8. **Nomad** – a wanderer; a member of a tribe who has no permanent home, but moves different places for different seasons.
9. **North America** – One of the seven continents; Home of the United States
10. **Asia** – One of the seven continents
11. **Blue Gramma** - A short grass that lives in the Great Plains and it eaten by bison
12. **Buffalo Grass** - A short grass that grows in the Great Plains and is eaten by bison
13. **Pictogram** – a sign or symbol that conveys an idea
14. **Preservation** – A place where animals are protected and kept safe from harm
15. **Biome** – A large community of plants and animals
16. **Beringia** – Land mass that once connected North America to Asia

Beringia



The Great Plains





The North American Bison



Directions: Fill in the blanks with the correct answers from the text box. Not all of the words in the text box will be used. Do not repeat any words. Once the questions are completed, find the answers in the word search below.

Africa	Two	Great Plains	Six	Cow	Clovis
Asia	Seven	Tipis	Tents	Bison	Arrowhead
Buffalo Grass	Cliff	Bull	Thirty	Stories	Plains Indians

- The Bison, mammoth, moose, and other animals crossed over from _____ to America.
- The bison is a cousin to the _____.
- The Bison can jump _____ feet vertically and _____ feet horizontally.
- A male buffalo is called a _____. A female buffalo is called a cow.
- The biome where the Buffalo live is called the _____ region
- Buffalo feed mainly on _____ and blue gramma.
- A bison eats up to _____ pounds of food in one day.
- People have been hunting the _____ for over 12,000 years.
- Sometimes Indians killed the Buffalo by chasing them off a _____.
- _____ and Folsom points were connected to spears and then used to finish killing the Buffalo.
- The _____ used every part of the Bison for food or supplies.
- The Indians had temporary homes called _____, which are made from buffalo hides.
- Some buffalo hides have pictures and symbols painted on them, which help tell _____.

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

The Great Race

[Cheyenne Legend]

Excerpt taken from: American Indians: Myths and Legends, Edited by Richard Erdoes and Alfonso Ortiz. Pantheon Books: New York, 1984.

When the Great Mystery created the earth and all living things upon it, the people and the animals lived in peace. None, neither people nor animals, ate flesh. Now it happened in the course of many seasons that the buffalo began to think they were the most powerful beings in the world. They came to believe that this gave them the right to kill and eat other animals, and people as well. Then the people said: "This isn't fair; we humans and the buffalo were created equal. But if it happens that one or the other must be the most powerful, then it should be us!"

The Buffalo said. "Let's get this settled. We should have a contest to see whether we eat you or you eat us. How about a race?"

The people said: "But in a race you have an unfair advantage; two legs can't compete with four. Suppose we let the birds race for us. They have wings; you have four legs, that makes it more even."

The buffalo said "Agreed. We'll choose our fastest runner, and you choose some birds to race for you."

Then some of the other animals said: "We should have a chance to race too."

"That's right, it's only fair," said the buffalo and the people. So all living things went to a place at the edge of the Black Hills called Buffalo Gap. There they lined up for the race.

As their contestant the buffalo had chosen Running Slim Buffalo Woman, a young cow who was the fastest of all animals and had never been beaten in a footrace.

To race for them the human beings had chosen four birds; a hummingbird, a meadowlark, and a hawk, and a magpie.

Then the signal to race was given, and the crowd of runners started toward a hill which was the halfway point. Running Slim took off in a flash, with the buffalo cheering her on. For a while Hummingbird flew along with her, but soon he fell back exhausted and Meadowlark took over. Still, Running Slim kept far ahead, leading the great mass of racers with their thundering hooves. Though they had already covered a great distance Running Slim was fresh.

By the time Running Slim reached the halfway point, she and the lark were far ahead of the field. At the hill the umpires were shouting: "Now turn and race back to the starting point, to Buffalo Gap!" The Lark heard this and thought: "I can't make it that far." He dropped out of the race but already Hawk was coming on strongly.

Now Hawk, acknowledged to be the fastest of the birds, suddenly shot ahead of Running Slim. The people shouted for joy – but not for long. Hawk's endurance did not match his swiftness, and the sudden spurt exhausted him.

Again Running Slim came on, thundering ahead. With her deep chest, powerful legs, and great lungs, it seemed that she could keep up the pace forever. Then far in the rear a little black and white dot could be seen, coming up, flying hard. This was Magpie, a slow bird but strong-hearted and persevering. The buffalo herd paid no attention to Magpie; they were cheering their runner while the people watched silently.

At last Buffalo Gap came into sight. Powerful and confident as she was, Running Slim herself was beginning to slow down, though it was hardly noticeable. Even she was not even

aware of it, but ran along feeling sure that she would win. Then very slowly, imperceptibly, Magpie began to gain on her.

Buffalo Gap was closer now, though still a good way off, thought Running Slim. She could feel herself tiring. The buffalo were grunting and stomping, trying to encourage her. Magpie was still behind, but coming on steadily.

Now Buffalo Gap was near. Running Slim Buffalo Woman was really tired, but she gathered all her strength for the last spurt, thundering along, her heart close to bursting. By then, however, Magpie had come up even with her.

Both the buffalo and the people were cheering their racers on, calling out to them, yelling and stomping. So the two were speeding up, putting the very last of their strength into it – Running Slim Buffalo Woman and Magpie. Thus they neared the sticks, painted red, planted in the earth, which marked the finishing line. It was not until they were a hand breadth away from those sticks, at the last moment that Magpie finally shot ahead. The people gave a great shout of happiness, and both racers fell exhausted.

So the humans had won and the buffalo had lost. And ever since the people have respected the magpie, never hunting it or eating it. So the people became more powerful than the buffalo and all the other animals, and from that day on, people have hunted the buffalo for food.

Buffalo Hide Activity

Description: Students will gain a better understanding of the Plains Indian culture by developing and creatively decorating their own Plains Indians buffalo hide. With the buffalo hide, students will develop their own story using pictograms and symbols they designed themselves or those Native Americans used.

Age Level: Elementary (Grades 3-5)

Approximate time allowed for project: Varies

Materials needed:

- Large side of a brown paper bag
- Scissors
- Paints (These can be substituted for markers or permanent markers.)
- Smocks
- Water
- Paint Brushes
- Newspaper

Procedure

1. Pass out “Plains Indian Pictograms” sheet. This will allow students to be thinking of what they might want to put on their own buffalo hide. If needed, go over the sheet with the entire class.
2. Using the Buffalo Hide Template as a guide, prepare hide by cutting out the large side of a brown paper bag in a buffalo hide shape.
3. Once the buffalo hide is cut, wad the paper bag into a ball. Unfold. Repeat this step about 25 times or until a “soft hide” is created. While wadding up the paper, have the students think of a story they want to paint on their buffalo hide.
4. Lay down newspaper on a table.
5. Prepare paints and place on Newspaper.
6. Lay hide on newspaper.
7. After putting on a smock, use a paint brush to create a storyline for your hide. Use the pictograms provided on the “Plains Indian Pictograms” sheet. If a pictogram is not provided, have the students create their own.
8. When finished allow to dry in a designated area.
9. Clean area.

Suggestions: *Use a different media other than paint, such as markers or colored pencils. This will eliminate most of the mess and clean up. If another type of media other than paint is used, adjust materials as necessary.*

Plains Indian Pictograms

These are actual Pictograms that the Plains Indian tribes used on buffalo hides.



Tipi



Storm



Hunting/War



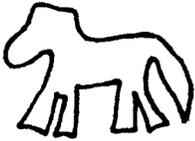
Bear



Desert/Cactus



Bird



Horse



Rain



Man



Woman



Day/Sun



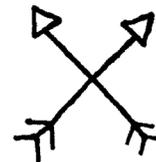
Moon/Night

Now create your own pictograms in the space below.

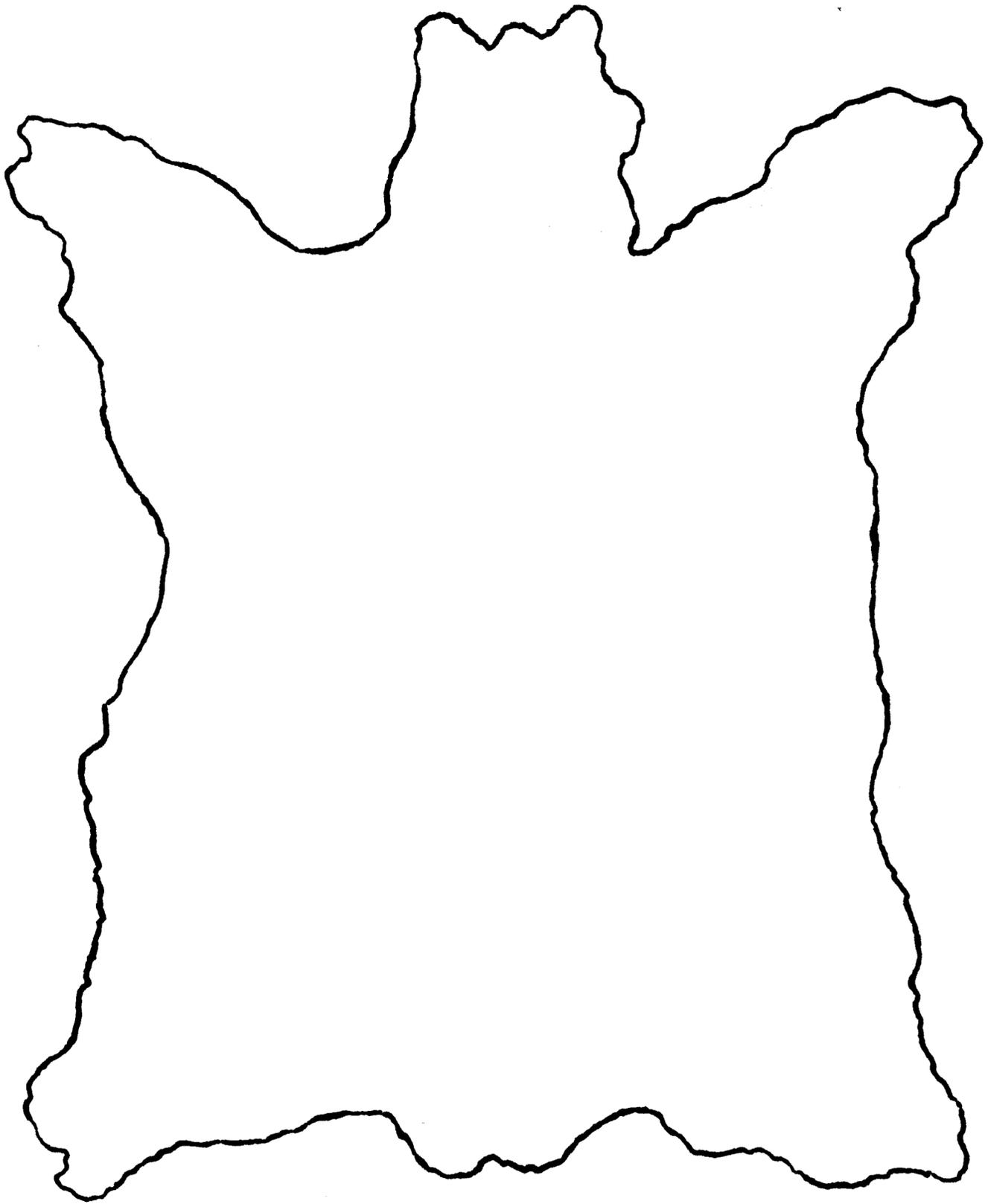
Here are two examples of illustrated stories using pictograms.



I like to play soccer on sunny afternoons.



It stormed all night while the men were hunting.



Buffalo Hide Template

At Woolaroc

Woolaroc offers a variety of items for students to observe. In the museum there are many paintings of buffalo, buffalo raids, and Plains Indians as well as sculptures and stuffed buffalo heads. There are also tools that Indians created out of buffalo.

At the Prairie Dome Café, you can enjoy a real buffalo burger.

The Woolaroc museum sits on Frank Phillips property which is the home of hundreds of wildlife animals. Woolaroc is noted for being a wildlife preserve and there are about one hundred buffalo currently on the property. So bring your cameras and get ready to see some buffalo and experience the way of life of the Plains Indians.