



# Putting it to Good Use

## **Audience**

Activity designed for ages 12 and up.

## **Goal**

Students will be able to understand importance of bison in the Native American culture.

## **Objective**

- To calculate how much a bison eats.
- To examine the physical capabilities of bison.
- To use critical thinking skills to identify how Native Americans used different parts of the bison

## **Conservation Message**

Around 150 years ago, there were around 30 million bison that roamed the United States. In the early 1800s, bison were overhunted for their meat, fur and hides. By the late 1980s, less than a 1000 bison remained. Today the bison population is around 30,000 individuals. Bison are a keystone species that help create habitat on the Great Plains for many different species, including grassland birds and a variety of plant species. As bison forage, they aerate the soil with their hooves, which aids in plant growth and disperse native seeds, helping to maintain a healthy, balanced ecosystem. By supporting your local wild preserves and refuges you can help the bison population thrive in Oklahoma.

## **Background Information**

Bison are huge mammals that live in the Great Plains of the United States. These grazing herbivores can weigh over 2,000 pounds! They communicate through grunts to maintain contact with each other and will snort to warn intruders. Bison are year-round grazers. They feed primarily on grasses, but will also consume flowering plants, lichens and woody plant leaves depending upon availability. They have an excellent sense of hearing and smell but cannot see very well. This poor eyesight can cause an entire herd of bison to stampede if startled. Bison have cloven hoofs and can reach speeds of 30 miles per hour. They are also great swimmers, crossing flowing rivers with ease.

When bison populations were still in the millions, Native American tribes that lived in the Great Plains relied heavily on the bison. They would use every part of the bison; nothing would go to waste! The Plains Indians had more than 150 different uses for the various bison parts. The bison provided them with meat for food, hides for clothing and shelter, and horns and bones for tools. Post hunt ceremonies were performed to thank the spirits for the bison that were killed, and the Plains Indians were thankful for the gifts the bison provided them every day.

**Materials Needed**

- Bison Math Worksheet
- Bison Items Worksheet
- Video of Bison Parts
- Pen/pencil

**Length of Activity**

30 minutes

**Procedure**

- With the Bison Calculations Worksheet, discover some interesting facts about bison.
- With the Bison Items Worksheet, make predictions as to how Native Americans used different bison parts. To give you a good look at each bison part, watch this video [CLICK HERE](#).



## Bison Calculations

### Example Problem:

A bison eats 30 pounds of vegetation a day. The average cheeseburger weighs around 6 ounces. How many cheeseburgers would you have eat to consume as much as a bison?

There are 16 ounces in a pound.

$$\frac{30 \text{ lbs}}{1 \text{ lbs}} \times \frac{16 \text{ ounces}}{1 \text{ ounces}} \times \frac{480 \text{ ounces}}{6 \text{ ounces}} = 80 \text{ cheeseburgers}$$

1. A bison eats 30 pounds of vegetation a day. The average chicken nugget weighs around 16 grams. How many chicken nuggets would you have to consume to eat as much as a bison?

There are 454 grams in a pound. Round to the nearest whole number.

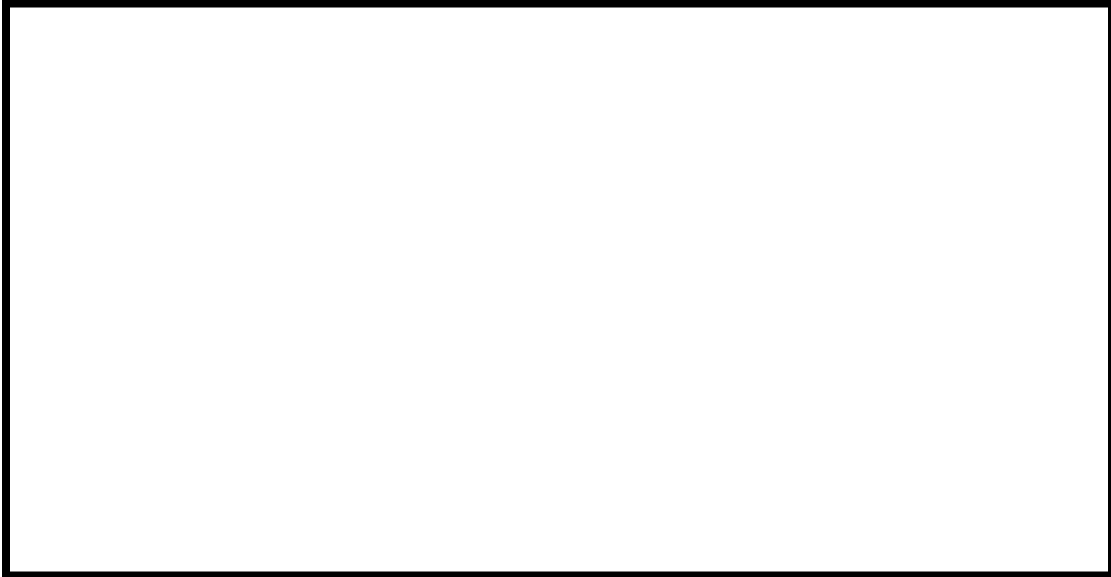
Work space:

2. Bison can run 35 miles per hour. How long would it take a bison to run from Tulsa to Oklahoma City?

It is 105 miles from Tulsa to Oklahoma City.

$$d = \frac{r}{t} \quad d=\text{distance}, r=\text{rate}, t=\text{time}$$

Work space:



3. Bison can jump 4.3 meters horizontally. How many jumps would it take a bison to jump 1 mile?

There are 1609 meters in 1 mile. Round to the nearest whole number.

Work space:





# Bison Items

Item #1: Fur

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Item #2: Bones

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Item #3: Horn

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Item #4: Bladder

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## Bison Math Answer Sheet

$$1. \frac{30 \text{ lbs}}{1 \text{ lbs}} \times \frac{454 \text{ grams}}{1 \text{ lbs}} \times \frac{13620 \text{ grams}}{16 \text{ grams}} = 851.25 \text{ nuggets}$$

*Correct Answer: 851 chicken nuggets*

$$2. 105 \text{ miles} = 35 \text{ mph} \cdot \text{time}$$
$$\frac{105}{35} = 3$$

*Correct Answer: 3 hours*

$$3. \frac{1609 \text{ meters}}{4.3 \text{ meters}} = 374.19 \text{ jumps}$$

*Correct Answer: 374 jumps to jump 1 mile*