

The Early Bison Hunt: Lesson Plan

Objective: Students will understand that changes in technology have led to different bison hunting techniques over time.

Grade Levels: K-4, 7

Applicable TEKS:

1. Kindergarten Social Studies
 - a. (12) Science, technology, and society. The student understands ways technology is used in the home and school and how technology affects people's lives. The student is expected to:
 - (A) identify examples of technology used in the home and school;
 - (B) describe how technology helps accomplish specific tasks and meet people's needs; and
 - (C) describe how his or her life might be different without modern technology.
 - b. (13) Social studies skills. The student applies critical-thinking skills to organize and use information acquired from a variety of valid sources, including technology. The student is expected to:
 - (A) gather information about a topic using a variety of valid oral and visual sources such as interviews, music, pictures, symbols, and artifacts with adult assistance; and
 - (B) sequence and categorize information.
 - c. (14) Social studies skills. The student communicates in oral and visual forms. The student is expected to:
 - (A) place events in chronological order;
 - (B) use social studies terminology related to time and chronology correctly, including before, after, next, first, last, yesterday, today, and tomorrow;
 - (C) express ideas orally based on knowledge and experiences; and
 - (D) create and interpret visuals, including pictures and maps.
 - d. (15) Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes to identify a problem, gather information, list and consider options, consider advantages and disadvantages, choose and implement a solution, and evaluate the effectiveness of the solution.

2. 1st Grade Social Studies

- a. (15) Science, technology, and society. The student identifies individuals who created or invented new technology and understands how technology affects daily life, past and present. The student is expected to:
 - (A) describe how technology has affected the ways families live;
 - (B) describe how technology has affected communication, transportation, and recreation
- b. (16) Social studies skills. The student applies critical-thinking skills to organize and use information acquired from a variety of valid sources, including technology. The student is expected to:
 - (A) gather information about a topic using a variety of valid oral and visual sources such as interviews, music, pictures, symbols, and artifacts with adult assistance; and
 - (B) sequence and categorize information.
- c. (17) Social studies skills. The student communicates in oral, visual, and written forms. The student is expected to:
 - (A) use a simple timeline to distinguish among past, present, and future;
 - (B) use a calendar to describe and measure time in days, weeks, months, and years;
 - (C) express ideas orally based on knowledge and experiences;
 - (D) create and interpret visual and written material; and
 - (E) use social studies terminology correctly.
- d. (18) Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes to identify a problem, gather information, list and consider options, consider advantages and disadvantages, choose and implement a solution, and evaluate the effectiveness of the solution.

3. 2nd Grade Social Studies

- a. (13) Science, technology, and society. The student understands how science and technology have affected life, past and present. The student is expected to:
 - (A) describe how science and technology have affected communication, transportation, and recreation; and
 - (B) explain how science and technology have affected the ways in which people meet basic needs.
- b. (15) Social studies skills. The student applies critical-thinking skills to organize and use information acquired from a variety of valid sources, including technology. The student is expected to:
 - (A) gather information about a topic using a variety of valid oral and visual sources such as interviews, music, pictures, maps, and artifacts; and
 - (B) interpret oral, visual, and print material by sequencing, categorizing, identifying the main idea, predicting, comparing, and contrasting.

- c. (16) Social studies skills. The student communicates in written, oral, and visual forms. The student is expected to:
 - (A) describe the order of events by using designations of time periods such as historical and present times;
 - (B) apply vocabulary related to chronology, including past, present, and future;
 - (C) create and interpret timelines for events in the past and present;
 - (D) use social studies terminology correctly;
 - (E) express ideas orally based on knowledge and experiences; and
 - (F) create written and visual material such as stories, maps, and graphic organizers to express ideas.
- d. (17) Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes to identify a problem, gather information, list and consider options, consider advantages and disadvantages, choose and implement a solution, and evaluate the effectiveness of the solution.

4. 3rd Grade Social Studies

- a. (13) Science, technology, and society. The student understands how individuals have created or invented new technology and affected life in various communities, past and present.
- b. (14) Social studies skills. The student applies critical-thinking skills to organize and use information acquired from a variety of valid sources, including technology. The student is expected to:
 - (A) gather information, including historical and current events and geographic data, about the community using a variety of resources;
 - (B) interpret oral, visual, and print material by sequencing, categorizing, identifying the main idea, distinguishing between fact and opinion, identifying cause and effect, comparing, and contrasting; and
 - (C) interpret and create visuals, including graphs, charts, tables, timelines, illustrations, and maps.
- c. (15) Social studies skills. The student communicates in written, oral, and visual forms. The student is expected to:
 - (A) use social studies terminology correctly;
 - (B) create and interpret timelines;
 - (C) apply the terms year, decade, and century to describe historical times;
 - (D) express ideas orally based on knowledge and experiences; and
 - (E) create written and visual material such as stories, pictures, maps, and graphic organizers to express ideas.
- d. (16) Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes to identify a problem, gather information, list and consider options, consider advantages and disadvantages, choose and implement a solution, and evaluate the effectiveness of the solution.

5. 4th Grade Social Studies

- a. (1) History. The student understands the origins, similarities, and differences of American Indian groups in Texas before European exploration. Student is expected to:
 - (A) explain the possible origins of American Indian groups in Texas;
 - (B) identify and compare the ways of life of American Indian groups in Texas before European exploration such as Lipan Apache, Karankawa, Caddo, & Jumano;
 - (C) describe the cultural regions in which American Indians lived such as Gulf, Plains, Puebloan, and Southeastern; and
 - (D) locate American Indian groups remaining in Texas such as the Ysleta Del Sur Pueblo, Alabama-Coushatta, and Kickapoo.
- b. (4) History. The student understands the political, economic, and social changes in Texas during the last half of the 19th century. The student is expected to:
 - (A) describe the impact of the Civil War and Reconstruction on Texas;
 - (B) explain the growth, development, and impact of the cattle industry such as contributions made by Charles Goodnight, Richard King, and Lizzie Johnson;
 - (C) explain the effects of the railroad industry on life in Texas, including changes to cities and major industries; and
 - (D) explain the effects on American Indian life brought about by the Red River War, building of U.S. forts and railroads, and loss of buffalo.
- c. (9) Economics. The student understands the basic economic activities of early societies in Texas. The student is expected to:
 - (A) explain the economic activities various early American Indian groups in Texas used to meet their needs and wants such as farming, trading, and hunting; and
 - (B) explain the economic activities early settlers to Texas used to meet their needs and wants.
- d. (19) Social studies skills. The student applies critical-thinking skills to organize and use information acquired from a variety of valid sources, including technology. The student is expected to:
 - (A) differentiate between, locate, and use valid primary and secondary sources such as technology; interviews; biographies; oral, print, and visual material; documents; and artifacts to acquire information about Texas;
 - (B) analyze information by applying absolute and relative chronology through sequencing, categorizing, identifying cause-and-effect relationships, comparing, contrasting, finding the main idea, summarizing, making generalizations and predictions, and drawing inferences and conclusions;
 - (C) organize and interpret information in outlines, reports, databases, and visuals, including graphs, charts, timelines, and maps; and
 - (D) identify different points of view about an issue, topic, historical event or current event.
- e. (21) Social studies skills. The student communicates in written, oral, and visual forms. The student is expected to:
 - (A) use social studies terminology correctly;
 - (B) incorporate main and supporting ideas in verbal and written communication;
 - (C) express ideas orally based on research and experiences; and
 - (D) create written and visual material such as journal entries, reports, graphic organizers, outlines, and bibliographies.

6. 7th Grade Social Studies

- a. (2) History. The student understands how individuals, events, and issues through the Mexican National Era shaped the history of Texas.
- b. (6) History. The student understands how individuals, events, and issues shaped the history of Texas from Reconstruction through the beginning of the 20th century. The student is expected to:
 - i. (A) identify significant individuals, events, and issues, including the factors leading to the expansion of the Texas frontier, the effects of westward expansion on American Indians, the buffalo soldiers, and Quanah Parker
 - ii. (C) identify significant individuals, events, and issues, including the effects of the growth of railroads and the contributions of James Hogg
- c. (19) Science, technology, and society. The student understands the impact of scientific discoveries and technological innovations on the political, economic, and social development of Texas. The student is expected to:
 - i. (A) compare types and uses of technology, past and present
 - ii. (D) evaluate the effects of scientific discoveries and technological innovations on the use of resources such as fossil fuels, water, and land
- d. (20) Social studies skills. The student applies critical-thinking skills to organize and use information acquired through established research methodologies from a variety of valid sources, including technology. The student is expected to:
 - i. (A) differentiate between, locate, and use valid primary and secondary sources such as media and news services, biographies, interviews, and artifacts to acquire information about Texas;
 - ii. (B) analyze information by applying absolute and relative chronology through sequencing, categorizing, identifying cause-and-effect relationships, comparing, contrasting, finding the main idea, summarizing, making generalizations and predictions, and drawing inferences and conclusions;
 - iii. (C) organize and interpret information from outlines, reports, databases, and visuals, including graphs, charts, timelines, and maps

The Early Bison Hunt: Pre-Visit Activity

Materials:

- Image 1: Atlatl
- Watch video “How to Throw an Atlatl” by National Geographic <https://www.youtube.com/watch?v=NHgUMUk3YwY>
- Image 2: Clovis spear points
- Image 3: Hunting Tactics Before Horses
- Image 4: Bow and Arrow on Horseback
- Image 5: Parts of an Arrow
- Reading Passage - Francis Parkman
- Image 6: Firearms and the Railroad

Type of Activity: Varied based on grade level:

1. Elementary: Teacher-led discussion of shifts in hunting technology, reinforced with worksheet
2. Secondary: Document-Based Question

Elementary Instructions:

1. Begin a class discussion by asking students if they know what a bison (aka buffalo) is and if they know how people used to hunt them. **Have students record their responses under Question 1 in the worksheet.** Display Image 1 and Image 2, as well as the video of hunting with an atlatl, explaining that this was one of the earliest tools used for hunting bison. The points were fashioned out of stone, such as obsidian, chert or jasper. Early hunters would mount the points onto the end of a spear and propel it with an atlatl.
2. Ask students to imagine themselves as an early human hunter with nothing but an atlatl. What strategies would you use to hunt safely and successfully? **Have students record their responses under Question 2 in the worksheet.** Explain that spears could be used only in close proximity and at great risk to the hunter. To simply sneak up on a herd and take down an animal was very difficult and dangerous. Bison can run up to 35 miles per hour and they have sharp horns and powerful feet. It would take many spears thrown very hard and at just the right points to take down a full-sized bison. Early humans learned special techniques for successfully hunting bison. Display Image 3 and ask students to evaluate this strategy. There were other strategies that were used as well. For example, a group of hunters might drive the herd of bison into a ravine, a narrow canyon, or a river to make an effective trap.
3. Display Images 4 and 5. Explain that as technology advanced, people developed new tools, such as the bow and arrow, which changed the way bison were hunted. At first, arrow points continued to be made of stone, but trade with European settlers eventually introduced metal arrowheads. In addition, explain that there were no horses in North America until the Spanish explorers brought them over in the late 1400s. Ask students to imagine how hunting bison would have been different with bows and arrows versus

atlatls, and horses versus on foot. **Have students record their responses under Question 3 in the worksheet.**

4. **Display the Reading Passage. Read out Question 4 from the worksheet and have students record their responses.**
5. **Display Image 6. Discuss how this represents a significant change in hunting techniques and how technology continued to evolve. Ask students to consider the long-term consequences of these hunting tactics. **Have students record their responses under Question 5 in the worksheet.****
6. **Extension: Divide the students into small groups. Give each group a piece of paper and ask them to draw a timeline. Have them place the atlatl, Clovis spear points, horses, bow and arrow, and firearms on the timeline in chronological order. Encourage them to add any other important technological advancements they know of. Have each group present their timeline to the class.**

Secondary Instructions:

1. The secondary version of this activity is designed to be more independent and student-centered, but the teacher can certainly use the information and worksheet from the elementary version to activate prior knowledge or fill information gaps.
2. Distribute copies of Images 1-6 and the Reading Passage to each student, or otherwise find a way that each student can view the materials. Have students watch the atlatl video as well.
3. Ask students to respond to the following prompt on paper or in a word processor on their school device, using the materials from Step 2 as evidence: **“Explain how innovations in technology impacted the way in which humans hunted bison in North America.”**
4. Students should attempt to use all or most of the documents as evidence in their response. The recommended response length is 3-5 paragraphs. The exact number of documents used, as well as the target length of the response, ultimately falls to teacher discretion.

The Early Bison Hunt: Student Worksheet

Instructions: Your class is talking about how changes in technology affected the way in which humans hunted bison over time. At certain times, your teacher will pause the discussion and ask you to write down your thoughts in response to certain questions. Please record your answers in the spaces below.

1. Brainstorm: What tools would be effective in taking down a large animal like a bison?

2. Imagine that you are an early human hunter, armed only with the weapon from the video. What are some potential strategies you could employ to successfully hunt a bison?

3. Over time, many Native Americans started using the bow and arrow for hunting bison. After horses were introduced to the Americas following European contact, they also rode on horses. What advantages would these new technologies have over previous hunting methods?

4. Humans invented firearms over 500 years ago, but in the early days they were slow and inefficient. By the 1800s, however, the effectiveness of firearms was much improved. Based on your own knowledge and the description found in the reading passage, how did firearms impact the way in which humans hunted bison?

5. Take a look at Image 6, which depicts people shooting bison from a train. What might be the long term consequences of hunting bison in such a manner?

Image 1

Atlatl



A hunter uses an atlatl to launch a spear at a prehistoric bison.
Illustration courtesy of National Park Service/Patrick Myers. Public Domain

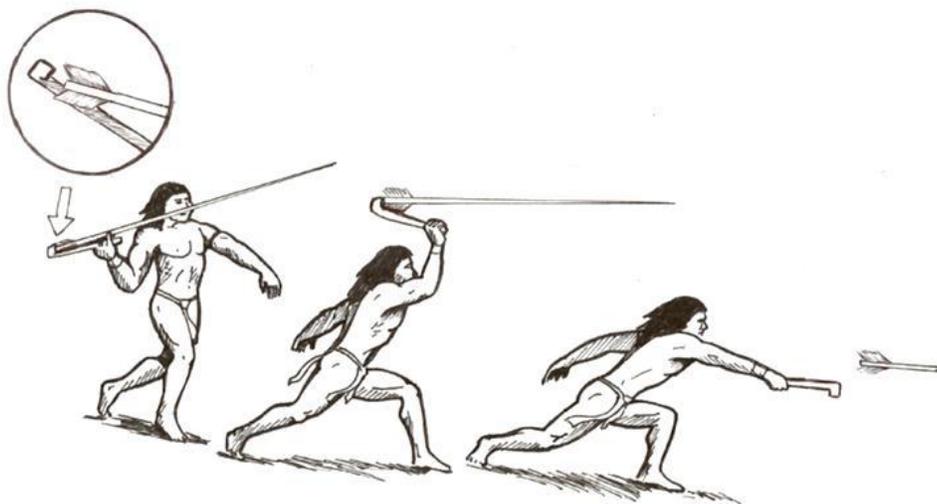


Image 2

Clovis Spear Point



These stone spear points are associated with early modern humans in North America between roughly 13,500–13,000 years ago. The Clovis points would be attached to a spear or dart and thrown using an atlatl.

Image courtesy of Emma Groeneveld, World History Encyclopedia. Public Domain.

Image 3



“Stalking buffalo in wolf skins” by George Catlin (1796–1872)
Image courtesy of Smithsonian American Art Museum. Retrieved from: commons.wikimedia.org

Image 4

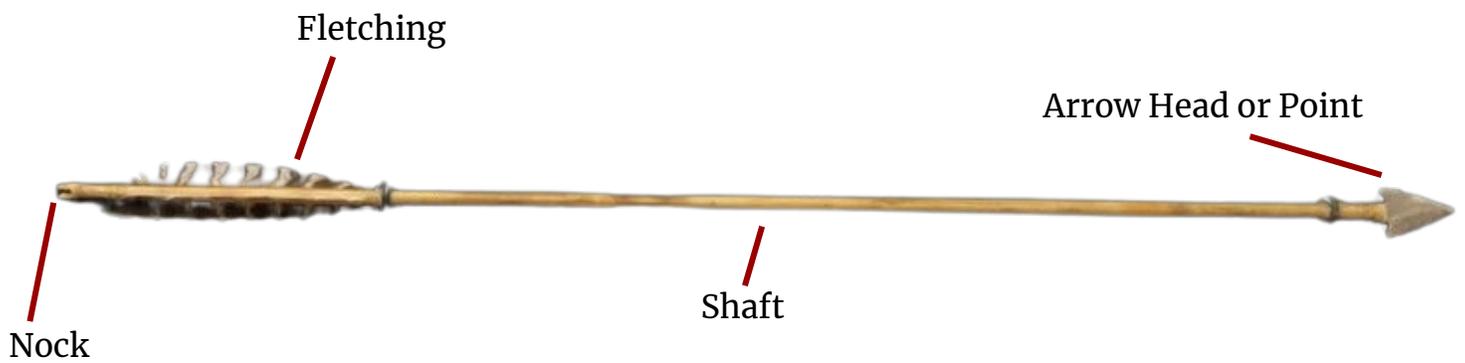
Bow and Arrow



“Buffalo Hunt, Chase” lithograph by George Catlin, 1884.
Image courtesy of Smithsonian Art Museum. Public Domain.

Image 5

Parts of an Arrow



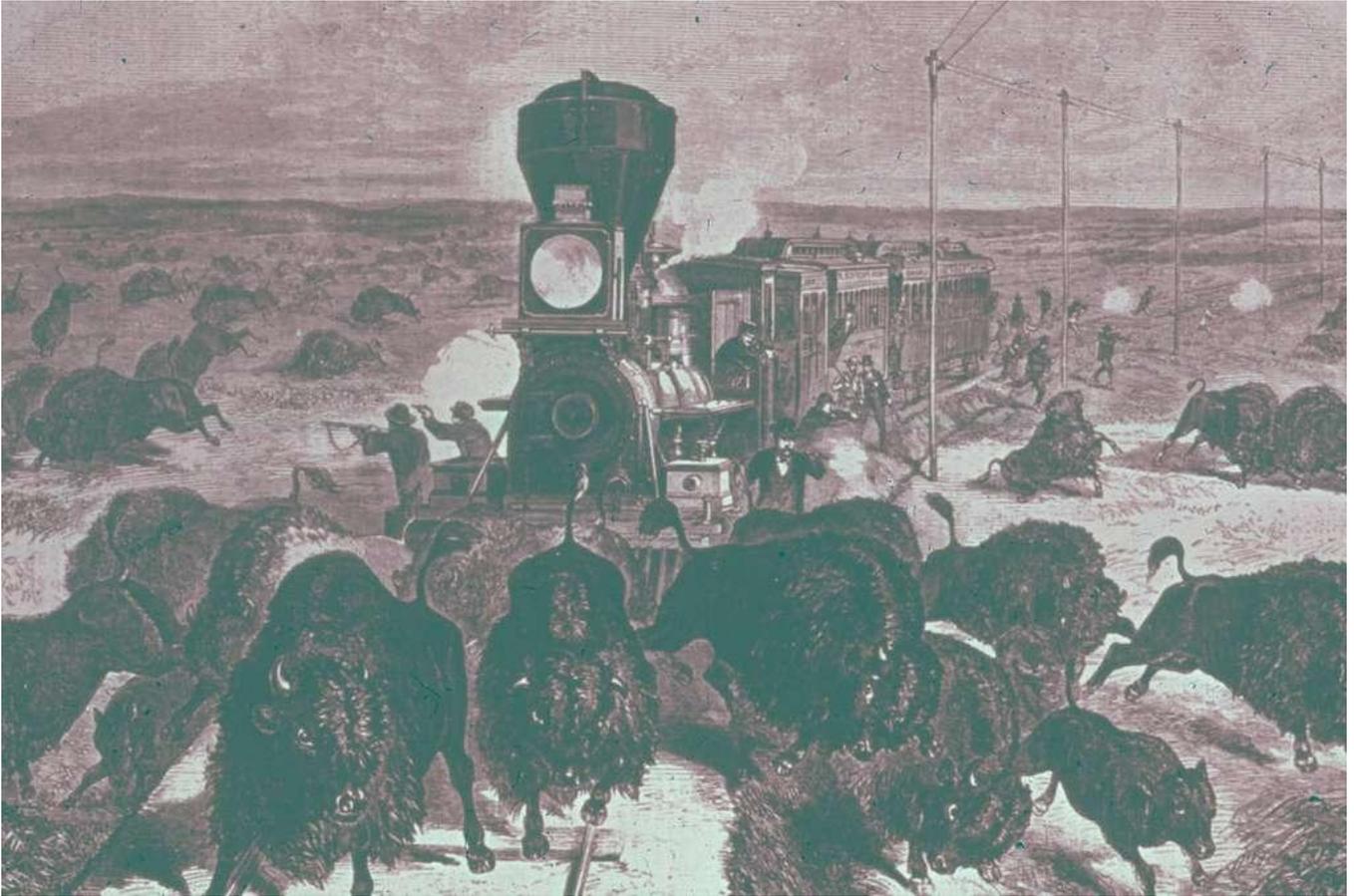
Reading Passage

Excerpt from Francis Parkman's book, *The California and Oregon Trail* (1849)

“In the midst of the flying herd, where the uproar and the dust are thickest, it never wavers for a moment; he drops the rein and abandons his horse to his furious career; he levels his gun, the report sounds faint amid the thunder of the buffalo ... A practiced and skillful hunter, well mounted, will sometimes kill five or six cows in a single chase, loading his gun again and again as his horse rushes through the tumult. An exploit like this is quite beyond the capacities of a novice...With a bold and well trained horse the hunter may ride so close to the buffalo that as they gallop side by side he may reach over and touch him with his hand; nor is there much danger in this as long as the buffalo's strength and breath continue unabated; but when he becomes tired and can no longer run at ease, when his tongue lolls out and foam flies from his jaws, then the hunter had better keep at a more respectful distance; the distressed brute may turn upon him at any instant; and especially at the moment when he fires his gun.”

Image 6

Firearms and the Railroad



People shoot at a herd of bison from a railroad. The illustration is from *Frank Leslie's Illustrated Newspaper* published June 3, 1871.
Image courtesy of Library of Congress.