A close-up of a sign

Description automatically generated with low confidenceThe Original Coloradans Kit

Teacher Background Information

Introduction to the Paleoindian Period

>14,000 – 9,000 years ago

**Topics Included:**

- The Ice Age

- Migration into North America

- Technology and Lifestyle

- Sites in Western Colorado

**Student objectives:** Understand how the earliest inhabitants of North America arrived on the continent and how they survived during the Ice Age.

**Tips:** Teachers are encouraged to use the lesson plans and artifacts included in trunk for classroom learning.

**THE ICE AGE**

The history of the Paleoindians begins in the later part of Pleistocene epoch, also known as the Ice Age. During the ice age, climate oscillated between glacial periods, where massive sheets of ice covered much of the European, Asian and North American continents, and interglacial periods where ice and snow remained year-round only at the poles like today. In fact, we are still in the Ice Age! For much of the Earth’s history, it has been too warm for there to be any ice or snow year-round at the poles or on high mountains. The land isn’t the only thing affected by ice and snow, while the planet was in a glacial period, sea level dropped because much of the Earth’s water was trapped in glacial ice. As the planet warmed during interglacial periods, melting glaciers caused the sea level to rise.

How do scientists know which part of the continents were covered by glaciers, and which parts were not? Despite melting away, glaciers still leave their mark on the landscape. They can carve out wide, U-shaped valleys (instead of the narrow V-shaped valleys created by rivers). They also can gouge bowl-shaped depressions on the sides of mountains called cirques. Glaciers transport rocks and sediments that are left behind as they melt in the form of moraines. They can also transport large boulders and leave them in an otherwise flat area. As glaciers move past rock, they can also leave scratch marks called striations.

The changing climate and landscape also brought changes in the plants and animals living in North America at the time. While many of the animals and plants were the same as those we see today, they may have been found in different locations or over a wider (or smaller) range than today. The biggest difference in the animal communities would have been the presence of large animals or megafauna. Paleoindians would have had to share the landscape with giant animals such as mammoths, mastodons, large ground sloths and bison. They would have had to be wary of large predators such as saber-toothed cats, giant short-faced bears, American lions and dire wolves. These large animals completely died by the time the last glaciers receded approximately 11,700 years ago. The reasons for this are complex and cannot be attributed to a single cause. However, the changing climate and interactions with humans are considered by scientists to have had an influence on the extinctions.

**MIGRATION INTO NORTH AMERICA**

Paleoindians were the first people in North America. Native people living in North America today believe they have always lived here, and they have creation stories that reflect those beliefs. Scientific evidence shows that they have indeed lived here for quite a long time. Recent genetic studies have shown that Native North Americans separated from their northeast Asian ancestors between 24,900 – 18,400 years ago and expanded their range through North America between 16,000 – 13,000 years ago. Archaeological evidence supports human migration into North America by at least 14,000 years ago with new discoveries potentially shifting the date further back in time. This is quite a long time by human standards!

How did people make their way to North America so long ago? We are not entirely sure, but scientists have found evidence for multiple forms of potential entry into the continent. The different hypotheses for migration into North America fall into two different categories. The first category is the Ice Free Corridor. In this model, humans were believed to have crossed over from northeast Asia via a land bridge that connected the two continents, connecting what is now Siberia and Alaska. The land bridge would have been present during the last glacial period when sea levels were lower. Geologic and archeological studies have shown that there was a narrow corridor of land that was not covered by ice approximately 15,000 years ago. Humans could have traveled through this area and subsequently populated North America over the course of thousands of years. There are potential obstacles associated with travel along the Ice Free corridor. It would have been quite cold, and terrain would have been difficult for humans to travel. The amount of game animals in the cold region between massive glaciers may not have been enough to sustain humans.

The second category is the North Pacific Coastal Route model. More recent evidence has shown that humans living in northeast Asia were able to construct boats and travel along the coast, eventually reaching the Americas. Waters along the coast would have been rich in nutrients, providing food like kelp to fish that would have also fed humans. Traveling by boat along the coast would have been a quicker, and easier route than walking along the Ice Free Corridor; however, there also would have been obstacles. Sea ice and volcanism could have been potential hazards faced by those who traveled by this route.

While there is some disagreement among archaeologists as to which route was the likely path for the first people to occupy North America, most scientists agree that it was some combination of the two that led to the arrival and dispersal of the original inhabitants of the continent.

**TECHNOLOGY AND LIFESTYLE**

Paleoindians were not a single culture, but rather several cultures living at the same time and interacting with one another through trade. In general, Paleoindians were hunter gatherers who survived by foraging for food. Their diet most likely consisted a broad range of plants and prey animals, regularly including small animals such as rabbits and birds and medium sized animals such as horse, camel, deer, mountain sheep, and pronghorn. On rare occasions, when the conditions were right, they would have also hunted larger prey like mammoths, mastodons, giant bison, or large ground sloths.

Paleoindians used a variety of tools made from stone, bone, antlers, and ivory. Tools made from materials other than stone are difficult to find because, unless the conditions were right for preservation, those materials would have decayed or rotted away. Despite this, archaeologists have found evidence for a variety of Paleo-Indian technology. Bone needles have been found at various sites, along with bone, ivory and antler rods that were used as awls, cooking instruments and to offset weight for spears. Evidence has also been found that shows that Paleoindians wore jewelry, made fire pits, built shelter, and used pigments as paints or dye.

Stone tools are more common than those made from organic material. These can include grinding stones and projectile points. Two of the best known styles of Paleo-Indian projectile points are the Clovis point and the Folsom point. Both of these points were named from different sites in New Mexico where they were first encountered by non-Native people. Both have a wide, central groove called a “flute” that allowed them to be attached to a spear shaft. Clovis points appeared early in the Paleoindian period and have been found in association with mammoth bones, while Folsom points appeared later in the Paleoindian period and have been found in association with bison bones.

**PALEOINDIAN SITES IN WESTERN COLORADO**

*Eagle Rock Shelter* is the oldest known human habitation in the state of Colorado and one of the oldest sites in the nation. The earliest occupation of the shelter was 13,000 and there is a near continuous record of occupation up until contact with Europeans. It is a large shelter that sits on the first terrace above the Gunnison River near the town of Delta. In the layers of sediment from the Paleoindian period, there are rabbit and grouse bones and seeds, but no evidence of megafaunal remains.

The *Mountaineer Site* is found on top of a mesa called Tenderfoot Mountain near Gunnison. Among the artifacts found at the site are Folsom Points, bison bones and a structure used as a habitation. The structure consists of a pit with a hearth (fire pit) in the center, and remnants of walls made of mud-plaster. Carbon-14 dating of the bison bone in the structure provided an age of 10,400 years ago. This site is important because prior to its discovery, it was believed that Folsom people did not inhabit the mountainous part of Colorado.