Teacher Guide For

America's National Monuments Legacy of the Great Plains

For grade 7 - College

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MATERIALS IN THE PROGRAM

Teacher's Guide -This teacher's Guide has been prepared to aid the teacher in utilizing materials contained within this program. In addition to this introductory material, the guide contains the following:

- Suggested Instructional Notes
- Student Learning Goals
- Test Questions on Blackline Masters A for duplication and handout to students.

INSTRUCTIONAL NOTES

It is suggested that you preview the program and read the related Lesson Plans, Student Goals and Teacher Points. By doing so, you will become familiar with the materials and be better prepared to adapt the program to the needs of your class. You will probably find it best to follow the programs in the order in which they are presented in this Teacher's Guide, but this is not necessary. It is also suggested that the program presentation take place before the entire class and under your direction. As you review the instructional program outlined in the Teacher's Guide, you may find it necessary to make some changes, deletions, or additions to fit the specific needs of your students. After viewing the programs you may wish to copy the Test Questions on Blackline Masters 1A, 2A, etc. and distribute to your class to measure their comprehension of the events.

INTRODUCTION AND SUMMARY OF SERIES

Legacy of the Great Plains is a new approach to presenting in an exciting way America's National Monuments found in her Great Plains. The series is designed to present these National Monuments of America's Great Plains in a way that promotes successful student learning. In the Legacy of the Great Plains, 10 national monuments take students back to the creation of the North American continent's Great Plains from its vast inland sea, through the age of dinosaurs and mammals, to the present day. From the initial upward thrust of the Rocky Mountains, America's Great Plans has been a land of astonishing geologic change and upheaval; a land of natural beauty and violence; a land with a deep cultural and historical legacy belonging to the plains' geological origins, science of flora and fauna, history of America's Plains Warriors and the taming of the land by America's settlers.

In 1906 the United States Congress passed The Antiquities Act, giving U.S. Presidents the power to designate parts of the U.S. as National Monuments. The purpose of this designation was to preserve for all Americans significant pieces of the country's history, ecology, geology and beauty. Since President Teddy Roosevelt designated Devil's Tower as the first national

Monument, Presidents have named 154 National Monuments. *Legacy of the Great Plains* explores ten of these monuments. It examines the science and nature of the plains through the geological forces that created the plains and the great variety of flora and fauna that have been a part of these plains from the Age of Dinosaurs to the present. *Legacy of the Great Plains* also delves into the human drama, discussing the history and culture of the plains through the human impact on this region - from the arrival of the first Americans, to the appearance of the Europeans and finally to American farmers and their families who settled and tamed this vast land area.

Below is a list of the programs and their segments. Using these programs, teachers can create a lesson plan to cover the specific issues, themes and the historical figures mentioned.

Program One: Geologic Wonders of the Northern Plains

Devils Tower National Monument Jewel Cave National Monument Agate Fossil Beds National Monument

Program Two: Sioux Indian Wars Pipestone National Monument Little Bighorn Battle Site National Monument.

Program Three: Manifest Destiny Scott's Bluff National Monument Homestead National Monument

Program Four: The Southern Plains.

Alibates Flint Quarry National Monument Capulin Volcano National Monument Fort Union National Monument

LINKS TO CURRICULUM STANDARDS

The design for this series was guided by the National Center for History in the Schools, United States History curriculum Era 3: Revolution and the New Nation-Standards 1 and 3 for grades 5-12, Era 9 Postwar United States -Standard 4 for grades 5-12, and the California Public School Standards for Historical Content, Grade 8 - Standards 8.1, 8.2 and 8.3 (#4 - #7), Standard 8.8 (#1) and Grade 11, Standards 11.1 (#2, #3), 11.3 (#5), 11.5 - (#3, #4) and 11.10 (#2, #3) and Grade 12, Standards 12.1, 12.4 and 12.5.

SUMMARY OF SERIES PROGRAMS

Program One: Geologic Wonders of the Northern Plains

Devils Tower National Monument

Student Goals - In this Legacy of the Great Plains segment the students will learn: Science and Nature Section

- The rocks found within the Devils Tower National Monument can be divided into two types: sedimentary and igneous.
- The tower itself is made up of super-hard igneous rock, formed directly from the cooling and crystallization of molten lava from the earth's interior.

- The most striking geological features of the tower are its five sided vertical columns, produced by extremely rare conditions of cooling and shrinking of the lava that formed the monolith.
- The Ecosystem contained within the grounds of the monument is a combination of mixed grass prairie and ponderosa pine forest.

History and Culture Section

- The tower has had a long mystical connection to the Plains Indian tribes: the Sioux, Cheyenne, Kiowa, Arapaho and Crow.
- U.S. Army officer, Colonel Richard Irving Dodge gave the tower its name in his book *The Black Hills*, writing, "The Indians call the shaft 'the bad God's tower.""
- By the 1880's the name had become simplified to: Devils Tower.
- By the 1980's the tower had become a Mecca for climbers.
- That Devils Tower, designated in 1906 by President Teddy Roosevelt, is the nation's first national monument.

Jewel Cave National Monument

Student Goals - In this Legacy of the Great Plains segment the students will learn: Science and Nature Section

- Jewel Cave is a series of spectacular chambers leading from one to another.
- The geologic history that created Jewel Cave.
- The Black Hills are the easternmost part of the mountain building event that produced the Rocky Mountains 60 million years ago.
- Surrounded by prairie, the Black Hills form a semi arid ponderosa pine ecosystem
- The ecosystem's fauna include the white tailed deer, the mule deer, elk, magpies and the wild turkey.

History and Culture Section

- The human history of Jewel Cave began when two locals found the entrance.
- Teddy Roosevelt proclaimed Jewel Cave a National Monument in 1908.

Agate Fossil Beds National Monument

Student Goals - In this Legacy of the Great Plains segment the students will learn: Science and Nature Section

- Agate Fossil Beds is part of the classic high plains prairie, punctuated by hills, badlands and bluffs, weathered over time into a myriad of strange shapes.
- By the middle of the 19th century, it became known to scientists that the Great Plains contained one of the richest caches of fossil bones on the planet.
- The bone beds at Agate represent a time 20 million years ago the last part of the age of mammals.
- The area would have been populated by large herds of early mammals such as primitive horses, rhinos and camels.

• The most unusual animal collected at the monument was the Dinohyus - the Terrible Pig, ancestor of the warthog.

History and Culture Section

- About the unique friendship of three extraordinary men: frontiersman Captain James Cook, the Oglala Sioux chieftain Red Cloud, and pioneering paleontologist O C. Marsh.
- By 1870 the fossil wars included the renowned collectors Edward Drinker Cope from Carnegie Museum and O. C. Marsh from Yale.
- A greater war between the U.S. Cavalry and the Native Americans would take place at the same time.
- James Cook would intervene with Chief Red Cloud on behalf of O. C. Marsh creating an enduring friendship that helped science move forward.
- Agate fossil beds would become the best Miocene fossil site the world had ever seen.
- The Museum at Agate Springs National Monument also contains one of Sioux given to Cook by his friend Chief Red Cloud.
- Agate Fossil Beds was designated a national monument by Lyndon Johnson.

Answers to Blackline Master 3A Quiz

Science and Nature Section

1-b; 2-c; 3-c; 4-b; 5-d; 6-a

History and Culture Section

1-d; 2-c; 3-b; 4-d; 5-d

Program Two: Sioux Indian Wars

Pipestone National Monument

Student Goals - In this Legacy of the Great Plains segment the students will learn:

Science and Nature Section

- Pipestone National monument is a billion and half year-old island of Sioux Quartzite, exposed by the glaciers.
- The geological processes that formed the spectacular formations of reddish-pink Sioux Quartzite from layers of sand laid down over millions of years is known as metamorphosis.
- That mud layers became sandwiched between the sand layers and metamorphosed into a mudstone called *catlinite*, known also as pipestone.

History and Culture Section

- Nearly 3000 years ago native people begin picking up pieces of soft pipestone rock, which they carved and traded.
- George Catlin, America's most famous western and Indian painter, put the pipestone quarries on the map.
- The distinctive red pipestone is called *catlinite* after Catlin.

- The red pipestone was used to fashion intricate calumets, the peace pipes of Hiawatha legend
- Pipestone was designated a national monument in 1937 by President Franklin Delano Roosevelt.

Little Bighorn Battle Site National Monument

Student Goals - In this Legacy of the Great Plains segment the students will learn:

Science and Nature Section

- The battle site of the Little Bighorn is on the western edge of the Great Plains.
- The area is part of the Yellowstone River drainage basin, an arid region of short grass prairie covering gently rolling hills.
- The area is home to two important fauna of the plains the buffalo and the pronghorn.
- Other animals were the elk and two species of deer.
- These herd animals played a role in the rise of the Plains Indians horse culture by providing food and materials for shelter and clothing.

History and Culture Section

- The Little Bighorn Battle site is the famous site of Custer's last Stand.
- The Northern Plains were home to nomadic warrior societies.
- The Nomadic Warrior culture of the Great Plains began as a result of the Pueblo Uprising in 1680
- A brief history of the battle for the Northern Plains between the Plains Indians warrior culture and the U.S. Cavalry.
- The Little Bighorn National Monument got its designation in 1946 by President Harry Truman.

Answers to Blackline Master 2A Quiz

Science and Nature Section 1-c; 2-a; 3-d; 4-b

History and Culture Section

1- b; 2-a; 3-a; 4-c; 5-d; 6-b

Program Three: Manifest Destiny

Scott's Bluff National Monument

Student Goals - In this Legacy of the Great Plains segment the students will learn: Science and Nature Section

- The spectacular formations of Scottsbluff National Monument are result of two geological processes the building up of sediments as a result of the rising up of the Rocky Mountains and the weathering away of the same sediments after the mountain building process stopped.
- The Scotts Bluff ecosystem is the mixed grass prairie: shorter grasses, dominated by little bluestem, needle grass, yucca and low-lying cactus.

- The nearby North Platte River has its own unique aquatic ecosystem supporting an abundance of fish, reptiles and waterfowl.
- The river also provided western travelers with the water they needed for their journey to Oregon

History and Culture Section

- From 1841 to 1869, a half million immigrants traveled the Oregon trail.
- Scotts Bluff is the story of the American dream, manifest destiny and courageous immigrants.
- Manifest Destiny was the near religious belief that Americans were destined to settle the wilderness from the Atlantic to the Pacific Ocean in order to create a great, new country.
- Immigrants made the nearly 2,000 mi. trip from the Missouri River in Kansas to their final destinations in present day Oregon, Utah, or California on the Oregon Trail, the Mormon Trail and the California Trail.
- Paralleling the Oregon Trail was the Mormon trail, where the poorer Mormon families used their men to pull carts carrying their goods on their way to Utah.
- It is estimated that 50,000 men, women and children died or simply disappeared traveling the Oregon Trail.
- For 18 months the Oregon trail was also the trail used by the Pony Express.
- President Woodrow Wilson established the Scotts Bluff National Monument in 1919.

Homestead National Monument

Student Goals - In this Legacy of the Great Plains segment the students will learn: Science and Nature Section

- Homestead has the second oldest restored tall grass prairie ecosystem in the nation.
- The Great Plains were formed when the uplift of the Rocky Mountains blocked the western flow of warm moist air, creating a rain shadow that produced the Great Plains arid climate.
- The Plains arid climate favored the growth of grasses over trees and produced the greatest grassland on earth, covering over one quarter of the continental United States.
- From east to west, the prairie biome is divided into three subdivisions: the tall grass prairie, now forming the Corn Belt; the mixed grass prairie where wheat and soybeans are grown; and the short grass prairie, which is primarily used for grazing cattle.
- The prairie's root system, extending as deep as 15 feet, is responsible for producing the most nutrient rich topsoil on the planet.
- Only one half of 1% of the prairie ecosystem remains today.

History and Culture Section

- The 1862 Homestead Act marked the beginning of the greatest wave of pioneer emigration the nation would ever see in the settling of the last, great American frontier.
- By the end of the 19th century millions of settlers would tame the Great Plains through the steel plow and the grazing of cattle.

- Daniel Freeman successfully filed the first claim to acquire free land under the 1862 Homestead Act.
- Through the Homestead Act, for the first time, American women were able to acquire and own land on their own.
- In a mere 40 years after the passage of the Homestead Act, the Great Plains was settled.
- The 20th century would see the Great Plains become America's breadbasket, feeding not only the country but also the world.
- Franklin Delano Roosevelt established Homestead National Monument in 1936.

Answers to Blackline Master 4A Quiz

Science and Nature Section 1: a = e, b = f, c = d; 2-d; 3-c; 4-a; 5-b; 6-b

History and Culture Section

1-c; 2-a; 3- a; 4-b; 5-a; 6-d

Program Four: The Southern Plains

Alibates Flint Quarry National Monument

Student Goals - In this Legacy of the Great Plains segment the students will learn:

Science and Nature Section

- The geological processes behind the creation of flint.
- The Alibates Flints belong to the largest group of minerals found on the earth: the silicates or silicon dioxide
- Ecologically, Alibates is a transitional environment a rare combination of short grass prairie, scrub desert, and mesquite chaparral.

History and Culture Section

- About the prehistoric Native American culture that once turned the products from the Alibates Flint Quarries into a major economic enterprise that spanned the continent.
- The unique petroglyphs of the area.
- The Kiowa and Comanche fought the last of the Southern Plains Indian Wars in this area.
- President Lyndon Johnson designated Alibates a National Monument in 1965.

Capulin Volcano National Monument

<u>Student Goals - In this Legacy of the Great Plains segment the students will learn:</u> Science and Nature Section

- How the geological forces created Capulin volcano's cinder cone.
- What geological processes created the entire Clayton/Raton volcanic field.
- Capulin is a mixed forest/prairie microenvironment.

History and Culture Section

• The contributions to archaeology made by the black cowboy George Mcjunkin.

- The role Capulin volcano played in determining the arrival of America's first immigrants 12,000 years ago.
- President Woodrow Wilson designated Capulin a National Monument.

Fort Union National Monument

Student Goals - In this Legacy of the Great Plains segment the students will learn:

Science and Nature Section

- Fort Union occupies the short grass prairie: a low growing mixture of the short grasses little bluestem, side oats gramma, and needle grass mixed with prickly pear cactus and a variety of forbes.
- Two of the most important animals on the plains the Iberian Mustang and the longhorn cattle were not native to the U.S.
- This prairie during Fort union's day was a harsh, arid ecosystem.

History and Culture Section

- Fort Union National Monument contains the greatest and largest ruins of the American Republic.
- Fort Union was created to protect the Santa Fe Trail.
- Fort Union was designated a National Monument in 1954 by President Dwight Eisenhower.

Answers to Blackline Master 1A Quiz

Science and Nature Section 1-a; 2-d; 3-b; 4-b; 5-a

History and Culture Section 1-d; 2-c; 3-a; 4-c; 5-d; 6-b