

Western Frontiers Slide Show

Nevada



Nevada

- Statehood: 1864
- Capital: Carson City
- Name: Spanish for “snow covered mountain”
- Nickname: Silver State, Sagebrush State, Battle Born State
- Moto: All for Our Country
- Today’s economy: Tourism (legalized gambling), Mining (gold)

State Metal: Silver



State Flower: Sagebrush



State Gemstone: Opal



Mojave Desert



Mojave Desert

- Driest Desert in North America
- Rain: 13 inches (330mm)
- Very hot in summer 120+F (49+C)
- Death Valley: -280 feet (-85m), 134F (56C)
- High desert 2000-5000 feet (600-1500m)
- Animals: snakes, lizards, chipmunks, rabbits, mule deer, etc
- Plants: 1700+ species
- Borders: Where Joshua Tree grows

Joshua Tree



Joshua Tree

- Yucca family
- Only grow in Mojave Desert
- Height: up to 50 feet (15m)
- Roots: 36 feet (11m)
- Native American uses: sandals & baskets, seeds & flowers
- Name: Mormon settlers - Joshua raising his hands in prayer

Arizona



Arizona

- Statehood: 1912
- Capitol: Phoenix
- Name: Spanish word for “little spring”
- Nickname: Grand Canyon State
- Motto: God enriches
- Today’s Economy: copper $\frac{2}{3}$ US production, tourism, healthcare, transportation

Gemstone: Turquoise



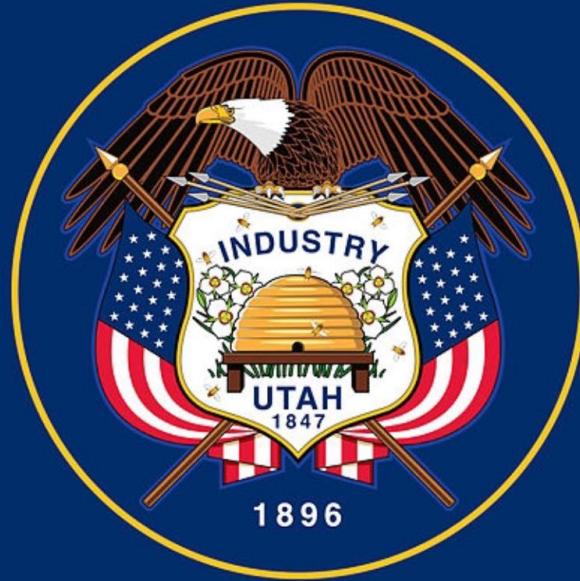
Reptile: Ridge-nosed Rattlesnake



Neckwear: Bolo Tie



Utah



Utah

- Statehood: 1896
- Capitol: Salt Lake City
- Name: Ute Indians - “people of the mountains”
- Nickname: Beehive State
- Motto: Industry
- Settled by Mormons
- Today’s Economy: tourism, computer software, steel, copper, cattle, corn, wheat

State Insect: Honey Bee



State Rock: Coal



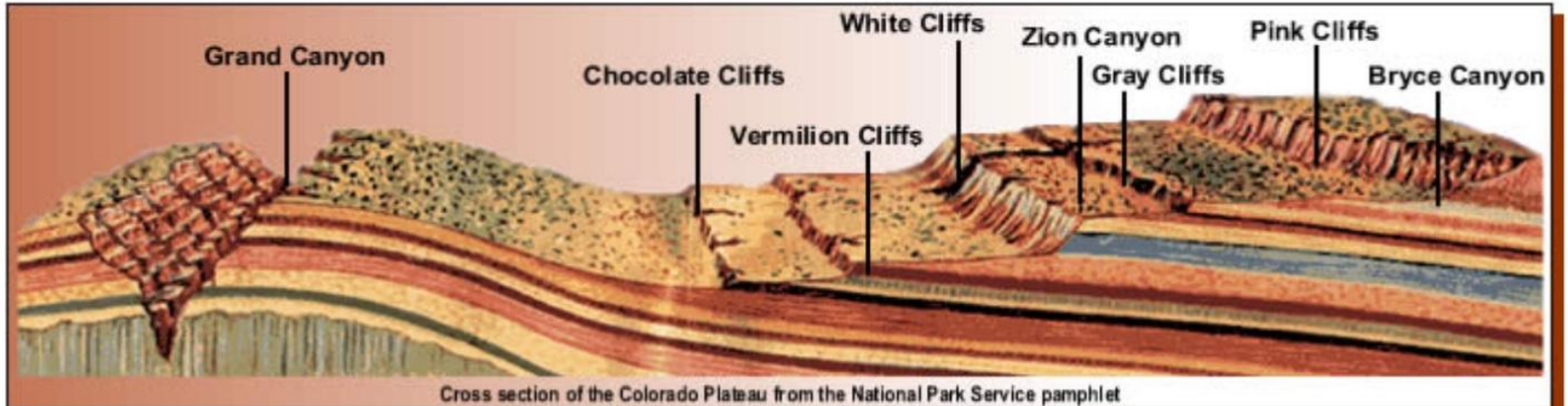
State Dance: Square Dance



Colorado Plateau



Colorado Plateau Grand Staircase



Colorado Plateau:

- CO Plateau large tracts of land mostly flat sedimentary rock sections rising up towards Rocky Mountains
- Elevation: 4900-11,000 feet (1500-3350 m)
- 5 Sections are edged with massive cliffs as they go lower
- Color names: Chocolate, Vermillion, White, Gray, Pink

Zion National Park



Virgin River



Zion National Park

- 1919
- 229 sq miles (590 sq km)
- Zion Canyon: 15-miles of towering red sandstone & white limestone cliffs carved by Virgin River
- River: 4000 feet - Rock formations: 7000+ feet
- Hanging Gardens: water seeps through rock, plants grow high
- Religious settlers named valley and many of the formations (Court of the Patriarchs, West Temple, Great White Throne)
- Main park road closed to buses & private vehicle traffic - complimentary Park Shuttles only (every 15 mins)

Scenic Byway 12



Scenic Byway 12

- 122 miles long
- Regularly on “Top Scenic Drive of America” lists
- Dixie National Forest
- Red Rock Canyon National Conservation Area

Bryce Canyon National Park



Bryce Canyon National Park

- 1928
- High elevation: 8000-9000 feet (2400-2700 m)
- Not technically a canyon
- Collection of giant natural amphitheaters along side of Paunsaugunt Plateau
- 56 sq miles (145 sq km)
- Not a large park, but impactful due to brilliant orange pinnacles

Bryce Canyon People History

- Native Americans 10,000 years
- 1300+ Paiute
- 1850s Mormon Settlements
- 1874 - Ebenezer Bryce built a homestead

Bryce Canyon Geology



Bryce Canyon Geology

- Not carved by flowing water
- Mostly ice erosion and rainfall
- High elevation = cold temps = ice & frost
- Water seeps into cracks, freezes, ice expands, pieces fall off
- Summer rains wash debris down cliff

Hoodoo



Hoodoo

- Red rock is soft sandstone
- White rock is harder limestone (acts as cap protecting sandstone below)
- Can be as tall as 200 feet (60 m)

- Paiutes: “Red rocks standing like men”
- Legend: people were tricked by trickster god & turned into stone
- Possibly as punishment for living “too heavily” on the land

Sunset Point



Panguitch Quilt Walk



Panguitch Quilt Walk

- 1863: Settlers arrive
- Crops planted, but season was short and they didn't mature
- 1864: winter extremely cold with deep snow
- Settlers were desperate for supplies
- Closest towns: 115 miles north or 40 miles west over mountain
- 7 men set out west to save the town
- Had to abandon their wagon and proceed on foot
- Snow so deep, they had to lay down quilts and walk across
- Annual festival is: Quilt Walk Festival

Panguitch Quilt Walk



Salt Lake City



Salt Lake City

- Capital of Utah
- Population: 2 million (largest city)
- Settled in 1847 by Mormon pioneers - religious persecution
- Situated between the Great Salt Lake and the Wasatch Front
- Salt Lake City - Provo - Park City
- Known for great skiing (2002 Winter Olympics)
- Known for Sundance Film Festival
- Known as center of Mormon religion

Great Salt Lake



Great Salt Lake

- Largest salt water lake in Western Hemisphere
- Remnant of massive prehistoric Lake Bonneville (salt flats)
- No outlet except evaporation
- Very shallow, average depth 16 feet (5 m)
- Size fluctuates
- Average length: 75 mi (120 km)
- Average width: 28 mi (45 km)
- Habitat for brine shrimp and native birds
- Shallow, warm water causes lake-effect snows (skiing)

Mormon Religion



Mormon Religion

- Church of Jesus Christ of Latter Day Saints (LDS)
- Restorationist Christianity
- Founded: 1830, New York, Joseph Smith
- Persecution led to relocation to Utah Territory in 1840s
- Strong sense of community
- Very family oriented - sealed together in afterlife
- No addictive substances (alcohol, caffeine, tobacco)
- Polygamy: 1852-1890

Mormon Religion Today

- 16 million worldwide
- 6.5 USA
- Require missionary service
- Women 18 months, men 2 years
- Doubles in membership every 15 years
- In Utah: 60% claim Mormon, 40% practice
- In Salt Lake City: 35% Mormon, rural ar as much higher

Brigham Young



Brigham Young

- 1801-1877
- Second president of LDS - after founder Joseph Smith
- President: 1847-1877
- Moved congregation to Utah
- Founded Salt Lake City
- First governor of Utah Territory
- 55 wives
- 56 children from 16 of the wives

Eagle Gate



Eagle Gate

- Originally erected 1859
- Commemorates entrance to Brigham Young's property
- 3rd Eagle Gate on this spot (1960)

Beehive House



Beehive House

- Built in 1854
- Official residence of Brigham Young
- “Executive residence” - lived and worked
- Outgrew house so he moved next door to Lion House
- Name: beehive sculpture on top

Utah State Capitol



Utah State Capitol

- 1916
- Style: Neoclassical Revival
- Made of Utah granite (same as Mormon Temple)
- 90% of Legislature is Mormon
- “95% of the bills, the LDS Church has no stand, no opinion, and doesn’t care.”
- Alcohol, gambling, assisted suicide, gay rights

Temple Square



Temple Square

- 10 acre complex
- Center of Mormon religion - equivalent to Mecca (Muslim), Vatican (Catholic), Jerusalem (Jews)
- Contains: Temple, Tabernacle, Assembly Hall, 2 Visitor Centers
- Surrounded by other Mormon buildings

Mormon Temple



Temple

- Built: 1893
- Largest Mormon Temple in world
- 222 feet high
- 250,000 feet interior
- Utah Granite, 6 gothic spires
- Hosts weekly church leader meetings
- Sacred to Mormons - no public tours
- “Mormons in good standing” can petition to visit

Temple Interior



Temple Interior



Temple Interior



Mormon Tabernacle



Tabernacle

- Built: 1867
- Unique dome design results in amazing acoustics
- 7,000 people
- Main Sunday church service
- Home of the Tabernacle Choir

Tabernacle Choir



Tabernacle Choir

- 360 members
- 25-55 years old
- Live within 100 miles
- “Mormon in good standing”

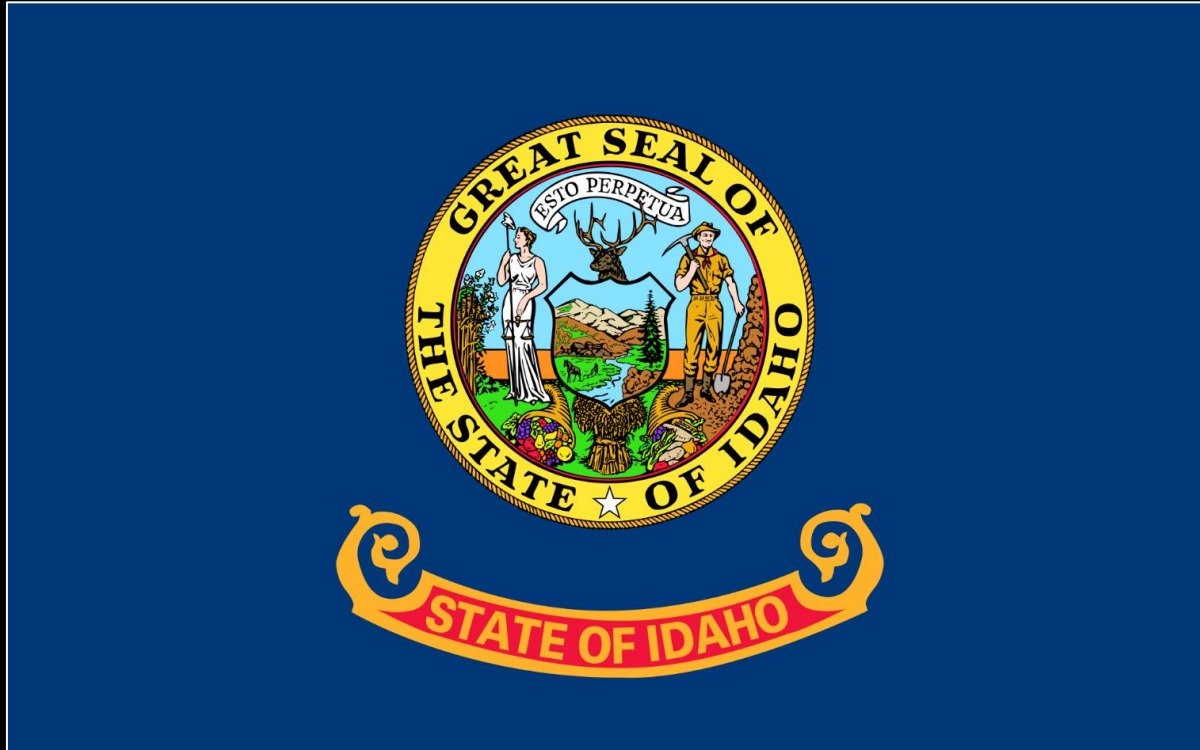
Bear Lake



Bear Lake

- Natural border between Utah and Idaho
- Known as the “Caribbean of the Rockies”
- Calcium carbonate deposits suspended in the water
- Length: 18 miles
- Width: 7 miles
- Depth: 208 feet
- Local area known for raspberries

Idaho



Idaho

- Statehood: 1890
- Capitol: Boise
- Name: ??? - possibly made up by lobbyist in 1860s
- Nickname: Gem State
- Motto: “Let it be perpetual”
- Today’s Economy: high tech manufacturing (around Boise), agriculture (wheat & potatoes $\frac{1}{3}$ USA production)

State bird: Mountain Bluebird



State fish: Cutthroat Trout



State Gem: Star Garnet

- Only found in Idaho & India
- Rutile mineral inclusion
- 4 or 6 pointed star



Oregon & California Trail



Oregon & California Trail

- 2000 miles (3400 km)
- East-west emigrant trail
- Connected Missouri River to Oregon and California
- 1811-1840 - fur trappers and traders
- 1830s-1860s - wagon trains
- Hundreds of thousands of settlers, farmers, miners, ranchers
- Headed west for new opportunities (land)

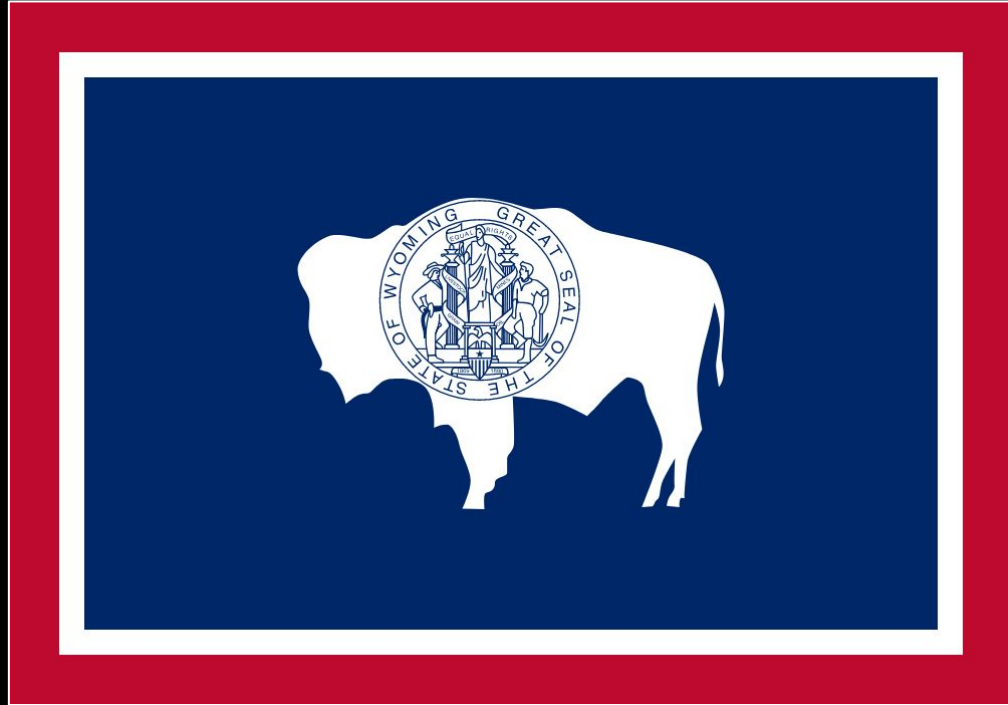
Huckleberry



Huckleberry

- Small, bluish purple berry
- Taste: similar to a blueberry, but slightly tart
- Growing region: Northwest USA & Western Canada
- Traditional medicine: pain relief, heart ailments, infections
- Traditional food: jams, candy, pie, ice cream, salad dressing, pancakes mix, tea, etc.
- Makes a great souvenir

Wyoming



Wyoming

- Statehood: 1890
- Capitol: Cheyenne
- Name: Native American word “mountains & valleys alternating”
- Nickname: Equality State
- Motto: Equal Rights
- Economy: cattle, wheat, mining (coal, sodium carbonate)
- Population: 580,000

Mammal: American Bison



Flower: Indian Paintbrush



Sport: Rodeo



Wyoming Registered



Wyoming Registered Trademark



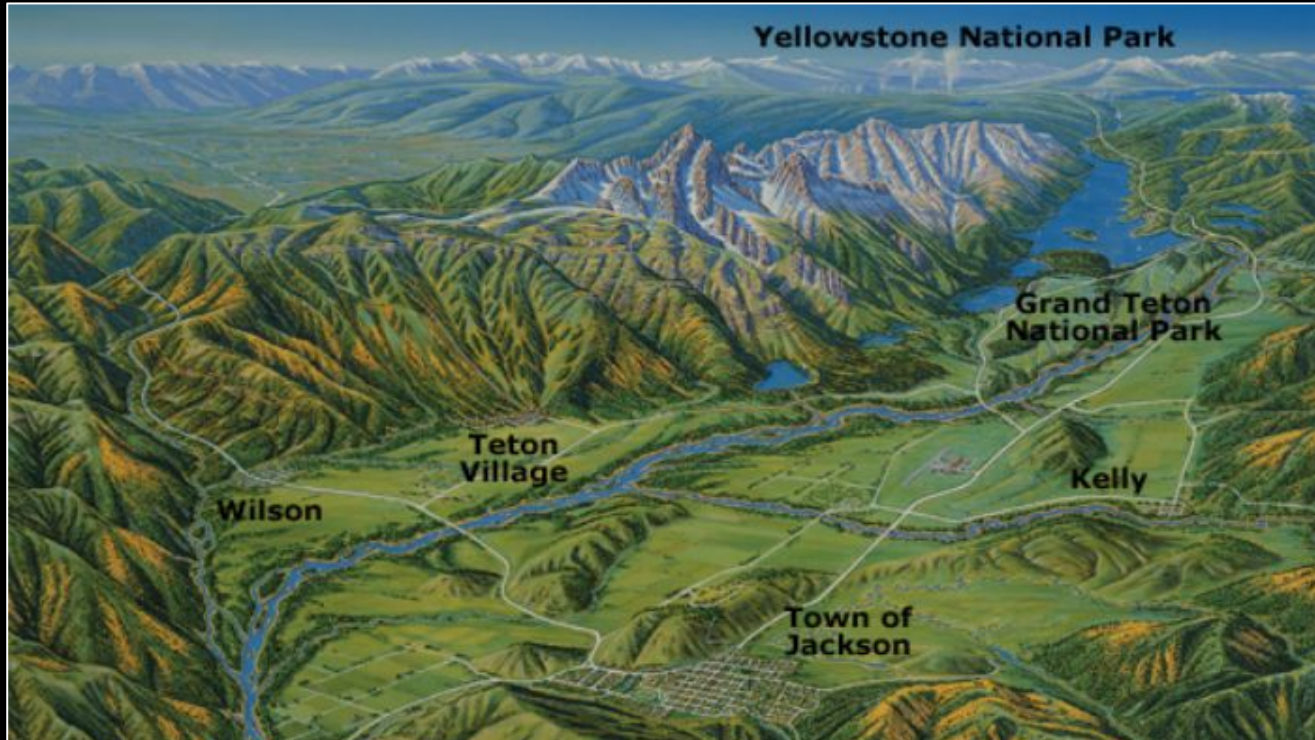
Jackson, Wyoming



Jackson, Wyoming

- “Hole” is the fur trapper name for a valley
- Rivers and streams make good beaver habitats
- Davy Jackson - 1820s fur trapper
- Town: 1914
- Population: under 10,000
- Winter: 3 ski resorts
- Summer: Close to Grand Teton and Yellowstone National Parks
- Known for art galleries and cowboy culture

Jackson Hole



National Elk Refuge



National Elk Refuge

- Created: 1912
- Purpose: protect habitat of wild elk herd
- Migrate down from Yellowstone each winter
- Winter population: 7,500
- Boy Scouts annual Elkfest
 - Scouts collect fallen antlers from Refuge
 - May auction in Jackson
 - 75% of proceeds go back to Elk Refuge

Rocky Mountains



Rocky Mountains

- 3000 mile (4800 km) - mountain chain
- “Backbone of the United States”
- British Columbia in Canada to New Mexico in USA
- 80-55 million years ago
 - Tectonic plates sliding at shallow angle, made wide range
 - Glaciers carved dramatic peaks & valleys
- Today: mining and tourism (skiing)

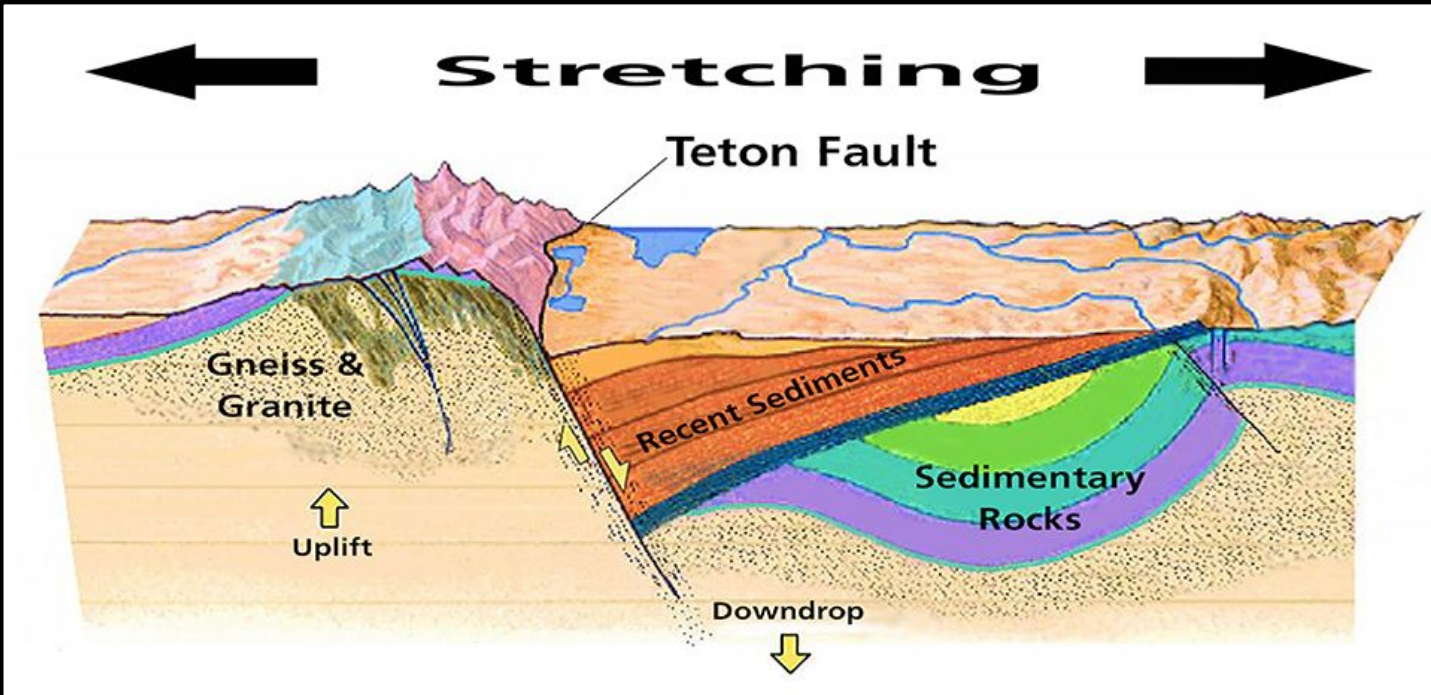
Grand Teton Range



Grand Teton Range

- Small range in Rocky Mountains
- Length: 40 miles
- Height: 13,775 feet
- Distinguishing feature: no foothills
- Valley is a faultline

Grand Teton Geology



Grand Teton National Park



Grand Teton National Park

- 1929
- 310,000 acres
- 10 miles south of Yellowstone
- John D. Rockefeller, Jr. Parkway
- Name: French Trappers “Les Trois Tetons”

Chapel of the Transfiguration



Chapel of the Transfiguration

- Built: 1925
- Cowboy church
- Today: Episcopal chapel
- Wedding location fee: \$2500

Jackson Lake



Jackson Lake

- Creation: 12,000 years ago by glacier gouging
- Fed by: Snake River
- Length: 15 miles
- Width: 7 miles
- Depth: 438 feet
- Elevation: 6700 feet
- 15 islands

Jackson Lake Lodge



Jackson Lake Lodge

- Built: 1955
- Great Room with floor to ceiling windows overlooking Tetons
- Walking trail
- Gift shops

Lewis and Clark Expedition



Lewis and Clark Expedition

- 1803: President Thomas Jefferson “Louisiana Purchase”
- 1804-06: Meriwether Lewis & William Clark
- Start: St. Louis (Missouri River)
- End: Washington State (Columbia River)
- Objective: map newly acquired territory
- Objective: find practical route to Pacific Ocean
- Objective: establish trade with local Native American tribes

Yellowstone National Park



Yellowstone National Park

- 1872: America's first national park (world's first)
- 2.2 million acres: half the size of Massachusetts
- Wyoming, Montana, Idaho
- Known for: unique geothermal features (geysers, hot springs)
Half of the world's geothermal features are in Yellowstone
- Known for: animals (bison, Black & Grizzly bears, wolves, elk)

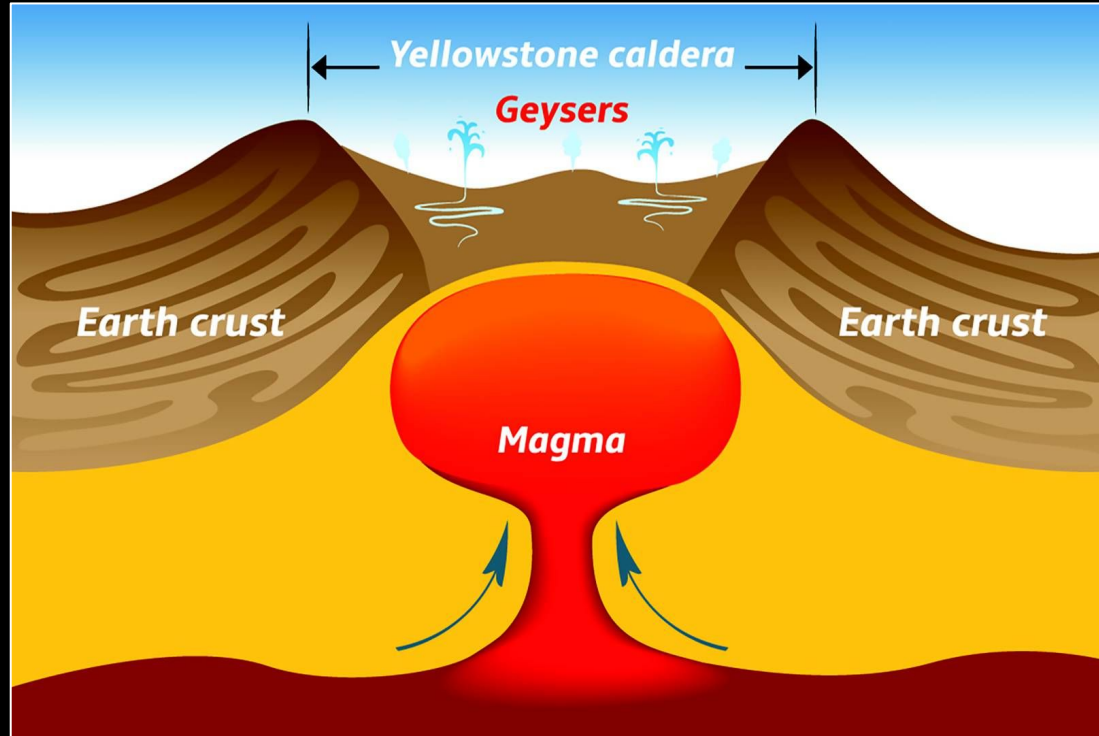
Yellowstone Geology



Yellowstone Geology

- Earth's crust usually 25-30 miles deep
- Yellowstone 3-8 miles
- Liquid hot magma close to surface
- Rain & snow melt seep into cracks & create park's unique geothermal features
- Hot springs, fumaroles, mud pots, geysers

Yellowstone Caldera



Yellowstone Caldera

- Super volcano - largest in North America
- 45 x 34 miles across
- 3 eruptions in past 2.1 million years (1.3 mil/640,000)
- Caldera: volcano erupts so quickly the land collapses down onto the empty magma chamber
- Magma chamber fills back up with molten rock - waiting for the next explosion
- Earth is constantly shifting under Yellowstone
- 2000 measurable earthquakes every year

Fumaroles



- no water at surface
- flash boils rain/snow melt resulting in hissing steam vent

Mud Pots



- hydrogen sulfide gas eaten by microorganisms
- convert to sulfuric acid which breaks down rock into clay

Hot Springs



- Water at surface
- Different colors = microorganisms living at different temperatures

Geysers



Yellowstone Geysers

- Geysers: plumbing system
- Surface water goes down a narrow passage, starts to collect lower down the pipe where it boils into steam, but steam bubbles can't escape because of water pressing down on it.
- Reaches a critical point: trapped steam forces its way to top, forcing water up and out of the geyser
- Some are pretty regular, but most go off whenever they need
- Old Faithful: about every 90 minutes (exception, not rule)
- Steamboat Geyser: 11 eruptions in 28 years, 21 since March (Sept 30) (tallest geyser in park)

Yellowstone Animals



Elk



Baby Elk



Bison



Baby Bison



Wolves



Baby Wolf



Black Bear



Baby Black Bears



Grizzly Bears



Baby Grizzly Bear



Yellowstone Forest Fires



Yellowstone Forest Fires



Yellowstone Forest Fires



Regrowth



Regrowth



Lake Yellowstone



Lake Yellowstone

- Largest high elevation lake in North America
- Centered over the Yellowstone Caldera
- Elevation: 7,700 feet
- 20 x 15 miles across
- Depth: 390 feet
- Boating & fishing allowed
- Lake Trout invasive species

West Thumb Geyser Basin



Old Faithful



Old Faithful Geyser

- Frequency: 44-125 minutes (about every 90 minutes)
- Height: 106-185 feet
- Duration: 3-10 minutes
- Discharge: 3,700 gallons of water
- Reliability because it is not connected to any other thermal features - no water is being siphoned off to other springs or geysers

Old Faithful Inn



Old Faithful Inn



Old Faithful Inn

- 1904
- Log cabin castle
- Largest log hotel in the world
- Golden age of “rustic resort architecture”
- Main lobby is a work of lodgepole pine art
- Four stories of balconies
- 85 foot fireplace
- Nearly destroyed in the 1988 fire - saved by firefighters, volunteers, roof sprinkler system installed the year before

Grand Prismatic Spring



Grand Prismatic Spring

- Largest hot spring in Yellowstone (3rd in world)
- Diameter: 370 feet
- Depth: 160 feet
- Temp: 160 F
- Dramatic color: microorganism thrive at different colors
(ratio of chlorophyll to carotenoids)

Fountain Paint Pots



Fountain Paint Pots

- Upper Geyser Basin
- Contains each of Yellowstone's four main geologic features
- Hotspring, mudpot, fumaroles, geyser

Mammoth Hot Springs



Mammoth Hot Springs

- One of the best preserved examples of travertine terraces
- Hot water + dissolved carbon dioxide = weak carbonic acid
- Rises through rocks & dissolves calcium carbonate in limestone
- At surface, calcium carbonate is deposited in form of travertines
- Constantly changes - living sculpture
- Shaped by volume of water, slope of ground, objects in way
- Water follows path of least resistance

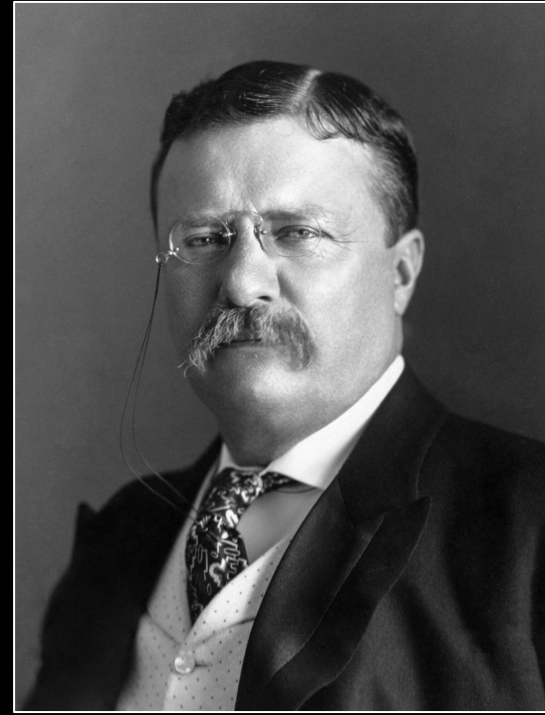
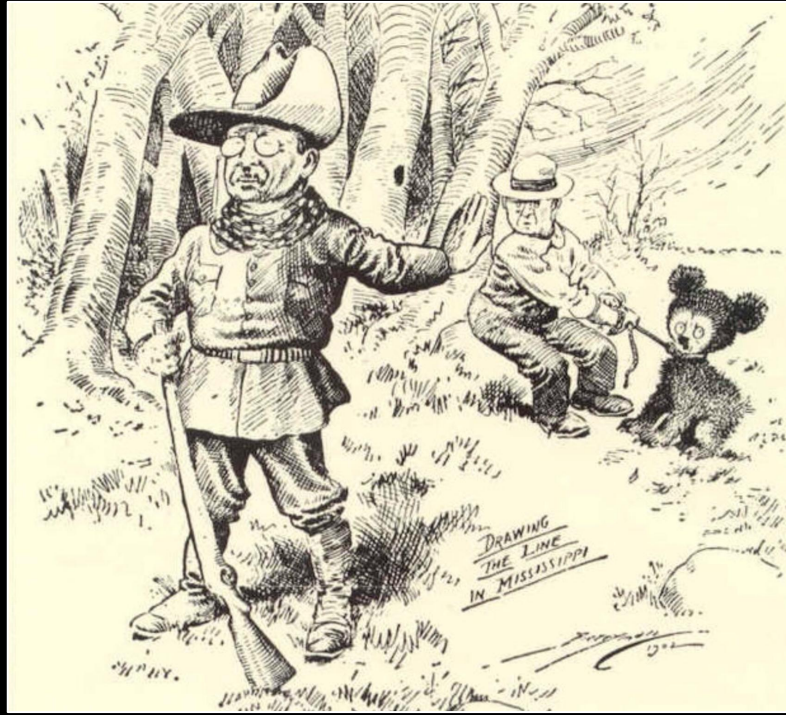
Albright Visitor Center



Teddy Bear



Theodore Roosevelt



Yellowstone Falls



Yellowstone Falls

- Grand Canyon of Yellowstone
- Length: 20 miles
- Depth: 1000 feet
- Yellow color: Rhyolite
- Lower and upper Falls
- Lower Falls height: 308 feet

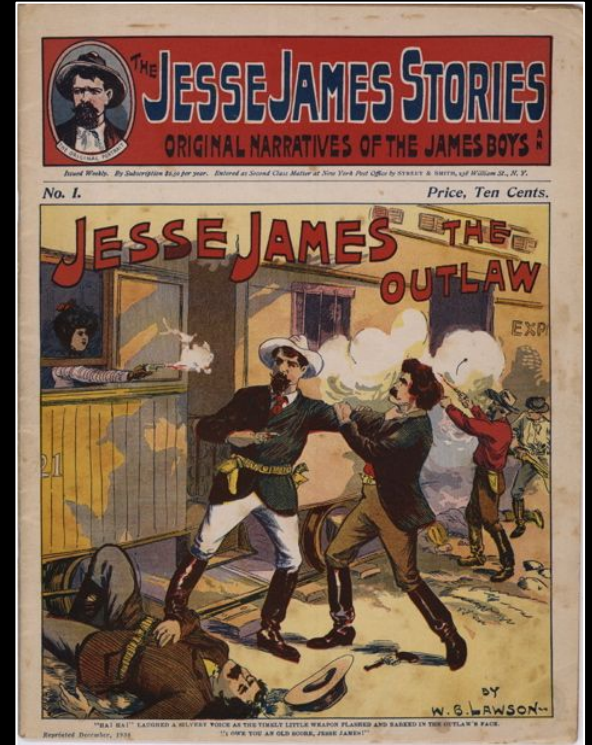
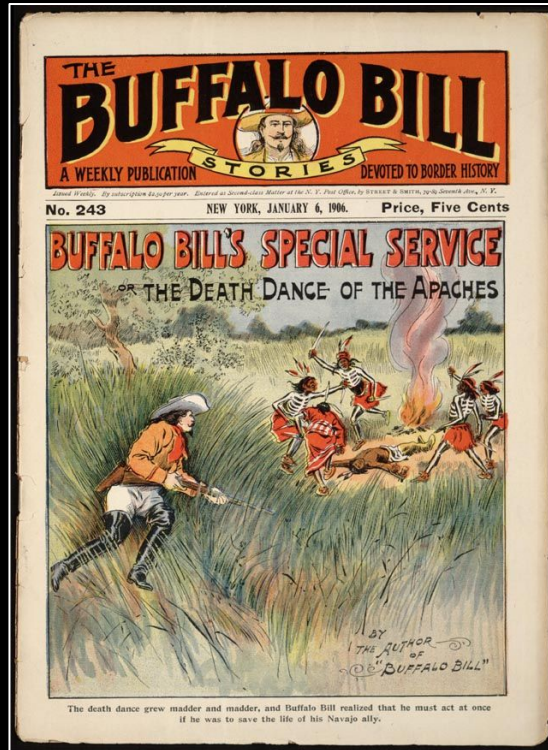
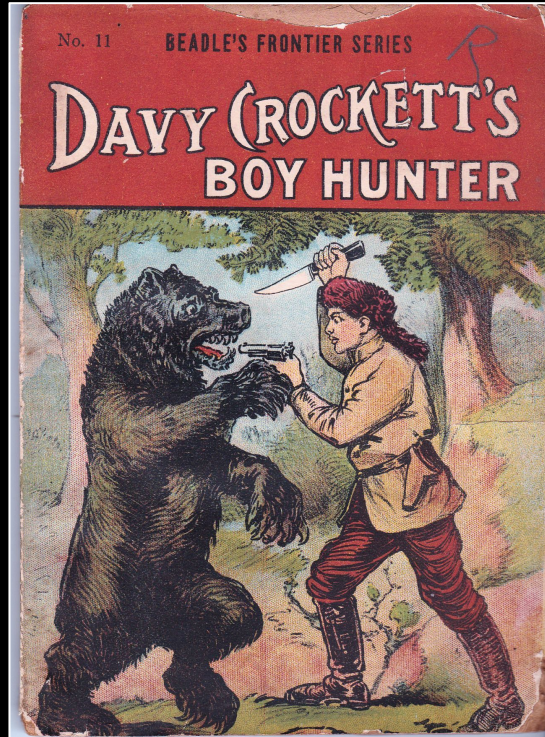
Hayden Valley



Hayden Valley

- Large, sub-alpine valley
- Ancient lakebed
- Trees don't grow, so excellent views of wildlife (bison)
- Views of Yellowstone River

Dime Novels



Dime Novels

- Popular, inexpensive paperback fiction mid to late 1800s
- Cheesy representations of western life
- Extremely over dramatized (often fictitious)
- Themes: Good vs evil
- Gunslingers
- Lawmen
- Cowboys & Indians
- Train & Bank robberies
- Saving the damsel in distress
- Comic Books of their day

Buffalo Bill Cody



Buffalo Bill Cody

- William Frederick Cody
- 1846-1917
- One of the most colorful figures of the American West
- Most famous American in the world
- American scout, bison hunter, showman
- Pony Express Rider, Civil War union soldier, civilian scout during Indian Wars,
- Name: hunted buffalo to provide meat to the railroad workers
- 1869: First appearance in a dime novel (mostly fiction)

Buffalo Bill Cody Shows

- 1872: Invited to Chicago to perform with “Scouts of the Prairie” Wild West stage show
- Dime novels on the stage
- Started his own troupe - more and more sophisticated
- Performed part of the year and was a plains scout the rest
- 1873: “Scouts of the Plains” touring stage show
- 1883: “Buffalo Bill’s Wild West” - circus-like attraction
- 1893: “Buffalo Bill’s Wild West and Congress of the Rough Riders of the World”
- Toured for 30 years around American and Europe
- 1887: Performed at Queen Victoria’s Golden Jubilee

Buffalo Bill Cody Shows

- Deadwood stage coach robbery
- Buffalo hunt
- Rodeo style skills - roping, horse tricks
- Sharp shooting demonstrations (Annie Oakley)
- Cowboys vs Indians battles
- Famous western figures (Sitting Bull)
- World Horse cultures: Turks, Arabs, Mongols (costumes)

Buffalo Bill Cody & the Rough Riders of the West



Cody, Wyoming



Cody, Wyoming

- 1901: Helped start the town of Cody, Wyoming
- Close to Yellowstone
- On a newly opened railroad line
- 1902: Irma Hotel, named after his daughter

Cody, Wyoming



Buffalo Bill Center of the West



Buffalo Bill Center of the West

- Affiliate of the Smithsonian Museum
- Five museums in one
- Buffalo Bill: his life and show
- Plains Indians: how they lived
- Western Art Gallery
- Natural History: plants and animals
- Firearms: thousands of guns (partially under renovation)

Montana

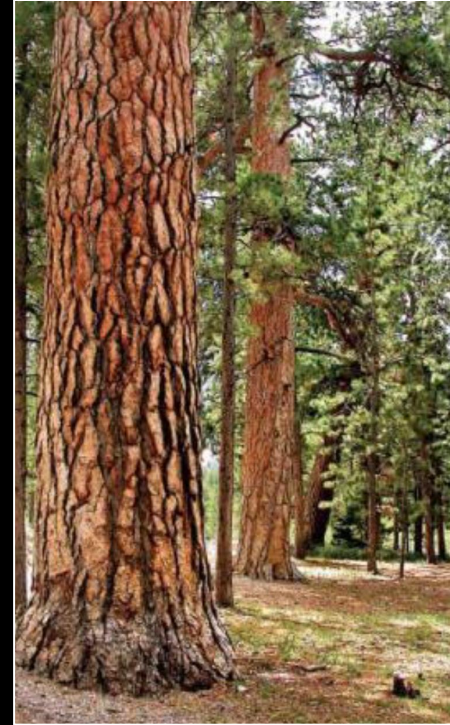
MONTANA



Montana

- Statehood: 1889
- Capital: Helena
- Name: Spanish for “mountain”
- Nickname: Big Sky Country & The Treasure State
- Motto: “Silver and Gold”
- Today’s economy: cattle ranching, cereal grain farming, oil, lumber

State Tree: Ponderosa Pine



State Mammal: Grizzly Bear



Billings, Montana



Billings, Montana:

- Founded: 1882
- Built on a railroad line
- Named after Frederick Billings (North Pacific Railroad President)
- Population: 100,000 (largest city in Montana)
- Industry: Oil refining, railroad
- Nickname: “Magic City” - due to rapid and sustained growth

Native Americans



Native Americans

- 30,000 BC - land bridge between Asia & Alaska
- Hunters followed animal herds
- Settled further south through North & South America
- Regional development of housing, tools, beliefs
- Common indigenous practices: sacredness of land, revere ancestors, connection between natural & supernatural

Native Americans, continued

- 1492 - Christopher Columbus
- 1500-1600s - Disease kills 90% - chicken pox, measles
- European settlement - pushed westward
- 1830 - Indian Removal Act
- 1845 - Manifest Destiny - US territorial expansion justification
- 1851 - Indian Appropriations Act - Reservation System
- 1860s-1890s - Post Civil War

Native Americans Today

- 573 federally recognized tribes
- 5.2 million people
- 326 reservations
- 22% live on reservations
- Total lands: 87,000 sq miles (227,000 sq km) - size of Idaho
- 12 larger than the state of Rhode Island
- Poorest demographic
- Tribal sovereignty - casinos

Battle of the Little Bighorn



Battle of the Little Bighorn

- Date: June 25-26, 1876
- Location: Little Bighorn River in southern Montana
(Named “Greasy Grass” by Native Americans)
- Background: Indians were required to live on reservations to protect the lands of white settlers, some refused and roamed the plains as they always had
- Large group of mix tribes formed large, wandering village in southern Montana
- 1876 US Army summer campaign to force Lakota & Cheyenne back to reservations, came upon village & underestimated size

Native Americans

- Lakota, Dakota, Cheyenne, Arapaho
- Notable commanders: Sitting Bull, Crazy Horse
- Strength: 2,500 warriors
- Casualties: 31

US Army

- 7th Cavalry
- Notable commanders: George Armstrong Custer
- Strength: 700 Cavalry
- Casualties: 268

Battle of the Little Bighorn

Battle result:

- Overwhelming Native American victory
- Annihilation of 5 companies of the 7th Cavalry
- Death of George Armstrong Custer

Aftermath:

- Army hardened its resolve to crush Native American resistance
- Beginning of the end for free Native Americans
- Custer & 7th Cavalry became folk heroes
- Endless military strategy debates

George Armstrong Custer



George Armstrong Custer

- Calvary Commander in Civil War and American Indian Wars
- Raised in Michigan & Ohio before attending West Point
- 1861+: First Battle of Bull Run, Battle of Gettysburg, present at Appomattox where South surrendered to the North
- 1867+: Dispatched to the west's 7th Cavalry Regiment to fight Indian Wars
- 1874: Black Hills Expedition
- 1876: Battle of Little Bighorn ("Custer's Last Stand")
- Why does everyone remember him? Very skilled at public relations - used print media of his time effectively

Sitting Bull & Buffalo Bill



Crazy Horse



South Dakota



South Dakota

- Statehood: 1889
- Capitol: Pierre (pronounced: “peer”)
- Name: Sioux word “dakhota,” meaning “friend”
- Nickname: Mount Rushmore State
- Motto: Under God the People Rule
- Population: 840,000

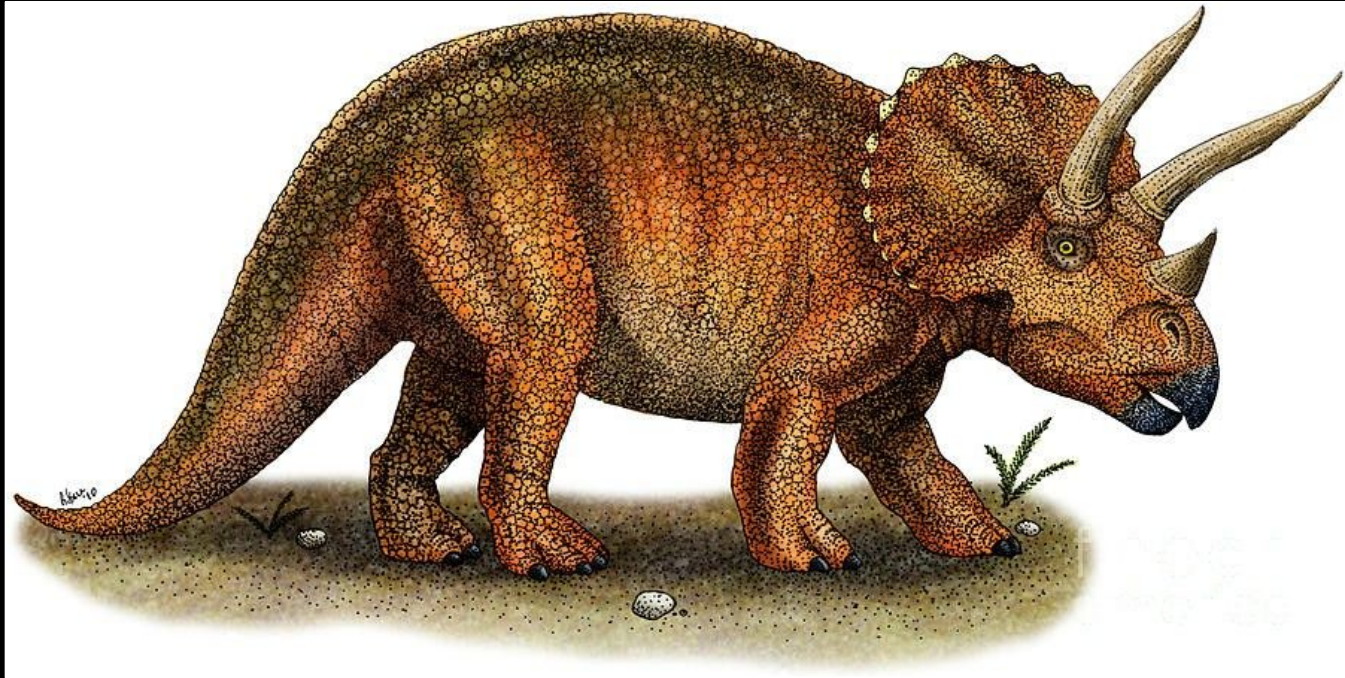
State Mineral: Rose Quartz



State Insect: Honeybee



State Fossil: Triceratops



Black Hills Gold



The Black Hills

- 1870s in Black Hills
- Henri LeBeau - French goldsmith
- Dream: grape clusters, vines, leaves
- Pink: Yellow gold + copper
- Green: Yellow gold + silver
- 1980 court case:
Gold can come from anywhere in the world
Jewelry must to be manufactured in Black Hills

The Black Hills



The Black Hills



The Black Hills

- Small, isolated mountain range in the Great Plains
- “Island of trees, in a sea of grass.”
- Look black from a distance because of pine trees
- Mostly gray granite rock

The Black Hills Human History

- 11,500 BC: evidence Clovis culture
- 1500-1700's: modern tribes Cheyenne, Crow, Kiowa, Pawnee
- 1776: Lakota Sioux arrived from Minnesota & drove others out
- Europeans & Americans steadily encroached on lands
- 1868 Fort Laramie Treaty: established Great Sioux Reservation, specifically forbidding white settlement of the Black Hills “forever”

The Black Hills Human History

- 1874: General George Armstrong Custer of the 7th US Cavalry led gold-finding expedition
- 1875-1878: Gold Rush
- 1876: Black Hills War (Great Sioux War) - last major Native American War in the Midwest
- 1877: US Government reclaimed the Black Hills
- 1889: Great Sioux Reservation dismantled, forcibly relocated to five smaller reservations

Sioux Tribe



Sioux Tribe

- Upper Midwest
- Nomadic hunters - buffalo
- Expert horsemen (Spanish import)
- Housing: Teepee buffalo hides and poles
- Clothing: buffalo skins
- Weapon: Bow and arrow

Sioux Tribe, today

- Sioux refers to any ethnic group within the Great Sioux Nation
- 3 major divisions based on language: Lakota, E & W Dakota
- Maintain 24 separate tribal governments scattered across several reservations
- North & South Dakota, Nebraska, Minnesota, Montana, Canada
- Population: 170,000
- Half of enrolled members live off the reservation ($\frac{1}{4}$ ancestry)

Crazy Horse Memorial



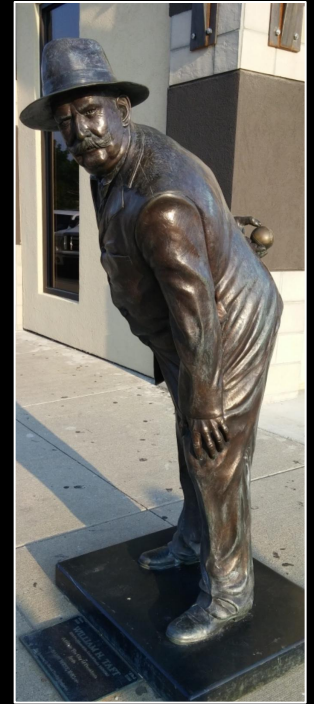
Crazy Horse Memorial

- Mountain monument currently under construction
- When done: largest sculpture in the world
- 17 miles from Mount Rushmore
- Will depict Crazy Horse astride a horse, pointing in the distance
- Face: 87 feet tall (Mount Rushmore heads 60 feet)
- Entire carving: 563 feet high, 641 feet long
- Pyramid of Giza (455 feet)
- Started: 1948
- Estimated Completion Date: ??? (50 years to complete arm)
- Refuse to accept government funds

Crazy Horse

- Born in the Black hills around 1840
- Revered warrior and strategist
- Participated in Battle of the Little Bighorn
- Never surrendered or submitted to living on a reservation
- Died: 1877, killed by US soldier while under a flag of truce
- Don't have a photo of him

Rapid City, South Dakota



Rapid City

- Nickname: “City of Presidents”
- Gateway to the Black Hills
- Population: 70,000
- Main industry: tourism
- Ellsworth Air Force Base

Mount Rushmore



Mount Rushmore

- Granite sculpture faces of 4 presidents
- Mount Rushmore named after New York City lawyer, Charles Rushmore (1885 inspected mining claims)
- 1923: State Historian proposed carving western heroes in Black Hills as a tourist attraction - approached sculptor Gutzon Borglum
- 1925: Borglum decided to appeal to a national audience and proposed presidents as the subject - fundraising begins
- 1927: Carving begins
- 1941: Completion (Borglum dies)

Mount Rushmore

- 400 workers
- 14 years
- Head: 60 feet
- Nose: 20 feet
- Eyes: 11 feet wide
- Original plan to carve figures to the waist (Washington's jacket)

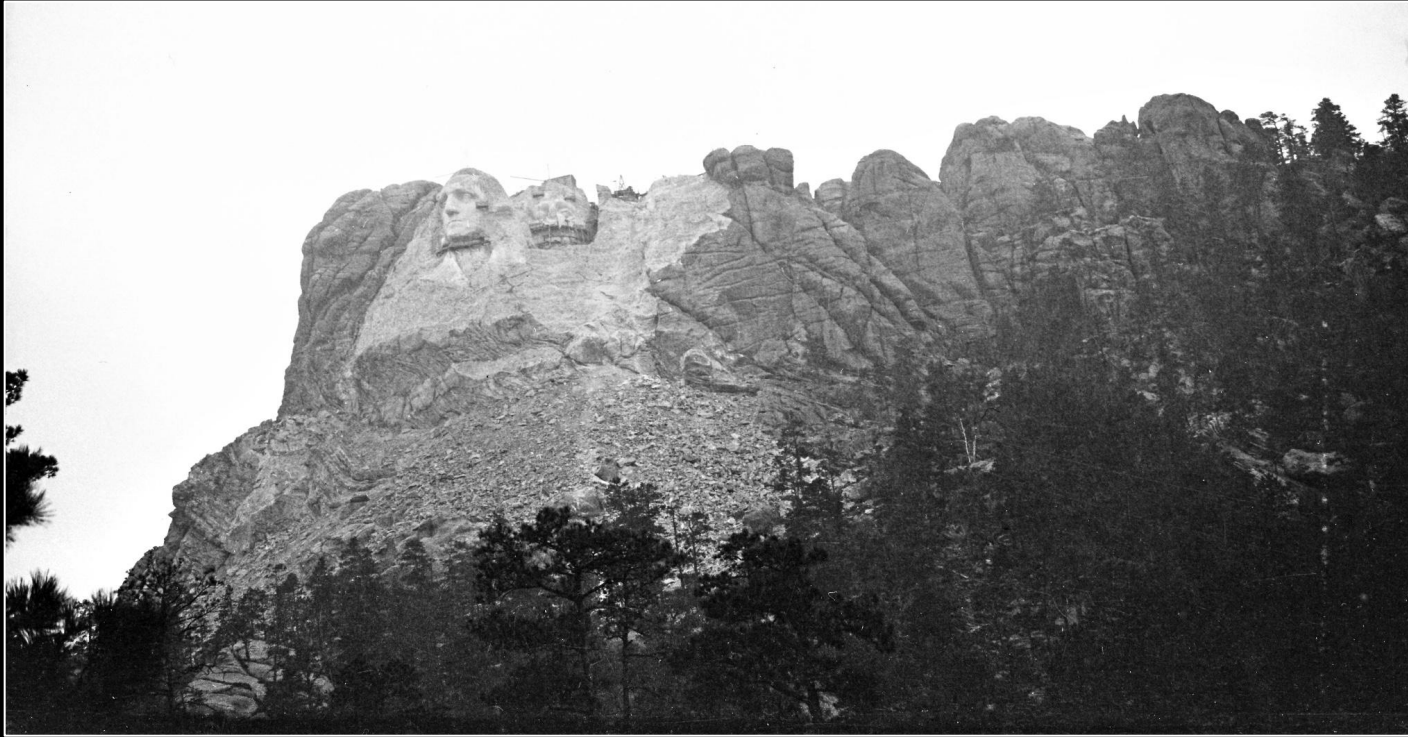
Mount Rushmore



Mount Rushmore Presidents

- **George Washington** - commander of US Army in Revolution, first president (founding father of our country)
- **Thomas Jefferson** - 3rd president, author of the Declaration of Independence, Louisiana Purchase
- **Abraham Lincoln** - kept America together during the Civil War
- **Theodore Roosevelt** - Conservation legislation, set aside millions of acres of public land (friend of sculptor), controversy (22 years)

Under Construction



Wall Drug, South Dakota



Wall, South Dakota

- The drug store that took over the town
- One of the most genius advertising campaigns in the world
- 1931: Dorothy & Ted Hustead opened Wall Drug Store
- Small town of 300 people - business poor
- 1936: Idea to advertise “free ice water” on Highway 16
- Business boomed - hired 8 girls the first summer
- Put up even more signs the next year
- Now the drug store takes up most of Main Street
- Billboards stretch 650 miles along Interstate 90
- 2 million visitors per year

The Jackalope



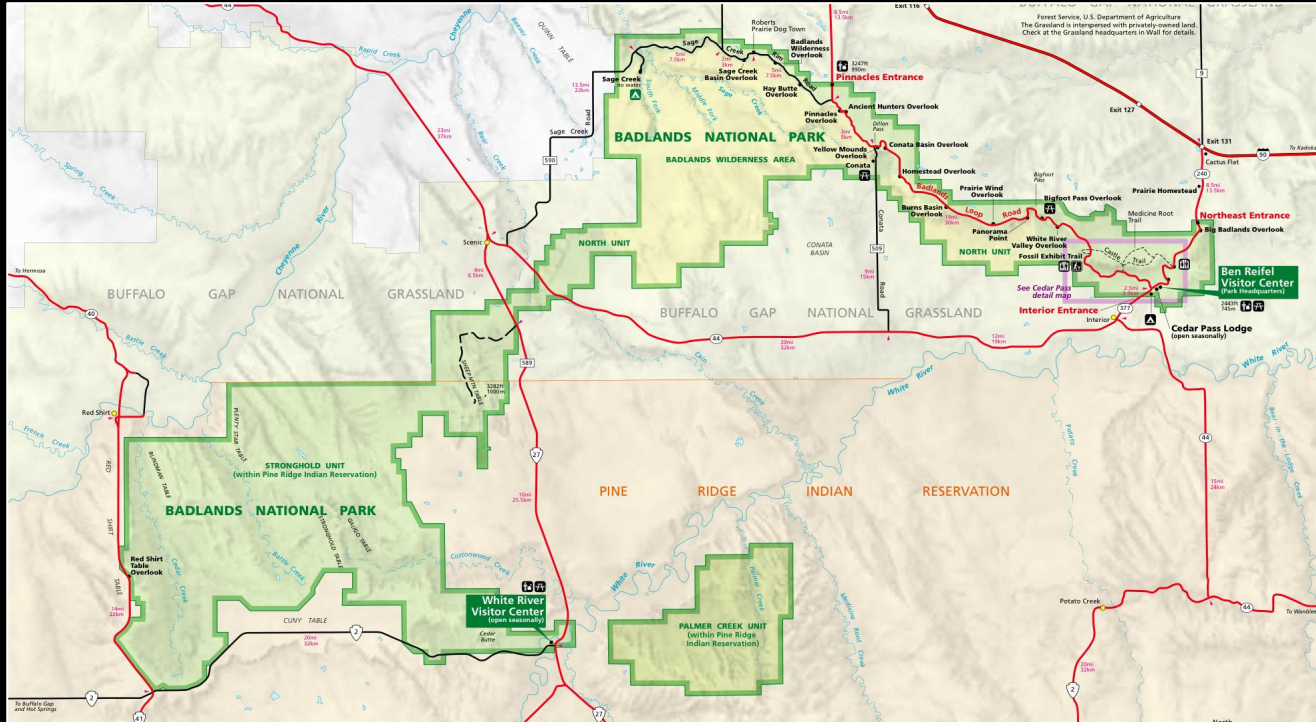
Badlands National Park



Badlands National Park

- French trappers: “bad land to cross”
- Sharply eroded buttes and pinnacles
- 240K acres
- National Park Services manages
- Largest undisturbed mixed grass prairie in US
- 1939 NM
- 1978 NP
- Dances With Wolves partially filmed in park

Badlands National Park



Pinnacles Overlook



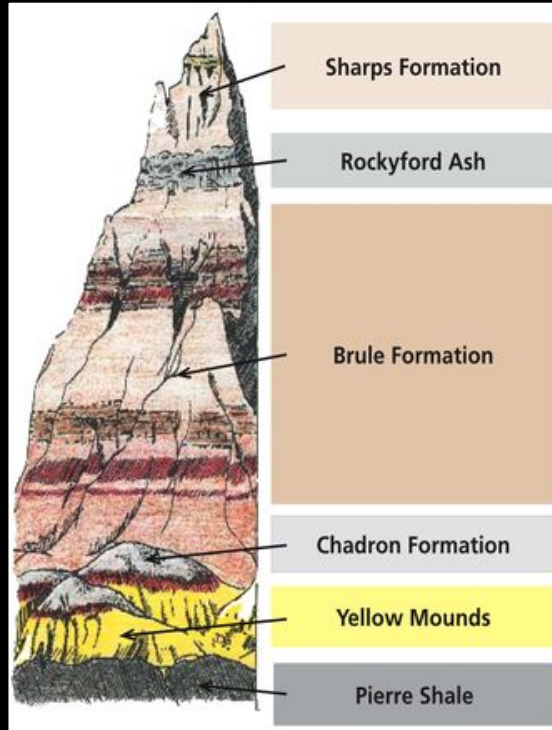
Yellow Mounds



Prairie Dog Town



Badlands Geology



Badlands Geology

- Ocean covered western US
- 25 million years ago: Upheaval rose ocean floor up, water drained away
- Broad, marshy plain with flowing rivers depositing layers of sediment
- Prehistoric animals died and sank into marshland: fossils
- Saber tooth cats, three toed horses the size of dogs, camels, crocodiles, dinosaurs
- 1-4 million years ago, erosion started to out pace deposits
- We are witnessing erosion - rain and wind

Badlands Geology

- Different colors = different sediment deposits
- Gray: silt and clay
- Orange: Iron
- Purple: manganese
- White: volcanic ash
- Yellow: sulfur

- Fossiles regularly being unearthed

Badlands Plants



Badlands Plants

- 60 species of grass
- Supports animals who eat grass
- Rapid erosion won't allow roots to grow for trees & shrubs
- This increased erosion rate even more

Badlands Animals



Badlands Animals

- Rabbits
- Snakes
- Coyotes
- Deer
- Porcupines
- Mice
- Buffalo
- Bighorn Sheep
- Prairie Dogs

Bighorn Sheep



Bighorn Sheep

- Native to North America
- Males have distinctive large, curled horns
- Weighing up to 30 lbs
- Female horns are smaller
- During mating season, they crash horns together for dominance displays
- Well adapted to climbing steep terrain (predator evasion)
- Eat grass and shrubs

Black-footed Ferret



Black-footed Ferret

- Once thought to be extinct
- Small colony found in Wyoming and reintroduced in 1994
- Primary food source: prairie dogs

Prairie Dogs



Prairie Dogs

- Native to North American grasslands
- Type of ground squirrel
- Name comes from sound they make - “barking squirrels”
- Burrows:
 - Multiple chambers
 - 6-9 feet deep
 - 15-30 feet long
 - Up to 6 entrances
- Highly social - live in colonies “towns”

Prairie Dogs Kiss



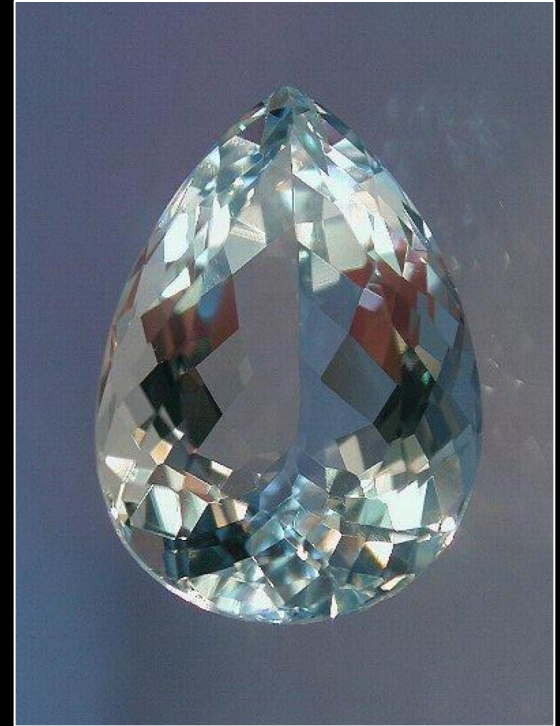
Colorado



Colorado

- Statehood: 1876
- Capitol: Denver
- Name: Spanish for Rio Colorado which carried ruddy (reddish) silt down river
- Nickname: The Centennial State
- Motto: Nothing without providence
- Geography: east = flat, west = Rocky Mountains
- Today's economy: cattle, mining, tourism (skiing), government (US Air Force Academy and NORAD (North American Aerospace Defense Command))

Gemstone: Aquamarine



Flower: Rocky Mountain Columbine



Sport: Pack Burro Racing



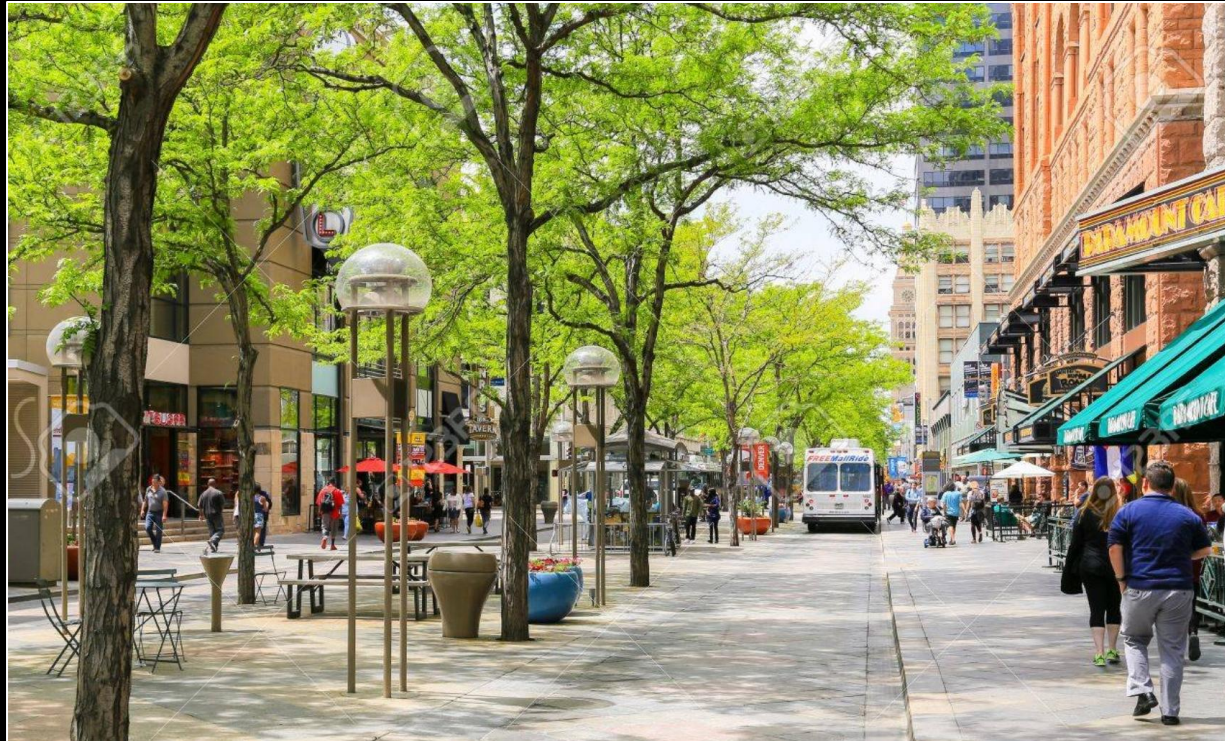
Denver, Colorado



Denver

- Capital of Colorado
- Most populous city in state - 2.8 million
- Nickname: “Mile High City” - 5,690 feet (1,731 meters)
- Nickname: “Queen City of the Plains” - 500 mi from nearest city
- Nickname: “Wall Street of the West”
- Lifestyle: active and outdoorsy - 300 days of sunshine
- Forbes Magazine list of best places for business and careers

16th Street Pedestrian Mall



16th Street Pedestrian Mall

- 1982 downtown revitalization
- 1.25 mile pedestrian street
- 350 shops and restaurants
- Street performers
- Free bus - every 3-15 mins

Western Frontiers Slide Show