



Dear Educator,

I am honored to introduce you to the Wyoming Stewardship Project. I want you to know, this unit was written with you and your students in mind. Developing this project has been a thoughtful process and multi-year commitment to offer lessons for classrooms across the state.

Wyoming educators, in collaboration with field experts and the Wyoming Department of Education, wrote, piloted, and revised the unit you are about to teach in your classroom. We are tremendously grateful for their efforts. These units are not intended to be a burden but were created purposefully to be easy-to-use, cross-curricular, and comprehensive. Units build on each other throughout the grades. However, they can be used independently without loss of integrity.

Found in the Educator Essentials document is everything needed to be prepared to teach this unit. We outline the Higher Order Thinking Skills and how to identify them throughout the units. We have compiled a material list of everything you need to complete all lessons: worksheets, PowerPoints, and video links are included in individual lessons. Additionally, a '101' sheet has been included to give you background information for the highlighted industry in Wyoming.

Our hope for the Wyoming Stewardship Project is to empower students to be our critical thinkers and problem solvers of tomorrow. We believe the stewardship definition captures the overall intent: As Wyoming citizens, we are stewards entrusted with the responsible development, care, and use of our resources to benefit current and future generations.

Thank you again for your effort in the classroom, presenting these lessons to your students, and helping advance this pivotal project for our state. Please don't hesitate to contact us with questions!





Jessie Dafoe

Executive Director
Wyoming Agriculture in the Classroom



Teacher Preparation and Required Materials

The critical work of Higher Order Thinking Skills (HOTS) involves breaking down complex material into parts, detecting relationships, combining new and familiar information creatively within limits set by the context, and combining and using all previous levels in evaluating or making judgments. Within each lesson you'll find reference to the Higher Order Thinking Skills that are part of the work students will be doing using language from Bloom's Taxonomy: Analysis, Synthesis, Application, and Evaluation.

- Analysis skills are used in areas with this symbol: 
- Synthesis skills are used in areas with this symbol: 
- Application skills are used in areas with this symbol: 
- Evaluation skills are used in areas with this symbol: 

The following ideas and content will be important to know for this unit:

- Review the Outdoor Recreation and Tourism introduction to the unit
- Make yourself familiar with Wyoming lands and the agencies that manage them
- Review Wyoming State Science standards to prepare for the science involved in Lesson 3 (Weathering and Erosion) and Lesson 5 (Engineering challenge)
- At the end of each lesson is a list of references that may be helpful when teaching about Wyoming's economy.

- This unit may provide a good introduction to any field trips your class may have planned to state parks or historic sites (ie. Fort Laramie).

The following materials will be needed for this unit:

- Whiteboards
- Dry-erase markers
- Sticky notes
- Chart paper
- Sets of 4 different colored markers
- Colored pencils or markers
- White paper
- Highlighters
- Timer
- Wyoming state maps
- Counters, blocks, or chips (at least 50)
- Container to hold counters, blocks, or chips



Outdoor Recreation & Tourism 101

Wyoming Outdoor Recreation & Tourism at a glance:

The below bullet points are taken directly from the *Wyoming Travel Impacts, 2000 – 2016 Report* prepared by Dean Runyan Associates. This addresses overall travel and tourism but gives a good indication of the importance of this industry

STATE SUMMARY: DIRECT IMPACTS OF TRAVEL IN WYOMING

- Travel spending by all domestic and international visitors in Wyoming was approximately \$3.2 billion in 2016. This is equivalent to approximately \$8.9 million dollars per day.
- Overall, travel spending in Wyoming has increased 4.3 percent per year since 2000. In constant dollars (adjusted for inflation), travel spending has increased by about 2.7 percent per year over the same period.
- Visitors who stayed overnight in commercial lodging facilities spent \$1.8 billion in 2016 - more than half (58 percent) of all visitor spending in the state. Visitors who stayed in public and private campgrounds spent \$563 million, or about 18 percent of all visitor spending.
- During 2016, travel spending in Wyoming directly supported approximately 32,000 jobs with travel-generated earnings of \$894 million. Travel spending generated the greatest number of jobs in accommodations, recreation, and food service industries.
- Local and state tax revenues generated by travel spending were about \$171 million in 2016 (property taxes not included). Without these, travel generated tax revenues, each household in Wyoming would

have had to pay an additional \$730 in taxes per year to maintain these current state and local tax revenues.

Wyoming Outdoor Recreation & Tourism Overview

Below this overview is a table that displays land ownership and who owns/manages the land. We encourage every teacher to review this before teaching this unit. While many of these lessons focus on public land, it is important to recognize that private land also plays an important role in recreation and tourism. Private landowners grant access for hunting and fishing, establish hunting and dude ranches, and contribute to the open spaces and wildlife habitat that make Wyoming so desirable for recreation and tourism.

The beautiful landscape of northwest Wyoming attracted the attention of settlers, and scientists alike. Wyoming pioneered the first national park, first national monument, and first national forest; making this unique land a hot spot for early tourists.

In 1872, before Wyoming was even a state, President Ulysses S. Grant designated Yellowstone as the nation's first national park. Yellowstone is home to remarkable hot springs, geysers, and wildlife. Its fame draws people worldwide to experience the breathtaking sights and natural beauty.

In 1906, the northeastern side of Wyoming became home to the first national monument. Devils Tower, a geological wonder, was handed this designation by President Theodore Roosevelt. This volcanic tower rises 867 feet from summit to base. On average, over 400,000 visitors come to hike around its base or climb its columns. Another outdoor first for Wyoming was the Shoshone National Forest. Created in 1891, it remains one of the wildest parts of the continental United States. This forest provides chances for people to hunt, hike, camp, and fish.

Wyoming became known world-wide through Buffalo Bill Cody's Wild West Show, which sensationalized the wild West. Wyoming continues to welcome tourists who are seeking a taste of the West and take pleasure in Wyoming's extraordinary lands. The state hosts an average of 8.5 million overnight visitors a year. These travelers and the people in Wyoming have the chance to enjoy the diverse landscape from mountains to vast grasslands.

Nearly half (48 percent) of Wyoming is federal public land, and the State of Wyoming owns another 5.6 percent. Not only does Wyoming have beautiful scenery, it offers history in various forms. In addition to the Ft. Laramie National Historic Site, there are twenty-five Natural Historic Landmarks and two national monuments: Devils Tower and Fossil Butte. To keep these destinations accessible, private land owners, along with state and federal agencies, such as the Wyoming Game and Fish Department, National Forest Service, and Bureau of Land Management work to provide balance in conserving these resources for future generations.

Wyoming Lands

LANDOWNERS	Acres	Sq Miles	%
United States Government			
National Park Service	2,223,083	3472	3.50
Forest Service	9,166,805	14324	14.62
Fish and Wildlife	72,449	112	0.12
Bureau of Land Mgt.	17,508,808	27359	27.92
Bureau of Indian Affairs	1,540,133	2407	2.46
Bureau of Reclamation	411,985	644	0.66
Other Federal Managed Lands	78,054	121	0.12
Wyoming			
State Lands	3,612,571	5642	5.76
State (State Parks & Hist Sites)	61,319	96	0.10
State (Wyoming Game and Fish)	187,747	294	0.30
Local Government	9,701	15	0.02
Surface Water	435,596	681	0.69
Total Private	27,406,262	42820	43.70
Total Public	35,308,251	55169	56.30
TOTAL AREA	62,714,513	97,987	

Source: Information compiled by Wyoming Association of Conservation Districts - 2017. Statistical information obtained from 2014 Bureau of Land Management dataset.

Land Ownership

Private Property

Private property rights are fundamental to Wyoming. Private property includes land owned by a person or group and kept for their exclusive use. Every person has the right to own private property and enjoy using it. This also includes the right to prohibit other people from using it. The Wyoming Constitution protects private property rights from the government taking ownership of the land (eminent domain) or by other people taking ownership of the land by stating "Private property shall not be taken for private use unless by consent of the owner, except for private ways of necessity, and for reservoirs, drains, flumes or ditches on or across the lands of others for agricultural, mining, milling, domestic, or sanitary purposes, nor in any case without due compensation." Furthermore, "Private property shall not be taken or damaged for public or private use without just compensation."

Students should be aware of the importance of private property in Wyoming and the understanding that someone who does not own a certain parcel of private land cannot cross or be on that land for recreation or tourism use without permission from the owner. Private property use is respected under the law. Many private landowners do create access for recreation in providing hunting and fishing opportunities, as well as development access. However, if someone wants to cross land they do not own, they must acquire permission, generally by purchasing certain rights to use the land from the person who owns the land.

State lands

State lands include land granted to the state of Wyoming by the United States upon the admission of Wyoming to the Union; these lands are commonly known as State Trust Lands. According to the Office of State Lands and Investments, "When Wyoming became a state on July 10, 1890, the federal government granted approximately 4.2 million acres of land (known as State Trust Lands) to the State of Wyoming. The law requires state land to be held in trust to produce income to support public schools and other state institutions named in the original grants." These lands held by the State of Wyoming provide a huge benefit for our youth and their education by generating income from leasing land for livestock grazing, outfitting, energy

production and mineral production. Students should understand the importance of stewardship of this land to be managed in a way that promotes sustainable multiple use while providing income to the institutions which the land was granted to benefit.

For example, there are other state lands, such as the University of Wyoming land that is owned by the University and used for its research and other purposes. Another category of state land includes state parks. State parks, much like national parks, are reserved to be enjoyed by the public for recreation and tourism and do not generate income through development. Additionally, there is specific Wyoming land managed by the Wyoming Game & Fish Department.

Federal lands

Federal lands have six primary administering agencies: Bureau of Land Management (BLM), Forest Service (FS), Fish and Wildlife Service (FWS), National Park Service (NPS), the Department of Defense (DOD), and the Bureau of Reclamation (BOR). The BLM, FS, FWS, and NPS lands are the primary agencies/federal land focused on by the Wyoming Stewardship Project.

DOD lands consist primarily of military bases and training ranges. The BOR has projects in 17 western states including Wyoming. The Wyoming Stewardship Project does not focus specifically on these projects/land areas.

The BLM, FS, NPS, and FWS have unique missions for each agency. BLM and FS lands are managed under the principles of multiple use and sustained yields. For other lands, such as wildlife refuges managed by FWS, the land is managed for wildlife with only limited private economic uses. By and large, the other federal land is managed for a wide range of multiple uses, including the timber harvest, mining and oil and gas development, grazing, outfitting, recreation, wildlife habitat, water supply protection and other productive uses of the land.

National parks, on the other hand, are set aside primarily for site preservation and used primarily for recreation and tourism purposes. In addition to the national parks are monuments and trails. Wyoming has a rich

resource within these lands for Wyomingites to enjoy and steward for many to benefit from these lands for time to come.

Stewardship

As Wyoming citizens, we are entrusted with the responsible development, care, and use of our resources to benefit current and future generations.



