

Preface

THE NORTH AMERICAN MODEL OF WILDLIFE CONSERVATION; AND ITS IMPORTANCE TO YOU AND YOUR COUNTRY

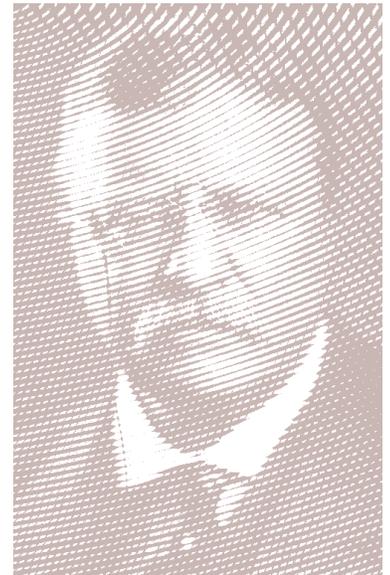
When the Europeans were settling North America, they were totally focused on using the natural resources of a place they knew as the “new world,” first to survive and then perhaps prosper. America’s founding documents focused on human rights. The Declaration of Independence, Constitution, and Bill of Rights all fail to mention our relationship with nature and natural resources. Thus, the people of our young democracy were left to chart our nation’s future course relative to the exploitation or conservation of fish, wildlife, forests, soil, water, and air.

In our first one hundred years, there was no sign of a conservation ethic among the people. Those seeking timber simply logged out an area and moved on. Wildlife and fish became commercial products and were generally killed and sold for their flesh, feathers or hides. The question of who would have the right to take fish and wildlife was left for the court’s to decide. We were only 66 years old as a country when the U.S. Supreme Court, hearing a dispute over access to oysters, began ruling that fish and wildlife in the “new world” were to attach, not to property, but to the people. What had been the kings-deer in the “old world” - became the people’s game in America.

When Theodore Roosevelt was born, there were 10 Americans and 17 buffalo per square mile in the United States. Forty-two years later, when he reached the White House as our youngest president, there were about 25 Americans per square mile and only 40 wild buffalo left alive – hiding out in Yellowstone National Park. All “useable” wildlife were suffering a similar plight.

Theodore Roosevelt (TR) loved to hunt and in 1887 he and another passionate hunter, George Bird Grinnell, formed a club to introduce a sporting code that would be basic to our relationship with wildlife, and to work for the restoration of big game in America. Their message of conservation gained moment when TR became our 26th president. As president, the hunter in the White House began introducing our nation to conservation starting with his first message to Congress. He would call seven national conferences on the subject, and being a man of action, he set aside over 230 million acres for wildlife and forest protection. It was just about 10 percent of America. These places included wildlife refuges, game ranges, forest reserves, national monuments, and national parks – and for wildlife, they were an “estate of hope.” When TR went into the White House there were about 500,000 deer left in the entire United States. Today there are over 33,000,000 whitetail deer alone.

Similar statistics apply to virtually all species of hunted game. The important thing to learn is that this remarkable achievement of restoration did not happen by accident. It happened because people cared, and for more than a century now, hunters nurtured a conservation ethic that made it happen. We have come to call this achievement the North American Model of Wildlife Conservation. So enjoy your journey through this educational opportunity; and then, out on the landscape, where it all is still very much alive and waiting for you.



Theodore Roosevelt

- Jim Posewitz, author of *Inherit the Hunt* and *Beyond Fair Chase*

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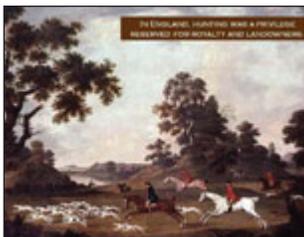
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| 6 |  | <p>How could such a tide be turned? How could a country restore nearly extinct wildlife to the abundance for which we are now known? The story is an amazing tale of national history. A story that can serve as a reminder of what we can accomplish when working together with a common goal. In this case, the goal was to save our wildlife legacy.</p> |
| 7 |  | <p>The story begins with the founding of our country. When colonists first settled here they encountered an abundance of natural resources. Settlers quickly learned which trees made the best lumber, which fields made the best farmlands, and which wildlife was the best game.</p> |
| 8 |  | <p>For many early settlers, unregulated hunting was a privilege they had never experienced. Back in Elizabethan England, game belonged to the landowners, who were usually royalty, and only the wealthy participated in big game hunting. Commoners were reduced to taking small game from the minimally available public lands.</p> |
| 9 |  | <p>Hunting wildlife was an important part of the settling of this land. Wild game was crucial to the survival of the early settlers, and deer, turkey, moose, elk, and small game were an important part of the early American diet. Hide for clothing was also important. At the time, game was abundant and the bounty seemed endless.</p> |
| 10 |  | <p>In addition to being an important source of food, wildlife was also valued for its fur and feathers. Many Europeans saw the natural bounty of the American wilderness as a source of wealth, with the fur-bearing animals such as beaver, marten, fisher, and wolverine being abundant, free for the taking, and whose hides were profitable to sell.</p> |



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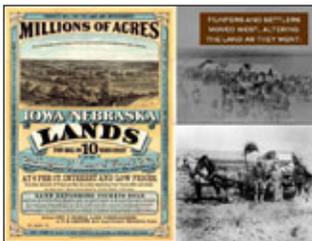
What started as an exchange between European traders and the Native Americans became, for a time, one of the most profitable and important industries in North America. Beaver pelts were considered not only a measure of wealth and currency, but the most important natural resource to come out of the new world.

12



Demand for furs in Europe grew and more and more trappers came to the new world to partake in this bounty. By the 1700s, beaver became increasingly scarce in eastern North America. Trappers moved west, exploring the wilderness and extracting an abundance of pelts from the western lands.

13



With a strong belief in "Manifest Destiny" or America's right and duty to expand across the continent, the settlers pressed westward. More and more land was cleared for settlements and agricultural fields. Forests were cut for fuel wood and lumber. This westward expansion increased the demand for game.

14



Wildlife continued to be an important food source and hunting was a way of life in this growing country. By the 1800s, however, animals, such as deer, bison, pronghorn, elk, and beaver, were becoming scarce in some places primarily due to unregulated hunting and loss of habitat.

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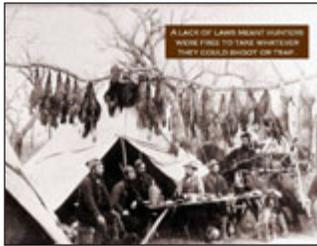


The first "Transcontinental Railroad," completed in 1869, not only brought new settlers, but provided easier access to western hunting grounds. The railroad also made the shipping of animal hides to the East more convenient and economical for market hunters.



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16



Up to this time, hunting was mostly unregulated and unrestricted. In the eastern United States, where some wildlife had become noticeably absent, the first hunting restrictions that reduced hunting seasons or “bag” limits were imposed. However, the West was still wide open to unregulated hunting; there were no bag limits and hunters were free to take what they could shoot or trap. While some conscientiously self-regulated their hunting, taking only what they needed, others made a living from hunting.

17



Market hunting – the shooting or capture of wildlife for sale to milliners, restaurants, or other markets – became big business during the mid to late 1800s. Not only were market hunters taking fur-bearing animals, but market hunting for birds also became popular and profitable for food, down, and fashion.

18



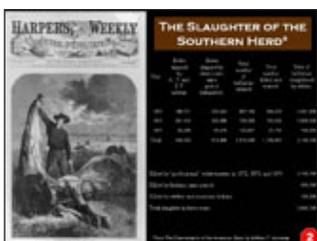
The story of the demise of the American bison is well known to most Americans. “Professional” market hunters, responding largely to the demand for “buffalo” hides and meat, hunted the bison to near extinction in the late 19th century.

19



Aided by the development of more efficient guns and the transportation opportunities provided by the railroad, unregulated hunting reduced the American Bison herd from a population of at least 30 million to a few thousand. By the late 1800s the American Bison was on the brink of extinction.

20



The slaughter of the “southern herd” was documented by William T. Hornaday, director of the New York Zoological Society.



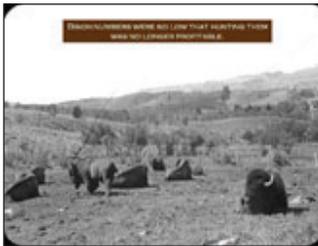
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By 1889, the total number of bison “running wild and unprotected” was 635. Added to that were 256 captive bison and 200 that were under government protection in Yellowstone National Park. According to Hornaday, “the whole number of individuals of *Bison americanus* now living is 1,091.”

22



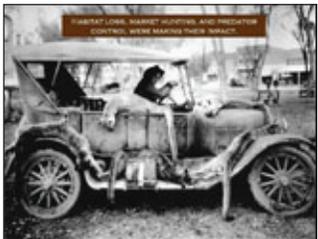
Bison were so scarce, hunting became unprofitable. However, herds in captivity and protected in Yellowstone slowly started growing.

23



While most people know the story of the bison, few know that during that same era, other wildlife populations such as deer, elk, pronghorn, cougar, wolf, grizzly, turkey, and waterfowl were drastically declining.

24



Habitat loss, market hunting, and predator eradication all contributed to the decline.

25



In the eastern waterways and wetlands, waterfowl were being decimated by market hunters with some species very near extinction. In the words of William T. Hornaday, “Of all the meat-shooters, the market-gunners who prey on wild fowl and ground game birds for the big-city markets are the most deadly to wild life.”



AMERICA'S WILDLIFE — YESTERDAY, TODAY AND TOMORROW

Lesson 2 – Turning the Tides of Conservation

Time Frame

2-3 hours/periods

Grades

High School

Overview

Students view Part 2 of the PowerPoint presentation which provides an overview of the conservation movement from the late 19th century to the present. Part 2 moves students through the specific events that turned the tides from “the darkest hour” to the model of wildlife conservation we recognize today. Included are the contributions of important conservation figures such as Teddy Roosevelt and Aldo Leopold, key legislative acts, and other historical events that brought wildlife back from the brink of extinction. The presentation concludes by introducing the concepts and seven key principles of the North American Model of Wildlife Conservation. Part 2 also includes a study guide for students to complete during the presentation and questions for discussion.

Objectives

Students will:

- learn about the recovery and conservation of wildlife populations from the early 20th century to the present.
- complete a study guide to reinforce content and concepts presented in the *PowerPoint Presentation: Part 2 - The Turning of the Tides and the North American Model of Wildlife Conservation*.
- analyze the human actions and attitudes that contributed to the wildlife conservation movement.
- evaluate how human values toward wildlife have changed over time.

Essential Questions

- What specific events brought wildlife back from near-extinction in the 20th century?
- How did human attitudes / beliefs change with the evolution of wildlife conservation?
- Who owns wildlife and what responsibilities come with that ownership?
- How does our understanding of wildlife science influence wildlife management and wildlife law?
- How are wildlife management and conservation funded and what would happen to wildlife if those funds were lost?
- What factors affect wildlife management decisions?

Standards Correlations

Note: The full text of these standards can be found in Appendix A.

AZ Academic Content Standards

| Science | Social Studies | Social Studies |
|-----------|----------------|----------------|
| • S3C1-01 | • SIC7-03 | • S3C3-04 |
| • S3C1-05 | • SIC10-03 | • S3C3-05 |
| • S3C2-02 | • S3C1-01 | • S3C4-03 |
| • S3C2-05 | • S3C1-02 | • S3C4-05 |
| • S4C3-02 | • S3C3-03 | • S4C5-05 |
| | | • S4C5-06 |

NSES Content Standards

- Life Science: Interdependence of organisms
- Science in Personal and Social Perspectives: Natural resources; Natural and human-induced hazards; Science and technology in local, national, and global challenges
- History and Nature of Science: Science as a human endeavor; Historical perspectives

NCSS Curriculum Standards

| | | |
|---------|---------|-------|
| 1: a, g | 6: a, e | 10: e |
| 2: c | 7: h | |
| 5: b, f | 8: c | |

Excellence in Environmental Education Guidelines for Learning

- 2.2: A, C
- 2.3: A, B, C
- 2.4: A, C
- 4: A



Materials and Resources

- Computer with PowerPoint software
- Computer projector
- *Turning the Tides of Conservation* PowerPoint presentation
- *Turning the Tides of Conservation Study Guide*
- **Optional:** *Turning the Tides of Conservation Vocabulary Definitions* OR *Turning the Tides of Conservation Vocabulary Matching*

Teacher Preparation

- Reserve computer/projector if necessary.
- Review the *Turning the Tides of Conservation* PowerPoint presentation to be sure it works on computer/projector. If the teacher-led version is being used, become familiar with the content/script.
- Print and copy *Turning the Tides of Conservation* (one per student).
- If the optional introduction activity is being used, determine which version of the vocabulary exercise students will perform. Print and copy appropriate worksheet (one per student).

Background Information

Prior to this lesson, students should view and be familiar with the *Wildlife at the Brink* PowerPoint presentation found in Lesson 1.

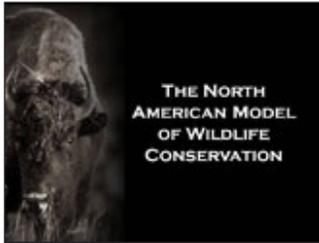
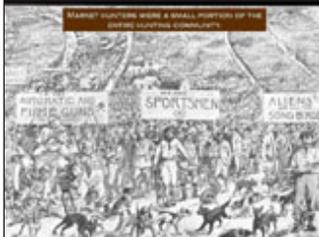
Students may become overwhelmed with some of the vocabulary in this lesson. An optional introduction activity has been provided that will help students with the new words. Students read a brief summary of the PowerPoint presentation and use context clues to determine the definitions of the vocabulary. There are two versions of this activity depending on the level of the students. One option has students match the words with provided definitions. The advanced option requires students to develop their own definitions and identify synonyms.



There are also two ways to present the PowerPoint presentation to the students. If you are comfortable with the content, there is a traditional PowerPoint that you can advance at your own pace. A script has been provided to help you tell the story. If you prefer, an automated and narrated version has also been provided. Once started, it will play automatically, just like a movie. For increased student interaction, both versions have options to stop and discuss. When you see a small stop sign in the corner of the slide, you may briefly stop the presentation and use the questions provided in the procedures to guide a class discussion. The signs can also be ignored if you would prefer to run the presentation without stopping.

Teachers and students should be familiar with American History including the Presidency of Theodore Roosevelt.



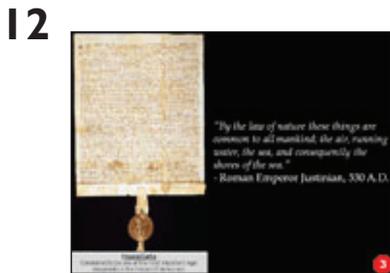
| Slide # | Slide Thumbnail | Script |
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| 6 |  | <p>This is the story of wildlife conservation in America. The story of bold individuals and determined politicians. Of concerned scientists and passionate hunters and anglers.</p> |
| 7 |  | <p>It is a story of the evolution of what would become the world's most successful model for wildlife conservation, the North American Model of Wildlife Conservation.</p> |
| 8 |  | <p>As wildlife numbers dwindled in the late 1800s, it was clear that something needed to be done. The exploitation of wildlife had to stop. To ensure America would have any wildlife in the next century, wildlife would have to be conserved and wildlife populations brought back from the brink of extinction.</p> |
| 9 |  | <p>While concerned citizens, scientists, politicians, and others championed conservation efforts, it was hunters and anglers, collectively called sportsmen, that took the actions that started wildlife on the road to recovery. By the turn of the century, "sportsmen" hunters had already been at work for several decades, striving to turn the tide.</p> |
| 10 |  | <p>First, hunters realized there was a division among their own ranks. Most hunters were not market hunters. They were "gentlemen" sportsmen that respected wildlife and the wilderness in which they lived. They were individuals with a passion for getting into the outdoors and providing meat for the table. They abhorred the slaughter by market hunters.</p> |



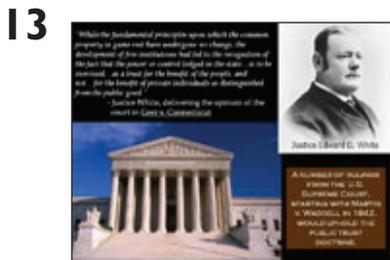
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Next, hunters also realized that as “sportsmen,” they must embrace a hunting ethic – a code of honor – that incorporated the ideas of recognizing and honoring “bag” limits, season restrictions, and the concept of “fair chase.”



For the most part, the public understood the concept that wildlife was held in the public trust. That is, wildlife belongs to everyone and is held in trust by the government. This principle, known as the Public Trust Doctrine, can be traced to Roman emperor Justinian and was formalized by the Magna Carta of 1215. Although the Magna Carta was originally a document limiting the powers of the English King, it would become a foundational document for our own Constitution.



More recently, a series of Supreme Court decisions, starting in 1842, with a case known as Martin v Waddell, legally upheld the public trust principle as outlined in the Magna Carta. These rulings upheld the idea that natural resources such as water, fish, and wildlife are held in trust by the government for the benefit of all the people, today and in the future. Geer v. Connecticut, in 1896, further solidified this idea.



Although wildlife belonged to everyone, no one had the right to decimate wildlife populations for their own gain. But market hunters were doing just that. Sportsmen realized that in order to stop market hunting, commerce in wildlife would have to be abolished. Hunting would need to be better regulated. However, public and political support was needed.



Sportsmen's clubs formed and sporting magazines were published to help build that support.



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| 26 | | <p>While lands were set aside for wildlife, market hunting was outlawed, and migratory birds were protected, across the country, states were limiting the harvest by setting hunting seasons and bag limits. Enforcement was difficult but sportsmen were encouraged to comply, honoring their code of ethics.</p> |
| 27 | | <p>At first, bag limits were set based on a variety of suppositions about wildlife populations and their movements. It was not until the 1930s that wildlife management became a science. Aldo Leopold, known as the father of wildlife management, developed the first graduate program in Game Management at the University of Wisconsin.</p> |
| 28 | | <p>In 1930, Leopold's "American Game Policy" was presented and adopted nationwide. This comprehensive policy established the era of wildlife management based on science. The Policy, along with his publication, Game Management, served as a guide for wildlife managers for decades and advanced the understanding of the balance of natural resources.</p> |
| 29 | | <p>As wildlife science developed, and understanding of wildlife populations and habitats grew, the management of wildlife improved. It was clear that science should inform the laws regulating hunting to ensure a sustainable harvest.</p> |
| 30 | | <p>A sustainable harvest meant that healthy wildlife populations could be ensured for the future by scientifically determining how many of a certain species could be harvested each season. Thus, science informed wildlife law and wildlife populations began to grow as a result.</p> |



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As with the establishment of other laws and regulations, the public also had the opportunity to shape hunting and angling laws through the public process.

32



State and federal wildlife regulatory agencies were established across the country. However, monies to support this new profession and these efforts were scarce. Many state agencies began requiring licenses to legally hunt and fish. The money from the sale of these licenses was used to fund wildlife management and conservation.

33



Then, in 1937, following recommendations from the North American Wildlife Conference, the Federal Aid in Wildlife Restoration Act (known as the "Pittman-Robertson Act") was passed with strong support from sportsmen. This Act placed an 11% excise tax on hunting equipment and ammunition. The funds were to be allocated by the Federal government to the states to aid in the management and restoration of wildlife.

34



In 1950, a similar act was passed to support fisheries. The Federal Aid in Sport Fish Restoration Act (Dingell-Johnson Act) established an excise tax on fishing equipment and allocated the funds to the management and restoration of state fisheries.

35



Along with the money collected from the sale of hunting and fishing licenses, these funds were, and still are, used for the restoration of wildlife populations, acquisition and enhancement of habitat, and other wildlife conservation and education activities that benefit non-game, or non hunted, species as well as game species.



KEY Turning the Tides of Conservation Study Guide KEY

Part A. To be completed during the PowerPoint presentation.

1. **HUNTERS AND ANGLERS (SPORTSMEN)** were among the first to take action to save our wildlife.
2. Most hunters were not **MARKET HUNTERS**.
3. Sportsmen hunters embraced a hunting ethic which incorporates the ideas of honoring **BAG LIMITS, SEASON RESTRICTIONS,** and **FAIR CHASE**.
4. The Public Trust Doctrine can be traced to Roman Emperor **JUSTINIAN** and the **MAGNA CARTA** of 1215.
5. Which Supreme Court ruling first upheld the public trust doctrine in the United States? **MARTIN V. WADDELL**
6. Sportsmen hunters know that to better regulate hunting, **PUBLIC** and **POLITICAL** support was needed.
7. Sporting magazines, such as **FOREST AND STREAM,** advocated for hunting regulations and the **CONSERVATION** of wildlife.
8. The **BOONE AND CROCKETT** Club promoted **FAIR AND REGULATED** hunting and was a significant force in wildlife **CONSERVATION** and the elimination of **MARKET HUNTING**.
9. Other advocacy groups included **SIERRA CLUB AND THE AUDUBON SOCIETY**.
10. The **LACEY ACT** was the 1900 Act that ended market hunting by making it illegal to move unlawfully taken game across **STATE LINES**.
11. **YELLOWSTONE** was the world's first National Park.
12. The **MIGRATORY BIRD TREATY ACT** protected migratory birds and their nests and eggs.
13. States limited harvest by setting **HUNTING SEASONS** and **BAG LIMITS**.
14. In the 1930s, wildlife management became a **SCIENCE**.
15. **ALDO LEOPOLD** is known as the father of wildlife management.
16. It became clear that science should inform the **LAWS** regulating hunting.
17. **A SUSTAINABLE** harvest helps ensure healthy wildlife populations for the future.
18. **The PITTMAN-ROBERTSON ACT** placed an excise tax on hunting equipment.



19. The **DINGELL-JOHNSON ACT** placed an excise tax on fishing equipment.
20. These Acts allocated funds for the **MANAGEMENT and RESTORATION** of state fisheries and wildlife.
21. The model we follow for wildlife management today is called **THE NORTH AMERICAN MODEL OF WILDLIFE CONSERVATION**.
- 22 – 28. The seven basic principles of this model are:
 - a. Wildlife is held in the **PUBLIC TRUST**.
 - b. **COMMERCE** in wildlife is regulated.
 - c. Hunting and fishing laws are created through **PUBLIC PROCESS**.
 - d. Everyone in good standing has the opportunity to **HUNT AND FISH**.
 - e. **HUNTERS AND ANGLERS** fund conservation.
 - f. Wildlife is an **INTERNATIONAL** resource.
 - g. **SCIENCE** is the basis for wildlife policy.

Part B. Questions for Discussion

1. Who owns wildlife and what responsibilities come with that ownership? *In North America, the people own wildlife. That means that no single person has a right to it. Therefore, the resource must be managed in a way that ensures all people, today and in the future, continue to have access to it. Part of the responsibility for ownership is that people must be involved. They must help shape wildlife laws.*
2. How did human attitudes and beliefs change with the evolution of wildlife conservation? *Answers will vary.*
3. How does our understanding of wildlife science influence wildlife management and wildlife law? *As our understanding of species and populations has improved, we have been able to adjust our management strategies to take this new knowledge into account. We are better able to know what sustainable populations sizes are and attempt to maintain numbers near these levels.*
4. How is wildlife management and conservation funded and what would happen to wildlife if those funds were lost? *The vast majority of wildlife management and conservation is funded by hunters and anglers. This is done through license fees and excise taxes on hunting and fishing equipment. If this funding was lost, state wildlife agencies would have an extremely difficult time managing wildlife and enforcing laws.*
5. Name at least two groups who had an interest in saving wildlife? What was their interest? What action did they take? *Answers will vary.*
6. How did ethics influence early wildlife conservation and how do they factor in today? *Since little to no wildlife laws were in place, ethics was the primary driving force for wildlife conservation. People conserved wildlife because they felt it was the right thing to do.*



Timeline Cards - Government, War, and Politics Long-term Events

| | | | | | |
|--|--|--|--|--|--|
| <p>1812</p> <p>●</p> <p>Begins</p> | <p>War of 1812</p> <p>●</p> <p>This is often called the “Second War of Independence.” It began when the United States was frustrated with the British navy harassing and seizing American ships and seamen.</p> <p>●</p> | <p>1815</p> <p>●</p> <p>Ends</p> | <p>1846</p> <p>●</p> <p>Begins</p> | <p>Mexican – American War</p> <p>●</p> <p>A war fought between the United States and Mexico over the American annexation of Texas.</p> <p>●</p> | <p>1848</p> <p>●</p> <p>Ends</p> |
| <p>1861</p> <p>●</p> <p>Begins</p> | <p>American Civil War</p> <p>●</p> <p>A war fought within the United States, between the northern states and eleven southern states that wanted to secede from the Union.</p> <p>●</p> | <p>1865</p> <p>●</p> <p>Ends</p> | <p>1901</p> <p>●</p> <p>Begins</p> | <p>Teddy Roosevelt Presidency</p> <p>●</p> <p>An avid hunter and outdoorsman, Roosevelt would make conservation a significant part of his Presidential legacy.</p> <p>●</p> | <p>1909</p> <p>●</p> <p>Ends</p> |
| <p>1914</p> <p>●</p> <p>Begins</p> | <p>World War I</p> <p>●</p> <p>“The Great War” was an unprecedented war involving most of the world’s major nations. The United States, Great Britain, and others fought against Germany, Austria-Hungary, Turkey, and Bulgaria.</p> <p>●</p> | <p>1918</p> <p>●</p> <p>Ends</p> | <p>1929</p> <p>●</p> <p>Begins</p> | <p>Great Depression</p> <p>●</p> <p>A worldwide economic depression that began in the United States with the stock market crash on October 29, 1929.</p> <p>●</p> | <p>1939</p> <p>●</p> <p>Ends</p> |



Timeline Cards - Student Events

1892

Sierra Club Forms

Founded by famous naturalist and nature writer, John Muir, the Sierra Club promotes an enduring legacy for America's wild places and strives toward safe and healthy communities.

1893

First Gas-Powered Car in U.S.

Charles and Frank Duryea produced the first gas-powered automobile in the United States. They would start selling them commercially three years later.

1894

National Park Protective Act

Also known as the Yellowstone Game Protection Act, this Act established the principle that national parks exist in part to protect wildlife and are not to be used for hunting.

1900

Lacey Act

The Lacey Act prohibits the transport of illegally taken game across state lines. It is the first Federal law protecting game.

1903

First Airplane

On December 17, the Wright Brothers would record the first successful human flight using an engine-powered airplane. Orville Wright would fly the craft 10 feet off the ground for 120 feet for 12 seconds.

1903

Pelican Island Wildlife Refuge Created

The first federally protected wildlife refuge in the United States is created, which later becomes part of the National Wildlife Refuge System.

1905

Audubon Society Forms

Although the roots of the Audubon Society can be traced earlier, the society became officially incorporated in 1905. Founded by a group of concerned Americans, it was formed primarily to protect birds from slaughter and use in fashion.

1905

U.S. Forest Service Established

The U.S. Forest Service is created with the Transfer Act of 1905. Gifford Pinchot becomes the first chief and implements a program of science-based forestry management.



Timeline Cards - Student Events

1908

National Conservation Commission Created

The National Conservation Commission is created to compile the first inventory of U.S. natural resources and make recommendations on resource management.

1910

Boy Scouts of America Incorporated

Modeled after similar movements in other countries, the Boy Scouts of America was founded to teach basic values such as patriotism and self-reliance. There was a large focus on outdoor activities.

1913

Migratory Bird Act

Also known as the Weeks-McLean Act, this Act allows the Federal government to regulate the hunting of migratory birds. It would later be replaced with the Migratory Bird Treaty Act.

1916

National Park Service Act

This Act creates the National Park Service within the Department of the Interior "to conserve the scenery and the natural and historic objects and the wildlife therein...and to...leave them unimpaired for the enjoyment of future generations."

1919

Grand Canyon National Park Created

Already being used for extensive mining and exploration, the designation of the Grand Canyon as a National Park ensured its protection and increased tourism to the area.

1929

Migratory Bird Conservation Act

The Migratory Bird Conservation allows for land and water areas to be designated as reservations for migratory birds.

1930

Leopold Presents His Game Policy

Aldo Leopold presents the first American Game Policy at the 17th American Game Conference, stating that wildlife should be scientifically managed.

1934

Duck Stamp Act

Also known as the Migratory Bird Hunting Stamp Act, this Act requires that waterfowl hunters purchase a stamp before hunting. The revenue from the stamp is to be used for the protection of waterfowl and their habitat.



Below are some of the events important to the wildlife conservation movement. Answer the questions for each one. Additional Internet links have been provided if you need more information.

Martin v. Waddell

- <http://supreme.justia.com/us/41/367/case.html>
- http://westvirginia.sierraclub.org/newsletter/archives/2005/07/a_001.html

a. Briefly summarize this event in your own words.

FIRST ESTABLISHED THE CONCEPT OF PUBLIC TRUST AS A LEGAL CONCEPT IN THE UNITED STATES. DETERMINED THAT NATURAL RESOURCES ARE HELD BY THE GOVERNMENT FOR THE BENEFIT OF ALL CURRENT AND FUTURE GENERATIONS.

b. How was this event important to wildlife conservation in North America?

THE PUBLIC TRUST DOCTRINE IS A KEYSTONE COMPONENT OF WILDLIFE CONSERVATION IN NORTH AMERICA. IT GRANTS AUTHORITY TO WILDLIFE MANAGEMENT AGENCIES TO SET REGULATIONS TO APPROPRIATELY MANAGE WILDLIFE.

Boone and Crockett Club

- <http://sports.espn.go.com/outdoors/hunting/columns/story?id=3636688>
- http://www.boone-crockett.org/about/about_overview.asp?area=about

a. Briefly summarize this event in your own words.

ONE OF THE MOST INFLUENTIAL SPORTING GROUPS THAT WOULD PUSH FOR THE DEVELOPMENT OF A HUNTING ETHIC FOR ALL SPORTSMEN TO ABIDE BY.

b. How was this event important to wildlife conservation in North America?

BOONE AND CROCKETT WERE ONE OF THE FIRST CITIZEN GROUPS THAT WOULD RECOGNIZE THE VALUE OF WILDLIFE FOR ALL.

Lacey Act

- <http://www.fws.gov/pacific/news/2000/2000-98.htm>
- <http://library.findlaw.com/1999/Mar/18/128202.html>

a. Briefly summarize this event in your own words.

THIS ACT MADE IT ILLEGAL TO TRANSPORT ILLEGALLY TAKEN (POACHED) GAME ACROSS STATE LINES.

b. How was this event important to wildlife conservation in North America?

THIS MADE ENFORCEMENT OF STATE WILDLIFE LAWS MORE POTENT. NOW POACHERS COULD NOT JUST CROSS OVER STATE BORDERS AND BE FREE FROM PROSECUTION.



Pittman-Robertson Act

- <http://www.fws.gov/southeast/federalaid/pittmanrobertson.html>
- http://clerk.house.gov/art_history/highlights.html?action=view&intID=472

- a. Briefly summarize this event in your own words.

THIS PLACED AN EXCISE TAX ON ALL SHOOTING EQUIPMENT AND FIREARMS PURCHASED IN THE UNITED STATES. THESE FUNDS WOULD BE USED FOR WILDLIFE RESTORATION PROJECTS. IN THE EARLY 1970s, THIS LAW WAS AMENDED TO INCLUDE HANDGUNS AND ARCHERY EQUIPMENT.

- b. How was this event important to wildlife conservation in North America?

THIS ACT CREATED ONE OF THE FIRST SIGNIFICANT FUNDING SOURCES FOR WILDLIFE CONSERVATION ACTIVITIES. TODAY IT CONTINUES TO BE ONE OF THE PRIMARY SOURCES OF MONEY FOR CONSERVATION.

Dingell-Johnson Act

- <http://www.fws.gov/southeast/federalaid/sportfishrestoration.html>
- http://www.fws.gov/southwest/federal_assistance/sfr.html

- a. Briefly summarize this event in your own words.

MODELED AFTER THE PITTMAN-ROBERSTON ACT, THIS PLACED AN EXCISE TAX ON ALL FISHING EQUIPMENT PURCHASED IN THE UNITED STATES. THESE FUNDS WOULD BE USED FOR AQUATIC RESTORATION PROJECTS.

- b. How was this event important to wildlife conservation in North America?

THIS ACT CREATED ONE OF THE MOST SIGNIFICANT FUNDING SOURCES FOR SPORTFISH CONSERVATION ACTIVITES. TODAY IT CONTINUES TO BE ONE OF THE PRIMARY SOURCES OF MONEY FOR CONSERVATION.



Historical Figures - Research Guide

Complete the research guide below. Use the references from your *Historical Figures - Student Assignments* to get started. Use additional paper if necessary. When your research is complete, work on a creative way to share your information with the rest of the class, as determined by your teacher.

Name of Historical Figure:

Birth/Death Dates:

Description of Childhood:

Significant life events:

How did this person contribute to conservation in the United States?

What was this person's profession and how did he/she apply this profession toward wildlife conservation?

Where did this person live and how did it influence his/her attitudes towards wildlife and the environment?

Describe any significant event(s) that inspired this person's actions.



Historical Figures - Research Guide

Name people who influenced this person and describe how they influenced him or her.

What groups or types of people do you think this person has inspired or is likely to inspire? Explain.

Was this person a hunter or angler?

Describe this person's values toward wildlife and the environment.

Describe how this person's attitudes/actions changed over time.

Describe at least one way you are similar to this person and one way you are different from this person.

Works Cited (sources):



Historical Figures - Study Guide

Jay Norwood "Ding" Darling

How did this person contribute to conservation in the United States?

List three interesting facts about this person:

George Bird Grinnell

How did this person contribute to conservation in the United States?

List three interesting facts about this person:

William T. Hornaday

How did this person contribute to conservation in the United States?

List three interesting facts about this person:

Aldo Leopold

How did this person contribute to conservation in the United States?

List three interesting facts about this person:



Historical Figures - Study Guide

George Perkins Marsh

How did this person contribute to conservation in the United States?

List three interesting facts about this person:

John Muir

How did this person contribute to conservation in the United States?

List three interesting facts about this person:

Mardy Murie

How did this person contribute to conservation in the United States?

List three interesting facts about this person:

Olaus Murie

How did this person contribute to conservation in the United States?

List three interesting facts about this person:



Historical Figures - Study Guide

Gifford Pinchot

How did this person contribute to conservation in the United States?

List three interesting facts about this person:

John Wesley Powell

How did this person contribute to conservation in the United States?

List three interesting facts about this person:

Theodore Roosevelt

How did this person contribute to conservation in the United States?

List three interesting facts about this person:



Name: _____

KEY Historical Figures - Study Guide KEY

As you learn about the various historical figures, answer the questions in each appropriate box. When you have studied each individual, answer the questions below.

Questions for Review:

1. To which of the historical figures are you most similar? Explain.

ANSWERS MAY VARY.

2. Famous scientist Sir Isaac Newton once stated: "If I have seen further, it was by standing on the shoulders of giants." What do you think Newton meant? How is this relevant to wildlife conservation in North America?

ANSWERS MAY VARY. STUDENTS SHOULD UNDERSTAND THAT NEWTON WAS CLAIMING THAT HE COULD NOT HAVE MADE HIS DISCOVERIES IF IT HAD NOT BEEN FOR THE SCIENTISTS AND PEOPLE WHO CAME BEFORE HIM.

3. In your opinion, do you believe these figures come from diverse backgrounds and careers or are they similar? How has that diversity (or lack of diversity) impacted the conservation movement?

ANSWERS MAY VARY. STUDENTS SHOULD RECOGNIZE THAT THESE INDIVIDUALS REPRESENT DIVERSE BACKGROUNDS. ULTIMATELY, THIS DIVERSITY HELPED CONSERVATION BECAUSE PEOPLE WERE ABLE TO SEE PROBLEMS FROM DIFFERENT PERSPECTIVES AND DEVELOP RELEVANT AND UNIQUE SOLUTIONS.

| John James Audubon | Rachel Carson |
|---|--|
| <p>How did this person contribute to conservation in the United States?</p> <p style="color: red; font-weight: bold;">A HIGHLY SUCCESSFUL WILDLIFE ARTIST WHO ATTEMPTED TO PAINT EVERY BIRD FOUND IN THE UNITED STATES. HIS NAME WOULD BE THE BASIS FOR THE AUDUBON SOCIETY.</p> <p>List three interesting facts about this person:</p> <p style="color: red; font-weight: bold;">ANSWERS MAY VARY.</p> | <p>How did this person contribute to conservation in the United States?</p> <p style="color: red; font-weight: bold;">FAMOUS WRITER AND BIOLOGIST. HER BOOK <i>SILENT SPRING</i> SOUNDED AN ALARM TO AMERICA ABOUT THE DANGERS OF PESTICIDES TO WILDLIFE.</p> <p>List three interesting facts about this person:</p> <p style="color: red; font-weight: bold;">ANSWERS MAY VARY.</p> |



KEY Historical Figures - Study Guide KEY

Jay Norwood "Ding" Darling

How did this person contribute to conservation in the United States?

DREW NUMEROUS EDITORIAL CARTOONS FOCUSED ON WILDLIFE CONSERVATION. WAS THE DIRECTOR OF THE U.S. BIOLOGICAL SURVEY AND DEVELOPED THE FIRST DUCK STAMP TO PROVIDE FUNDING FOR WATERFOWL CONSERVATION.

List three interesting facts about this person:

ANSWERS MAY VARY.

George Bird Grinnell

How did this person contribute to conservation in the United States?

WAS EDITOR OF *FIELD AND STREAM* MAGAZINE, INFLUENCING THE PASSAGE OF MANY CONSERVATION LAWS. FOUNDED THE AUDUBON SOCIETY OF NEW YORK.

List three interesting facts about this person:

ANSWERS MAY VARY.

William T. Hornaday

How did this person contribute to conservation in the United States?

LARGELY CREDITED WITH HELPING TO KEEP THE AMERICAN BISON AND ALASKAN FUR SEAL FROM EXTINCTION. HELPED CREATE THE NATIONAL ZOO. WROTE MANY BOOKS AND ARTICLES THAT HELPED PASS NUMEROUS CONSERVATION LAWS.

List three interesting facts about this person:

ANSWERS MAY VARY.

Aldo Leopold

How did this person contribute to conservation in the United States?

IS CONSIDERED THE "FATHER OF WILDLIFE MANAGEMENT" FOR HIS WORK TO DEVELOP A SCIENCE-BASED CAREER IN WILDLIFE MANAGEMENT. HELPED FOUND THE WILDERNESS SOCIETY.

List three interesting facts about this person:

ANSWERS MAY VARY.



KEY Historical Figures - Study Guide KEY

George Perkins Marsh

How did this person contribute to conservation in the United States?

OFTEN CONSIDERED TO BE AMERICA'S FIRST ENVIRONMENTALIST. WAS ONE OF THE FIRST TO SHOW HOW HUMAN ACTIVITIES CAN BE EXTREMELY DESTRUCTIVE TO THE ENVIRONMENT.

List three interesting facts about this person:

ANSWERS MAY VARY.

John Muir

How did this person contribute to conservation in the United States?

CREATED THE SIERRA CLUB. PUSHED FOR YOSEMITE VALLEY TO BECOME A NATIONAL PARK.

List three interesting facts about this person:

ANSWERS MAY VARY.

Mardy Murie

How did this person contribute to conservation in the United States?

PLAYED A SIGNIFICANT ROLE IN LAND CONSERVATION IN ALASKA. IS LARGELY RESPONSIBLE FOR THE ARCTIC NATIONAL WILDLIFE REFUGE AS WELL AS THE ALASKA NATIONAL INTEREST LANDS CONSERVATION ACT, WHICH ADDED MILLIONS OF ACRES TO NATIONAL PARKS AND NATIONAL WILDLIFE REFUGES.

List three interesting facts about this person:

ANSWERS MAY VARY.

Olaus Murie

How did this person contribute to conservation in the United States?

WAS THE FIRST PRESIDENT OF THE WILDERNESS SOCIETY. IS LARGELY RESPONSIBLE FOR THE ARCTIC NATIONAL WILDLIFE REFUGE AND THE PASSAGE OF THE WILDERNESS ACT.

List three interesting facts about this person:

ANSWERS MAY VARY.



KEY Historical Figures - Study Guide KEY

Gifford Pinchot

How did this person contribute to conservation in the United States?

HELPED FOUND THE SOCIETY OF AMERICAN FORESTRY. WAS THE NATION'S FIRST SCIENTIFICALLY TRAINED FORESTER AND THE FIRST HEAD OF THE U.S. FOREST SERVICE.

List three interesting facts about this person:

ANSWERS MAY VARY.

John Wesley Powell

How did this person contribute to conservation in the United States?

MADE THE FIRST BOAT TRIP THROUGH THE GRAND CANYON. AS DIRECTOR OF THE U.S. GEOLOGIC SURVEY, HE MADE NUMEROUS CONTRIBUTIONS TO THE FIELD OF GEOLOGY. HE ALSO PUSHED FOR BETTER PLANNING OF THE ARID LANDS IN THE WEST.

List three interesting facts about this person:

ANSWERS MAY VARY.

Theodore Roosevelt

How did this person contribute to conservation in the United States?

HELPED FOUND THE BOONE AND CROCKETT CLUB. AS PRESIDENT, HE CREATED THE U.S. FOREST SERVICE AND ESTABLISHED NUMEROUS NATIONAL PARKS, MONUMENTS, AND WILDLIFE REFUGES.

List three interesting facts about this person:

ANSWERS MAY VARY.



Assessment

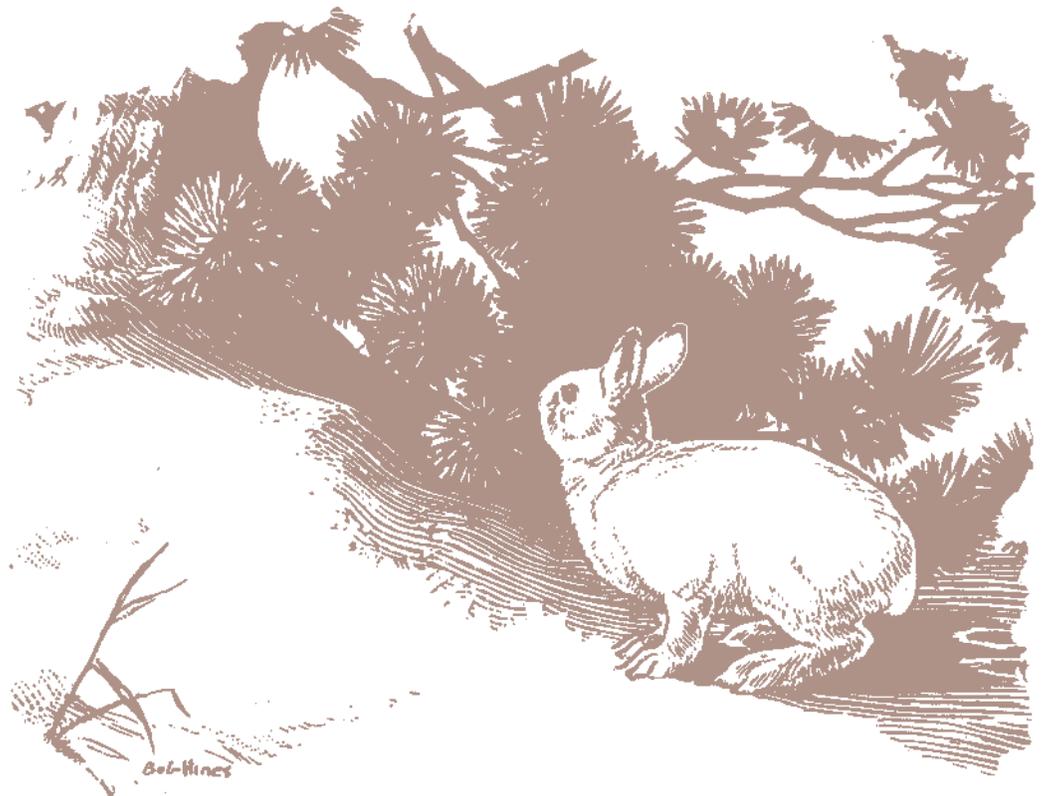
Describe the over-arching conservation challenges faced today by wildlife and propose solutions to address specific issues related to each.

Modifications

- The *Wildlife Action Plan* can be read aloud in class.
- Assign a pre-selected issue to each team (instead of having students select their own issues to research).
- If class size is large, create two sets of teams for each conservation challenge.
- Students can complete the *Student Research Guide* as a team rather than individually.
- Students can be permitted to develop a poster about their historical figure instead of creating an electronic product.

Extensions

- Students could interview a wildlife expert from a local college or the Arizona Game and Fish Department as part of their issue research.
- Educate others about wildlife conservation today by presenting a Wildlife Summit to other classes, the entire school, or the community.
- Research ways to take action and get involved in local wildlife conservation efforts.
- Download Wildlife Action Plans from other states and compare the issues with Arizona.



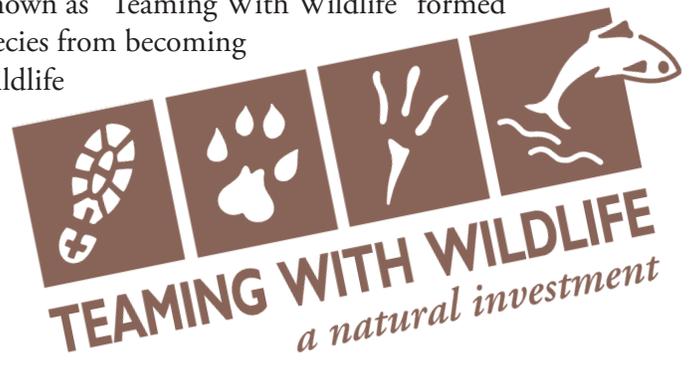
Bringing It Home - Wildlife Conservation Fact Sheet

Although there are some wildlife species unique to our state, most wildlife conservation issues are not unique. Across the country, key issues (stressors) affecting wildlife can be attributed to primary conservation challenges.

Approximately 90% of wildlife species are non-game (not hunted) animals. Wildlife conservation has historically been funded through excise taxes on hunting and fishing equipment and licenses (Pittman-Robertson and Dingell-Johnson Acts). There has been a serious gap in funding available for conservation of all species.

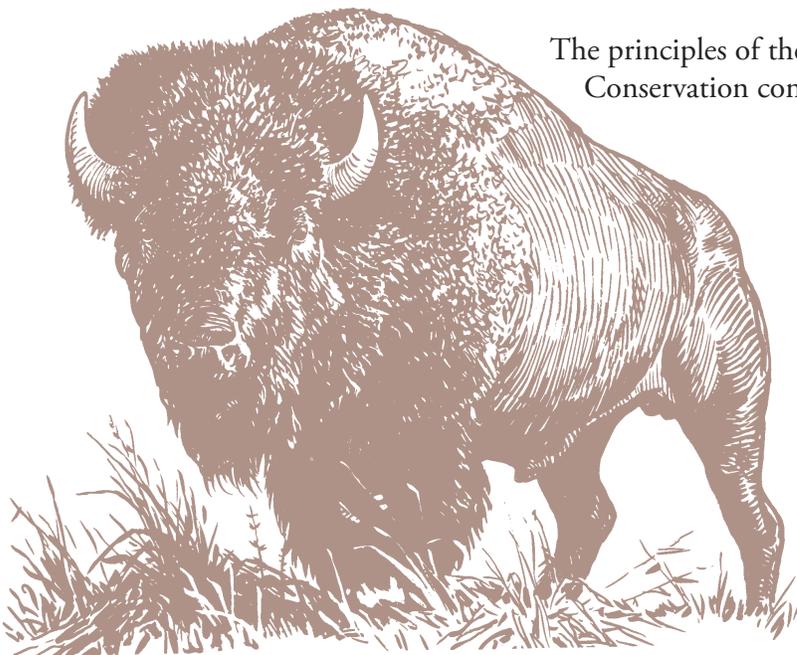
A coalition of nearly 6,000 conservation organizations known as “Teaming With Wildlife” formed over a decade ago. Their goal was (and still is) to keep species from becoming endangered by increasing state and federal funding for wildlife conservation.

Teaming With Wildlife’s work led to the passage of the Wildlife Conservation and Restoration Program and the State Wildlife Grants Program in 2001. These programs provide federal dollars to states to support conservation projects that prevent wildlife from becoming endangered.



As a requirement of these programs, each state wildlife agency had to develop a comprehensive wildlife conservation strategy (CWCS)—a wildlife action plan—that evaluates wildlife conservation needs and outlines the necessary action steps. They are focused on identifying and managing the wildlife and habitats of greatest conservation need.

The principles of the North American Model of Wildlife Conservation continue to inform wildlife management today.



National Council for Social Studies Curriculum Standards

| Standards | | Lessons | | | | |
|--|---|---------|---|---|---|---|
| Number | Description | 1 | 2 | 3 | 4 | 5 |
| 1: Culture | a. Analyze and explain the ways groups, societies, and cultures address human needs and concerns. | ★ | ★ | | | ★ |
| | g. Construct reasoned judgments about specific cultural responses to persistent human issues. | | ★ | | | |
| 2: Time, Continuity, and Change | b. Apply key concepts such as time, chronology, causality, change, conflict, and complexity to explain, analyze, and show connections among patterns of historical change and continuity. | | | ★ | | |
| | c. Identify and describe significant historical periods and patterns of change within and across cultures such as the development of ancient cultures and civilizations, the rise of nation-states, and social, economic, and political revolutions. | ★ | ★ | | | |
| 3: People, Places, and Environments | i. Describe and assess ways that historical events have been influenced by, and have influenced, physical and human geographic factors in local, regional, national, and global settings. | ★ | | ★ | | |
| | k. propose, compare, and evaluate alternative policies for the use of land and other resources in communities, regions, nations, and the world. | | | | | ★ |
| 4: Individual Development and Identity | a. Articulate personal connections to time, place, and social/cultural systems. | | | | ★ | |
| | e. Examine the interactions of ethnic, national, or cultural influences in specific situations or events. | | | | ★ | |
| | h. work independently and cooperatively within groups and institutions to accomplish goals. | | | | | ★ |
| 5: Individuals, Groups, and Institutions | a. Apply concepts such as role, status, and social class in describing the connections and interactions of individuals, groups, and institutions in society. | | | | ★ | |
| | b. Analyze group and institutional influences on people, events, and elements of culture in both historical and contemporary settings. | | ★ | ★ | ★ | |
| | f. Evaluate the role of institutions in furthering both continuity and change. | | ★ | ★ | | |
| | g. Analyze the extent to which groups and institutions meet individual needs and promote the common good in contemporary and historical settings. | | | ★ | | |
| 6: Power, Authority, and Governance | a. Examine persistent issues involving the rights, roles, and status of the individual in relation to the general welfare. | | ★ | | ★ | |
| | b. Explain the purpose of government and analyze how its powers are acquired, used, and justified. | | | ★ | | |
| | e. Compare different political systems (their ideologies, structure, institutions, processes, and political cultures) with that of the United States, and identify representative political leaders from selected historical and contemporary settings. | | ★ | | | |
| | g. Evaluate the role of technology in communications, transportation, information-processing, weapons development, or other areas as it contributes to or helps resolve conflicts. | ★ | ★ | | | |



National Council for Social Studies Curriculum Standards (cont.)

| STANDARDS | | LESSONS | | | | |
|--|--|---------|---|---|---|---|
| Number | Description | 1 | 2 | 3 | 4 | 5 |
| 7: Production, Distribution, and Consumption | h. Apply economic concepts and reasoning when evaluating historical and contemporary social developments and issues. | ★ | ★ | | | |
| 8: Science, Technology, and Society | a. Identify and describe both current and historical examples of the interaction and interdependence of science, technology, and society in a variety of cultural settings. | ★ | | ★ | | |
| | b. Make judgments about how science and technology have transformed the physical world and human society and our understanding of time, space, place, and human-environment interactions. | | | ★ | | |
| | c. Analyze how science and technology influence the core values, beliefs, and attitudes of society, and how core values, beliefs, and attitudes of society shape scientific and technological change. | | ★ | ★ | | |
| 9: Global Connections | d. Analyze the causes, consequences, and possible solutions to persistent, contemporary, and emerging global issues, such as health, security, resource allocation, economic development, and environmental quality. | | | | ★ | |
| | h. Illustrate how individual behaviors and decisions connect with global systems. | | | | | ★ |
| 10: Civic Ideals and Practices | a. Explain the origins and interpret the continuing influence of key ideals of the democratic republican form of government, such as individual human dignity, liberty, justice, equality, and the rule of law. | | | ★ | | |
| | b. Identify, analyze, interpret, and evaluate sources and examples of citizens' rights and responsibilities. | | | | ★ | |
| | c. Locate, access, analyze, organize, synthesize evaluate, and apply information about selected public issues – identifying, describing, and evaluating multiple points of view. | | | | | ★ |
| | d. Practice forms of civic discussion and participation consistent with the ideals of citizens in a democratic republic. | | | | | ★ |
| | e. Analyze and evaluate the influence of various forms of citizen action on public policy. | | ★ | ★ | ★ | |
| | i. Construct a policy statement and an action plan to achieve one or more goals related to an issue of public concern. | | | | | ★ |
| | j. Participate in activities to strengthen the “common good,” based upon careful evaluation of possible options for citizen action. | | | | | ★ |

National Council for the Social Studies. Expectations of Excellence: Curriculum Standards for Social Studies. Silver Spring, MD: National Council for the Social Studies, 2008.

