

Environmental Impact

How does the way we live impact our environment?

“The land was ours before we were the land’s” wrote the poet Robert Frost. Since the earliest days of humans on Earth, people have adapted to the physical landscape around them. It shapes the food they eat, the homes they build, the way they move around and the environment they live in. Studying environmental history involves understanding relationships — and sometimes trade-offs — that people make with the landscapes around them.

Environmental Factors

The land itself is the most important factor in human settlement. Do we live in the mountains, on the plains, in the forest, on a river or on the beach? Or on an island? Rivers and oceans were the first human highways. Ships moved people and goods faster and easier than people and animals on land could. Mountains and forests impeded transportation, which could have been a problem or a benefit if it protected residents from outsiders. Ocean-front housing could provide a mild climate or subject inhabitants to brutal storms. Iowans are blessed with incredibly rich soil and rainfall while desert people must be creative to grow food or raise livestock. Where we live has a major impact on the lifestyle of any people.

The air humans breathe is also a factor in our environment. For most of human history, the quality of the air has not been impacted by human activity, but with the Industrial Revolution and a demand for energy from fossil fuels like coal or gasoline, people have polluted the air with carbon products that can create a variety of challenges, like smog or acid rain. Oxygen-depleting pollutants have reconfigured the layers of air surrounding the earth leading to warming temperatures and evolving rainfall patterns.

Water also is an important environmental factor. When water is in short supply, efforts sometimes divert rivers for agriculture or store it behind massive dams to create hydroelectric power. Fertilizer run-off from farm fields seeps into underwater water reserves or flows into rivers and streams altering natural balances.

Renewable Energy

Some energy sources like wind power or sun light are termed renewable energy sources because using them does not decrease their availability. Fuels derived from plant matter like wood, natural gas, oil or coal are nonrenewable sources because they can be depleted. For the most part, fossil fuels present the greatest environmental challenges because they increase the amount of carbon dioxide in the air. Nuclear fuels pose the danger of increased radioactivity when a reactor malfunctions and nuclear wastes create a problem for disposal. When nations were conducting nuclear tests in the atmosphere, radioactive drift traveled far beyond the test site to threaten resources thousands of miles away.

Environmental protection challenges a world divided into nation states because human activity can impact land, the air and water far beyond the site where the activity occurs. Keeping our world safe is a truly world challenge.

Supporting Questions

Why are landforms important?

- [Sierra Nevada Mountain Pass, 1867 \(Image\)](#)
- [Valley of the Mississippi River near Clinton, Iowa, 1899 \(Image\)](#)
- [Des Moines River Valley, 1901 \(Image\)](#)
- [Grand Canyon in Arizona, 1913 \(Image\)](#)
- [Zion National Park in Washington County, Utah, 1993 \(Image\)](#)
- [Sweet Corn Field near Marengo, Iowa, August 8, 2016 \(Image\)](#)

What are renewable and nonrenewable resources?

- [Mississippi River Power Plant in Keokuk, Iowa, 1910 \(Image\)](#)
- [Thomas Lake Logging Camp, April 21, 1910 \(Image\)](#)
- [Harvesting Wheat in Walla Walla County, Washington, between July and September 1941 \(Image\)](#)
- [Remains of the Old Carissa Gold Mine in South Pass City, Wyoming, May 27, 2016 \(Image\)](#)
- [Farm Scene with Wind Turbines in Hardin County, Iowa, August 18, 2016 \(Image\)](#)

What impact do people have on our environment?

- [Cabinet Portrait of Iowa U.S. Representative John Lacey, ca. 1890 \(Image\)](#)
- [U.S. Rep. John Lacey's Bill about the Department of Agriculture, 1900 \(Document\)](#)
- [President Theodore Roosevelt and Conservationist John Muir on Glacier Point, 1903 \(Image\)](#)
- [Letter from Louis Hermann Pammel to the Bank President in Steamboat Rock, Iowa, December 27, 1916 \(Document\)](#)
- ["Legislation on State Parks" Essay from The Annals of Iowa, 1921 \(Document\)](#)
- [Louis Hermann Pammel Speaking at Dedication of Ledges State Park in Iowa, October 9, 1924 \(Image\)](#)
- [Iowa State Parks including Lakes and Streams, 1927 \(Map\)](#)
- [Polluted Stream in Dubuque, Iowa, April 1940 \(Image\)](#)
- [Girl Scout in Canoe Picking Up Trash in Potomac River, April 22, 1970 \(Image\)](#)
- [Traffic on Interstate 405 in Los Angeles, California, 2012 \(Image\)](#)
- [Aerial View of Four-Way Interchange in Los Angeles, California, Date Unknown \(Image\)](#)

[*Printable Image and Document Guide](#)

Additional Resources

[U.S. National Parks for Kids - Landforms](#): This website allows students to use an interactive map to research national parks throughout the country. This specific webpage focuses on landforms, such as mountain ranges, lakes and rivers.

[Gaylord Nelson Letters](#): This online collection includes letters from elementary school students to Wisconsin politician Gaylord Nelson about pollution.

[First Earth Day - April 22, 1970](#): This history.com webpage about “This Day in History” focuses on the very first Earth Day, which was championed by Senator Gaylord Nelson of Wisconsin, a staunch environmentalist who hoped to provide unity to the grassroots environmental movement and increase ecological awareness.

[Clean Air and Water Act](#): This Environmental Protection Agency (EPA) webpage has a summary of the Clean Air and Water Act, which was passed in 1972.

The Wartville Wizard by Don Madden: This children’s book focuses on the imaginary town of Wartville, which is being buried in trash. Then one day, one tidy man realizes he has the power to get rid of all the trash forever and teach his town about their responsibility to keep their land free of trash.

The Camping Trip That Changed America: Theodore Roosevelt, John Muir, and Our National Parks by Barb Rosenstock: This illustrated story book begins in 1903 when President Theodore Roosevelt joined naturalist John Muir on a trip to Yosemite. Camping by themselves in the uncharted woods, the two men saw sights and held discussions that would ultimately lead to the establishment of America’s national parks.

A River Ran Wild by Lynne Cherry: “A River Ran Wild” tells a story of restoration and renewal. The book focuses on the modern-day descendants of the Nashua Indians and European settlers were able to combat pollution and restore the beauty of the Nashua River in Massachusetts.

U.S. Landforms (TrueBooks: US Regions) by Dana Meachen Rau: This book allows readers to learn about the nation’s deserts, mountains and plains. There are numerous photographs of famous landmarks, such as California’s Death Valley and the hot water geysers of Yellowstone National Park.

The Lorax by Dr. Seuss: This well-known book by children’s author, Dr. Seuss, chronicles the plight of the environment and the Lorax, who speaks for the trees against the Once-ler, who is cutting them down.

Our Natural Resources by Jennifer Overend Prior: This children’s book includes colorful images, supporting text, a glossary, table of contents and index that all work together to help readers better understand the importance of natural resources.

Sierra Nevada Mountain Pass, 1867



Courtesy of Library of Congress, Currier & Ives, "The mountain pass, Sierra Nevada," 1867

Description

This print shows a wilderness scene with a bear at the edge of a stream and waterfalls and mountains in the background. It is an image of a mountain pass in the Sierra Nevada Mountain Range near Lake Tahoe. This pass was a point on the Carson Trail during the California Gold Rush and was used for American Civil War shipping to California until the completion of the first Transcontinental Railroad. Today, it is one of California's historic landmarks.

Text-Dependent Questions

- Describe the different types of landforms included in this image. Describe other natural elements that you see.
- Today, Sierra Nevada mountain pass is a historic landmark. Why do you think the artist chose to represent this part of the Sierra Nevada mountain range?

Citation Information

Currier & Ives, "The mountain pass, Sierra Nevada," 1867. [Courtesy of Library of Congress](#)

Valley of the Mississippi River near Clinton, Iowa, 1899



Courtesy of Library of Congress, "Valley of the Mississippi, near Clinton, Iowa," Detroit Publishing Co., 1899

Description

This photograph captures the Mississippi River Valley near Clinton, Iowa, in 1899.

Text-Dependent Questions

- Look closely at this photo and compare it with the photo of [Des Moines River Valley](#). How are the land features the same? How are they different?
- The Mississippi River creates the eastern border of Iowa. Why would using a river to create a state border be helpful? Why would it not be helpful?

Citation Information

"Valley of the Mississippi, near Clinton, Iowa," Detroit Publishing Co., 1899. [Courtesy of Library of Congress](#)

Des Moines River Valley, 1901



Courtesy of Library of Congress, "Up the Des Moines Valley, From C. & N. W. Ry. viaduct," Detroit Publishing Co., 1901

Description

This photograph, taken in 1901, shows a bird's-eye view of the Des Moines River in Iowa.

Text-Dependent Questions

- Why would it be necessary to build a bridge over this river?
- After looking closely at this photo, compare it with the photo of the [Colorado River](#) in the Grand Canyon. How are the lands features the same? How are they different?

Citation Information

"Up the Des Moines Valley, From C. & N. W. Ry. viaduct," Detroit Publishing Co., 1901. [Courtesy of Library of Congress](#)

Grand Canyon in Arizona, 1913



Courtesy of Library of Congress, Kolb Bros., "Grand Canyon, Arizona," 1913

Description

This 1913 photograph shows the Grand Canyon. A small boat can be seen floating on the Colorado River.

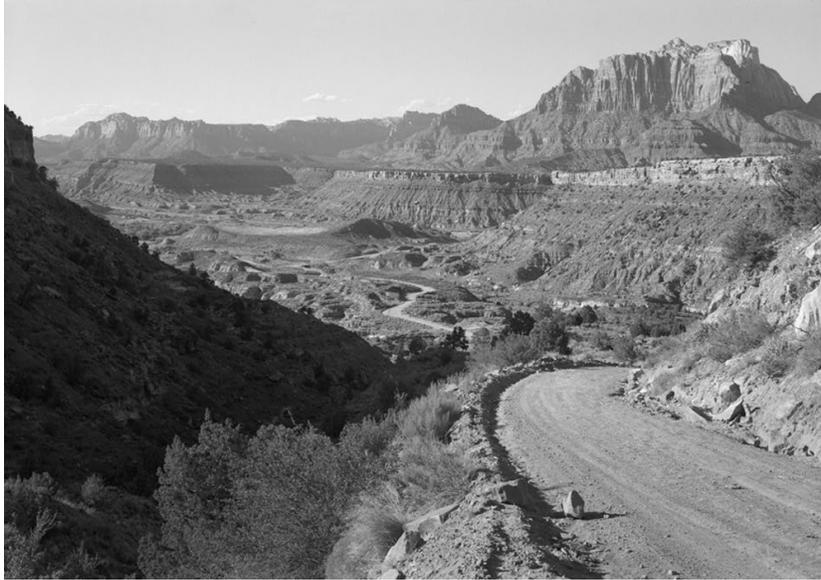
Text-Dependent Questions

- Describe the land features is the boater encountering.
- Compare this photo to the image of the [Sierra Nevada Mountain Pass](#). How are the lands features the same? How are they different?

Citation Information

Kolb Bros., "Grand Canyon, Arizona," 1913. [Courtesy of Library of Congress](#)

Zion National Park in Washington County, Utah, 1993



Courtesy of Library of Congress, Grogan, Brian C., "5. View from Smithsonian Butte facing north along old road - Zion National Park Roads & Bridges, Springdale, Washington County, UT," 1993

Description

This photograph, taken in 1993, shows Zion National Park in Washington County, Utah.

Text-Dependent Questions

- Describe the landforms that are found at Zion National Park in Utah.
- Closely observe this photo and compare it to the image of [Grand Canyon National Park](#). How are the lands features the same? How are they different?
- Both Zion National Park and Grand Canyon National Parks are protected places. Why would it be important to protect natural places? What problems might this cause?

Citation Information

Grogan, Brian C., "5. View from Smithsonian Butte facing north along old road - Zion National Park Roads & Bridges, Springdale, Washington County, UT," 1993. [Courtesy of Library of Congress](#)

Sweet Corn Field near Marengo, Iowa, August 8, 2016



Courtesy of Library of Congress, Highsmith, Carol. M., "Vast field of sweet corn near Marengo in Iowa County, Iowa," 8 August 2016

Description

A field of sweet corn near Marengo in Iowa County, Iowa, is shown in this photograph by Carol Highsmith. The photo was taken in 2016.

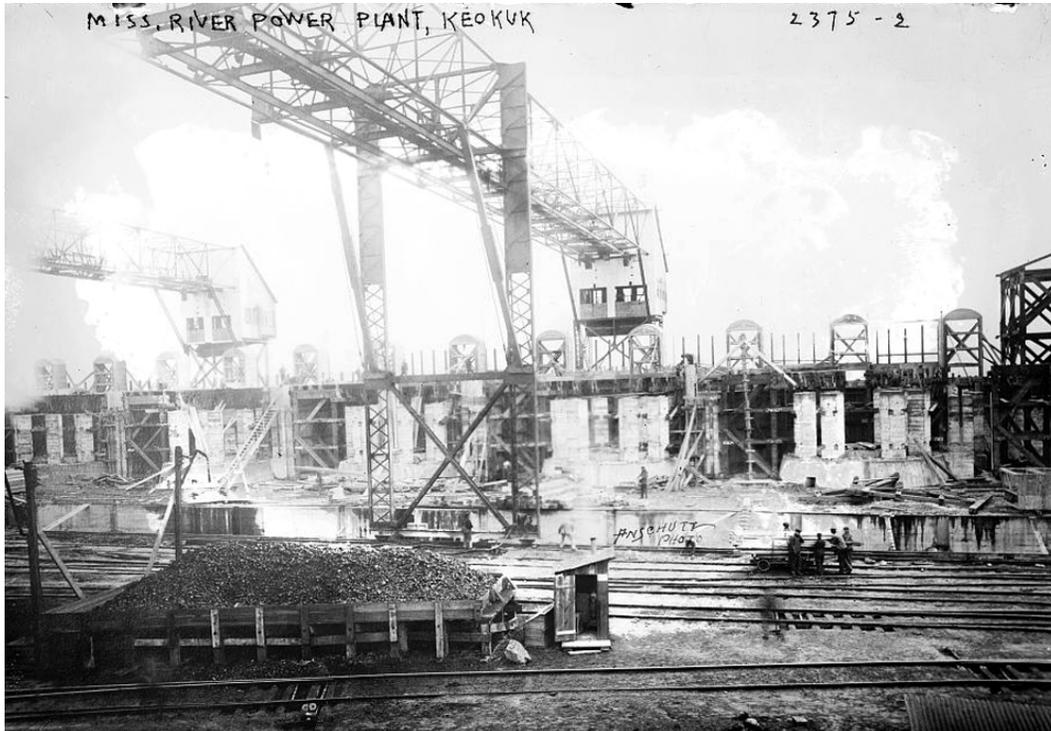
Text-Dependent Questions

- How do people use the land and natural resources to produce goods?
- In this photo, describe the ways humans have changed the land in order to live on it.

Citation Information

Highsmith, Carol. M., "Vast field of sweet corn near Marengo in Iowa County, Iowa," 8 August 2016. [Courtesy of Library of Congress](#)

Mississippi River Power Plant in Keokuk, Iowa, 1910



Courtesy of Library of Congress, "Miss. River Power Plant, Keokuk," Bain News Service, 1910

Description

This photograph, taken in 1910, shows a Mississippi River power plant in Keokuk, Iowa. The power plant was owned by Union Electric.

Text-Dependent Questions

- Look closely at the photo, what material is piled on top of the wooden platform. Is that a renewable or nonrenewable resource?
- This power plant was located on the Mississippi River. Why would the power plant's location be important?

Citation Information

"Miss. River Power Plant, Keokuk," *Bain News Service*, 1910. [Courtesy of Library of Congress](#)

Thomas Lake Logging Camp, April 21, 1910



Courtesy of Library of Congress, "Thomas Lake logging camp," 21 April 1910

Description

This photograph captures the Thomas Lake Logging Camp. The photo shows lumberjacks, logs and a steam-powered logging machine on a railroad.

Text-Dependent Questions

- Is logging a renewable or nonrenewable resource? In order to make logging a renewable resource trees have to be planted at the same rate they are cut down. Why would that be?
- Other than logging and trees, what other natural resources are being used in this photograph?

Citation Information

"Thomas Lake logging camp," 21 April 1910. [Courtesy of Library of Congress](#)

Harvesting Wheat in Walla Walla County, Washington, between July and September 1941



Courtesy of Library of Congress, Lee, Russell, "Walla Walla County, Washington. Harvesting wheat with a combine," between July and September 1941

Description

The photograph shows a combine harvester in Walla Walla County, Washington. A combine is able to reap (cut), thresh (separate grain) and winnow (blow air through) grain, such as wheat, which is shown in the photo.

Text-Dependent Questions

- These farmers are harvesting wheat. How can wheat become a renewable resource?
- Why would it be important for these farmers to use renewable resources?

Citation Information

Lee, Russell, "Walla Walla County, Washington. Harvesting wheat with a combine," between July and September 1941. [Courtesy of Library of Congress](#)

Remains of the Old Carissa Gold Mine in South Pass City, Wyoming, May 27, 2016



Courtesy of Library of Congress, Highsmith, Carol M., "Remains of the old Carissa Gold Mine in South Pass City..." 27 May 2016

Description

This photograph by Carol Highsmith shows the remains of the old Carissa Gold Mine in South Pass City, Wyoming. South Pass City used to be a mining boomtown of 2,000 people in the 1860s in what is now Fremont County. By 1949, miners, speculators and businessmen, finding little gold and suffering in the region's winter blizzards and unrelenting summer heat, abandoned the town.

Text-Dependent Questions

- Is gold a renewable or nonrenewable resource? What happens to a town when the gold mine runs out of gold?
- Finding gold takes a lot of work and luck. Why would people stop mining for gold if they had not found any for a long time?

Citation Information

Highsmith, Carol M., "Remains of the old Carissa Gold Mine in South Pass City, a mining boomtown of 2,000 people in the 1860s in what is now Fremont County, Wyoming, that by 1949 was a ghost town. Over time miners, speculators, and businessmen, finding little gold and suffering in the region's winter blizzards and unrelenting summer heat, abandoned the town, which is named for the surrounding valley that proved the most reliable route through the Rocky Mountains for emigrants on the Oregon, Mormon, and California trails. Now a historic site, South Pass City once again has (in 2016) a few hardy residents," 27 May 2016. [Courtesy of Library of Congress](#)

Farm Scene with Wind Turbines in Hardin County, Iowa, August 18, 2016



Courtesy of Library of Congress, Highsmith, Carol M., "Farm scene including a bright-red barn, three silos (one vintage, two modern), and quite modern wind turbines in Hardin County, Iowa," 18 August 2016

Description

This 2016 photograph by Carol Highsmith shows a farm scene that includes a bright-red barn, three silos (one vintage, two modern) and modern wind turbines in Hardin County, Iowa.

Text-Dependent Questions

- What renewable or nonrenewable resources are represented in the photo?
- Iowa has a large number of wind turbines located across the state. Why would Iowa be a good state for wind turbines?
- In this photo the wind turbines are lined up, one behind another. Why do you think the wind turbines were placed that way?

Citation Information

Highsmith, Carol M., "Farm scene including a bright-red barn, three silos (one vintage, two modern), and quite modern wind turbines in Hardin County, Iowa," 18 August 2016. [Courtesy of Library of Congress](#)

Cabinet Portrait of Iowa U.S. Representative John Lacey, ca. 1890



Courtesy of State Historical Society of Iowa, Brady, Matthew, ca. 1890

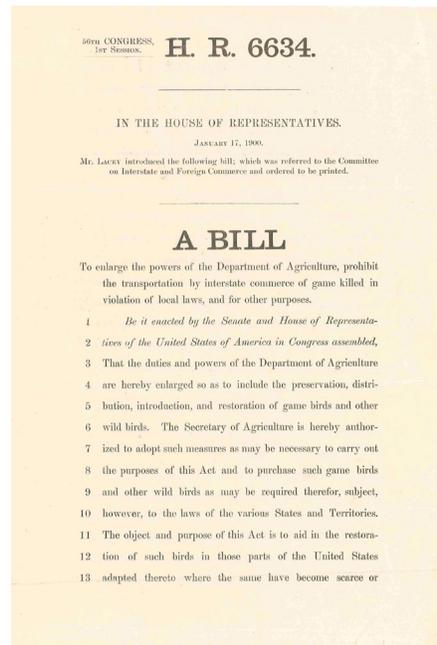
Description

In 1888, John Lacey was elected to the U.S. House of Representatives for the state of Iowa until 1906. Lacey worked on the Bird and Game Act in 1900, also known as the Lacey Act, which stopped transportation of wild animals or birds killed in violation of state laws.

Text-Dependent Question

- Rep. John Lacey helped to intact the Bird and Game Act of 1900. This is a conservation law to protect birds and wildlife. Why would it be important to protect these natural elements? What problems might this cause?

U.S. Rep. John Lacey's Bill about the Department of Agriculture, 1900



Courtesy of State Historical Society of Iowa, Lacey, John, 1900

Description

This 1900 bill from U.S. Rep. John Lacey of Iowa in the House of Representatives focused on enlarging the powers of the Department of Agriculture.

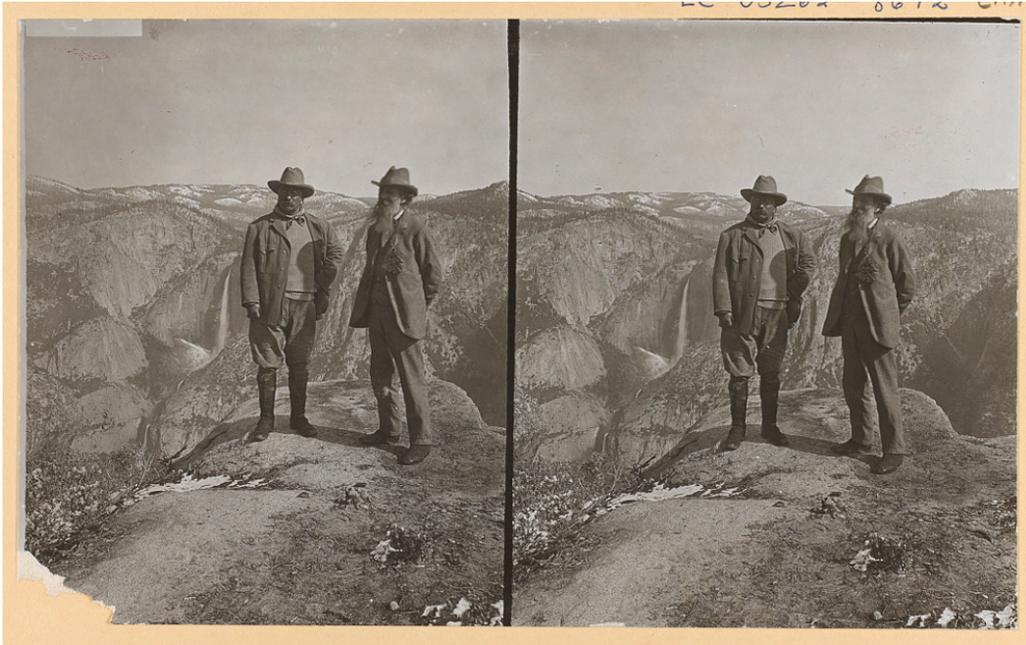
[Full Transcript of Rep. John Lacey's Bill about the Department of Agriculture](#)

[Transcribed Excerpts from Rep. John Lacey's Bill about the Department of Agriculture](#)

Text-Dependent Questions

- This bill, known as the Lacey bill was introduced by [John Lacey](#). Why is Rep. John Lacey proposing this law about birds? Why would this be important?
- What are the powers of the Department of Agriculture? Why would these powers be important to protect wildlife?

President Theodore Roosevelt and Conservationist John Muir on Glacier Point, 1903



Courtesy of Library of Congress, "Theodore Roosevelt and John Muir on Glacier Point, Yosemite Valley, California," 1903

Description

This photograph shows President Theodore Roosevelt with famous conservationist and environmentalist John Muir on a camping trip at Glacier Point, which would later become Yosemite National Park. Muir took Roosevelt to Yosemite in an attempt to persuade him to take the land under federal control and establish it as a national park, which Roosevelt did in 1906.

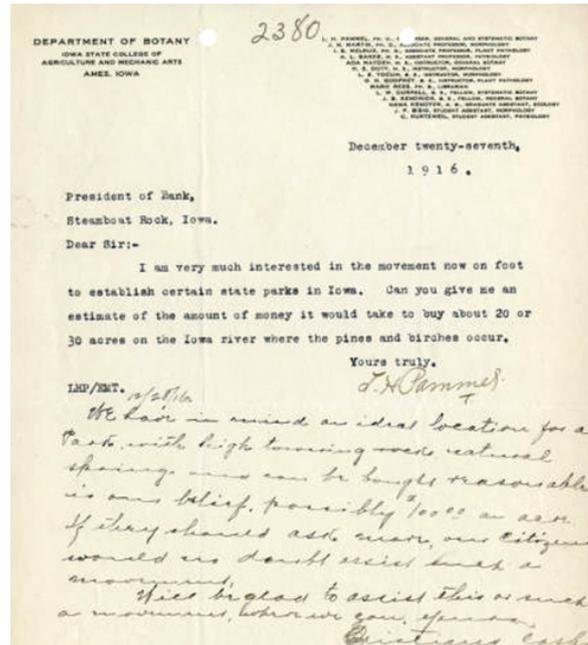
Text-Dependent Questions

- The two people in this photo are environmentalist John Muir, with the long beard, and President Theodore Roosevelt. The men are standing at Glacier Point, in what would later become Yosemite National Park, in California. John asked President Roosevelt to visit this area with him because John hoped President Roosevelt would turn this land into a National Park. Why would John want President Roosevelt to see the land in person rather than just writing President Roosevelt a letter describing the area?
- Compare this photo with [Zion National Park](#). How are the two National Parks the same? How are they different?

Citation Information

"Theodore Roosevelt and John Muir on Glacier Point, Yosemite Valley, California," 1903. [Courtesy of Library of Congress](#)

Letter from Louis Hermann Pammel to the Bank President in Steamboat Rock, Iowa, December 27, 1916



Courtesy of Iowa State University Library Special Collections and University Archives, Pammel, Louis H., 27 December 1916

Description

This document is a letter from Louis Hermann Pammel, a botany professor at Iowa State University, to the president of the bank in Steamboat Rock, Iowa. In the letter, Pammel is requesting funds and land for future state parks in Iowa.

[Transcript from Professor L.H. Pammel Steamboat Rock Bank President](#)

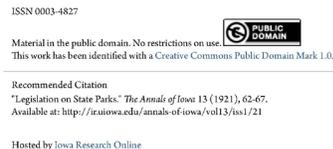
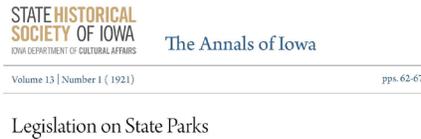
Text-Dependent Questions

- What is Louis Hermann Pammel asking about in his letter to the bank president?
- What is Pammel trying to do in the state of Iowa?
- After looking at this letter, read the [Legislation on State Parks](#). How do you think Louis would feel about this legislation? What makes you say that?

Citation Information

Pammel, Louis H., 27 December 1916. [Courtesy of Iowa State University Library Special Collections and University Archives](#)

“Legislation on State Parks” Essay from The Annals of Iowa, 1921



Courtesy of University of Iowa Libraries and Archives, "Legislation on State Parks," *The Annals of Iowa*, Vol. 13, No. 1, pp. 63-65, 1921

Description

This essay from *The Annals of Iowa* is about why and where a state park can be located in the state of Iowa.

[Full Transcript of "Legislation on State Parks" *Annals of Iowa* Essay](#)

[Transcribed Excerpt of "Legislation on State Parks" *Annals of Iowa* Essay](#)

Text-Dependent Questions

- Where can a state park be located in Iowa? Why would those areas be preferable?
- For what reasons can a state park be formed in Iowa? Why would those reasons be important? What problems might this cause?

Citation Information

"Legislation on State Parks," *The Annals of Iowa*, Vol. 13, No. 1, pp. 63-65, 1921. [Courtesy of University of Iowa Libraries and Archives](#)

Louis Hermann Pammel Speaking at Dedication of Ledges State Park in Iowa, October 9, 1924



Courtesy of Iowa State University Library Special Collections and University Archives, "Louis Pammel Speaking at the dedication of Ledges State Park," 9 October 1924

Description

The photograph shows Louis Hermann Pammel, a botany professor at Iowa State University, speaking at the dedication of Ledges State Park, which is near the town of Boone, Iowa. In the photo, from left to right, are Iowa Secretary of State Walter C. Ramsey, Ledges State Park Custodian Carl Fritz Hemmings, Pammel and another unidentified individual.

Text-Dependent Questions

- This is a photo of Louis Hermann Pammel (center, holding papers) speaking at the dedication of Ledges State Park, which is near Boone. What is a dedication?
- After looking at his photo, read the [letter that Louis wrote to a bank](#). Why do you think Louis spoke at the dedication of this State Park?

Citation Information

"Louis Pammel Speaking at the dedication of Ledges State Park," 9 October 1924. [Courtesy of Iowa State University Library Special Collections and University Archives](#)

Iowa State Parks including Lakes and Streams, 1927



Courtesy of Iowa State University Library Special Collections and University Archives, "Location Map of Iowa State Parks Including the Meandered Lakes and Streams," 1927

Description

This map of Iowa shows the locations of its state parks in 1927.

Text-Dependent Questions

- On the map, a star in a circle is the symbol for a State Park. How many state parks are there in Iowa in 1927?
- After looking at the map, refer to the [Legislation on State Parks in Iowa](#). What connections can be made between the legislation and where the parks are located?
- Find the county you live in. Is there a state park in your county? What is the name of the state park? If there is not one in your county, what is the closest state park to your county?

Citation Information

"Location Map of Iowa State Parks Including the Meandered Lakes and Streams," 1927. [Courtesy of Iowa State University Library Special Collections and University Archives](#)

Polluted Stream in Dubuque, Iowa, April 1940



Courtesy of Library of Congress, Vachon, John, "Stream pollution, Dubuque, Iowa," April 1940

Description

This photograph from 1940 shows a polluted stream in Dubuque, Iowa. Dubuque's main industry was manufacturing, and these large companies lacked proper waste disposal in the city in the 1940s.

Text-Dependent Questions

- What items are in the stream? Why would people dump items like this in a stream?
- How will this pollution affect the stream? How will this pollution affect humans and animals?

Citation Information

Vachon, John, "Stream pollution, Dubuque, Iowa," April 1940. [Courtesy of Library of Congress](#)

Girl Scout in Canoe Picking Up Trash in Potomac River, April 22, 1970



Courtesy of Library of Congress, O'Halloran, Thomas J., "[Girl Scout in canoe, picking trash out of the Potomac River during Earth Week]," 22 April 1970

Description

This photograph by Thomas J. O'Halloran shows a girl scout in a canoe picking trash out of the Potomac River. She was taking part in an outdoor clean-up activity during Earth Week in 1970.

Text-Dependent Questions

- What items are the Girl Scouts collecting? How are the Girl Scouts impacting the environment?
- Compare this photo to the [Polluted Stream in Dubuque](#). How are the photos similar? How are they different?

Citation Information

O'Halloran, Thomas J., "[Girl Scout in canoe, picking trash out of the Potomac River during Earth Week]," 22 April 1970. [Courtesy of Library of Congress](#)

Traffic on Interstate 405 in Los Angeles, California, 2012



Courtesy of Library of Congress, Highsmith, Carol, M., "Traffic on Interstate 405, Los Angeles, California," 2012

Description

This photograph shows traffic in Los Angeles on an interstate highway in 2012. This interstate, I-405, is a heavily traveled freeway by both people and semi-trailer trucks along its entire length. It is the busiest and most congested freeway in the United States.

Text-Dependent Questions

- Look closely at the skyline in this photo. What type of pollution do you see? What might cause this pollution?
- What problems might pollution cause for the environment?

Citation Information

Highsmith, Carol, M., "Traffic on Interstate 405, Los Angeles, California," 2012. [Courtesy of Library of Congress](#)

Aerial View of Four-Way Interchange in Los Angeles, California, Date Unknown



Courtesy of Library of Congress, Grogan, Brian C., "16. AERIAL VIEW OF FOUR LEVEL INTERCHANGE OF ARROYO SECO PARKWAY AND HIGHWAY 101. LOOKING NE. - Arroyo Seco Parkway, Los Angeles to Pasadena, Los Angeles, Los Angeles County, CA," Date Unknown

Description

This photograph by Brian Grogan shows an aerial view of a four-level interchange at Arroyo Seco Parkway and Highway 101. This interchange is located in Los Angeles, California.

Text-Dependent Question

- How is our environment being impacted in this photograph?

Citation Information

Grogan, Brian C., "16. AERIAL VIEW OF FOUR LEVEL INTERCHANGE OF ARROYO SECO PARKWAY AND HIGHWAY 101. LOOKING NE. - Arroyo Seco Parkway, Los Angeles to Pasadena, Los Angeles, Los Angeles County, CA," Date Unknown. [Courtesy of Library of Congress](#)