

Iowa's Connection To The World

How has Iowa made a significant impact on the world?

Many Iowans tend to feel that important things occur and important people live "Somewhere Else." History has shown that this is not true. Iowans have made a significant impact on agriculture, technology and world events.

Agricultural and Science Innovators

The American Midwest has been a world leader in improvements in plants, livestock and agricultural technology. Three names are especially significant. George Washington Carver graduated from and taught botany at Iowa State College (now Iowa State University), the first African-American appointed to the ISC faculty, before taking a faculty and research position at the Tuskegee Institute. There he developed a successful career breeding crops, especially peanuts, that could raise the income of southern African-American farmers. Henry Wallace was another Iowa State alumnus. Like his father and grandfather, he became editor of Wallaces' Farmer Magazine, where he promoted the use of hybrid seed that he had helped develop. He also served as vice president of the United States during World War II. Norman Borlaug was born in Howard County along the Iowa-Minnesota border. He became a leading proponent for the use of hybrid grains in developing countries, exponentially boosting crop yields in what became known as the Green Revolution. His biographers credit Borlaug with saving the lives of one billion people from starvation. For his efforts, he received the Nobel Peace Prize and was a driving force behind the creation of the World Food Prize centered in Des Moines.

Iowa has also produced an impressive list in the fields of science and technology. John Atanasoff was teaching at Iowa State College (now Iowa State University) during WWII when he invented the first electronic computer. Robert Noyes, a Grinnell College graduate, was the inventor of a computer chip that revolutionized the electronics industry and a co-founder of the very successful Intel Corporation. James Van Allen, an astronomy professor at the University of Iowa, discovered a radiation field around the earth that became known as the Van Allen Belt. George Gallup of Jefferson, Iowa, developed a statistical survey technique to sample public opinion with a high degree of accuracy.

Humanitarian Leaders

Iowans have also led humanitarian efforts. Annie Wittenmyer drew together the efforts of women across the state during the Civil War to improve diets and care conditions in Union hospitals. Carrie Chapman Catt headed the national organization that led the fight to grant women the right to vote. At the end of WWI, Iowa-born Herbert Hoover accepted the assignment to head up relief efforts to feed the starving in Europe until farms and the economy could be restored. His very successful efforts made him a revered figure for saving the lives of countless children through efficient food programs. Governor Robert Ray demonstrated Iowans' compassion when he promoted a resettlement program for Vietnamese and Laotian refugees. Many other Iowans have served in international relief and rural development projects to raise the standards of living among the world's poor.

Iowa has a distinguished record in agriculture, science, technology and humanitarian efforts. Residents in Iowa towns and cities readily volunteer for community service and relief programs that make their communities better places to live.

Supporting Questions

What contributions have Iowans made to agriculture around the world?

- [Froelich Tractor in Iowa and South Dakota, 1892 \(Image\)](#)
- [Biography of John Froelich from Iowa Inventors Hall of Fame Pamphlet, 1994 \(Document\)](#)
- [IPTV's "Borlaug Receives Congressional Gold Medal," 2006 \(Video\)](#)

How have Iowans impacted the rest of the world in the field of science and technology?

- ["The Invention of the Electronic Digital Computer" from The Palimpsest, September/October 1984 \(Document\)](#)
- [Biography of Clair Cameron Patterson, 1998 \(Document\)](#)
- [Biography of John Robinson Pierce, 2004 \(Document\)](#)
- [NASA Astronaut Peggy Whitson Interview, September 1, 2017 \(Document\)](#)
- [NASA Astronaut Peggy Whitson Returns from the International Space Station with Record-Breaking Accomplishments, September 4, 2017 \(Document\)](#)

How have the unique lives of famous Iowans influenced the lives of people both nationally and around the world?

- [Letter from Annie Wittenmyer to the Soldiers' Aid Societies of Iowa Ladies, 1861 \(Document\)](#)
- [Letter from Annie Wittenmyer to Governor Samuel Kirkwood, 1863 \(Document\)](#)
- [American Red Cross Letter to Herbert Hoover, March 4, 1918 \(Document\)](#)
- [Address from Carrie Chapman Catt to U.S. Legislatures about Women's Suffrage Movement, 1919 \(Document\)](#)
- [First Lady Lou Henry Hoover Comments on her Husband's Career and Public Service, 1932 \(Document\)](#)

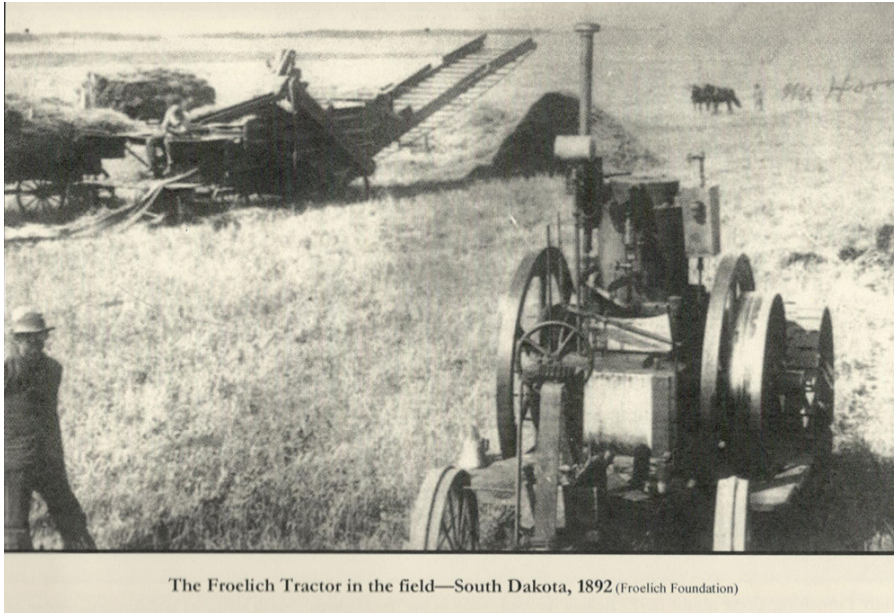
[*Printable Image and Document Guide](#)

Additional Resources

[Peggy Whitson Video Interview:](#) This 2017 video interview, produced by the State Historical Society of Iowa, features NASA astronaut and native Iowan Peggy Whitson. Whitson speaks about her illustrious career with NASA and the influence her Iowa upbringing had on her pursuit of going to space.

["Annie Wittenmyer, Iowa's Civil War Heroine:"](#) This issue of The Iowan Magazine focuses on the work of humanitarian and Iowan Annie Wittenmyer. The document features biographical information about Wittenmyer and a number of newspaper articles written to and by her.

Froelich Tractor in Iowa and South Dakota, 1892



Courtesy of Froelich Foundation and Museum, "Froelich Tractor Photos, Langford, South Dakota, and Froelich, Iowa," 1892

Description

These photographs show the Froelich Tractor in Iowa and South Dakota in 1892. The tractor was created by John Froelich, an American inventor who lived in Froelich, Iowa, a small village in northeast Iowa. His invention, shown in the photos, was the first stable gasoline/petrol-powered tractor with forward and reverse gears.

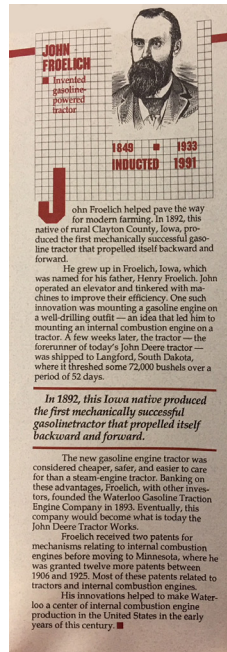
Text-Dependent Questions

- What do you notice about the construction and appearance of the Froelich Tractor from this time period compared to modern tractors?
- This was the first stable gasoline/petrol-powered tractor with forward and reverse gears, invented in 1892. Do the photos match your expectations about what a historic tractor would look like? Why or why not?
- How would this invention revolutionize farming? What from the photos would support your response?

Citation Information

"Froelich Tractor Photos, Langford, South Dakota, and Froelich, Iowa," 1892. Courtesy of Froelich Foundation and Museum

Biography of John Froelich from Iowa Inventors Hall of Fame Pamphlet, 1994



Courtesy of State Historical Society of Iowa, 1994

Description

This document is a brief biography of John Froelich, who was inducted into the Iowa Inventors Hall of Fame in 1991. Froelich was an American inventor who lived in Froelich, Iowa, a small village in northeast Iowa. He is best known for inventing the first stable gasoline/petrol-powered tractor with forward and reverse gears.

[Transcript of John Froelich's Biography from Iowa Inventors Hall of Fame Pamphlet](#)

Text-Dependent Questions

- John Froelich was inducted into the Iowa Hall of Fame for the [Froelich Tractor](#) that he invented. Why did this invention have a significant contribution to agriculture around the world?
- John Froelich founded the Waterloo Gasoline Traction Engine Company in 1893, which was purchased by John Deere in 1918. Contemplate how farming would be different if John Froelich had not invented the tractor.

IPTV's "Borlaug Receives Congressional Gold Medal," 2006



Courtesy of Iowa Public Television, "Borlaug Receives Congressional Gold Medal," Market to Market - Iowa Public Television, 2006

Description

This is a 2006 video from Iowa Public Television's program "Market to Market" that covered native Iowan, Dr. Norman Borlaug, receiving the U.S. Congressional Gold Medal. The video shows Borlaug, a world-renowned agricultural scientist, being presented the honor by then-President George W. Bush at the U.S. Capitol. At 93 years old, Borlaug was recognized for his lifelong work to fight world hunger through crop breeding.

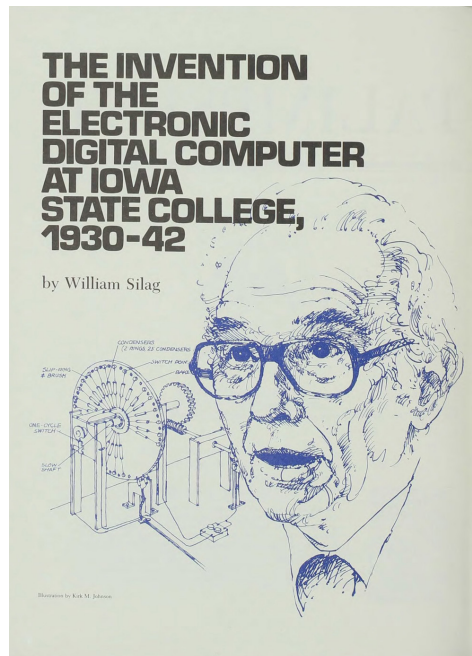
Text-Dependent Questions

- According to the video, what are some of Norman Borlaug's contributions to agriculture? Cite evidence from the video to support your ideas.
- Why are these accomplishments significant to the rest of the world?
- On the back of the medal he received is a quote by Borlaug. "The first essential component for social justice is adequate food for all mankind." Discuss what you think this means.

Citation Information

"Borlaug Receives Congressional Gold Medal," *Market to Market* - Iowa Public Television, 2006. [Courtesy of Iowa Public Television](#)

“The Invention of the Electronic Digital Computer” from *The Palimpsest*, September/October 1984



Courtesy of State Historical Society of Iowa, Silag, William, “The Invention of the Electronic Digital Computer,” *The Palimpsest*, Vol. 65, No. 5, pp. 159-177, September/October 1984

Description

This 1984 article from *The Palimpsest* focuses on the invention of the electronic digital computer by John Vincent Atanasoff and Clifford Berry. Their invention is credited as the first computer invented in the world.

[Transcribed Excerpt from “The Invention of the Electronic Digital Computer” from *The Palimpsest*](#)

Text-Dependent Questions

- According to the article, describe Atanasoff and Berry’s first prototype of their computer. What was it able to do? What did it look like? How much did it cost to build?
- What components from this invention would later prove to be vital to the development of the modern computers and electronics?
- Why is this invention so significant to our modern world today?

Biography of Clair Cameron Patterson, 1998



Courtesy of the Division of Geological and Planetary Science, California Institute of Technology

Clair C. Patterson

Courtesy of National Academy of Sciences, Tilton, George R., "Claire Cameron Patterson: 1922-1995," 1998

Description

This National Academy of Sciences document is the biography of Claire Cameron Patterson, an American geochemist. Patterson was born in Mitchellville, Iowa, who spent his entire professional career at the California Institute of Technology (Caltech). In collaboration with George Tilton, Patterson developed the uranium-lead dating method into lead-lead dating. Using his technique, Patterson was able to calculate the age of the Earth at 4.55 billion years, which was a figure far more accurate than those that existed at the time.

[Full Transcript of Clair Cameron Patterson's Biography](#)

[Transcribed Excerpts from Clair Cameron Patterson's Biography](#)

Text-Dependent Questions

- What was the main focus of Clair Patterson's research? What is he known for discovering? How did he discover it?
- As a by-product of his work, what else did Patterson discover which has had a major impact on societies around the world?
- What controversies did Patterson face during his research? In what ways did these issues highlight the way humans were impacting the Earth?

Citation Information

Tilton, George R., "Claire Cameron Patterson: 1922-1995," 1998. Courtesy of National Academy of Sciences

Biography of John Robinson Pierce, 2004



J. R. Pierce

Courtesy of National Academy of Sciences, David, Edward E. et al., "John Robinson Pierce: 1910-2002," 2004

Description

This document is the National Academy of Sciences biography for John Robinson Pierce, an American engineer and author. Pierce was born in Des Moines, Iowa, and he worked extensively in the fields of radio communication, microwave technology, computer music, psychoacoustics and science fiction.

[Full Transcript of John Robinson Pierce's Biography](#)

[Transcribed Excerpts from John Robinson Pierce's Biography](#)

Text-Dependent Questions

- What was John Robinson Pierce known for in the science world? What was his invention, and what did it do?
- Why were his inventions so significant to connecting people across the globe?

Citation Information

David, Edward E. et al., "John Robinson Pierce: 1910-2002," 2004. Courtesy of National Academy of Sciences

NASA Astronaut Peggy Whitson Interview, September 1, 2017



Sept. 1, 2017

NASA Astronaut Peggy Whitson Shares Thoughts on Extended Mission, Returning to Earth



Record-breaking astronaut [Peggy Whitson](#) is set to leave the International Space Station – her home of the past nine months – on Saturday, Sept. 2, and return to Earth. Impacts from Hurricane Harvey at NASA's Johnson Space Center in Houston caused her final in-flight news conference to be canceled, however, she was able to participate via email in the following interview with the Associated Press's Marcia Dunn, acting as a press pool representative.

Whitson and her Expedition 52 crewmates Jack Fischer of NASA and Fyodor Yurchikhin of the Russian space agency Roscosmos are scheduled to land in Kazakhstan at 9:22 pm EDT on Saturday. NASA Television and the agency's website will provide complete coverage of their departure and landing.



Astronaut Peggy Whitson pauses during a busy day on orbit to look out the seven-windowed cupola at the Earth 250 miles below.

Courtesy of NASA, Garcia, Mark, "NASA Astronaut Peggy Whitson Shares Thoughts on Extended Mission, Returning to Earth," 1 September 2017

Description

This document is a 2017 interview with Iowa and astronaut Peggy Whitson about her recent time on the International Space Station. Whitson also speaks about her record-setting accomplishments throughout her NASA career.

[Full Transcript of Peggy Whitson's Interview](#)

[Transcribed Excerpts from Peggy Whitson's Interview](#)

Text-Dependent Questions

- What is Peggy Whitson known for in NASA? What have been her most recent accomplishments?
- Why are her accomplishments unique to space exploration?
- Connect this article with [NASA Astronaut Peggy Whitson Returns from the International Space Station with Record-Breaking Accomplishments](#).
- Why are her accomplishments significant to the world of science and technology, especially for women in these fields?

Citation Information

Garcia, Mark, "NASA Astronaut Peggy Whitson Shares Thoughts on Extended Mission, Returning to Earth," 1 September 2017. [Courtesy of NASA](#)

NASA Astronaut Peggy Whitson Returns from the International Space Station with Record-Breaking Accomplishments, September 4, 2017

Sept. 4, 2017
RELEASE 17-076

President Trump Welcomes Home Record-breaking NASA Astronaut Peggy Whitson



NASA astronaut Peggy Whitson talks on the phone with President Donald Trump as she flew on a NASA plane to Johnson Space Center's Ellington Field in Houston Sunday, Sept. 3, 2017. Whitson, NASA's Jack Fischer, and Commander Fyodor Yurchikhin of Roscosmos, landed back on Earth at 9:22 p.m. EDT Sept. 2 in Kazakhstan following their long-duration mission aboard the International Space Station. During the phone call, President Trump congratulated Whitson for her record breaking mission and Fischer for his accomplishments on his first spaceflight. During this mission, Whitson became the U.S. astronaut who has spent the most cumulative time in space with a total of 665 days during three long-duration missions.
Credits: NASA/D. Hoot
[Download high-resolution image here.](#)

Courtesy of NASA, Beutel, Allard, "President Trump Welcomes Home Record-breaking NASA Astronaut Peggy Whitson," 4 September 2017

Description

This document is a 2017 article from the NASA website celebrating Peggy Whitson's return from the International Space Station and her record-breaking accomplishments. She and fellow astronaut Jack Fischer are shown speaking on the phone with President Donald Trump after their return from space.

[Full Transcript of Press Release about Peggy Whitson's NASA Career Accomplishments](#)

[Transcribed Excerpts from Press Release about Peggy Whitson's NASA Career Accomplishments](#)

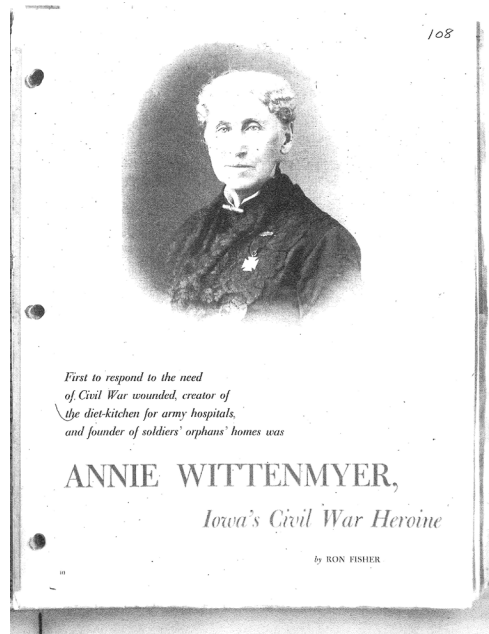
Text-Dependent Questions

- What are the records that astronaut Peggy Whitson broke?
- According to the article, what do some people believe is the significance of Whitson's accomplishments to science?
- Refer to the [NASA Astronaut Peggy Whitson Interview](#). How do Whitson's accomplishments and her career impact women in the fields of science and space exploration around the world?

Citation Information

Beutel, Allard, "President Trump Welcomes Home Record-breaking NASA Astronaut Peggy Whitson," 4 September 2017. [Courtesy of NASA](#)

Letter from Annie Wittenmyer to the Soldiers' Aid Societies of Iowa Ladies, 1861



Courtesy of State Historical Society of Iowa, pp. 113-114, 1861

Description

This document is a letter from Iowa humanitarian Annie Wittenmyer that was published in the Keokuk Weekly Gate City. This letter was to the Soldiers' Aid Societies of Iowa Ladies in 1861 and it shared the conditions for recovering soldiers from the Civil War and requested aid and supplies.

[Transcript of Annie Wittenmyer's Letter](#)

Text-Dependent Questions

- What was the overall intent of the letter by Annie Wittenmyer?
- How did Annie Wittenmyer appeal to this organization in order to obtain her requested aid and supplies? What textual evidence can you use to support your claim?
- During the Civil War for every three soldiers killed in battle, five more died of disease. Why would Annie Wittenmyer's cause be so important for this war and future wars?

Letter from Annie Wittenmyer to Governor Samuel Kirkwood, 1863



Courtesy of State Historical Society of Iowa, Kirkwood, Samuel, pp. 115-116, 1863

Description

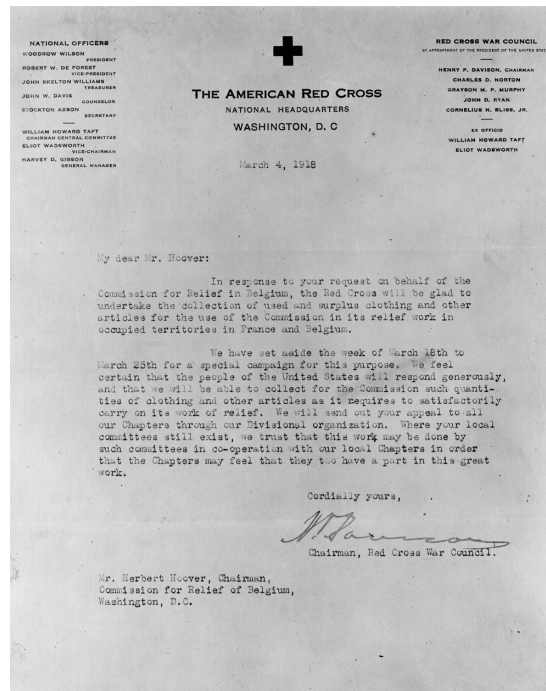
This document is a letter from Annie Wittenmyer to Iowa Governor Samuel Kirkwood that was published in the *Keokuk Weekly Gate City* in 1863. Wittenmyer outlined her efforts and the needs that remained in caring for Iowa's Civil War casualties. The letter also included his response to the needs, which was to call for other Iowans to help.

Transcript of Letter from Annie Wittenmyer to Governor Samuel Kirkwood

Text-Dependent Questions

- What do you feel was significant in Annie Wittenmyer's letter to Iowa Governor Samuel Kirkwood? Why would she choose to write to him personally?
- How did Governor Kirkwood respond to Wittenmyer's report? How did his response show the impact of Ms. Wittenmyer's efforts?
- From Wittenmyer's report, what was positive, and what still needed to be addressed?
- Compare this letter to her [letter to the Soldiers' Aid Societies of Iowa Ladies](#). What are common themes running through both letters?

American Red Cross Letter to Herbert Hoover, March 4, 1918



Courtesy of National Archives, Davison, Henry P., "American Red Cross Letter to Mr. Hoover," 4 March 1918

Description

This document is a copy of a letter from Henry P. Davison, chairman of the American Red Cross, to Herbert Hoover, who at the time was the chairman of the Commission for Relief of Belgium. The letter was sent March 1918.

[Transcript of American Red Cross Letter to Herbert Hoover](#)

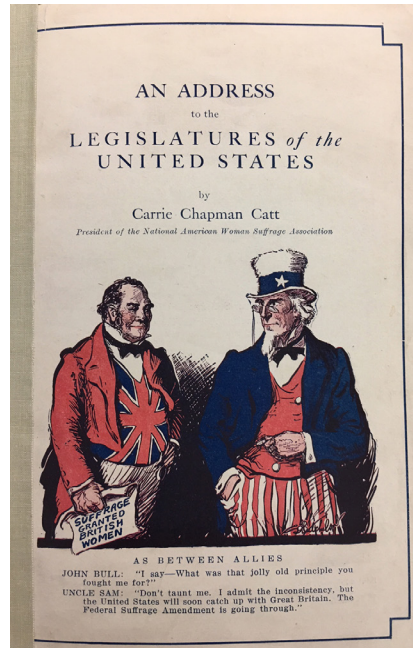
Text-Dependent Questions

- What is the purpose of this letter? What is the main content of this letter?
- How does the American Red Cross plan on handling Herbert Hoover's request?
- How does this letter show Hoover's humanitarian work impacting those around the world? How is something like a clothing drive significant to the Belgium Relief effort?

Citation Information

Davison, Henry P., "American Red Cross Letter to Mr. Hoover," 4 March 1918. [Courtesy of National Archives](#)

Address from Carrie Chapman Catt to U.S. Legislatures about Women's Suffrage Movement, 1919



Courtesy of State Historical Society of Iowa, Catt, Carrie Chapman, "An Address to the Legislatures of the United States of America," pp. 1-9, 1919

Description

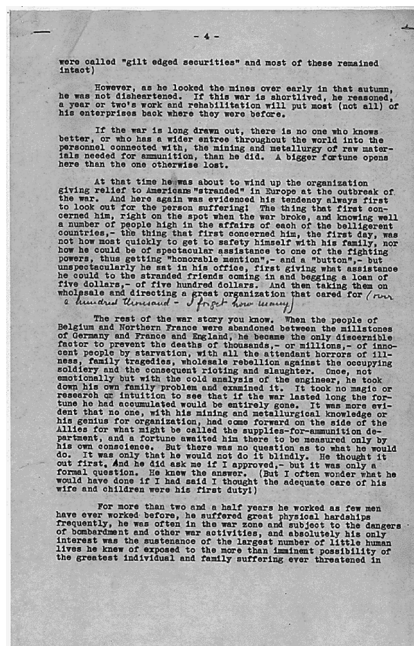
This document is an address given by Carrie Chapman Catt, president of the National American Women's Suffrage Movement, to the legislatures of the United States in 1919.

[Transcribed Excerpt of Address from Carrie Chapman Catt to U.S. Legislatures](#)

Text-Dependent Questions

- What cause is Carrie Chapman Catt representing, and what three arguments does she lay out in the first part of her address in relation to this movement to "be inevitable?"
- What are the main points Carrie Chapman Catt presents in her address that point to this action to be "immediate?"
- Why is Catt's address to the United States legislature significant to American society, and how did society benefit from the work of Carrie Chapman Catt?

First Lady Lou Henry Hoover Comments on her Husband's Career and Public Service, 1932



Courtesy of National Archives, Hoover, Lou H., "Mrs. Hoover comments on her husband's career and public service during the campaign of 1932," pp. 4-8, 1932

Description

This document is a letter written by President Herbert Hoover's wife, Lou Henry. In the letter, Lou Henry Hoover wrote about her husband's career in public service during his campaign in 1932.

[Transcribed Excerpt of First Lady Lou Henry Hoover's Comments on her Husband's Career and Public Service](#)

Text-Dependent Questions

- What is the purpose of this letter by Herbert Hoover's wife? Who was it intended for, and why did she feel these individuals needed to read this letter?
- This letter outlines some of the humanitarian work that Herbert Hoover accomplishes. What are some of those efforts, and how does Lou Henry Hoover describe her husband's attitude and beliefs behind those actions?
- Compare this letter to the [Red Cross Letter to Herbert Hoover](#), which was written before he became president. How does Herbert Hoover's humanitarian work around the world exemplify the Iowa State Motto, "Our Liberties We Prize, and Our Rights We Will Maintain?" Provide textual evidence from these documents to support your answer.

Citation Information

Hoover, Lou H., "Mrs. Hoover comments on her husband's career and public service during the campaign of 1932," pp. 4-8, 1932. [Courtesy of National Archives](#)