

Guided Inquiry Example

6TH-8TH





Example of Guided Inquiry

To understand how to use the following resources as part of a guided inquiry, see the <u>Guided Inquiry</u> document.

Topic: Agriculture in a Global World

Compelling Question: How has agriculture in the American Midwest evolved over time?

Background Information:

For thousands of years, lowa's rich soil has supported many different people who have called "the land between two rivers" home. Native American women planted corn, beans and squash in carefully cultivated gardens along Iowa's rivers. When the sweet corn ripened in early August, the tribe celebrated. For the Meskwaki in Tama County, it was called the "the Green Corn Dance" and later became the starting point for the tribe's famous pow wow. Iowa's First Settlers Profit from Farmland The eastern United States is mostly covered in forests. Pioneers moving westward knew how to carve out farms among the trees but did not have experience on the treeless Iowa prairies which covered 85 percent of central and western lowa. They needed to learn how to plow up for the first time the tough roots that held the soil in place. The first settlers often planted wheat as their primary cash crop but discovered that corn was more profitable. While it was hard to market bulky wagon loads of grain, corn could be fed to hogs which could be driven to markets or butchered in the winter and transported frozen on sleds. Meat brought a better price than the grain itself. In the second half of the 19th century, 1850 to 1900, Iowa farmers experience the rural side of the Industrial Revolution. John Deere, an Illinois blacksmith, invented a steel plow that would clean off the sticky prairie soil, unlike earlier iron plows that clogged and had to be scraped frequently. Horses replaced oxen as a source of power with the invention of new machinery. Hay rakes, mowers, corn planters and multi-row plows allowed one farmer to cultivate more acres than ever before. Production skyrocketed. When barbed wire allowed farmers to keep their animals contained, they began to import purebred livestock from Europe. They held fairs to compare their efforts in quality seed and animals. Refrigerated railroad cars permitted beef and pork to be slaughtered in Iowa and shipped to the growing cities of the east. Science Propels Agricultural Practices Forward.

After WWI (1917-1918), the gasoline engine began to make its way onto the farm to replace horses as the primary source of power. Tractors did not need to be fed when they were not working nor did farms have to devote fields to the cultivation of oats. Tractors came in larger and larger sizes and could plow and harvest fields much faster than horses could. At the same time, scientists began to promote the advantages of hybrid seed to produce bigger and better crops. Iowa-born Henry Wallace, later to become secretary of agriculture and vice president, was a co-founder of Pioneer Hybrid Seed that helped boost corn production across the Midwest. Iowa State University was a leader in the development of herbicides, pesticides and fertilizers and teaching farmers how to use them that also contributed to a major boost in Iowa farm production. The ISU Extension Service placed a farm specialist and home economist in every Iowa county to make the entire state a classroom and to improve farm life. Beginning in the 1960s, science jumped to a new level with new discoveries in genetics. Until then, farming had always been about improving the surroundings in which a plant grew — insuring adequate sunlight and water, eliminating weeds and improving the quality of the soil. Genetic engineering was something new.

Example of Guided Inquiry

It went into the plant itself and gave it new directions on how to grow and to resist disease. Iowa's Norman Borlaug took the new agriculture improvements to impoverished nations around the world. He was a leader of what has been called "the Green Revolution" to increase the world's food supply. His work is estimated to have saved the lives of one billion people from starvation. In 1970, he was awarded the Nobel Peace Prize.

Farm Families Decline in the Late 20th, Early 21st Century Agriculture has faced many problems with these new developments. His work is estimated to have saved the lives of one billion people from starvation. In 1970, he was awarded the Nobel Peace Prize. Farm Families Decline in the Late 20th, Early 21st Century Agriculture has faced many problems with these new developments. In the 20th century, 1900 to 1999, farmers could often produce more than the market could sell at a satisfactory price, and surpluses developed. When prices plunged as a result, farmers planted even more to maintain their incomes, creating even bigger surpluses. The federal government in the 1930s instituted programs to try to keep up prices for those farmers that would agree to reduce their production. In both WWI and WWII, farmers were encouraged to produce as much as they could to support the U.S. and its allies. Adjusting to peacetime created problems both times in the post-war world. Demand for farm products was strong in the 1970s, and once again, farmers geared up for top production. They borrowed money to buy larger equipment and paid more money to buy more land. In 1980, farm and farmland prices collapsed suddenly and many farmers could not meet their financial obligations. Many of them lost their farms. The small-town banks around the state that had lent them money also felt hard times. Many of them filed for bankruptcy. Merchants in small towns saw their sales drop, and many were forced to close their doors. The early years of the 1980s were called the "Farm Crisis," the worst times lowa had experienced since the Great Depression of the 1930s.

Since the first wave of new machinery in the late 1800s, farms have grown in size and the number of farms has decreased. Many rural lowa counties had their highest population figures in the early 20th century, and have witnessed a gradual decline ever since. Losing students, rural schools were forced to consolidate into larger districts. Farm representation in the lowa Legislature, once dominating everything else, was forced to yield seats to the growing urban cities.

On the other hand, the growth in numbers of families living in the country who are not farmers has grown. With good roads, cities now attract daily commuters from surrounding counties and beyond, blurring the lines between urban and rural. By any measure, however, lowa agriculture is a power force in the economy and in the source of food for a hungry world.

Sources with Transcripts:

Source 1: "The Crop Outlook" Newspaper Article, June 30, 1906

Source 2: "1913 Farm Crops and their Value" Newspaper Article, May 14, 1914

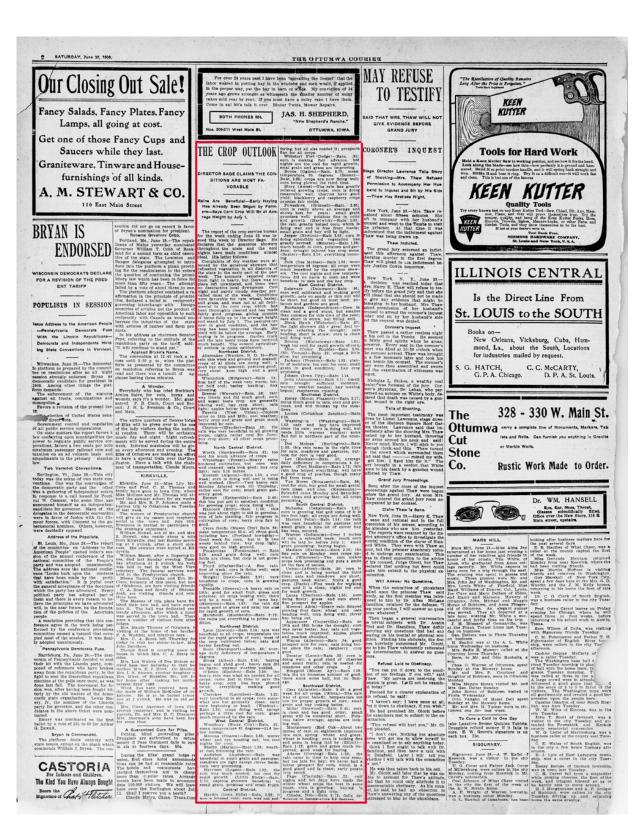
Source 3: 1923 Soviet Premier Nikita Khrushchev Visits Iowa, September 23, 1959

Source 4: Iowa Hog Lift to Japan, 1960

Source 5: "Food for Freedom" Church Women United Letter, 1966

Source 6: S.2250: Congressional Tribute to Dr. Norman E. Borlaug Act of 2006, December 14, 2006

"The Crop Outlook" Newspaper Article, June 30, 1906



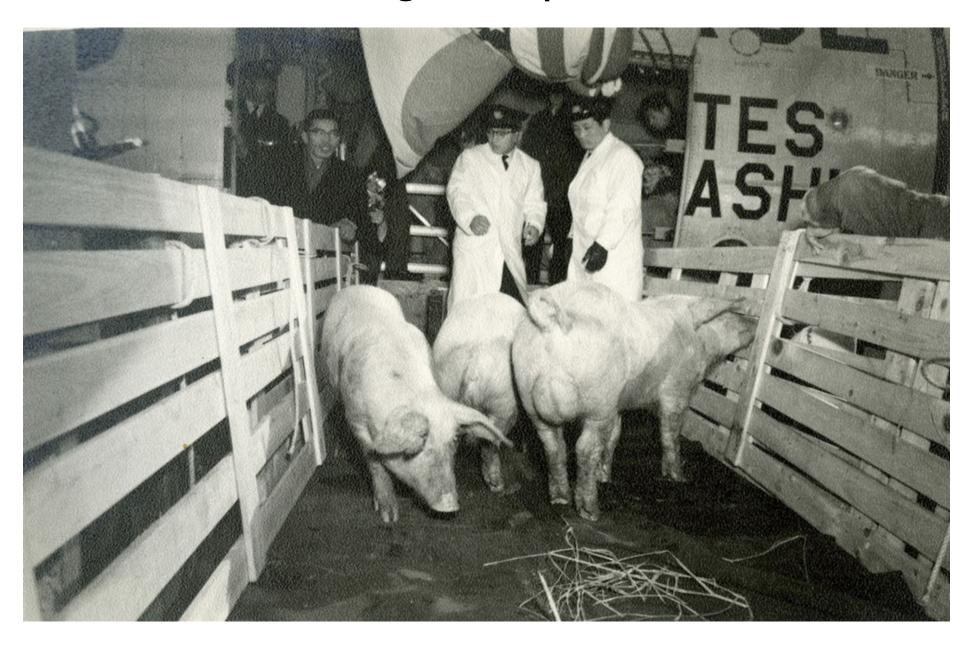
"1913 Farm Crops and their Value" Newspaper Article, May 14, 1914



Soviet Premier Nikita Khrushchev Visits Iowa, September 23, 1959



Iowa Hog Lift to Japan, 1959



Goeppinger, Walter, Iowa State University, 1959. Courtesy of Iowa State University Special Collections

S.2250: Congressional Tribute to Dr. Norman E. Borlaug Act of 2006, December 14, 2006 (Pg. 1)



PUBLIC LAW 109-395-DEC. 14, 2006

CONGRESSIONAL TRIBUTE TO DR. NORMAN E. BORLAUG ACT OF 2006

S.2250: Congressional Tribute to Dr. Norman E. Borlaug Act of 2006, December 14, 2006 (Pg. 2)

120 STAT. 2708

PUBLIC LAW 109-395-DEC, 14, 2006

Public Law 109-395 109th Congress

Dec. 14, 2006 IS. 22501

To award a congressional gold medal to Dr. Norman E. Borlaug.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

Congressional Tribute to Dr. Norman E. Borlaug Act of 2006. 31 USC 5111

This Act may be cited as the "Congressional Tribute to Dr. Norman E. Borlaug Act of 2006".

Congress finds as follows:

(1) Dr. Norman E. Borlaug, was born in Iowa where he grew up on a family farm, and received his primary and sec-

ondary education.

(2) Dr. Borlaug attended the University of Minnesota where he received his B.A. and Ph.D. degrees and was also a star NCAA wrestler.

(3) For the past 20 years, Dr. Borlaug has lived in Texas where he is a member of the faculty of Texas A&M University.
(4) Dr. Borlaug also serves as President of the Sasakawa

Africa Association.

(5) Dr. Borlaug's accomplishments in terms of bringing

(5) Dr. Borlaug's accomplishments in terms of bringing radical change to world agriculture and uplifting humanity are without parallel.

(6) In the immediate aftermath of World War II, Dr. Borlaug spent 20 years working in the poorest areas of rural Mexico. It was there that Dr. Borlaug made his breakthrough achievement in developing a strand of wheat that could exponentially increase yields while actively resisting disease.

(7) With the active support of the governments involved, Dr. Borlaug's "green revolution" uplifted hundreds of thousands of the rural poor in Mexico and saved hundreds of millions from famine and outright starvation in India and Pakistan.

(8) Dr. Borlaug's approach to wheat production next spread throughout the Middle East. Soon thereafter his approach was adapted to rice growing, increasing the number of lives Dr.

Borlaug has saved to more than a billion people.

(9) In 1970, Dr. Borlaug received the Nobel Prize, the only person working in agriculture to ever be so honored. Since then he has received numerous honors and awards including the Presidential Medal of Freedom, the Public Service Medal, the National Academy of Sciences' highest honor, and the Rotary International Award for World Understanding and

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(10) At age 91, Dr. Borlaug continues to work to alleviate poverty and malnutrition. He currently serves as president of Sasakawa Global 2000 Africa Project, which seeks to extend the benefits of agricultural development to the 800,000,000 people still mired in poverty and malnutrition in sub-Saharan

Africa.

(11) Dr. Borlaug continues to serve as Chairman of the Council of Advisors of the World Food Prize, an organization he created in 1986 to be the "Nobel Prize for Food and Agriculture" and which presents a \$250,000 prize each October at a Ceremony in Des Moines, Iowa, to the Laureate who has made an exceptional achievement similar to Dr. Borlaug's breakthrough 40 years ago. In the almost 20 years of its existence, the World Food Prize has honored Laureates from Bangladesh, India, China, Mexico, Denmark, Sierra Leone, Switzerland, the United Kingdom, and the United States.

(12) Dr. Borlaug has saved more lives than any other

land, the United Kingdom, and the United States.

(12) Dr. Borlaug has saved more lives than any other person who has ever lived, and likely has saved more lives in the Islamic world than any other human being in history.

(13) Due to a lifetime of work that has led to the saving and preservation of an untold amount of lives, Dr. Norman E. Borlaug is deserving of America's highest civilian award: the congressional gold medal.

SEC. 3. CONGRESSIONAL GOLD MEDAL.

(a) PRESENTATION AUTHORIZED.—The President Pro Tempore of the Senate and the Speaker of the House of Representatives are authorized to make appropriate arrangements for the presentation, on behalf of Congress, of a gold medal of appropriate design, to Dr. Norman E. Borlaug, in recognition of his enduring contributions to the United States and the contributions of the Property of

tions to the United States and the world.

(b) DESIGN AND STRIKING.—For the purpose of the presentation referred to in subsection (a), the Secretary of the Treasury (in this Act referred to as the "Secretary") shall strike a gold medal with suitable emblems, devices, and inscriptions, to be determined by the Secretary. by the Secretary.

SEC. 4. DUPLICATE MEDALS.

Under such regulations as the Secretary may prescribe, the Secretary may strike and sell duplicates in bronze of the gold medal struck under section 3 at a price sufficient to cover the cost thereof, including labor, materials, dies, use of machinery, and overhead expenses, and the cost of the gold medal.

SEC. 5. STATUS AS NATIONAL MEDALS.

(a) NATIONAL MEDAL.—The medal struck under this Act is national medal for purposes of chapter 51 of title 31, United

(b) NUMISMATIC ITEMS.—For purposes of section 5134 of title 31, United States Code, all duplicate medals struck under this Act shall be considered to be numismatic items.

SEC. 6. AUTHORITY TO USE FUND AMOUNTS; PROCEEDS OF SALE.

(a) AUTHORITY TO USE FUND AMOUNTS.—There are authorized to be charged against the United States Mint Public Enterprise Fund, such sums as may be necessary to pay for the cost of the medals struck under this Act.

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120 STAT. 2710

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(b) PROCEEDS OF SALE.—Amounts received from the sale of duplicate bronze medals under section 4 shall be deposited in the United States Mint Public Enterprise Fund.

Approved December 14, 2006.

LEGISLATIVE HISTORY—S. 2250:

CONGRESSIONAL RECORD, Vol. 152 (2006): Sept. 27, considered and passed Senate. Dec. 6, considered and passed House.

