



1975 – 1999 Crisis In Agriculture

activities

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1 | The Business of Farming

Activity Grade Level

4 8 HS

■ activity

Math Exercises

Farmers have to do a lot of math. Have students read the Crisis in Agriculture section in the 1975-1999 timeline before answering the following questions: <http://nebraskastudies.org/1975-1999/crisis-in-agriculture/>

- If a farmer is going to put 1 pint of weed chemical on each acre of soybeans s/he plants, how many gallons would it take to do 80 acres?
- How many pounds does a bushel of wheat weigh? How many loaves of bread weighing one pound could be made (in theory) from a bushel of wheat? Use the Wheat Foods Council: Wheat Facts website to help find the answers: <https://www.wheatfoods.org/resources/wheat-facts/>
- If a farmer had 160 acres of wheat and each acre averaged 40 bushels, how many bushels of wheat would the farmer raise?
- If a farmer's soybean crop averaged 45 bushels per acre and s/he was paid \$5 per bushel, how much profit would the farmer make if s/he had the following expenses per acre?

\$15 fertilizer

\$10 weed killer

\$12 taxes

\$50 cost for planting, harvesting, etc.

\$80 interest charges for money borrowed to buy the land

■ Nebraska Department of Education Content Area Standards

Nebraska State Social Studies Standards
[SS 4.2.1](#); [SS 4.2.2](#) | [SS HS.2.5](#)

Nebraska State English Language Arts Standards
[LA 4.1.5 Vocabulary](#); [LA 4.1.6 Comprehension](#);
[LA 4.2.2 Writing Mode](#); [LA 4.4.1 Information Fluency](#)
[LA 8.1.6 Comprehension](#); [LA 8.2.2 Writing Modes](#);
[LA 8.4.1 Information Fluency](#)

Nebraska State Mathematics Standards
[MA 4.1.2 Operations](#); [MA 4.3.3 Measurement](#)

Nebraska State Science Standards
[Standard 4.4.3](#); [Standard 4.5.1](#); [Standard 4.6.2](#); [Standard 4.7.3](#) | [Standard 8.7.2](#); [Standard 8.7.3](#); [Standard 8.7.4](#);
[Standard 8.7.5](#) | [Standard 12.2.1](#); [Standard 12.4.4](#);
[Standard 12.7.2](#); [Standard 12.7.3](#); [Standard 12.7.4](#);
[Standard 12.7.6](#); [Standard 12.8.3](#)

2 Population Change

Activity Grade Level

4 8 HS

■ activity

Geography Census Analysis

Have students read the Crisis in Agriculture section in the 1975-1999 timeline. Then, have students compare and contrast the information contained on the following web pages to help answer the following questions: <http://nebraskastudies.org/1975-1999/crisis-in-agriculture/>

NE Dept. of Economic Development: Urban & Rural Population Changes Map
<http://www.neded.org/files/research/stathand/bsecc2.pdf>

POPULATION OF NEBRASKA TOWNS, 1930 to 1980
<http://www.neded.org/files/research/stathand/bsect5b.htm>

POPULATION OF NEBRASKA TOWNS, 1990
<http://www.neded.org/files/research/stathand/bsect5c.htm>

Table 4: Nebraska County Populations: 1860 to 2010 pp 11-13
<https://www.unomaha.edu/college-of-public-affairs-and-community-service/center-for-public-affairs-research/documents/nebraska-historical-population-report-2018.pdf>

- In what counties are the largest cities in Nebraska located?
- What counties have lost the most population (—30 to —20.1) from 1970-1990?
- How do you explain the reasons for counties and/or cities gaining population or losing population?
- What geographic factors have affected the growth and/or loss of population of cities/counties/state?
- What are the political implications for a county/region to lose population?
- What steps would you suggest be taken by local communities and/or government leaders to address the declining population?

NOTE: Teachers should review these websites ahead of class to help guide students to the appropriate information, based on the students' skill levels.

■ Nebraska Department of Education Content Area Standards

Nebraska State Social Studies Standards

SS 4.2.2; SS 4.4.2; SS 4.4.4 | SS 8.4.2; SS 8.4.3; SS 8.4.4 | SS HS.2.5; SS HS 3.1; SS HS.3.4; SS HS.3.5; SS HS.4.4

Nebraska State English Language Arts Standards

LA 4.1.5 Vocabulary; LA 4.1.6 Comprehension; LA 4.4.1 Information Fluency
LA 8.1.6 Comprehension; LA 8.2.2 Writing Modes; LA 8.4.1 Information Fluency

Nebraska State Science Standards

Standard 4.1.2; Standard 4.4.3; Standard 4.6.1; Standard 4.6.2; Standard 4.7.3 | Standard 8.6.1; Standard 8.7.2; Standard 8.7.3; Standard 8.7.4; Standard 8.7.5 | Standard 12.2.1; Standard 12.6.1; Standard 12.7.2; Standard 12.7.3; Standard 12.7.4; Standard 12.7.6; Standard 12.8.3

L1

LESSON PLAN

There's More than Football in "Cornhuskers"

Activity Grade Level

4 8

This lesson plan was funded in part by the Cooper Foundation, Abel Foundation, and the Nebraska Humanities Council.

Length Two to five class periods

Lesson Objectives

1. Students will find and compare facts about raising corn in the 1920s and 1940s to raising corn now.
2. Students will use the Internet to gather factual and anecdotal information from reliable Internet sources.
3. Students will use photograph analysis sheets for analysis.
4. Students will be able to name parts of a corn plant.
5. Students will display what they have learned to the class and guests of the class.

■ Nebraska Department of Education Content Area Standards

Nebraska State Social Studies Standards

SS 4.2.1; SS 4.4.1; SS 4.4.2; SS 4.4.3 | SS 8.4.2; SS 8.4.3; SS 8.4.4

Nebraska State English Language Arts Standards

LA 4.1.6 Comprehension; LA 4.2.2 Writing Modes; LA 4.4.1 Information Fluency | LA 8.1.6 Comprehension; LA 8.2.2 Writing Modes; LA 8.4.1 Information Fluency

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Resources & Materials

Computer with Internet access. Students can work alone or in teams depending on computer and Internet availability. Students will need paper, a pen or pencil, and drawing utensils.

Nebraska Studies website <http://www.nebraskastudies.org>

USDA Agriculture in the Classroom Resources <http://www.agclassroom.org>

History of U.S. Corn Production <https://www.indexmundi.com/agriculture/?country=us&commodity=corn&graph=production>

Wessels Living History Farms <http://www.livinghistoryfarm.org>

Camp Silos, From Native Prairie to Present, Our Agricultural Heritage
<http://www.campsilos.org>

The Story of Corn <http://www.campsilos.org/mod3/students/index.shtml>

Teachers Resources <http://www.campsilos.org/mod3/teachers/index.shtml>

Iowa State Corn Production Image Gallery <https://crops.extension.iastate.edu/crops/corn>

USDA Youth Resources
<https://www.nal.usda.gov/topics/educational-resources-children-parents-and-teachers>

Agriculture is Fun website <https://www.usda.gov/youth>

The Nebraska Corn Growers Association <http://www.necga.org>

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Introduction

Do you think Nebraska is called the Cornhusker State because of University of Nebraska Football? Think again! Nebraska is called the Cornhusker State for an entirely different reason. Let's find out what this reason is.

The Process

Step 1

Within Nebraska Studies (<http://www.nebraskastudies.org>), have students click on 1975-1999, and then click on Farm Crisis 1977 Strike. Students should read the first page of the following two sections to find answers to the following questions:

Crisis in Agriculture <http://nebraskastudies.org/1975-1999/crisis-in-agriculture/>

Alternative Markets <http://nebraskastudies.org/1975-1999/alternative-markets/>

- a. In 1935, how many farms were there in the *United States*?
- b. In 1934, how many farms were there in *Nebraska*?
- c. In 1935, how big was the average farm in Nebraska?
- d. In 1940, how many people did one farmer feed?

Step 2

In the upper left corner of Nebraska Studies, have students type in "corn" in the Search box and then click on Primary Source. Of the over 200 responses they will find, have them select 3 to 5 photographs showing an aspect of corn production from 1920-1940. Have students complete the Photograph Analysis Worksheet in the Resources Section at the end of this document. Have them make note of their discoveries that are different from corn production now.

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Step 3

Have students open the website, USDA Agriculture in the Classroom Resources (<http://www.agclassroom.org>) and find the State Agriculture Profile for Nebraska. This will be a print-friendly, one-page document. Have students use this page to answer these questions:

- In 2000, how many farms were there in Nebraska? Compare the answer you find with data that you discovered in Step 1.
- How many acres of land are farmed in Nebraska? How many of these areas are used to grow corn?
- What is Nebraska's number one crop in terms of acres? In terms of bushels produced? In terms of value of cash receipts?
- How much of Nebraska's corn crop is exported?
- What industry uses most of Nebraska's corn crop?

The Ag Classroom website will also supply county-by-county data about agriculture in Nebraska, based on the 1997 census. Use the Need More Details button.

Step 4

Have students read and take notes on the article, History of U.S. Corn Production, to answer these questions: (<https://www.indexmundi.com/agriculture/?country=us&commodity=corn&graph=production>)

- What is the United States' largest crop? What other countries are large producers of this crop as well?
- What are five ways that changes in corn production techniques after World War II have resulted in higher corn yields?

*Remember, students will be reading for ideas and then summarizing. These 5 changes in how corn is produced will be used to complete Step 5.

Note to Teachers:

Five changes in corn production techniques from are:

- Use of fertilizer
- Increased plant population
- Decreased row width
- Earlier planting dates
- Use of hybrid seeds

Students may find other ideas in the information that will work just as well. The Living History Farm site supports the history of these topics very well.

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Step 5

On the homepage of the Nebraska Studies website, have students click on the *Living History Farms* button (<http://www.livinghistoryfarm.org>). Have them open the *Farming in the 1920s* section and then use the *Machines, Farm Life, and Crops* buttons to discover anecdotal information about the history of the 5 changes in corn production.

Step 6

Have students open Camp Silo's Story of Corn website to answer the following questions: (<http://www.campsilos.org/mod3/students/index.shtml>).

- How much of the world's total corn supply does the United States produce? What other countries in the world also produce corn?
- What are the top six corn producing states in the United States? Where does Nebraska rank among them?

Step 7

Have students open the Iowa State Corn Production Image Gallery: <http://www.agronext.iastate.edu/corn/gallery/homepage.php?catid=17&crumblimit=>

Have students select the illustration or illustrations they think best show the parts of a corn plant and then draw their own versions, using the website as a guide.

Step 8

Open the Camp Silos website and pull out activities for your students from Teachers Resources (<http://www.campsilos.org/mod3/teachers/index.shtml>). These interactive activities have their own evaluations, which are fun and educational at the same time! Have students on the look out for data that fits with what they have already learned. Be sure to have students take the Corny Quiz.

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Learning Advice

The websites used in this lesson are of various degrees of difficulty. Students will need to have some basic familiarity with using the Internet, but will not need any advanced Internet skills. Students will need to "read for information" to answer the lesson questions, so they should be able to take notes while they are at the computer. Encourage the students to move beyond the basic questions that are asked. If students are members of farming families, they will have access to more personal information about changes in corn production over the years than students who are not part of farming families. For students without access to family farms, teachers could buy ears of corn for use in squirrel feeders that are sold at hardware stores. Having the chance to observe actual ears of corn adds interest to this study. Completing this lesson during "sweet corn season" would make it possible to find ears of sweet corn in urban grocery stores.

Conclusion

Corn is the largest crop in the United States. As uses for corn become more numerous (including the use of ethanol, a corn product), everyone needs to have an understanding of how corn is grown and why corn is a vital commodity.

Assessment

Each student (or team of students) will construct a summary display showing the information s/he has learned. This display should include diagram(s) of corn plants, statistics about Nebraska, United States, and world corn production, and compare-and-contrast statements about changes in corn production since the 1920s. Students should be prepared to explain their displays to the class and/or guests of the class. Grandparents and business people from the community would especially enjoy hearing what the students have learned about history of the importance of corn to the state of Nebraska, the United States, and the world.



1975 – 1999

Crisis In Agriculture

resources

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Photograph Analysis Worksheet	11

Nebraska Department of Education Academic Standards

<https://www.education.ne.gov/contentareastandards/>

Nebraska Department of Education Social Studies and History Standards

<https://cdn.education.ne.gov/wp-content/uploads/2019/11/Nebraska-Social-Studies-Standards-Final-11-2019.pdf>

National Archives <http://www.archives.gov/index.html>

Library of Congress Learning Page Lesson Plans

<https://www.loc.gov/search/?in=&q=lesson+plans&new=true&st=>

Analyze a Photograph

Meet the photo.

Quickly scan the photo. What do you notice first?

Type of photo (check all that apply):

- Portrait Landscape Aerial/Satellite Action Architectural
 Event Family Panoramic Posed Candid
 Documentary Selfie Other

Is there a caption? yes no

Observe its parts.

List the people, objects and activities you see.

PEOPLE	OBJECTS	ACTIVITIES

Write one sentence summarizing this photo.

Try to make sense of it.

Answer as best you can. The caption, if available, may help.

Who took this photo?

Where is it from?

When is it from?

What was happening at the time in history this photo was taken?

Why was it taken? List evidence from the photo or your knowledge about the photographer that led you to your conclusion.

Use it as historical evidence.

What did you find out from this photo that you might not learn anywhere else?

What other documents, photos, or historical evidence are you going to use to help you understand this event or topic?



Nebraska Department of Education Content Area Standards

Social Studies Standards

4

SS 4.2.1 Describe how scarcity requires the consumer and producer to make choices and identify costs associated with them.

SS 4.2.2 Investigate various financial institutions in Nebraska and the reasons for people's spending and saving choices.

SS 4.4.1 Investigate patterns of continuity and change over time in Nebraska.

SS 4.4.2 Analyze and explain multiple perspectives of events in Nebraska, including historically marginalized and underrepresented groups.

SS 4.4.3 Analyze past and current events throughout Nebraska history.

SS 4.4.4 Develop historical inquiry and research skills.

8

SS 8.4.2 Use multiple perspectives to evaluate the historical, social, and cultural context of past and current events.

SS 8.4.3 Examine historical events from the perspectives of marginalized and underrepresented groups.

SS 8.4.4 Evaluate and interpret sources for perspective and historical context.

HS

SS HS.2.5 Explain the role of markets in determining prices and allocating scarce goods and services.

SS HS.3.1 Evaluate where (spatial) and why people, places, and environments are organized on the Earth's surface.

SS HS.3.4 Compare and contrast patterns of human populations and culture over space and time on a local, national, and global scale.

SS HS.3.5 Evaluate issues and/or events using geographic knowledge and geospatial skills to make informed decisions.

SS HS.4.4 Evaluate sources for perspective, limitations, accuracy, and historical context.

Nebraska Department of Education Content Area Standards

■ Language Arts Standards

4

LA 4.1.5 Vocabulary: Students will build and use conversational, academic, and content specific grade-level vocabulary.

LA 4.1.6 Comprehension: Students will construct meaning by using prior knowledge and text information while reading grade-level literary and informational text.

LA 4.2.2 Writing Modes: Students will write in multiple modes for a variety of purposes and audiences across disciplines.

LA 4.4.1 Information Fluency: Students will evaluate, create, and communicate information in a variety of media and formats (textual, visual, and digital).

8

LA 8.1.6 Comprehension: Students will construct meaning by applying prior knowledge, using text information, and monitoring comprehension while reading increasingly complex grade-level literary and informational text.

LA 8.2.2 Writing Modes: Students will write in multiple modes for a variety of purposes and audiences across disciplines.

LA 8.4.1 Information Fluency: Students will evaluate, create, and communicate information in a variety of media and formats (textual, visual, and digital).

Nebraska Department of Education Content Area Standards

■ Math Standards

4

MA 4.1.2 Operations: Students will demonstrate the meaning of addition and subtraction of whole numbers and fractions and compute accurately.

MA 4.3.3 Measurement: Students will perform and compare measurements and apply formulas.

Nebraska Department of Education Content Area Standards

■ Science Standards

4

By the end of fourth grade, students will:

Standard 4.1.2 Develop an understanding of evidence, models, and explanation.

Standard 4.4.3 Develop an understanding of living things and environments.

Standard 4.5.1 Develop an understanding of the characteristics of earth materials.

Standard 4.6.1 Develop an understanding of technological design.

Standard 4.6.2 Develop an understanding of science and technology.

Standard 4.7.3 Develop an understanding of environmental changes.

8

By the end of eighth grade, students will:

Standard 8.6.1 Develop an understanding of technological design.

Standard 8.7.2 Develop an understanding of relationships among populations, resources, and environments.

Standard 8.7.3 Develop an understanding of natural hazards.

Standard 8.7.4 Develop an understanding of risks and benefits.

Standard 8.7.5 Develop an understanding of science and technology in society.

HS

By the end of twelfth grade, students will:

Standard 12.2.1 Develop the abilities needed to do scientific inquiry.

Standard 12.4.4 Develop an understanding of the interdependence of organisms.

Standard 12.6.1 Develop an understanding of technological design.

Standard 12.7.2 Develop an understanding of the effects of population change.

Standard 12.7.3 Develop an understanding of natural resources.

Standard 12.7.4 Develop an understanding of environmental quality.

Standard 12.7.6 Develop an understanding of the role of science and technology in local, national, and global challenges.

Standard 12.8.3 Develop an understanding of the history of science.