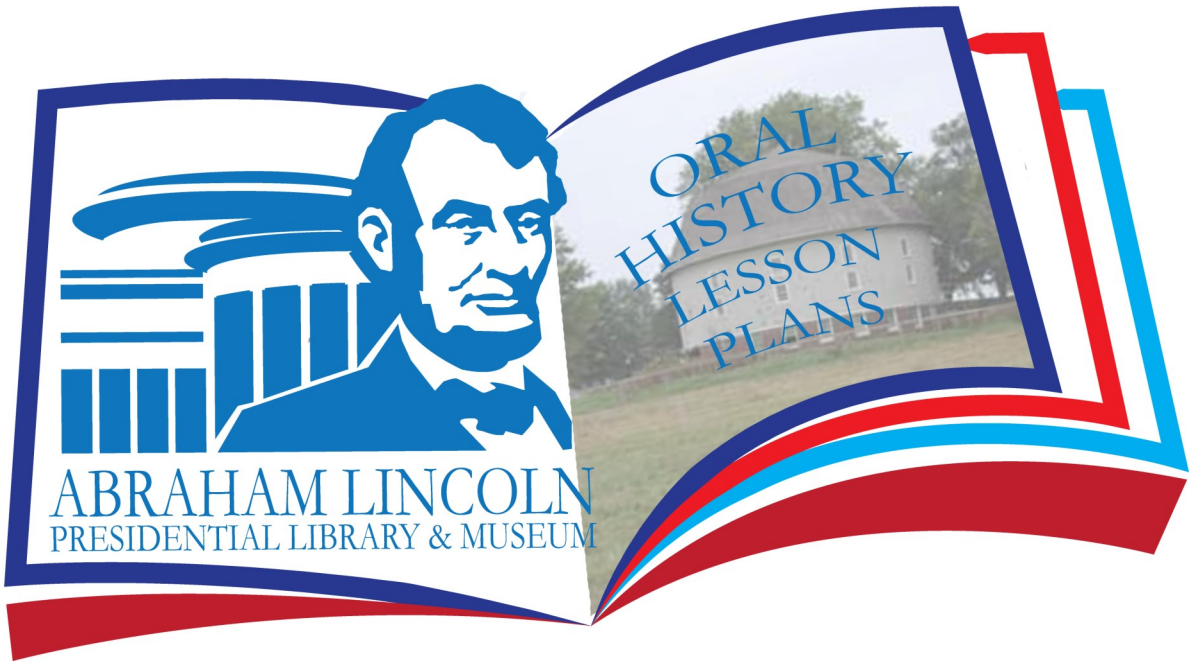
The Evolution of Agriculture



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Grade Levels: 6-12

Purpose: Students will learn about the complexity of agriculture as it is practiced in Illinois by watching, listening to, or reading oral history interviews. Agriculture is a vital part of Illinois' economy, but it is often overlooked in today's society. Students will also learn how to extract relevant information from an oral history interview and how to analyze and integrate information gleaned from different sources. Students will learn about the dramatic changes farming has undergone over the last sixty years, and will also hear valuable advice about how to adapt to an ever-changing world from experienced and successful farmers.

Objectives: Upon completing the activities presented in this Resource Guide, students will:

- gain an enhanced understanding of the history of agriculture in Illinois.
- examine the way that agriculture has evolved in ways that take advantage of changes in technology, industry, and economy.
- compare the experiences of different farmers to gain an understanding of how their careers have adapted to the ever-changing economic and technological climate.
- understand the impact that technology has had on farming today, and on the family farm.

Materials:

Internet access, headphones, audio equipment for listening to and watching interview clips, printer, projector

Illinois State Learning Standards:

Middle School

SS.15.D.3c– Explain how workers can affect their productivity through training and by using tools, machinery and technology.

Early High School

SS.15.C.4a – Analyze the impact of political actions and natural phenomena (e.g., wars, legislation, natural disaster on producers and production decisions.)

SS.15.C.4b – Explain the importance of research, development, invention, technology and entrepreneurship to the United States economy.

Late High School

SS.15.C.5c – Explain how government intervention with market prices can cause shortages or surpluses of a good or service (e.g., minimum wage policies, rent freezes, farm subsidies).

SS.16.A.5a – Analyze historical and contemporary developments using methods of historical inquiry (pose questions, collect and analyze data, make and support inferences with evidence, report findings).

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Middle School:

CCSS.ELA-LITERACY.RH.6-8.1:
Cite specific textual evidence to support analysis of primary and secondary sources.

CCSS.ELA-LITERACY.RH.6-8.2:
Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions.

Early High School:

CCSS.ELA-LITERACY.RH.9-10.1:
Cite specific textual evidence to support analysis of primary and secondary sources, attending to such features as the date and origin of the information.

CCSS.ELA-LITERACY.RH.9-10.6:
Compare the point of view of two or more authors for how they treat the same or similar topics, including which details they include and emphasize in their respective accounts.

Later High School:

CCSS.ELA-LITERACY.RH.11-12.9:
Cite specific textual evidence to support analysis of primary and secondary sources, connecting insights gained from specific details to an understanding of the text as a whole.

CCSS.ELA-LITERACY.RH.11-12.9:
Evaluate authors' differing points of view on the same historical event or issue by assessing the authors' claims, reasoning, and evidence.

Background Information:

The family farm, once at the center of American life, has changed tremendously during the twentieth century and continues to evolve in the twenty-first century. These changes are due to a variety of factors, including advances in science and technology, the ever changing American marketplace, the changing face of the family farm, as well as events on the world stage. Farmers today have to be both innovative and knowledgeable in a variety of different fields to be successful.

The Oral History Program at the Abraham Lincoln Presidential Library has interviewed many people who work in the agricultural sector as part of its *Agriculture in Illinois* project. These interviews record the ways that agriculture has changed during the interviewees' lifetimes.

Most of the interviewees featured in this lesson plan grew up on a family farm but have adapted their farming techniques in order to enhance their farm's productivity. The interviews touch on the themes of rural communities, education, business, technology, the future, and the relationship between the government and agriculture. These interviews are rich in content, and can be used and adapted for history, economics, government, science, technology, and English classrooms.

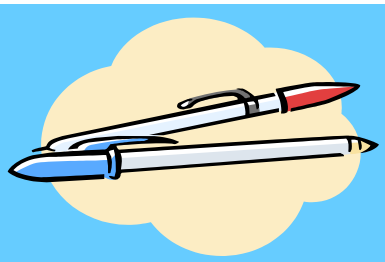
Activity:

1. Begin the lesson by having students read a short passage about the importance of agriculture to Illinois's economy (try the first site in our list of additional resources), and ask them to consider the question **"How has agriculture evolved due to new technologies and our country's ever-changing economy?"** Have the students record their answers. (Consider assigning this step as homework to allow for more class time to listen to interviews).
2. Give students a short amount of time to discuss what they have read during a class discussion or with partners.
3. Listen to all or some of the audio and video excerpts listed on the next two pages created from interviews with several farmers. Take time between interviews if needed for students to discuss or record their thoughts.
4. While the students listen, they should fill out the "Evolution of Farming" listening guide on page six.
5. Once the students have completed the interviews and chart, reassess the answer to the question **"How has agriculture evolved due to new technologies and our country's ever-changing economy?"** Encourage students to think about why these changes occurred. Students should have a deepened understanding of the transitions agriculture has gone through in the past several decades.

Assessment: Collect student work and use it to evaluate their progress to ensure understanding of the topic. See 'Tips and Suggestions' on the right for more assessment ideas.

Discussion Questions:

1. How has agriculture evolved over the past century?
2. Why was it necessary for farmers to make these changes?
3. How has the farm family evolved over that same period?
4. What experience struck you as most interesting from the interviews?
5. What similarities did you see between the interviews? Explain.
6. Consider your prior knowledge about agriculture and your own connections to farming, agribusiness or an ag related industry. How have these changes impacted your life and the lives of others in your state?
7. Has global competition changed farming in Illinois?



Tips and Suggestions:

* **Optional Assessment**: Students use their notes in the Evolution of Farming chart to write a short essay comparing two or three interviews. They should practice, as historians, using concrete evidence to back their claims as to why or how agriculture has evolved in the past century.
* Use this lesson to tie in concepts from technology, history, science, and economics classes– collaborate with a teacher in another subject area to tie your classes together.
- Accompany this lesson with a trip to a local farm or have a local farmer visit the classroom to talk about his or her experience.
- Use these interviews for a History Fair project.

Additional Resources:

- Background information on farming in Illinois: http://www.agr.state.il.us/about/agfacts.html
- FAQs on Illinois farming: http:www.watchusgrow.org/faq
- Illinois farming fact sheet: http://www.agclassroom.org/kids/stats/illinois.pdf

Interviews:

Norbert Bentele: Norbert Bentele grew up on his family's farm in Macon County, Missouri. He talks about rendering fat from hogs after butchering them, and the importance of saving the lard for cooking. Bentele recalls that butchering hogs would often be a community event and neighbors would gather to participate in some fashion.
Interview:
Rendering Fat **(1:10) Transcript:** Coming Soon
Norb talks about the importance of lard to farm families in the 1930s and '40s.

Left: Bentele served in the Army during the Korean War.

Charlie Carey: Charlie Carey took over his father's position on the Chicago Board of Trade (CBOT) in 1978. He has served as Chairman for the CBOT and Vice Chair for the CME group. In his interview, Carey explains how the CBOT operates and how prices are set in terms that are easy to understand to those who are unfamiliar with the process of trading commodities.
Interview:
How the Market Determines Prices **(4:14) Transcript:** Coming Soon
Carey explains the process of setting market prices at the Chicago Board of Trade.
The Trading Floor at the Board of Trade **(10:56) Transcript:** Coming Soon
Carey discusses what goes on in the trading pits at the Chicago Board of Trade.

Left: Carey on the trading floor at the Chicago Board of Trade

Charles Hartke: Charles 'Chuck' Hartke grew up on the Hartke family farm in rural Teutopolis, Illinois . He went on to serve as the Director of the Department of Agriculture in Illinois under Governor Rod Blagojevich. In these excerpts, Hartke talks about his career and his farming innovations.
Interview:
Growing Up **(5:32) Transcript:** Click Here
Chuck's experience growing up on a farm in the 40s-50s.
Feeders **(2:48) Transcript:** Click Here
About his innovation of stainless steel pig feeders.
Disease Tracking **(2:31) Transcript:** Click Here
The importance of tracking the movement of animals and plants to root out harmful disease.

Left: Chuck in the farrowing barn.

Matthew Hughes: Matt Hughes grew up on a family farm during the 1960s and 70s, and after completing college and working for a time in the marketing field, he returned to farming. In the excerpts below, Hughes talks about growing up on the farm, his years in marketing, and the ways he linked marketing with farming.
Interview:
Growing Up **(2:51) Transcript:** Click Here
Growing up on the farm in the 1960s and 70s.
A Farmer Working in Marketing **(2:46) Transcript:** Click Here
How his farming experience benefited his early business career.
In the Combine **(3:43) Transcript:** Click Here
The impact of technology on combining/harvesting the soybean crop.

Left: Matthew, aged 4, with his little sister Ann in front of their new tractor.

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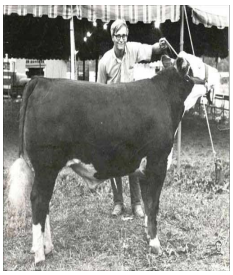

Doug Parrett: Doug F. Parrett grew up on the family farm in the 1950s and '60s in rural Champaign County, near Mahomet. He is currently a professor of Animal Sciences at the University of Illinois. In this interviews, he talks about growing up on the farm, and the innovation of tracking and measuring food intake that technology allows today.

Interview:

Growing Up **(0:58)** **Transcript:** Click Here

Growing up on a farm in the 1950s-1960s.

Tracking Cattle Feeding Habits **(5:41)** **Transcript:** Click Here

Recent innovations in feeding and tracking beef cattle as tested at the University of Illinois.

Left: Doug Parrett showing the champion Hereford steer at the Champaign County fair in 1969.

Orion Samuelson: Orion Samuelson grew up on the family's Wisconsin dairy farm in the 1940s. In the interviews, the WGN Agribusiness Director talks about how farming has changed over the course of his career.

Interview:

Growing Up **(3:43)** **Transcript:** Click Here

Growing up on a farm in the 40s-50s

REA Changed Everything **(2:34)** **Transcript:** Click Here

Discussion about the introduction of electricity to his family farm.

GPS **(4:17)** **Transcript:** Click Here

The use of GPS in fertilizer and pesticide application.

Left: Orion as a toddler with his father riding a horse.

Scott Schertz: Scott Schertz is the owner and president of Schertz Aerial Service, Incorporated, and has over 26 years of experience in aerial applications. He grew up in Illinois in the 1960s and 70s. In his interview, Scott demonstrates how to apply pesticides and fertilizers from the air.

Interviews:

Flying the Field **(9:58)** **Transcript:** Click Here

An overview of the technology and techniques for applying pesticides and fertilizers aerially.

Left: Scott in front of one of the airplanes he uses for aerial application.

Ed Teefey: Ed Teefey is a banker from Mt. Sterling, Illinois. Teefey began working in the trust department at the Farmers State Bank and Trust Company in the late 1970s. He describes the farm crisis of the 1980s from the perspective of a small town banker, in many cases dealing with neighbors and friends facing bankruptcy and foreclosure.

Interviews:

Farming Crisis **(7:15)** **Transcript:** Coming Soon

Discussion of the economic downturn many farmers experienced in the 1980s.

Left: Teefey in his office in Mt. Sterling, Illinois.

Ernest Thorp: Ernest Thorp was raised on a farm in rural Clinton, Illinois during the Great Depression. Thorp's family was relatively well-off during the Depression years, which Ernest attributes to his father's use of machinery on the farm. He discusses what kinds of machines were on his father's farm and the influence on the work done by his father's hired hands.

Interviews:

Machinery on the Farm **(0:56)** **Transcript:** Click Here

Innovative machinery used on the Thorp farm during the Great Depression.

Left: Lieutenant Thorp (B-17 pilot) in front of a tractor on his family farm in Clinton, Illinois.

Listening Guide:

Who is being interviewed?	What did they say? Include specific evidence!	Your analysis of what the interviewee had to say:

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