

Investigate Illinois

Grade Level: 4-8

Lesson Overview

Illinois is known for famous figures like Abraham Lincoln and features like expansive fields of corn. However, Illinois is home to many lesser-known but equally interesting features as well. In this lesson, students will investigate Illinois agriculture, famous people, historical tidbits, and sites.

Student Objectives

Students will research an important Illinois person, place, or feature and develop written reports and/or presentations based on their research.

Materials

- ✓ Josephine Cochrane, Illinois Inventor Information Sheet
- ✓ Investigate Illinois cards (set of 32)
- ✓ Investigate Illinois Reflection Sheet master
- ✓ Investigate Illinois Answer Key
- ✓ computer and internet access
- ✓ access to the school library
- ✓ writing materials

Procedure

1. Ask students if they ever wash dishes at home. Do they enjoy doing it? Why or why not? Tell them you will share with them the story of a famous Illinois woman who some people today might consider to be a hero. Read aloud the information page titled “Josephine Cochrane, Illinois Inventor.” After reading the story, distribute copies of or project the Investigate Illinois Reflection Sheet. Use it to guide a class discussion of the key points of Josephine Cochrane’s story.
2. Ask students how many knew the inventor of the dishwasher was from Illinois, and whether they found the story interesting. Explain that our state is full of fascinating stories like that of Josephine Cochrane’s. Each student will have the opportunity to choose a unique Illinois person, place, or feature to investigate. Once they have researched their topic, they will develop reports and/or presentations to share with the class.

3. Display the Investigate Illinois cards where students may view them during free time. Once all students have had a chance to review them, allow each to choose a card. The card they choose will be the topic they research.
4. Explain that their card is only starting point to learn about their topic. Students will continue their research in the library and online. (Note: This is a good opportunity to discuss tools for finding credible, accurate sources of information and comparing the information presented from multiple sources. See the Investigate Illinois Answer Key for suggested resources.)
5. Based on their research, students will write a report and/or create a presentation to share with the class. Presentation tools may include apps such as Google Slides, BookCreator, video creation apps, etc,
6. Distribute copies of the Investigate Illinois Reflection Sheet. Students should complete a reflection sheet as they listen to each presentation. After each presentation, allow students a few more minutes to complete their reflections. Conduct a brief classroom discussion of the presented topic, with students referring to their reflection sheets as needed. (Presentations may take place over the course of several days.)
7. Review the presented topics with a guessing game.
 - a. Make a set of signs, each displaying the name of an Investigate Illinois topic. Tape one sign to the back of each student, making sure no one receives the topic they researched. Students should NOT see what the sign on their back says, nor should they ask anyone to tell them.
 - b. Each student must identify the Illinois person, place, or interesting feature by circulating and asking other students only “yes” or “no” questions, e.g., “Am I a person?” or “Is this a place I could visit?” They may ask just one question of each student before moving on.
 - c. Once they have correctly guessed what is on their sign, students should return to their seats but continue answering questions from others.
8. Conclude with a class reflection on what students discovered about Illinois.

Extension Activities

1. Have each student conduct research on a new Illinois person, place, or topic with an agricultural connection in order to create a new Investigate Illinois card.
2. Provide Illinois Highway maps and challenge students to map the location of each Investigate Illinois card topic.

Standards

Illinois English Language Arts Standards

CCSS.ELA-LITERACY.CCRA.W.4

Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

CCSS.ELA-LITERACY.CCRA.W.7

Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.

CCSS.ELA-LITERACY.CCRA.SL.4

Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.

CCSS.ELA-LITERACY.CCRA.R.10

Read and comprehend complex literary and informational texts independently and proficiently.

Illinois Social Science Standard

SS.H.2.4. Using artifacts and primary sources, investigate how individuals contributed to and the founding and development of Illinois.

The **M**ultidisciplinary **A**gricultural Integrated **C**urriculum (mAGic) was created in 2004 under the leadership of the Illinois State Board of Education (ISBE) and the Facilitating Coordination in Agricultural Education Project (FCAE). Funding was made available through the FCAE grant budget from the agricultural education line item of the ISBE budget. This revision, as printed, was developed in January 2021.



These mAGic lessons are designed to bring agriculture to life in your classroom. They address the Illinois Learning Standards in math, science, English language arts and social studies.

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Josephine Cochrane, Illinois Inventor

1839 – Born Josephine Garis in Ashtabula County, Ohio; raised in Valparaiso, Indiana
1858 – Moved to Shelbyville, Illinois where she married William Cochran
1870 – Family moved into a mansion where they hosted many social events
1886 – Received U.S. patent no. 355,139 for her “Dish Washing Machine”
1913 – Died in Chicago; buried in Shelbyville, Illinois
1917 – Posthumously received U.S. patent no. 1,223,380 for an improved design
2006 – Inducted into the National Inventors Hall of Fame

Josephine Cochrane, inventor of the first commercially successful dishwashing machine, was born in Ashtabula County, Ohio in 1839. Her father was a civil engineer, and her great grandfather, John Fitch, was an inventor known for his steamboat-related innovations. Cochrane, thus, may have had creative tendencies in her family. However, she was not formally educated in the sciences.

Cochrane was a socialite. She and her husband, William, often entertained guests at their home. Accustomed to having servants do much of her housework for her, Cochrane did not set out to create the dishwasher to relieve her of the hard work of manually doing the dishes. Rather, the idea came to her when she grew frustrated that her fine china was chipping, mostly by the harsh handling it suffered by the servants as they scrubbed it in the sink. At first Cochrane tried washing the dishes herself. But she found the task burdensome, and thought there must be a better way.

She worked out a design that employed water jets and a dishrack that would hold the soiled tableware in place. Soon after she first began working on the design, her husband passed away and she was left with debt. This tragedy gave Cochrane a push. She became driven in her desire to create a successful model of her machine. Though others had attempted to create similar devices, including a hand-cranked model patented in 1850, none had become commercially viable. She was determined that her machine could meet a real consumer need.

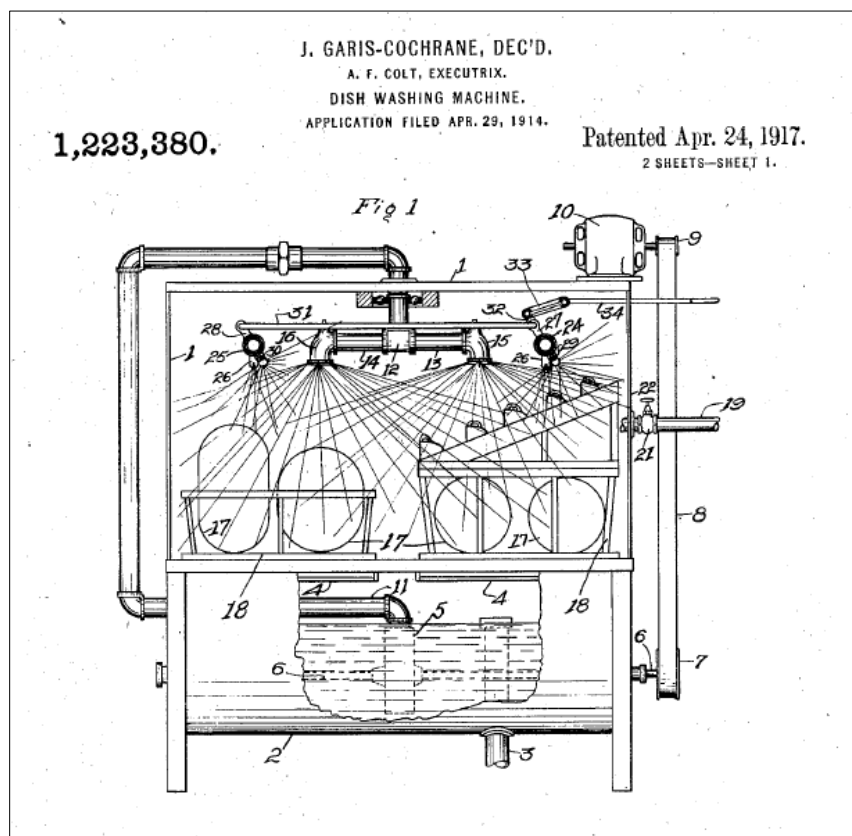
Working in a shed behind her home, Cochrane got to work. After measuring plates, cups and saucers, she constructed wire compartments in which they would fit. Then she placed the compartments inside a wheel which lay flat within a copper boiler. The wheel turned, powered by a motor, and soapy water would squirt up over the dishes to clean them. In 1886 she patented her design and began making machines for friends, calling it the "Cochrane Dishwasher." She also advertised the machines in local newspapers. She established Cochrane's Crescent Washing Machine Company. Soon restaurants

and hotels became interested. In 1893, Cochrane presented her machine at the Chicago World's Fair, where she won an award for its design and durability.

Initially, the machines sold well to businesses, but not to individual consumers. Some homemakers admitted that they enjoyed washing dishes by hand, and the machines reportedly left a soapy residue on the dishes. They also demanded a great deal of hot water, and many homes did not have hot water heaters large enough to supply the machine sufficiently. The machines' popularity skyrocketed in the 1950s, when technology, women's attitudes toward housework, and dishwashing detergent changed in the dishwasher's favor. Today, the dishwasher is a part of the typical American household.

Cochrane's company eventually became KitchenAid, part of the Whirlpool Corporation. She died in 1913, at the age of 74.

Text retrieved from <https://lemelson.mit.edu/resources/josephine-cochrane> on 7-1-2020
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1 Josephine Cochrane's second patent, for an improved design of a "Dish Washing Machine," was awarded after she died.

Name _____

Investigate Illinois Reflection Sheet

Presentation topic:

Name of presenter:

What do you think is the most important fact about this Illinois person, place, or feature?

List two other important details you learned about this topic:

1.

2.

Describe how you think Illinois might be different if this person, place, or feature had never existed.

Investigate Illinois Cards ANSWER KEY

The Investigate Illinois cards are meant to give students just enough information to introduce each topic; they are not intended to be a thorough overview. Each card includes questions to compel students to conduct their own investigations.

This key is a guide for teachers. It includes answers to the questions found on each card as well as websites that may serve as starting points for student research.

Agriculture in Illinois

DeKalb Genetics

1. What was the original meaning behind the famous “winged ear” symbol for DeKalb seed?

The original winged-ear symbol depicted DeKalb brand corn flying away with the farm mortgage, advising farmers to "Let DeKalb Quality Hybrids Be Your Mortgage Lifter." This was a powerful message during the Depression as farmers struggled to make their land payments.

2. Who were the key figures involved in the development of hybrid corn?

Hybrid corn breeding first took place in 1909, mostly with the work of scientist George Harrison Shull. Other important early figures include Edward Murray East, Donald F. Jones, and Henry A. Wallace.

3. What are the benefits of corn hybridization, and how has hybrid corn changed agriculture?

Corn hybridization is a traditional breeding process in which inbred lines are crossed to create seed varieties with improved plant characteristics (such as increased number of kernels, drought tolerance, pest resistance, etc.) and greater yields. The first commercial hybrid corn was available in 1926. The use of hybrid corn increased dramatically in just a few years:

1935 – 1% of total corn acreage planted with hybrids

1940 – 30% of total corn acreage planted with hybrids

1960 – 96% of total corn acreage planted with hybrids

Today – around 99% of total corn acreage planted with hybrids

Hybrid corn allows farmers to produce more corn on the same amount of land. Hybridizing is also the primary practice used for other crops like cotton, wheat and sorghum.

4. What other brands of seed corn are available in Illinois?

Answers may include AgriGold, Asgrow, Cargill Seed, Crow's Hybrid, Golden Harvest, LG Seeds, Mycogen, NK Brand Seed, Pfister Hybrid, Pioneer Hi-Bred International, Stine Seed, Wyffels Hybrids, and others.

5. Plant scientists have developed ever more precise ways to improve crops like corn. Explain biotechnology and how it can be used to help corn, farmers, and the environment.

Biotechnology is a range of methods used to modify plants or animals to achieve specific traits. Modern biotechnology includes the tools of genetic engineering. For example, most corn grown today is genetically engineered to resist pests, leading to reduced use of pesticides. This results in crops that yield more grain; that save farmers time, money, and fuel; and that reduce fuel emissions and soil erosion.

Recommended Resources:

<https://www.daaha.org/100-years-of-dekalb-ag-innovation> - DeKalb Area

Agricultural Heritage Association – Virtual Exhibit of DeKalb Ag history

<https://bit.ly/2BxwPBf> - Illinois State Historical Society – Historical Marker:

Winged Ear Logo

<https://bit.ly/2A0h8yM> - USDA ARS – Improving Corn

<https://bit.ly/2INoSaf> - USDA NASS - Corn Hybridization

<https://bit.ly/2z8ofpJ> - USDA - Biotechnology FAQs

DOT Foods

1. Name seven states other than Illinois where DOT Foods has a distribution center.

Answers may include Arizona, California, Georgia, Idaho, Indiana, Maryland, Missouri, New York, Oklahoma, and Tennessee.

2. Which distribution center is closest to the DOT Foods corporate headquarters, Chicago or Chesterfield, MO?

Chesterfield, MO – 126 miles.

3. In addition to the food redistribution aspect of the company, what other companies are under the DOT Foods umbrella?

edotfoods, Inc. and Dot Transportation.

4. List 10 companies that use DOT Foods as a redistributor of their products.

Answers will vary.

5. What types of jobs can be found at DOT Foods?

Answers may include truck drivers, accountants, maintenance, etc.

Recommended Resource:

www.dotfoods.com - DOT Foods company website

Funks Grove

1. Near what town and in what county is Funks Grove located?

Near Shirley, Illinois, in McLean County.

2. What historic “hard road” brought many customers to Funk’s Grove for the Funk’s maple sirup? **Route 66.**
3. What is the difference between maple sirup and syrup?
Sirup is made by boiling sap. Syrup is the end product of adding sugar to fruit juice.
4. Go home and read the label of your pancake syrup. Does it contain real maple sirup? If not, what does it contain?
Most pancake syrup today is made with corn syrup and maple flavoring, unlike the product that is made at Funk’s Grove.
5. Have you ever tasted real maple syrup?
Answers will vary.

Recommended Resource:

<https://bit.ly/2NxDeMS> - Legends Of America - Shirley and Funks Grove: Maple Sirup Country

Hunter Haven Farms

1. What does it mean for a herd to be registered?
Each animal in the herd is recorded in the breed association herdbook (such as Holstein Association) and a certificate about each animal exists. The certificate lists information such as name of owner, name of animal, date of birth, number, dam, sire, and identifying color markings.
2. The cows at Hunter Haven are milked in a modern facility known as a milking parlor. What is a milking parlor, and how does it work?
A milking parlor is the area of a dairy farm where milking takes place. Cows come into the parlor two or three times a day. Many farms now have robotic milking machines, which cows can come to as they choose.
3. Describe the process of methane digestion. (Hint: this process is also known as anaerobic digestion.)
The process by which microorganisms break down biodegradable materials—such as manure—in the absence of oxygen (see http://en.wikipedia.org/wiki/Anaerobic_digestion)
4. One of the main feed components for cows at Hunter Haven is distiller’s grain. How is distiller’s grain produced in ethanol production?
Corn is ground and separated. The starch (about 70% of the kernel) is converted to ethanol alcohol. The remaining nutrients—including protein, fat, minerals, and vitamins—are concentrated into distillers grain.

Recommended Resources:

<https://bit.ly/2VIE4NC> - Journal Standard - “Hunter Haven Farms among the area’s first large dairies”

<https://bit.ly/3gj269C> - FarmEnergy.org – Hunter Haven Farms

<https://www.usdairy.com/> - National Dairy Council – Undeniably Dairy

Illinois Department of Agriculture

1. How does agriculture benefit Illinois’ economy?
“Marketing of Illinois’ agricultural commodities generates more than \$19 billion annually. ...Billions more dollars flow into the state’s economy from ag-related industries, such as farm machinery manufacturing, agricultural real estate, and production and sale of value-added food products. Rural Illinois benefits principally from agricultural production, while agricultural processing and manufacturing strengthen urban economies.” – Illinois Department of Agriculture (IDOA)
2. Who farms in Illinois?
“Although Illinois’ food and fiber industry employs nearly 1 million people, there are only 75,087 farm operators, down from 164,000 in 1959. ...Illinois farmers are generally more than 50 years old. Forty-nine percent hold jobs off the farm and consider farming their secondary occupation. Family farms still dominate, though some of these have incorporated.” – IDOA
3. Are many of Illinois’ agricultural products exported to other nations?
“Illinois ranks third nationally in the export of agricultural commodities with \$8.2 billion worth of goods shipped to other countries. ...Illinois is the nation’s second leading exporter of both soybeans and feed grains and related products. Approximately 44 percent of grain produced in Illinois is sold for export.” – IDOA
4. What are the characteristics of a typical Illinois farm?
“...as of April 2019, Illinois had 72,000 farms. Illinois farmland covers 27 million acres—about 75 percent of the state’s total land area. ...The average size of an Illinois farm, including hobby farms, is 375 acres. Most farm acreage is devoted to grain, mainly corn and soybeans.” – IDOA
5. Explore the Consumers area of the Illinois Department of Agriculture website at <http://www.agr.state.il.us/>. List three ways the IDOA ensures consumer safety in Illinois.

Answers may include: ag products inspection, egg inspections, and meat & poultry inspections.

Ingredient

1. List the items in your desk that might contain a corn product.
Possible answers: paper, book, plastics, etc.
2. What does the word pharmaceutical mean?
Pharmaceuticals are drugs.

3. Have you ever used corn starch in cooking? If so, what were you making?

Answers will vary.

4. Find an ingredient label that contains corn in some form.

Answers may include corn oil, corn flour, corn meal, corn starch, modified starch, high fructose corn syrup, dextrose, ethyl alcohol or ethanol, etc.

5. Why do you think that Ingredion was founded in and is still based near Chicago, Illinois?

Chicago is in the “Corn Belt.” It also has a good transportation system, many factories, and a large population.

Recommended Resources:

www.ingredion.us - Ingredion company website

<https://en.wikipedia.org/wiki/Ingredion> - Wikipedia - Ingredion

The Maschhoffs, Inc.

1. What are the top five pork-producing counties in Illinois? (Hint: Look up “Illinois Agricultural Statistics” online.)

Answers will vary over time.

2. Most of today's pigs are raised in specially-designed barns known as confinement buildings. What are the advantages of raising pigs in a building vs. outdoors?

Barns protect pigs from weather, predators, and disease. The barns have automated feeding technology, allowing stored feed to be automatically dispensed into feeders as needed. Pigs also have constant access to automatic waterers. In summer, pigs are cooled with openings along the sides of the barns, large fans to keep air moving, and water sprinklers which mist the pigs. In winter, special “curtains” cover the sides of the barn to block wind while heaters keep the pigs comfortable.

3. Have you ever visited a pig farm? Watch a factual video about pig farming and write three observations about how pig farmers care for their animals.
(Suggested videos: “A Day on a Pig Farm at <https://youtu.be/U-AI1-7obdk> or “A Field Trip to Ohio Pig Farms and Farm Song” at https://youtu.be/rAw7Fs_IAW4.)

Answers will vary.

4. The pork industry provides thousands of jobs in Illinois. List at least five different careers that have to do with raising pigs.

Pork producer/farmer, veterinarian, animal nutritionist, livestock transport driver, farrowing technician.

Recommended Resources:

<http://www.themaschhoffs.com/> - The Maschhoffs company website

Prairie Farms

1. How many and what kind of products does Prairie Farms offer?
For a full list and description, please visit their website. Product categories include milk, cottage cheese, sour cream, dips, yogurt, ice cream, butter, cream, frozen treats, juices and other drinks.
2. What has Prairie Farms done to promote milk as a healthy beverage to youth?
Answers will vary, but could include partnering with Paralympic athletes and promoting products with “kid appeal” like Milk Snacks.
3. Describe the Prairie Farms distribution and service area.
Prairie Farms services a vast area of the Midwest and beyond including locations in 16 states from Minnesota to Texas and Nebraska to Ohio.
4. What is PFD Supply Corporation?
As a Prairie Farms subsidiary operation, PFD Supply is a primary one-stop distributor of products to fast food outlets.
5. What slogans are used to promote milk and its nutritional value?
Undeniably Dairy, Got Milk?, etc.

Recommended Resource:

<https://www.prairiefarms.com/> - Prairie Farms website

Famous People

Abraham Lincoln

1. What life experiences do you think would have made Lincoln so supportive of farmers and agriculture?
Answers will vary; should mention that he was born on the Kentucky frontier and one of his many jobs as a young man was working on a farm.
Abraham Lincoln signed legislation that created the United States Department of Agriculture (USDA). Visit the USDA website at www.usda.gov to answer the following questions:
2. List three priority research topics identified by the USDA.
Answers may include: global food supply and energy, climate and energy needs, sustainable use of natural resources, nutrition and childhood obesity, food safety, education and science literacy, and rural-urban interdependence/rural prosperity.
3. Which USDA agency provides leadership to help people conserve, maintain, and improve our natural resources and environment?

Natural Resources Conservation Service (NRCS)

4. The USDA's Animal and Plant Health Inspection Service (APHIS) regulates imports of live animals and plants as well as animal and plant products. Why is it important to control what plants, animals, and products are brought into our country?

Plants, animals, and products from other countries must be monitored closely because they can harbor pests, pathogens, or invasive species which may harm our agriculture or environment.

Recommended resource:

<https://www.nal.usda.gov/topics/lincolns-agricultural-legacy> - USDA National Agricultural Library - Lincoln's Agricultural Legacy

Joseph Glidden

1. Before barbed wire, how do you think ranchers would know their cattle from other rancher's cattle?

Ranchers would mark their cattle with brands for each ranch.

2. What changes did the invention of barbed wire make for ranchers?

The range was no longer open. It caused the end of cattle drives to get them to market.

3. Barbed wire was nicknamed "the Devil's Rope." Why?

Barbed wire's sharp points injured many cattle that came in contact with it.

4. Was Joseph Glidden the only inventor of barbed wire?

No. Others included Michael Kelly, Jacob Haish, and Isaac Ellwood.

5. What is a patent?

An exclusive right officially granted by a government to an inventor to make or sell an invention.

Recommended Resources:

<http://www.gliddenhomestead.org/> - Joseph E. Glidden Homestead

https://en.wikipedia.org/wiki/Barbed_wire - Wikipedia - Barbed Wire

<https://www.barbwiremuseum.com/history.htm> - Devil's Rope Museum

<https://bit.ly/2A2w2EJ> - National Archives - Glidden's Patent Application for Barbed Wire

Joseph Smith

1. What types of tourism opportunities are available in Nauvoo?

Historic sites, museums, visitors center, daily performances, and recreation.

2. What is the distance between Nauvoo and Carthage? Warsaw and Carthage?

Nauvoo to Carthage is 22 miles; Warsaw to Carthage is 17 miles.

3. What happened to the original temple in Nauvoo?

Two years after the Mormon expulsion from Nauvoo, it was set on fire by an arsonist. Two years later, a tornado destroyed the temple's north wall. In 1867, the temple was demolished by decision of the Nauvoo City Council for fear it would collapse and kill someone.

4. Who was the leader of the Mormon church following Joseph Smith's death?

Brigham Young.

5. What was the Nauvoo settlement called before it was named Nauvoo? What do the previous and current names mean?

Commerce, or Commerce City. This name, chosen in 1834, reflected hopes to play a prominent role in U.S. westward expansion. In 1840 the settlement became home to an influx of Mormon settlers and its name was changed to Nauvoo, a Hebrew word for "beautiful."

Recommended Resources:

<http://www.beautifulnauvoo.com> - Nauvoo, Illinois tourism website

<http://pbs.org/americanprophet/joseph-smith.html> - PBS - Joseph Smith

Lorado Taft

1. List three reasons why Lorado Taft is remembered.

Lorado Taft is remembered for helping advance women as sculptors, his own sculpting, and his writing of the *History of American Sculpture*.

2. Why do you think Lorado Taft placed his statue of Black Hawk overlooking the Rock River? **Answers will vary.**

3. Why would Lorado Taft place his statue of Alma Mater at University of Illinois? **He attended University of Illinois.**

4. Why should women sculptors be grateful to Lorado Taft?

He helped them to be taken seriously as sculptors.

5. What do you think would be the most difficult aspect of being a sculptor?

Answers will vary.

Recommended Resources:

<https://www.britannica.com/biography/Lorado-Taft> - Encyclopedia Britannica -

Lorado Taft

Lydia Moss Bradley

1. Create a timeline depicting the significant events of Lydia's youth and adulthood.

Timeline should include such events Lydia's birth in Indiana in 1816, marriage to Tobias Bradley, the deaths of their children and her husband, her founding of Bradley Polytechnic Institute, etc.

2. One of her first business transactions as a youth involved her horse. What did she do?

Lydia's father gave her a colt. She raised money for a saddle and bridle so she could ride around the countryside, and then exchanged the horse and tack for 40 acres of forested land. She cleared the land herself, sold the timber to saw mill owner Tobias Bradley (whom she later married).

3. What did Lydia do with the 680 acres of Manito Marsh which changed the value at the time from \$10 to more than \$140 and benefited other area farmers?
She drained the land, added fencing and buildings, and cultivated it for farming. When the crops did poorly she had the soil tested, which showed the soil lacked potash. Amending the soil improved the crops, benefitting the land itself, the farmers who worked it, and farmers nearby who followed her lead by amending the soil. This increased the land's value significantly.

4. Describe the events that lead to the creation of Illinois' Park districts.

Peoria citizens were the first to petition the Illinois General Assembly for official park status, which was approved in 1893. Lydia donated 135 acres in 1894 which started the Park District of Peoria.

5. How did Lydia feel about issues of the time such as slavery and the role of women in society?

She did not agree with slavery. It was reported that she was an agent on the Underground Railroad, assisting slaves escaping from the South. She was strong and independent, doing the typical work of women but also that of men. She earned the respect of business leaders and held leadership roles that were unheard of for women at that time.

Recommended Resources:

<https://www.bradley.edu/sites/lmb200/biography/> - Bradley University – Lydia Moss Bradley Biography

<https://www.womenofthehall.org/inductee/lydia-moss-bradley/> - National Women's Hall of Fame – Lydia Moss Bradley

<https://www.womenhistoryblog.com/2013/04/lydia-moss-bradley.html> - History of Women – Lydia Moss Bradley: Philanthropist and Founder of Bradley University

Priscilla and the Hollyhocks

1. What is the path of the Trail of Tears?

The path consists of several routes stretching over 5,000 miles from east to west over nine southeastern and Midwestern states.

2. The Cherokees crossed the Ohio River into Illinois at what town?
Golconda.
3. What was the 1830 Indian Removal Act?
It was an act signed into law by Andrew Jackson in 1830. It authorized the president to grant unsettled lands west of the Mississippi in exchange for Indian lands within existing state borders. Some tribes left their lands peacefully, but many resisted. In the fall and winter of 1838-1839, the U.S. government forced the Cherokees to leave their lands and move west. Approximately 4,000 Cherokees died on this forced march, which became known as the "Trail of Tears."
4. Imagine what it would be like to have your family uprooted, removed from your farm in the southeastern United States, placed in a stockade, and then forced to travel 800 miles to Oklahoma Territory, where the climate and land were very different. How would you live there? Describe your feelings and experiences.
Answers will vary.

Recommended Resources:

<https://www.nps.gov/trte/index.htm> - National Park Service – Trail of Tears, A Journey of Injustice

<https://www.britannica.com/event/Trail-of-Tears> - Encyclopedia Britannica - Trail of Tears

<http://illinoishistory.com/trailoftears.html> - Jon's Southern Illinois History Page

Ronald Reagan

1. Are there any historical sites one can visit in Illinois to learn more about Reagan's boyhood? What are they, and where are they located?
Yes, his birthplace and museum in Tampico; and boyhood home in Dixon.
2. Name three movies in which Ronald Reagan acted.
Some of his movies included *Sergeant Murphy*, *Brother Rat*, *Knute Rochne - All American*, *King's Row*, *That Hagen Girl*, *Nash Airflyte Theatre*, *Bedtime for Bonzo*, *The Winning Team*, *The Killers*.
3. What events led to Reagan's involvement in California politics?
During his presidency of the Screen Actors Guild, Reagan became active in politics. Upon delivering a nationally-televised speech in support of Barry Goldwater's bid for the presidency, Reagan's message that the nation had a "rendezvous with destiny" paved the way for his own political career.
4. To which political party did Reagan belong? How did his positions on significant political issues of the day reflect the basic principles of that party?
Republican; answers will vary.
5. What are some of the significant world events Ronald Reagan helped to shape?

Answers may include: release of American hostages in Iran, events that led to the fall of the Berlin Wall, reduction of the nuclear arsenal.

Recommended Resource:

<http://www.reaganlibrary.com> - Ronald Reagan Presidential Foundation & Institute

Sherb Noble

1. Sherb Noble was active in the Kankakee community for many years. Name a community activity in which he was involved.

He was one of the earliest sponsors of Little League baseball. In 1990, the Kankakee Chamber of Commerce named him Businessman of the Year.

2. How many Dairy Queen restaurants can be found in your county?

Answers will vary by county.

3. What single item on the Dairy Queen menu has the most total calories? Which has the least?

Answers will vary by location and current menu items.

4. What other dessert pioneers helped Dairy Queen get its start?

Ted Drew of St. Louis, Missouri; many other small ice cream shop owners.

5. How much has the price of an ice cream cone gone up since the first Dairy Queen opened?

Prices vary by location.

Recommended Resources:

<http://noblestores.com/OriginalDQ/about/history/> - The History of Noble Stores, LLC

<http://www.dairyqueen.com> - Dairy Queen website

Illinois Tidbits

Arsenal Island, Rock Island

1. Why did so many soldiers die at the Confederate prison camp on Arsenal Island?

They died from disease or exposure.

2. What is an arsenal?

An establishment for the construction, repair, storage and issue of weapons and ammunition.

3. What was the name of the fort that was built on the island in 1816? Why was it built?

Fort Armstrong was built as part of a system of forts in the Upper Mississippi Valley. The fort's most important role in keeping the peace was when it served as military headquarters during the Black Hawk War of 1832.

4. Arsenal Island still serves a valuable military purpose today. What is it?
It is an active manufacturer of military equipment and ordnance. They also provide logistics and base support for the Armed Forces.

Recommended Resources:

<https://www.army.mil/RIA> - US Army Rock Island Arsenal

http://en.wikipedia.org/wiki/Rock_Island_Arsenal - Rock Island Arsenal entry in Wikipedia

Darn Hot Peppers

1. In southern Illinois orchards, migrant workers make up most of the workforce. Where can they go to get training and language classes?
The Illinois Migrant Council has service centers in the following counties: Alexander, Franklin, Gallatin, Jackson, Jefferson, Johnson, Perry, Pulaski, Saline, Union, Williamson.
2. Cobden, Illinois' population is just over 1,000. What kinds of businesses would a town that size be able to support?
Answers will vary, but may include: auto dealership, restaurant, grocery store, convenience store, service businesses, etc.
3. Do you think there are any challenges migrant workers face, living and working in a small downstate Illinois town?
Answers will vary. Please accept any reasonable answer.
4. What kind of growing conditions (soil, climate, sunlight, rainfall) do chile peppers need to grow well? Does southern Illinois have all of the necessary conditions?
Peppers grow best in higher temperatures (evening temperatures over 55 degrees Fahrenheit) with moist, well-drained, fertilized soil. Yes, it does.
5. The Illinois Migrant Council operates a well-equipped technology center in Cobden. Look up the council and explain what it offers Illinois migrant workers.
For adults, English as a Second Language, GED prep, computer skills, interviewing skills and resume preparation. For youth in grades 1 – 6, "Beyond School."

Recommended Resources:

<http://www.urbanext.uiuc.edu/veggies/peppers1.html> - University of Illinois web page on peppers

<http://www.illinoismigrant.org/> - Illinois Migrant Council website

Griggsville, Illinois – Purple Martin Capital of the Nation

1. Between what two rivers is Griggsville located?
The Illinois & Mississippi rivers.

2. Name three other “purple martin capitals.”

Answers will vary.

3. How many mosquitoes does Griggsville claim a purple martin will eat in a day?
2,000.

4. What two birds do purple martin enthusiasts need to discourage from using the purple martin housing, and why?

European Starlings and House Sparrows steal martin compartments to build their own nests, kill martins and their young, remove or eat their eggs, and chase them away. Just one House Sparrow pair can fill so many compartments with nesting material that they block martins from access.

5. How many “apartments” were in the first purple martin high rise in 1962?
562.

Recommended Resources:

<http://www.roadsideamerica.com/attract/ILGRpurple.html> - Roadside America website

<http://purplemartin.org/> - Purple Martin Conservation Association

Lincoln’s New Salem State Historic Site

1. What other Lincoln sites could you visit in the towns around New Salem?

Answers may include the Lincoln Presidential Library and Museum, Lincoln Depot, Lincoln’s Home, and Lincoln’s Tomb in Springfield; Beardstown Courthouse in Beardstown; Long Nine Museum in Athens, and many others.

2. Lincoln was the only president to receive a patent. What did he invent and patent while he lived in New Salem?

On May 22, 1849, Abraham Lincoln received Patent No. 6469 for a device to lift boats over shoals, an invention which was never manufactured. He is the only U.S. president to have a patent.

3. Does it cost anything to visit New Salem?

It is free, but donations are suggested.

4. Visit the Lincoln’s New Salem web site at <http://www.lincolnsnewsalem.com> and take a virtual tour of the map on this card.

5. How many places did Lincoln live in his lifetime?

Answers may vary; there is much disagreement on this subject.

Morton, Illinois – Pumpkin Capital of the World

1. What happens to most of the pumpkins grown in the Morton area?

Most of the pumpkins in the Morton area become Libby’s canned pumpkin.

2. What is pumpkin chunkin’?

Pumpkin chunkin' is a contest to see whose homemade contraption can launch a pumpkin the farthest.

3. Which pumpkin variety is most widely grown in the Morton area?
Dickinson, which is known for its rich, golden color, creamy texture and pure pumpkin flavor.
4. Why are pumpkins orange?
The vivid orange color of pumpkin indicates a high content of carotene pigments such as lutein, alpha-carotene, and beta-carotene (the latter of which turns in to vitamin A in the body).
5. What other tourism opportunities are available in the area?

Answers will vary.

Recommended Resources:

<http://mortonchamber.org> - Morton Chamber of Commerce

<https://www.verybestbaking.com/libbys/we-are-pumpkin/> - Libby's We Are Pumpkin

Prairie Style Architecture

1. How did the prairie style of architecture change the layout of a home?
Prairie style architecture emphasized the use of interior light and open spaces in low, earth-hugging buildings.
2. What aspects of the prairie style architecture might you see in today's homes?
Carports and living rooms. Low-lying homes.
3. How do you think the job of an architect has changed over the years?
Computers are used in many facets of architecture today.
4. How old was Frank Lloyd Wright when he died?
1957 – 1867 = 90 years old (technically 89, because he died in April and was born in June, but some students may not take this into account).
5. Find the closest Frank Lloyd Wright building in your area. (Your city's historical society might be able to help you with this.)
Answers will vary; there are examples of his work throughout Illinois.

Recommended Resources:

<https://flwright.org/> - Frank Lloyd Wright Trust

Illinois from A to Z by Betty Carlson Kay

Route 66

1. How many miles long was the original Route 66?
2,448 miles.
2. How many states did Route 66 go through? Name them.

7: Illinois, Missouri, Kansas, Oklahoma, Texas, New Mexico, and California

3. How many time zones does Route 66 cross?
3 time zones.
4. What interstate road has replaced Route 66 in Illinois?
Interstate 55.
5. What are some of the nicknames for Route 66? Is there an interesting story to how the nickname came about?
 - **The Mother Road – John Steinbeck called it this in his 1939 novel “The Grapes of Wrath.”**
 - **Main Street of America – Route 66 linked remote and under-populated regions with Chicago and Los Angeles.**
 - **The Great Diagonal Way – Unlike other highways, a large section of Route 66 ran diagonally.**
 - **The Will Rogers Highway – This “official” name was created by the U.S. Highway 66 Association in 1952.**

Recommended Resources:

<http://www.route-66.com/history/index.htm> - Route 66 History

<https://www.illinoisroute66.org/> - Illinois Route 66 History

The Reversal of the Chicago River

1. How do you think Chicago’s history would have been changed if the Chicago River had not been reversed?
Answers should relate to sanitation; the reversal made the city safer by controlling disease.
2. Why is safe water so important to a city?
Without safe water, people would not want to live there; they would have to spend a lot of money obtaining safe water.
3. If you were to drink well water, how would you be sure that it was safe to drink?
It should be tested annually to be sure of its safety.
4. Do you think either typhoid or cholera is still a common disease in the United States? Why do you feel this way?
Answers may vary. Cholera or typhoid are not common in the United States at this time due to our sanitary practices. However, there may be outbreaks during disasters such as Hurricane Katrina.
5. Where does your water supply come from? If you aren’t sure, contact the city in which you live and find out.
Answers will vary depending upon where students live.

Recommended Resources:

<https://www.asce.org/project/reversal-of-the-chicago-river/> - American Society of Civil Engineers – Reversal of the Chicago River

<https://bit.ly/3dX3TjI> - WTTW - How Chicago Reversed Its River: An Animated History

Illinois from A to Z by Betty Carlson Kay

Sites to See

Allerton Park

1. What is 4-H and what do the 4 “H’s” stand for?
4-H is an organization sponsored by the USDA. It was first established to instruct youth in rural areas in farming methods and other useful skills like carpentry and home economics. Today, youth from both rural and urban areas join 4-H to gain skills from gardening and animal care to photography and rocketry. The 4 “H’s” stand for Head, Heart, Hands, and Health.
2. What are some things you can do while visiting Allerton Park?
Walk through the outdoor formal gardens containing over 100 sculptures and garden ornaments, hike the woodland trails, attend a program, concert or event, or visit the gift shop.
3. Is there an entry fee to go through the park?
No, it is free of charge.
4. Name some other public parks in Illinois.
Answers will vary.
5. What is your favorite park and why?
Answers will vary.

Recommended resources:

<https://allerton.illinois.edu/> - Allerton Park and Retreat Center

https://en.wikipedia.org/wiki/Robert_Allerton_Park - Wikipedia - Robert Allerton Park

Charles Mound

1. Charles Mound is located in a very hilly area of our state. Why is this area so hilly compared to other parts of the state?
This area did not undergo repeated glaciations affecting most of Illinois.
2. Locate Charles Mound on an Illinois roadmap. If you were describing its location to a friend who wanted to find it on his or her own map, what would you say?
Answers may include: map coordinates, located in Jo Daviess County, in northwestern Illinois.

3. Your family has decided to take a trip to see Charles Mound. You have agreed to map out the route and write directions for your mother, who will be driving. She wants to know which roads to take, and in order to plan for time and fuel, how many miles she will be driving. Using your Illinois roadmap, write out step-by-step directions and calculate mileage for the trip.

Answers will vary.

4. On the way back from Charles Mound, your family decides to stop halfway and spend the night. What town is located closest to the halfway point between Charles Mound and your home? Not all towns have hotels, however. Do a Google search to find out whether the town closest to the halfway point has lodging available. If not, locate the nearest town along your route that does have a hotel or motel.

Answers will vary.

Recommended resource:

<https://www.atlasobscura.com/places/charles-mound> - Atlas Obscura - Charles Mound

Dickson Mounds

1. Which excavation site would you most like to visit, and why?

Answers will vary.

2. What hours is the Dickson Mounds museum open?

Check the website for current hours.

3. Dickson Mounds is located nearest to which river?

The Illinois River

4. What Native American tribes lived in the area of Dickson Mounds?

The Hopewell.

5. What is the name of the mound close to Dickson Mounds? What town is it located in? What is the area used for now?

Rockwell Mound in Havana, Illinois is used for a park.

Recommended Resource:

<http://www.illinoisstatemuseum.org/content/welcome-dickson-mounds> - Dickson Mounds State Museum

Fermilab

1. What type of research is done at Fermilab?

Examining particles of the atom

2. Why did Dr. Betz feel Fermilab was a good place to reconstruct a prairie?

It used to be prairie and the land above the accelerator was lying fallow.

3. What would you like to see if you visited Fermilab?
Answers will vary.
4. If 55 farms made up the 6,800 acres of Fermilab, what was the average size of these farms?
6800 divided by 55 = 120.3 acres
5. What three parts of the atom were discovered at Fermilab?
The bottom quark, top quark and the tau neutrino

Recommended Resources:

<https://www.fnal.gov/> - Fermilab

Illinois from A to Z by Betty Carlson Kay

Goose Lake Prairie State Park

1. Near what town is Goose Lake Prairie located? Why do you think the town was given this name?
Coal City. Coal was mined in this area during the mid 1800s. Much of the coal was taken by rail to supply fuel for the city of Chicago.
2. The road to the visitor's center at Goose Lake Prairie is named "Jugtown Road." Why might it be named this?
Clay was taken from the drained Goose Lake to make pottery for frontier farms and households. The potters' settlement was called Jugtown.
3. Goose Lake Prairie is located where two rivers come together to form the Illinois River. What are the names of these rivers?
The Des Plaines and Kankakee Rivers.
4. The former Joliet Army Ammunition Plant is being restored to a tallgrass prairie and is located near Goose Lake Prairie. This restored site is part of the U.S. Forest Service's National Park System. What is the name of this site and where is it located?
Midwein National Tallgrass Prairie; it is located near Wilmington, Illinois.
5. What agency is responsible for taking care of Goose Lake Prairie?
Illinois Department of Natural Resources.

Recommended Resources:

<https://bit.ly/3e1WShi> - Wikipedia - Goose Lake Prairie State Natural Area

<https://bit.ly/2ZyvfH7> - Illinois Department of Natural Resources - Goose Lake Prairie State Natural Area.

Illinois Great River National Scenic Byway

1. Through what counties and/or major cities in Illinois does the Great River Road travel?

Counties: JoDaviess, Carroll, Whiteside, Rock Island, Mercer, Henderson, Hancock, Adams, Pike, Calhoun, Greene, Jersey, Madison, St. Clair, Monroe, Randolph, Jackson, Union, Alexander. Cities: Galena, Savanna, Fulton, Moline, Nauvoo, Quincy, Alton, Columbia, Chester, Cairo.

2. Where would be a good place to watch the eagles along the Great River Road? (Hint: It is in the Meeting of the Great Rivers Scenic Byway Area.)

Alton & Grafton; where the Mississippi, Illinois, and Missouri Rivers meet.

3. How did the flood of 1993 affect the Great River Road and areas nearby?

Answers will vary. The flood of 1993 greatly affected much of this area.

4. What county along the Great River Road is known for its peaches?

Calhoun County grows 1/3 of the peach crop in Illinois.

5. List some sights and places one could visit while traveling along the Great River Road in Illinois.

Answers will vary; may include nature sites such as Pere Marquette State Park, agricultural sites such as John Deere in Moline, wineries, historic sites such as Cahokia Mounds, locks & dams, and more.

Recommended Resources:

<http://greatriverroad-illinois.org/> - Great River Road in Illinois

<https://experiencemississippiriver.com/> - Great River Road national site

Morrow Plots, University of Illinois

1. Name three other Land Grant Universities.

Iowa State University, Michigan State University, University of Nebraska, Ohio State University, and others (each state has a Land Grant University).

2. Why are test plots like the Morrow Plots important?

They allow researchers to try ideas and scientific hypotheses—on a small scale—on how to help farmers with problems they might be facing. This is important because if a new idea fails, they haven't already encouraged farmers across the state to try it on their farms.

3. For whom are the Morrow Plots named?

George E. Morrow, who was to become the first dean of the College of Agriculture, and Manley Miles, a professor of agriculture

4. Name three subjects you would be able to study at the University of Illinois.

Answers will vary; may include Agriculture, Journalism, Engineering, and more.

5. Name four famous people who have attended the University of Illinois and give the reasons for which they are famous.

Answers will vary.

Shawnee National Forest

1. The state mineral is mined in the southeastern portion of the state. What is the mineral, where is it mined, and how much is mined on an annual basis?
Fluorite is the state mineral which was mined in Rosiclare and Cave-in-Rock areas of Southern Illinois until 1995. It is no longer mined in the U.S.
2. Illinois is divided into three major geographical divisions. The Shawnee National Forest is in the southern Illinois division (which is mainly south of U.S. Route 50). Describe the climate, mix of crops, topography, and mining of the area.
Southern Illinois is warmer, allowing for crops like cotton. The topography is hilly and rocky. Small oil deposits and coal can be found in the region.
3. Name at least one avulsion (sudden removal of land [soil] by a change in the course of a river, sometimes caused by flood) that can be found along the Ohio River border with Kentucky.
Cave in Rock and Tower Rock.
4. What are the main varieties of trees that are grown at the Union County State Nursery in Jonesboro?
White pine, oaks (white, red, black pin, burr), bald cypress, and dogwoods.
5. What is Stone Face and where is it located? How did it form?
Stone Face is a rock formation located in Saline County, in the Shawnee National Forest. It is part of a ridge in the ShawneeTown Fault system.

Recommended Resources:

<https://www.fs.usda.gov/shawnee> - USDA Forest Service – Shawnee National Forest

<https://www.enjoyillinois.com/explore/listing/shawnee-national-forest> - Enjoy Illinois - Shawnee National Forest

<https://www.nrs.fs.fed.us/rna/il/shawnee/stoneface/> - USDA Forest Service – Stoneface Research Natural Area

INVESTIGATE ILLINOIS

FACT CARDS FOR 32 NOTABLE ILLINOIS PEOPLE, PLACES, AND BUSINESSES

Agriculture in Illinois

- DeKalb Genetics
- DOT Foods
- Funks Grove
- Hunter Haven Farms
- Illinois Department of Agriculture
- Ingredion
- Prairie Farms
- The Maschoffs, Inc.

Famous People

- Lydia Moss Bradley
- Joseph Glidden
- Abraham Lincoln
- Sherb Noble
- Priscilla and the Hollyhocks
- Ronald Reagan
- Joseph Smith
- Lorado Taft

Illinois Tidbits

- Arsenal Island
- Darn Hot Peppers
- Griggsville, Illinois
- Lincoln's New Salem
- Morton, Illinois
- Prairie Style Architecture
- Route 66
- The Reversal of the Chicago River

Sites to See

- Allerton Park
- Charles Mound
- Dickson Mounds
- Fermilab
- Goose Lake Prairie State Natural Area
- Illinois Great River Road
- Morrow Plots
- Shawnee National Forest

Please note: These Investigate Illinois Cards are set up to print two-sided for your convenience.

DeKalb Genetics

In 1912 a group of farmers in DeKalb County formed the Soil Improvement Association (SIA) to help themselves improve their soil and to purchase good seed and fertilizer for their crops. Five years later, the SIA created a separate corporation to take on the association's expanding commercial enterprises. This corporation was named the DeKalb County Agricultural Association (DeKalb "Ag" for short).

An outgrowth of DeKalb Ag's activities focused on the research, testing, and development of hybrid seed corn. A new technique in marketing this hybrid seed was used in which area farmers served as dealers, selling seed products to their fellow farmers.

The famous "Winged Ear" symbol began to be used in the mid-1930s. To this day the symbol represents research and development of seed to incorporate new technologies for increased production and profitability.

The DeKalb Ag company diversified into many other areas including oil drilling, raising chicks, breeding swine, cotton hybridization, and more. "Winged Ear" corn was marketed throughout the world and additional plants were built all over the Midwest.

DeKalb Ag entered into a merger with Pfizer Genetics for a few years. The company eventually became DeKalb Genetics, which was purchased by Monsanto Company in 1998. Today the DeKalb seed business, the DEKALB brand, and the winged ear logo are owned by Bayer.



Image source: DeKalb County Farm Bureau

AGRICULTURE IN ILLINOIS

DOT Foods

DOT Foods (originally Associated Dairy Products) was founded in 1960 by Robert F. and Dorothy Tracy using the family station wagon and a 14-year-old Cessna airplane. Between 1984 and 1989, DOT Foods expanded by opening distribution centers in the South, Southeast, Northeast and Western portions of the United States to serve customers in those areas.

The focus of DOT Foods is food redistribution. DOT Foods does not deliver directly to stores, schools or restaurants for item sales. Instead, the company has over 70,000 products that distributors can order in much smaller quantities to re-sell.

The DOT Foods corporate headquarters are in Mt. Sterling, Illinois with eight additional distribution centers throughout the United States. DOT Foods delivers to all 50 states. The company employs over 2,500 people and has over 2,000,000 square feet of storage space.



Image source: DOT Foods

AGRICULTURE IN ILLINOIS

Begin your investigation of...

DeKalb Genetics

1. What was the original meaning behind the famous “Winged Ear” symbol for DEKALB seed?
2. Who were the key figures involved in the development of hybrid corn?
3. What are the benefits of corn hybridization, and how has hybrid corn changed agriculture?
4. What other brands of seed corn are available in Illinois?
5. Plant scientists have developed ever more precise ways to improve crops like corn. Explain biotechnology and how it can be used to help corn, farmers, and the environment.

AGRICULTURE IN ILLINOIS

Begin your investigation of...

DOT Foods

1. Name seven states other than Illinois where DOT Foods has a distribution center.
2. Which distribution center is closest to the DOT Foods corporate headquarters, Chicago or Chesterfield, MO?
3. In addition to the food redistribution aspect of the company, what other companies are under the DOT Foods umbrella?
4. List 10 companies that use DOT Foods as a redistributor of their products.
5. What types of jobs can be found at DOT Foods?

AGRICULTURE IN ILLINOIS

Funks Grove

Ask an American where maple syrup comes from, and they'll likely mention Vermont. There is another source, however: Funks Grove, Illinois. There, they call it maple sirup.

What has become a local legend started back in 1824 when Isaac Funk left Germany and settled in a natural maple grove some fifteen miles south of Bloomington, Illinois. Funk had picked the location due to its easy access to water, timber, and good soil. It wasn't long before he began tapping the "sweet trees" on the land. Funk started by producing small quantities of maple syrup and maple sugar for his family's use as a ready source of sweetener. Soon, he and his sons were making syrup not only for themselves, but also for neighbors who'd heard about the quality of their product.

Their private production became a family business when a commercial syrup camp opened in 1891. Family members insisted that the product's name be spelled with an "i", just as Noah Webster (and the agriculture departments of the U. S. and Canada) spelled it.

Today, Funks Grove Maple Sirup continues to be family owned and operated. Also, the trees of Funks Grove are now part of a trust that specifies they may never be used for anything but maple sirup production.

The sirup still sells as well as it ever did. Folks in central Illinois and from all over the world know to get their orders in early or be disappointed. Those "Funks Grove Pure Maple Sirup" signs along the highway tend to be covered all too soon with another sign reading, "Sold Out".



Image source: www.funksmaplesirup.com

AGRICULTURE IN ILLINOIS

Hunter Haven Farms

Hunter Haven Farms was established in 1976 when Douglas & Edith Block and Thomas & Mary Block purchased the 320-acre "home farm" from Robert & Ruth Block. The registered Holstein herd had the prefix of "Hunter Haven" as Robert originally bought the farm from C. Hunter in 1948. This prefix for the registered cows is still used. Thus, the farm is named after its cows.

Today's herd consists of about 760 cows. They are milked and housed in a modern facility utilizing the latest in computer and science technology for their care. Technology allows the recording of each cow's milk production as well as how much cow manure is used through methane digestion to produce electricity. The cows produce about 125 kilowatts of electricity per hour. This electricity is used by the dairy and off-farm consumers.

The cows are fed from 1,400 acres of cropland, including 800 acres of corn, 100 acres of soybeans, and 500 acres of alfalfa hay. Other feed ingredients in the cows' ration are cottonseed (a by-product of the cotton industry) and distiller's grain (a by-product of the ethanol industry).

Care of the cows and the environment is the core of business at Hunter Haven Farms in the rolling hills of Northwest Illinois.



Image source: DeKalb County Farm Bureau

AGRICULTURE IN ILLINOIS

Begin your investigation of...

Funks Grove

1. Near what town and in what county is Funks Grove located?
2. What historic “hard road” brought many customers to Funk's Grove for the Funk's maple sirup?
3. What is the difference between maple sirup and syrup?
4. Go home and read the label of your pancake syrup. Does it contain real maple sirup? If not, what does it contain?
5. Have you ever tasted real maple syrup?

AGRICULTURE IN ILLINOIS

Begin your investigation of...

Hunter Haven Farms

1. What does it mean for a herd to be registered?
2. The cows at Hunter Haven are milked in a modern facility known as a milking parlor. What is a milking parlor, and how does it work?
3. Describe the process of methane digestion. (Hint: this process is also known as anaerobic digestion.)
4. One of the main feed components for cows at Hunter Haven is distiller's grain. How is distiller's grain produced in ethanol production?

AGRICULTURE IN ILLINOIS

Illinois Department of Agriculture

The roots of the Illinois Department of Agriculture go back to 1819, when the Illinois Agricultural Association was formed just months after Illinois became a state. The only known record of this organization comes from letters written by early settlers.

In 1853, the association became the Illinois State Agricultural Society, with a 2-year budget of \$1,000. The society was active until 1871 when a new state constitution created the Illinois Department of Agriculture, overseen by the State Board of Agriculture.

The department gained its current status as a regulatory and promotional agency in 1917 under the Civil Administrative Code. Today the Agriculture Department administers a \$109 million budget and employs more than 600 people statewide. Separate bureaus administer programs and services directed at conserving the state's land and water resources; protecting the health and welfare of livestock and companion animals; overseeing state and county fairs; regulating seed, feed, and fertilizer products; ensuring the financial stability of grain dealers and warehouses; promoting Illinois food and agricultural products; and operating the state's horse racing programs.



Since 1981, the department has been headquartered on the Illinois State Fairgrounds in Springfield.



AGRICULTURE IN ILLINOIS

Ingredion

The Corn Products Refining Company was created in 1906 with the merger of the leading corn refiners in the United States. Now called Ingredion, the company is based in Westchester, Illinois and has plants across the United States and in several countries.

Starting with simple kernels of corn, Ingredion unleashes a variety of ingredients that are building blocks for thousands of products. These ingredients fall into four major categories: starches, sweeteners, co-products, and others.

Starches are used to thicken, or bind, processed foods and are found in frozen foods, canned soups, and pie fillings. Starches are also used as strengthening agents in the making of paper. Corn starches are also used in plastics, adhesives, pharmaceuticals and cosmetics, as well as in the oil and gas drilling industries.

Corn sweeteners are used in foods and beverages. You will find them in candy, baked goods, canned foods, dry food mixes, soft drinks, and juices. Corn dextrose is used in intravenous fluids, pharmaceutical applications, and vitamins.

Refined corn oil is sold to packers of cooking oil and producers of margarine, salad dressings, shortenings, and mayonnaise. Corn gluten feed and corn gluten meal is used as livestock and pet foods.

Ingredion has developed a multitude of uses for corn and other crops. Thanks to research and development, many more are being developed each year.



Image source: Ingredion,
<http://www.ingredion.us/>

AGRICULTURE IN ILLINOIS

Begin your investigation of...

Illinois Department of Agriculture

1. How does agriculture benefit Illinois' economy?
2. Who farms in Illinois?
3. Are many of Illinois' agricultural products exported to other nations?
4. What are the characteristics of a typical Illinois farm?
5. Explore the Consumers area of the Illinois Department of Agriculture website at www.agr.state.il.us/consumers/. List three ways the IDOA ensures consumer safety in Illinois.

AGRICULTURE IN ILLINOIS

Begin your investigation of...

Ingredion

1. List the items in your desk that might contain a corn product.
2. What does the word pharmaceutical mean?
3. Have you ever used corn starch in cooking? If so, what were you making?
4. Find an ingredient label that contains corn in some form.
5. Why do you think Ingredion was founded in and is still based near Chicago, Illinois?

AGRICULTURE IN ILLINOIS

Prairie Farms

In 1932, Illinois Producers Creameries was organized through the Illinois Agricultural Association. Five years later, Producers Creamery - Carlinville plant was organized to purchase farm-separated cream. Then in 1942, they began purchasing milk. The first milk was used in manufacturing skim powder, most of which was sold to the government. Cream was used for churning sweet cream butter. Excess cream and powder was sold to ice cream plants. Buttermilk whey was sold to farmers for hog feed. In 1945, the name changed to Prairie Farms Creamery of Carlinville. Two years later, they moved into a new plant where it is still located today. Milk is bottled in this plant.

Today, the dairy cooperative is made up of over 800 dairy farms. Throughout the Midwest, Prairie Farms is recognized for an array of superior dairy products and service. In 2000, Prairie Farms was the 22nd largest dairy cooperative handling a volume of 1.081 billion pounds of milk.

By 2002, Prairie Farms had 31 processing plants (bottling milk, ice cream & ice cream mix, novelties, cottage cheese, sour cream, yogurt, butter and butter oil), three fast food warehouses (PFD Supply), and 68 distribution points. Their slogan is "taste the homemade goodness of Prairie Farms."



Image source: www.prairiefarms.com

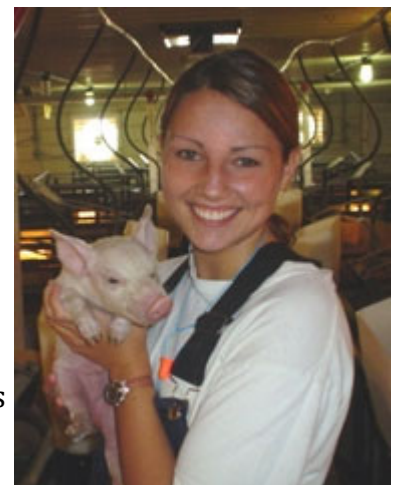
AGRICULTURE IN ILLINOIS

The Maschhoffs, Inc.

The Maschhoffs Inc., headquartered in Carlyle, Ill., is one of the largest family-owned hog production networks in North America. It is a family-owned business with over 100 years of experience in pork production. The Maschhoffs partner with nearly 550 family farmers across the Midwest. Their goal is to raise pork in an efficient, environmentally-conscious, secure and profitable manner.

The Maschhoffs have helped pioneer new frontiers in the pork industry, including the use of artificial insemination, efficient and sensible confinement configurations, the use of the latest feed technology, cutting-edge environmental improvements, and a focus on improved animal health and well-being.

The Maschhoffs' management practices and the work of their environmental systems manager focus on responsible, effective and progressive environmental management. This includes strategies to reduce odor, protect water resources, and enrich the land. They consider protecting the environment of our families, friends, and communities to be of prime importance in their business.



Text and photo adapted from www.maschhoffs.com.

AGRICULTURE IN ILLINOIS

Begin your investigation of...

Prairie Farms

1. How many and what kind of products does Prairie Farms offer?
2. What has Prairie Farms done to promote milk as a healthy beverage to youth?
3. Describe the Prairie Farms distribution and service area.
4. What is PFD Supply Corporation?
5. What slogans are used to promote milk and its nutritional value?

AGRICULTURE IN ILLINOIS

Begin your investigation of...

The Maschhoffs, Inc.

1. What are the top five pork-producing counties in Illinois? (Hint: Look up “Illinois Agricultural Statistics” online.)
2. Most of today's pigs are raised in specially-designed barns known as confinement buildings. What are the advantages of raising pigs in a building vs. outdoors?
3. Have you ever visited a pig farm? Watch a factual video about pig farming and write three observations about how pig farmers care for their animals. (Suggested videos: “A Day on a Pig Farm” at <https://youtu.be/U-Al1-7obdk> or “A Field Trip to Ohio Pig Farms and Farm Song” at <https://youtu.be/rAw7FsIAW4>.)
4. The pork industry provides thousands of jobs in Illinois. List at least five different careers that have to do with raising pigs.

AGRICULTURE IN ILLINOIS

Lydia Moss Bradley

"If you turned an estate worth half a million dollars into a fortune of over two million dollars you would be prosperous. If you were the director of the board of a national bank for twenty-five years you would be a leader. If you donated a city park and endowed a private college, and if you gave money and land to many community projects, you would be a great philanthropist. If you accomplished all of this as a woman, you would be astonishing, and, if you achieved all of this as a woman between the years of 1816 and 1908, you would be Lydia Moss Bradley." (As quoted from <http://www.bulibstats.net/illinoiswomen/files/br/htm1/bradley.htm>)

Bradley was a pioneer in many fields who experienced success and tragedy. By her 51st birthday, she had buried her six children, husband and parents. Born on a farm, Lydia learned all the typical chores expected of her as well as common sense and business skills which served her well throughout her life.

Her accomplishments include being a leader in land development and agriculture, becoming the first female member of an American national bank board, establishing Bradley University in Peoria, Illinois, providing the estate on which St. Francis Medical Center stands, building the Bradley Home for Aged Women, and encouraging the city of Peoria to establish the first park system in Illinois on land she donated for the purpose.



FAMOUS PEOPLE

Joseph Glidden

Illinois farmer Joseph F. Glidden is credited with the development of barbed wire. Before his invention in the 1870's, settlers on the treeless plains of the West had no easy way to fence livestock away from cropland. Ranchers had no method to prevent their herds from roaming far and wide. Glidden's barbed wire opened the plains to large scale farming and closed the open range, which brought the era of the cowboy and the round-up to an end.

Not everyone was happy with this new product. When livestock encountered barbed wire, it was usually a painful experience. The injuries provided enough reason for the public to protest its use. In fact, some religious groups demanded its removal and nicknamed the barbed wire "The Devil's Rope."

The advent of Glidden's successful invention set off a frenzy that eventually produced over 570 barbed wire patents. It also set the stage for a three year battle over the rights to these patents. When the legal battles were over, Joseph Glidden was declared the winner and the "Father of Barbed Wire." He established the Barb Fence Company in DeKalb, Illinois and became one of the wealthiest men in the nation.

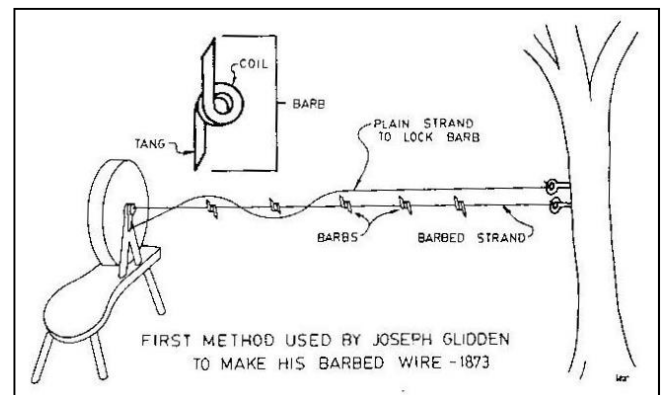


Image source: www.gliddenhomestead.org

FAMOUS PEOPLE

Begin your investigation of...

Lydia Moss Bradley

1. Create a timeline depicting the significant events of Lydia's youth and adulthood.
2. One of her first business transactions as a youth involved her horse. What did she do?
3. What did Lydia do with the 680 acres of Manito Marsh which changed the value at the time from \$10 to more than \$140 and benefited other area farmers?
4. Describe the events that lead to the creation of Illinois' Park districts.
5. How did Lydia feel about issues of the time such as slavery and the role of women in society?

FAMOUS PEOPLE

Begin your investigation of...

Joseph Glidden

1. Before barbed wire, how do you think ranchers would know their cattle from other rancher's cattle?
2. What changes did the invention of barbed wire make for ranchers?
3. Barbed wire was nicknamed "the Devil's Rope." Why?
4. Was Joseph Glidden the only inventor of barbed wire?
5. What is a patent?

FAMOUS PEOPLE

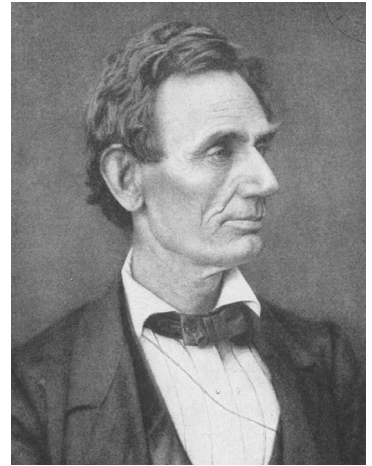
Abraham Lincoln

Abraham Lincoln, sixteenth president of the United States, is a much-studied figure in Illinois history. His years spent in New Salem, his time serving in the Illinois legislature, his 1858 run for senator against Stephen Douglas, and his presidency are well known. However, his impact on our nation's agriculture is seldom noted.

On May 15, 1862, President Lincoln signed into law an act of Congress establishing the United States Department of Agriculture (USDA). His farm background on what was then the western frontier and his years as a country lawyer made Lincoln a representative of the frontier, the farmer, and small town democracy.

On July 2 of that same year, President Lincoln also signed into law what is generally referred to as the Land Grant Act. This legislation, introduced by U.S. Representative Justin Smith Morrill of Vermont, granted to each state 30,000 acres of public land for each Senator and Representative under apportionment based on the 1860 census. Proceeds from the sale of these lands were to be invested in a perpetual endowment fund which would provide support for colleges of agriculture and mechanical arts in each of the states. The University of Illinois was established as a result of this legislation.

Although Lincoln's primary challenge during his Presidency was preserving the Union, the agricultural legislation he signed transformed American farming.



FAMOUS PEOPLE

Sherb Noble

"Sherb's" was the name of a small ice cream store that opened in Kankakee, Illinois, August 4, 1938. A sign appeared in the window that said, "All you can eat for 10 cents!" This was a bargain during the Great Depression.

The owner of the store, thirty-year-old Sherwood Dick "Sherb" Noble, had been associated with dairy products from his teenage years. What he offered his customers that day for 10 cents was a new semi-frozen, "soft-serve" ice cream. This new type of ice cream had been formulated by Sherb's new business partner J. F. McCullough.



The enthusiastic acceptance of the new soft-serve ice cream made history by launching a multi-million dollar business. Sherb soon opened the first store named "Dairy Queen" in Joliet, Illinois. In time, Dairy Queen became internationally known and more than 5,000 Dairy Queens would open in the United States, Canada, and 14 other countries.



Image source: www.dairyqueen.com

FAMOUS PEOPLE

Begin your investigation of...

Abraham Lincoln

1. What life experiences do you think would have made Lincoln so supportive of farmers and agriculture?

Abraham Lincoln signed legislation that created the United States Department of Agriculture (USDA). Visit the USDA website at www.usda.gov to answer the following questions:

2. List three priority research topics identified by the USDA.
3. Which USDA agency provides leadership to help people conserve and improve our natural resources and environment?
4. The USDA's Animal and Plant Health Inspection Service (APHIS) regulates imports of live animals and plants as well as animal and plant products. Why is it important to control what plants, animals, and products are brought into our country?

FAMOUS PEOPLE

Begin your investigation of...

Sherb Noble

1. Sherb Noble was active in the Kankakee community for many years. Name a community activity in which he was involved.
2. How many Dairy Queen restaurants can be found in your county?
3. What single item on the Dairy Queen menu has the most total calories? Which has the least?
4. What other dessert pioneers helped Dairy Queen get its start?
5. How much has the price of an ice cream cone gone up since the first Dairy Queen opened?

FAMOUS PEOPLE

Priscilla and the Hollyhocks

While visiting a plantation in Georgia in the 1830s, a man named Basil Silkwood became acquainted with several slaves. Among them was a young girl named Priscilla. When the owner of the plantation died, the slaves were sold and Priscilla was bought by a Cherokee chief and taken to live on a reservation. When the Indians were forced from the reservation in 1838 along the Trail of Tears, they passed through Southern Illinois on their way to the Indian Territory. Once again, Basil Silkwood's path intertwined with Priscilla's. He was in Jonesboro, Illinois for a business trip when the Indians moved through the area. He recognized Priscilla, and bought her for \$1,000 in gold. Priscilla was taken to the inn which Basil Silkwood owned. There, she was accepted as a member of the family. She died in 1892 and was buried beside the Silkwoods in the Reid-Kirkpatrick Cemetery, about two miles northwest of the inn.



When Priscilla came to Southern Illinois, she brought some hollyhock seeds that she planted at her new home. The hollyhocks have continued to thrive in front of the inn, and are still known as the Priscilla hollyhocks.

Adapted from the Wikipedia: https://en.wikipedia.org/wiki/Silkwood_Inn

FAMOUS PEOPLE

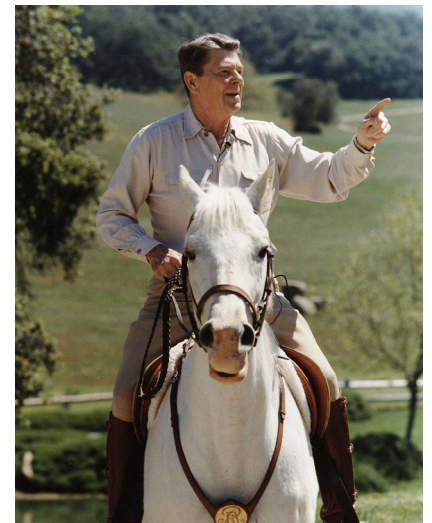
Ronald Reagan

Ronald Wilson Reagan was born in Tampico, Illinois on February 6, 1911. He attended high school in nearby Dixon and then worked his way through Eureka College. There, he studied economics and sociology, played football, and acted in school plays. Upon graduation, he became a radio sports announcer. A screen test in 1937 won him a contract in Hollywood. During the next two decades he acted in 53 films.

From his first marriage to actress Jane Wyman, he had two children, Maureen and Michael. In 1952 he married Nancy Davis, who was also an actress, and they had two children, Patricia Ann and Ronald Prescott.

In 1966 Reagan was elected Governor of California; he was re-elected in 1970.

Ronald Reagan won the Republican Presidential nomination in 1980. Voters troubled by inflation and by the year-long confinement of Americans in Iran swept the Republican ticket into office, and on January 20, 1981 his first term as president began. Only 69 days later he was shot by a would-be assassin, but quickly recovered and returned to duty. His grace and wit during the dangerous incident caused his popularity to soar. He went on to win a second term in office, which ended in 1989 after the election of Reagan's two-term vice president, George H. W. Bush.



FAMOUS PEOPLE

Begin your investigation of...

Priscilla and the Hollyhocks

1. What is the path of the Trail of Tears?
2. The Cherokees crossed the Ohio River into Illinois at what town?
3. What was the 1830 Indian Removal Act?
4. Imagine what it would be like to have your family uprooted, removed from your farm in the southeastern United States, placed in a stockade, and then forced to travel 800 miles to the Oklahoma Territory, where the land and climate were very different. How would you live there? Describe your feelings and experiences.

FAMOUS PEOPLE

Begin your investigation of...

Ronald Reagan

1. What sites in Illinois could you visit to learn more about Reagan's boyhood? What are they called, and where are they located?
2. Name three movies in which Ronald Reagan acted.
3. What events led to Reagan's involvement in California politics?
4. To which political party did Reagan belong? How did his positions on significant political issues of the day reflect the basic principles of that party?
5. What are some of the significant world events Ronald Reagan helped to shape?

FAMOUS PEOPLE

Joseph Smith

Joseph Smith was born on December 23, 1805 in Sharon, Vermont. He spent his childhood on tenant farms in Vermont, New Hampshire, and New York. At the age of 23, Joseph Smith said he was visited by an angel who revealed the location of a set of gold plates. Later, he would translate characters supposedly imprinted on the plates into the Book of Mormon. The Book of Mormon was published and available for sale in March of 1830.

Smith lived in New York, Pennsylvania, Ohio and Missouri before settling in what is now Nauvoo, Illinois in the winter of 1838-39. By 1844, the population of Nauvoo was greater than 10,000 and competed with Chicago in size.

In the spring of 1844, some followers of Joseph Smith broke from the church and printed a newspaper exposing his secrets. The Nauvoo, Illinois City Council deemed the newspaper a public nuisance and all copies of the paper and the press were destroyed. Because of this incident, Hancock County was on the verge of a civil war. Governor Ford ordered Smith and the city council to stand trial for destroying the press.

On June 27, 1844, Joseph Smith and his brother, Hyrum, were killed by a group of militia who stormed the Carthage Jail where they were being held.



FAMOUS PEOPLE

Lorado Taft

Lorado Zadoc Taft was born on April 29, 1860 in Elmwood, Illinois. He was home-schooled by his parents and then earned his bachelors' and masters' degrees from the University of Illinois, where his father was a professor. After earning his masters, he left for Paris to study sculpture at Ecole des Beaux Arts in Paris. He returned to the United States and became an instructor at University of Chicago.

When working on sculptural additions to the buildings of the World Columbian

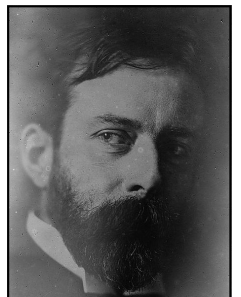


"Alma Mater" by HalloweenHJB - Own work, CC BY 3.0, <https://commons.wikimedia.org/w/index.php?curid=4440276>

Exposition of 1893, he fell behind schedule. He hired a group of women sculptors to assist him, which was unheard of because women were not accepted as sculptors at that time. For this action, he is credited for helping advance the status of women as sculptors.

Lorado Taft wrote the first survey of sculpture, the *History of American Sculpture*. Published in 1903, many consider this his best work and the main reason for which he should be remembered.

Lorado Taft was a pioneer in the type of medium used to make his sculptures. The 40-foot sculpture of "Black Hawk", on a bluff overlooking the Rock River near Oregon, IL, was made of cement. Other sculptures for which he is famous include "Alma Mater", which stands in front of Altgeld Hall at University of Illinois in Champaign-Urbana and "The Fountain of Time" at the University of Chicago.



FAMOUS PEOPLE

Begin your investigation of...

Joseph Smith

1. What types of tourism opportunities are available in Nauvoo?
2. What is the distance between Nauvoo and Carthage? Warsaw and Carthage?
3. What happened to the original temple in Nauvoo?
4. Who was the leader of the Mormon church following Joseph Smith's death?
5. What was the Nauvoo settlement called before it was named Nauvoo? What do the previous and current names mean?

FAMOUS PEOPLE

Begin your investigation of...

Lorado Taft

1. List three reasons why Lorado Taft is remembered.
2. Why do you think Lorado Taft placed his statue of Black Hawk overlooking the Rock River?
3. Why would Lorado Taft place his statue, "Alma Mater," at the University of Illinois?
4. Why should women sculptors be grateful to Lorado Taft?
5. What do you think would be the most difficult aspect of being a sculptor?

FAMOUS PEOPLE

Allerton Park

The 1500-acre woodland, garden, meadow, and prairie landscape that surrounds the Allerton Mansion was once the private estate of Robert Henry Allerton. Named "The Farms," the estate was the center of the 12,000-acre Illinois agricultural enterprise acquired during the latter half of the 1800s by Robert's father Samuel. The family wealth, however, extended far beyond Illinois. Samuel Allerton owned more than 80,000 acres of farmland, was a founding principal of the First National Bank of Chicago, and held prominent leadership positions in five major stockyards including the Union Stockyards of Chicago.

The Allertons moved to Hawaii and initiated the first major gift ever given to the University of Illinois. In 1946, Robert Allerton gave his beautiful Monticello, Illinois estate to the University of Illinois for use as "an educational and research center, as a forest and wild-life and plant-life reserve, as an example of landscape architecture, and as a public park." He also committed the income from 3,600 acres of farmland for the Park's care. At the same time, 250 additional acres of land within the estate's boundaries were given to establish the Illinois 4-H Memorial Camp.

Allerton Park is considered one of the Seven Wonders of Illinois. Its natural areas are open to the public for hiking and wildlife observation.

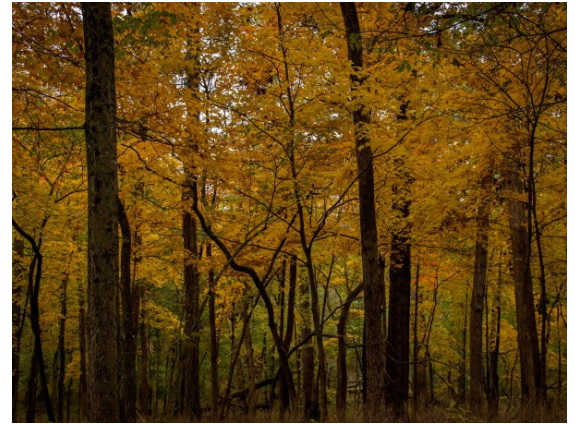


Image source: allerton.illinois.edu/natural-areas/

SITES TO SEE

Charles Mound

A gently rising, 1,235-foot-high hill in northern Jo Daviess County claims the title of highest point in Illinois. Located near the small town of Scales Mound and 11 miles northeast of Galena, its geographic location is 42.5042° N 90.2401° W. The peak of Charles Mound is less than one-half mile from the Wisconsin border.

Charles Mound is found within the Driftless Area, a region of Illinois, Iowa, Minnesota, and Wisconsin that was untouched by the last continental glaciers. Because this area was not smoothed down by the incredible weight and force of the glaciers, it remains much hillier than surrounding areas of the Midwest.

Charles Mound is located on rolling farmland. The Wuebbels, who own the land, permit the general public to access the property during the first weekends of June, July, August, and September.

While Charles Mound is the highest non-man-made point in Illinois, the Willis Tower and other skyscrapers in Chicago actually rise to a greater elevation above sea level. The lowest point in Illinois is located at the confluence of the Ohio and Mississippi Rivers near Cairo in Alexander County, at 279 feet above sea level.



Image source: https://commons.wikimedia.org/wiki/File%3ASign_at_the_top_of_Charles_Mound.jpg

SITES TO SEE

Begin your investigation of...

Allerton Park

1. What is 4-H and what do the 4 “H’s” stand for?
2. What are some things you can do while visiting Allerton Park?
3. Is there an entry fee to go through the park?
4. Name two other public parks in Illinois. Compare and contrast them with what you have learned about Allerton Park.
5. What is your favorite park and why?

SITES TO SEE

Begin your investigation of...

Charles Mound

1. Charles Mound is located in a very hilly area of our state. Why is this area so hilly compared to other parts of the state?
2. Locate Charles Mound on an Illinois roadmap. If you were describing its location to a friend who wanted to find it on his or her own map, what would you say?
3. Your family has decided to take a trip to see Charles Mound. You have agreed to map out the route for your mother, who will be driving and hates using GPS. She wants to know which roads to take, and how many miles she will be driving. Using GPS or an Illinois roadmap, print out directions and mileage for the trip.
4. On the way back from Charles Mound, your family decides to stop halfway and spend the night. What town is located closest to the halfway point between Charles Mound and your home? Do a Google search to find out whether this town has lodging available. If not, locate the nearest town that does have a hotel or motel.

SITES TO SEE

Dickson Mounds

Dickson Mounds Museum, a branch of the Illinois State Museum, is located outside of Lewistown. It is a National Register Historic Site and one of the major on-site archeological museums in the United States.



Dickson Mounds

Image source: www.illinoisstatemuseum.org

In 1927, a chiropractor named Don Dickson began excavation of the ancient burial grounds on his family farm. Mr. Dickson chose not to remove the bones and artifacts he uncovered. Instead, he covered the area with a tent which he later replaced with a building to serve as a private museum.

In 1945, the site was sold to the State of Illinois, with Don Dickson and his family managing the site as employees of the Illinois Department of Conservation for 20 years. In 1965, the museum became a part of the Illinois State Museum. It was opened to the public in 1972.

On April 3, 1992 the burial site was closed to the public. After being closed for over a year for renovations and the creation of new exhibits, the museum reopened in September of 1994.

SITES TO SEE

Fermilab

On November 21, 1967, President Lyndon B. Johnson signed a bill to create a site for scientific research. This was the beginning of Fermilab, originally named the National Accelerator Laboratory.

Scientists study the atom at Fermilab by placing it in accelerator rings where the atom breaks into particles, which are then studied. The Tevatron, four miles in circumference, is the world's highest-energy particle accelerator.

Two major components of the Standard Model of Fundamental Particles and Forces were discovered at Fermilab: the bottom quark and the top quark. In July of 2000, the last particle of the atom, tau neutrino, was observed.

Fermilab's 6,800-acre site was originally home to over 55 farms and to the village of Weston. Since the accelerator is buried underground, thousands of acres of what had once been prairie essentially lay empty. In 1971, Northeastern Illinois University biology professor Robert Betz approached Fermilab with his idea of a Prairie Restoration Project. Thanks to this project, by 1988 over 700 acres of restored prairie existed on the site. The prairie at Fermilab was at that time the largest reconstructed prairie in the world.



Image source: www.fnal.gov

SITES TO SEE

Begin your investigation of...

Dickson Mounds

1. Which excavation site would you most like to visit, and why?
2. What hours is the Dickson Mounds museum open?
3. Dickson Mounds is located nearest to which river?
4. What Native American tribes lived in the area of Dickson Mounds?
5. What is the name of the mound close to Dickson Mounds? What town is it located in? What is the area used for now?

SITES TO SEE

Begin your investigation of...

Fermilab

1. What type of research is done at Fermilab?
2. Why did Dr. Betz feel Fermilab was a good place to reconstruct a prairie?
3. What would you like to see if you visited Fermilab?
4. If 55 farms made up the 6,800 acres of Fermilab, what was the average size of these farms?
5. What is a particle accelerator, and what can scientists learn by using one?

SITES TO SEE

Goose Lake Prairie State Natural Area

In an attempt to describe the unfamiliar terrain they encountered, early settlers to Illinois referred to it as “a sea of grass with pretty flowers.” Today, Goose Lake Prairie is like peering into the past, when nearly 60% of Illinois was prairie.

Located in Grundy County, Goose Lake Prairie is the largest remnant of prairie left in Illinois. It is made up of 2,537 acres of varied prairie and marsh communities, an important habitat for birds, prairie flora, and rare insects.

The site got its name from a 1,000 acre lake that no longer exists. Settlers, relying on the land for their livelihoods, made drastic changes. They planted trees to serve as windbreaks and as fences for their farms. In an effort to gain more farmland, they drained Goose Lake. They removed the underlying clay, first to make pottery and jugs and later for fire brick. Though drained, the land remained too wet to ever be farmed. Coal was also mined in the 1820s, and in 1928, strip mining of the land began.

Goose Lake Prairie today is a study in contrasts. It has the largest stand of tall grass prairie remaining in Illinois as well as ponds and marshes that resulted from the draining of Goose Lake. The strip mine spoil mound is the highest point at the site and from this vantage point one can view the reclaimed mine areas, prairie, and prairie marsh.



Image source: www.dnr.illinois.gov

SITES TO SEE

Illinois Great River Road National Scenic Byway

The Illinois Great River Road National Scenic Byway is a 550 mile route on Illinois' western border. This route offers breathtaking views and majestic landscapes. The banks and bluffs along the way attract thousands of species that travel many miles for a visit or to make themselves a home. The rich fertile soil and waterways are ideal for agricultural production, processing, and distribution.

Throughout history, the Mississippi River influenced the lives of many people including Native Americans,

early French voyagers, African Americans seeking refuge on the Underground Railroad, and many more. The Great River Road continues to link people, resources and history.



Image source: www.greatriverroad-illinois.org



Image source: www.enjoyillinois.com

The Great River Road was established in 1938 as the national parkway of the Mississippi River. It actually spans 2,069 miles and ten states beginning in Minnesota and ending in Louisiana. When you look at a road map or travel the route, just follow the green Pilot's Wheel road signs.

SITES TO SEE

Begin your investigation of...

Goose Lake Prairie State Natural Area

1. Near what town is Goose Lake Prairie located? Why do you think the town was given this name?
2. The road to the visitor's center at Goose Lake Prairie is named "Jugtown Road." Why might it be named this?
3. Goose Lake Prairie is located where two rivers come together to form the Illinois River. What are the names of these rivers?
4. The former Joliet Army Ammunition Plant is being restored to a tallgrass prairie and is located near Goose Lake Prairie. This restored site is part of the U.S. Forest Service's National Park System. What is the name of this site and where is it located?
5. What agency is responsible for taking care of Goose Lake Prairie?

SITES TO SEE

Begin your investigation of...

Illinois Great River Road National Scenic Byway

1. Through what counties and/or major cities in Illinois does the Great River Road travel?
2. Where would be a good place to watch the eagles along the Great River Road?
3. How did the flood of 1993 affect the Great River Road and areas nearby?
4. What county along the Great River Road is known for its peaches?
5. List some sights and places one could visit while traveling along the Great River Road in Illinois.

SITES TO SEE

Morrow Plots, University of Illinois

The Morrow Plots are located in the heart of the Urbana-Champaign campus of the University of Illinois, a Land Grant College established under the Morrill Act of 1862. The plots, which were started in 1876, are the oldest continuous agricultural research fields in the United States.

During a plot dedication ceremony held in 1968, Professor M. B. Russell, then director of the Illinois Agricultural Experiment Station, noted that "it is of interest to observe that the Morrow Plots were established in 1876, the centennial year of one of the greatest proclamations of free men of all time, the Declaration of Independence." He emphasized that "it is now clear that the lesson of the Morrow Plots represents a new kind of declaration of independence—not of political independence but independence from one of the fears that man has had since the dawn of time, the fear of hunger."

Only three of the original 10 plots remain in place today. Two plots were lost for construction of the observatory in 1895 and five others were seeded back to lawn in 1903. The remaining three plots were reduced in size to 1/10th acre, subdivided, and separated by permanent borders at that time. The physical size and configuration of the three main plots has not changed since 1903.



Image source: https://commons.wikimedia.org/wiki/File:Morrow_Plots_UIUC.JPG#/media/File:Morrow_Plots_UIUC.JPG

SITES TO SEE

Shawnee National Forest

In contrast to the level or gently rolling farm lands typical of most of Illinois, the Shawnee National Forest lies in the hilly, unglaciated areas known as the Illinois Ozark and Shawnee Hills. The geology includes stone bluffs and overlooks to lowland areas.

Topography ranges from the flood plains of the Mississippi and Ohio Rivers, at about 325 feet above sea level to 1,064 feet at Williams Hill in Pope County.

The forest was planted to pine trees to prevent erosion due to over farming the land during the 1930s and 40s by the Civilian Conservation Corps.

The Shawnee National Forest covers over 277,500 acres, covering roughly half of the southern tip of Illinois. Designated in August 1939 as the Shawnee Forest by President Roosevelt, 10% of the land has been declared wilderness area.

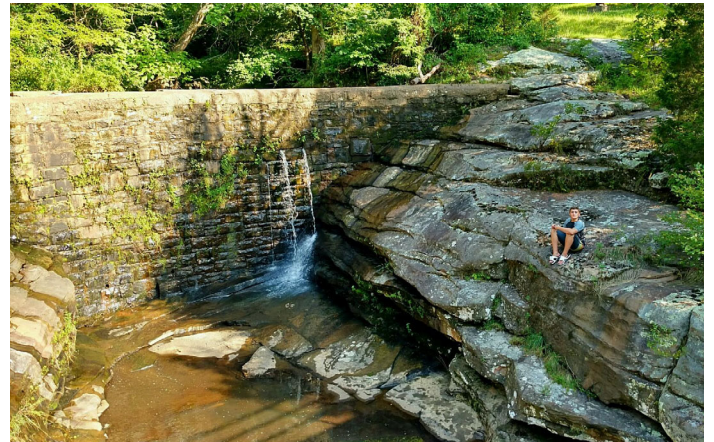


Image source: www.enjoyillinois.com

SITES TO SEE

Begin your investigation of...

Morrow Plots, University of Illinois

1. Name three other Land Grant Universities.
2. Why are test plots like the Morrow Plots important?
3. For whom are the Morrow Plots named?
4. Name three subjects you would be able to study at the University of Illinois.
5. Name four famous people who have attended the University of Illinois and give the reasons for which they are famous.

SITES TO SEE

Begin your investigation of...

Shawnee National Forest

1. The state mineral is mined in the southeastern portion of the state. What is the mineral, where is it mined, and how much is mined on an annual basis?
2. Illinois is divided into three major geographical divisions. The Shawnee National Forest is in the southern Illinois division (which is mainly south of U.S. Route 50). Describe the climate, mix of crops, topography, and mining of the area.
3. Name at least one avulsion (sudden removal of land [soil] by a change in the course of a river, sometimes caused by flood) that can be found along the Ohio River border with Kentucky.
4. What is Stone Face and where is it located? How did it form?

SITES TO SEE

Arsenal Island, Rock Island

On a crisp winter day, the Stars and Stripes lapped softly in the icy breeze coming off the Mississippi River. Sunlight bathed a field of uniform white stones marking the graves of American patriots—graves many Americans don't know exist.

It's not that soldiers in the graves are unknown. Each grave is identified. It isn't that they're historically insignificant. They fought and suffered valiantly. They were just fighting for what many say was the wrong side.

The Civil War was long ago, and to northerners, far away. However, in 1863, the Union brought the war to a small, rocky island in the Mississippi. Two days before Christmas, a train rustled into Rock Island, passed over a wooden bridge to the island where a landmark clock tower was being built, and unloaded 468 Confederate soldiers captured in battles near Chattanooga, Tenn.

They were the first prisoners of war incarcerated on the 12-acre Confederate prison camp on the northern side of the island. Before the camp closed 20 months later, 1,964 prisoners died and were buried in a cemetery there.

Today the island is still home to the Rock Island Arsenal, which provides logistical and manufacturing support for the U.S. Armed Services. The island also features many historical attractions and a museum.



Image source: <https://militarybases.com>

ILLINOIS TIDBITS

Darn Hot Peppers

Darn Hot Peppers are grown at Rancho Bella Vista, a family farm in Cobden, Illinois. The farm is owned and operated by the Jimenez family, which grows a wide variety of pesticide-free hot peppers. The family is committed to sustainable care of "nuestra tierra" (our land).

In a typical growing season, they produce 15-20 hot pepper varieties, many of which are used to make their own salsas, pepper jellies, and spices.

Darn Hot Peppers was founded by Gerardo "Jerry" Jimenez, a Mexican who was born in South Texas. Jerry was picking cotton in Texas cotton fields with his mother at the age of 6, later attended college in Oklahoma, and was hired as a farm worker by Green Giant in Belvidere, Illinois when he was unable to find work in Oklahoma after college. "Uncle Sam" then called Jimenez into military service, where he served overseas in southeast Asia. Following his military service, he returned to Illinois and worked with migrant and seasonal farm workers with disabilities. Eventually he was able to purchase a small farm near Cobden and start his hot pepper business.



Image source: www.darnhotpeppers.com

ILLINOIS TIDBITS

Begin your investigation of...

Arsenal Island, Rock Island

1. Why did so many soldiers die at the Confederate prison camp on Arsenal Island?
2. What is an arsenal?
3. What was the name of the fort that was built on the island in 1816? Why was it built?
4. Arsenal Island still serves a number of military purposes today. Describe at least one of these roles in detail.

ILLINOIS TIDBITS

Begin your investigation of...

Darn Hot Peppers

1. In southern Illinois orchards, migrant workers make up most of the workforce. Where can they go to get training and language classes?
2. Cobden, Illinois' population is just over 1,000. What kinds of businesses would a town that size be able to support?
3. Do you think there are any challenges migrant workers face living and working in a small downstate Illinois town?
4. What kind of growing conditions (soil, climate, sunlight, rainfall) do chile peppers need to grow well? Does southern Illinois have all of the necessary conditions?
5. The Illinois Migrant Council operates a Technology Learning Center in Cobden. Look up the council and explain what it offers Illinois migrant workers.

ILLINOIS TIDBITS

Griggsville, Illinois

"America's Most Wanted Bird" is what this small town proclaims on the side of a main street building. In 1962, the Griggsville Jaycees civic organization realized there was a mosquito problem in their town and decided they wanted to do something about it. The group wanted to find an alternative solution to using chemicals.

J. L. Wade, understanding the benefits of the purple martin and realizing that its population was declining, suggested that this bird might be the answer to the problem, since it eats only flying insects and prefers nesting in man-made homes near humans.

After consulting with naturalists and ornithologists, the Griggsville Jaycees received 28 martin houses and installed them at regular intervals along the city's main street.

J. L. Wade converted his antenna manufacturing company into a purple martin house factory over 40 years ago. It is now the main industry in Griggsville.

Purple martin image by DickDaniels (<http://carolinabirds.org/>) (Own work)
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Image source: https://commons.wikimedia.org/wiki/File:Griggsville_Illinois.jpg

ILLINOIS TIDBITS

Lincoln's New Salem State Historic Site

Lincoln's New Salem State Historic Site, about two miles south of Petersburg and about 20 miles Northwest of Springfield, is a reconstruction of the village where Abraham Lincoln spent his early adulthood.

The six years Lincoln spent in New Salem formed a turning point in his career. Although he never owned a home there, Lincoln was engaged in a variety of activities while he was at New Salem. He clerked in a store, split rails, enlisted in the Black Hawk War, served as postmaster and deputy surveyor, failed in business, and was elected to the Illinois General Assembly in 1834 and again in 1836 after an unsuccessful try in 1832.

Today, visitors to the site can enjoy a variety of programs available throughout the year. Self-guided walking tours, school programs, historical demonstrations, and interpreters in period clothing will take you back into history and help you imagine life as it was in the days of Abraham Lincoln.



Image source: www.lincolnsnewsalem.org

ILLINOIS TIDBITS

Begin your investigation of...

Griggsville, Illinois

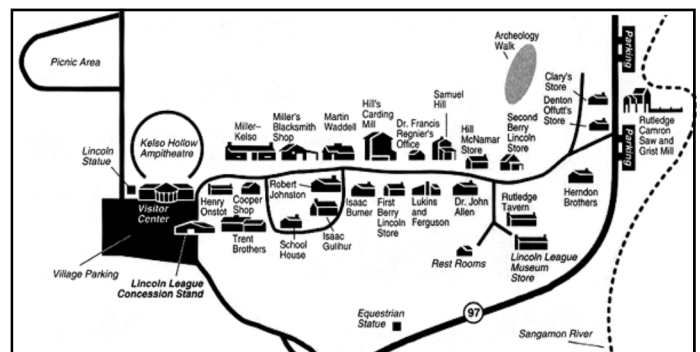
1. Between what two rivers is Griggsville located?
2. Name three other "purple martin capitals."
3. How many mosquitoes does Griggsville claim a purple martin will eat in a day?
4. What two birds do purple martin enthusiasts need to discourage from using the purple martin housing, and why?
5. How many "apartments" were in the first purple martin high rise in 1962?

ILLINOIS TIDBITS

Begin your investigation of...

Lincoln's New Salem State Historic Site

1. What other Lincoln sites could you visit in the towns around New Salem?
2. Lincoln was the only president to receive a patent. What did he invent and patent while he lived in New Salem?
3. Does it cost anything to visit New Salem?
4. Visit the Lincoln's New Salem web site at <http://www.lincolnsnewsalem.com/> and take a virtual tour of the map shown on this card (above).
5. How many places did Lincoln live in his lifetime?



ILLINOIS TIDBITS

Morton, Illinois

Pumpkin Capital of the World

Morton is a village located near Peoria, in Tazewell County. It is well-known for pumpkins and the Morton Pumpkin Festival they host each Fall.

The development of a canning plant in the 1920s had a tremendous impact on the business community in Morton. From its early days, the plant has been a mainstay of the community. It is now owned by Nestle USA/Libby's and is used for pumpkin packing. Over 80 percent of the world's canned pumpkin market is supplied by the Libby's plant in Morton.

In September 1978, then Governor James Thompson declared Morton, Illinois, "The Pumpkin Capital of the World."



Image source: Illinois Farm Bureau

ILLINOIS TIDBITS

Prairie Style Architecture

Do you have a living room in your house? A carport? If so, you have architect Frank Lloyd Wright to thank for these designs. His "organic architecture" emphasized interior light and open spaces in low, earth-hugging buildings. These homes were called "prairie style" after his 1901 Ladies Home Journal plan titled "A Home in a Prairie Town." They were designed to blend in with the flat, prairie landscape. While most of his designs were of single-family homes, Wright also designed museums, government offices, gas stations, and bridges.

Wright was born in Richland Center, Wisconsin on June 8, 1867. He entered the University of Wisconsin at 15 as a special student, studying engineering because the school had no course in architecture. In 1887 Wright went to work as a draftsman in Chicago. His first work was the Hillside Home School built for his aunts near Spring Green, Wisconsin in 1888.

Wright designed over 1,000 buildings, of which over 500 were built. He wrote several books on architecture and founded a successful school where he trained many young architects. His drawings of buildings and other plans were so beautiful that they are treasured for their art alone. He also designed furniture, glass art, and other aspects of interior design.

The city of Oak Park, Illinois, has 25 buildings designed by Mr. Wright. His architecture is seen throughout the United States. Frank Lloyd Wright died in Phoenix, Arizona on April 9, 1959.



Image source: www.enjoyillinois.com

ILLINOIS TIDBITS

Begin your investigation of...

Morton, Illinois: Pumpkin Capitol of the World

1. What happens to most of the pumpkins grown in the Morton area?
2. What is pumpkin chunkin'?
3. Which pumpkin variety is most widely grown in the Morton area?
4. How do pumpkins used for processing (canning) differ from the pumpkins we usually see?
5. What other tourism opportunities are available in the Morton area?

ILLINOIS TIDBITS

Begin your investigation of...

Prairie Style Architecture

1. How did the prairie style of architecture change the layout of a home?
2. What aspects of the prairie style architecture might you see in today's homes?
3. How do you think the job of an architect has changed over the years?
4. How old was Frank Lloyd Wright when he died?
5. Find the closest Frank Lloyd Wright building in your area. (Your city's historical society might be able to help you with this.)

ILLINOIS TIDBITS

Route 66

Route 66 was created in 1926 as one of the original federal routes of the U.S. Highway system. It originally started in Chicago, Illinois and ended in Los Angeles, California.

Route 66 did not follow the traditional straight north and south or east and west course. Instead, its diagonal course linked hundreds of mostly rural communities, enabling farmers to transport grain and produce more efficiently. The diagonal configuration of Route 66 was also significant to the trucking industry as the shorter route between Chicago and the Pacific coast went across flat prairie lands and in a more temperate climate than northern routes.

Route 66 stimulated the largest westward movement in U.S. history. It was a major path for more than 200,000 people who migrated to California to escape the Dust Bowl of the Midwest, symbolizing the highway as the “road to opportunity.” When World War II broke out, Route 66 proved to be invaluable in transporting troops, equipment, and products across the vast West to California. When the war was over, Route 66 served to transport thousands of troops home.

Route 66 became a four-lane highway after World War II, and was realigned so it no longer ran through small towns. These were the first steps toward today’s interstate system. By 1977, an interstate had completely taken the place of Route 66 in Illinois, allowing non-stop travel from Chicago to St. Louis.



Image source: www.illinoisroute66.org

ILLINOIS TIDBITS

The Reversal of the Chicago River

In the 1800's, Chicago was plagued by outbreaks of cholera and typhoid fever caused by water polluted with human waste. In 1887, it was decided to attempt to reverse the flow of the Chicago River. Rudolph Hering, an engineer, found that the Great Lakes drainage system was separated from the Mississippi River drainage system by a ridge approximately 8 feet high located 12 miles inland. A plan was devised to cut through that ridge with a canal from the south branch of the Chicago River to carry the wastes away from the lake and down to the Mississippi River via the Des Plaines and Illinois Rivers. To reverse the Chicago River, a 28-mile canal was built from the south branch of the river through the low summit and down to Lockport. It was completed in 1900. Locks at the mouth of the Chicago River and at Lockport control the flow in this canal. Chicago had built the first of its own rivers to dispose of wastewater.

Chicago's water supply was not truly safe until the addition of chlorine to the water in 1912. By 1917 Chicago's typhoid death rate had fallen to the lowest of any major city in the nation.

Today, the entire waterway system consists of 71 miles of canals, channels, and rivers. In 1955, the American Society of Civil Engineers selected the Metropolitan Sanitary District of Greater Chicago as one of the seven engineering wonders of the United States.



By OmidGul (Own work) [CC BY-SA 4.0 (<http://creativecommons.org/licenses/by-sa/4.0/>)], via Wikimedia Commons

ILLINOIS TIDBITS

Begin your investigation of...

Route 66

1. How many miles was the original Route 66?
2. How many states did Route 66 go through? Name them.
3. How many time zones does Route 66 cross?
4. What interstate road has replaced Route 66 in Illinois?
5. What are some of the nicknames for Route 66? Describe how each nickname originated.

ILLINOIS TIDBITS

Begin your investigation of...

The Reversal of the Chicago River

1. How do you think Chicago's history would have been changed if the Chicago River had not been reversed?
2. Why is safe water so important to a city?
3. If you were to drink well water, how would you be sure that it was safe to drink?
4. Do you think either typhoid or cholera is still a common disease in the United States? Why or why not?
5. Where does your water supply come from? If you aren't sure, how could you find out?

ILLINOIS TIDBITS