WEST CHICAGO CITY MUSEUM
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Historic Geography

Digital Mini-Kit

presented by West Chicago City Museum

The purpose of this kit is to supplement your regular curriculum with fun activities that reinforce the concepts taught, while at the same time exposing students to the history of West Chicago.

Worksheets can be projected on a screen or wall to serve as *whole-class* activities. They can also be printed out in limited numbers for *small-group work* or given to each individual child for *independent work*.

Contact Maggie Capettini at MuseumEd@westchicago.org with questions or comments.

Mini-Kit Contents:

West Chicago Was Once a

Prairie

What is a prairie?

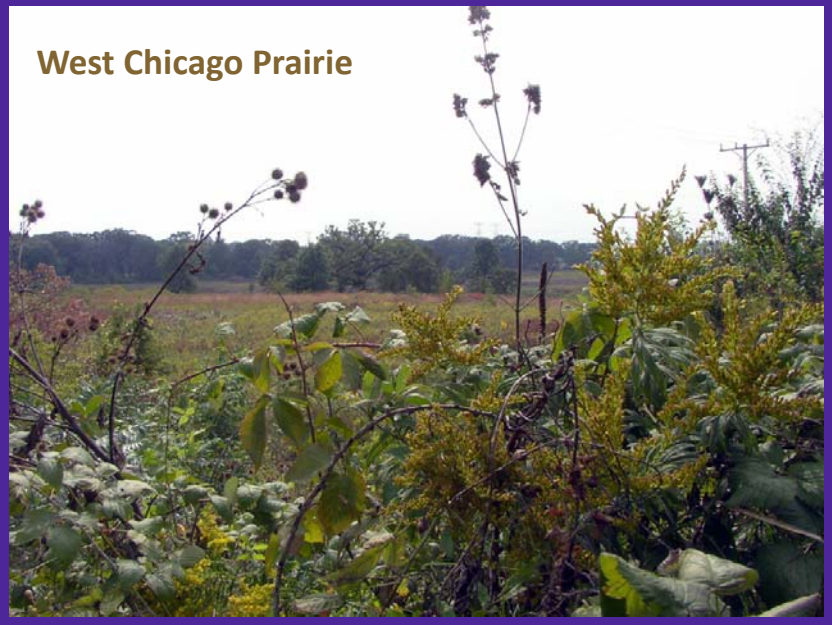
A prairie is a type of grassland. A prairie may have no trees at all. Some prairies have a few trees far apart from each other in big, open land.

Fun Fact:

70% of the food produced for humans comes from grasslands

Where can you find a prairie?

Prairies are found in the central part of the North American continent. They exist in Canada, the United States, and Mexico.



Illinois is home to **tallgrass** prairies because our climate is more wet than other prairie areas. Some grasses can reach heights of 10 feet or more in Illinois.

The Prairie Peninsula

Illinois lies within an area called the "Prairie Peninsula."

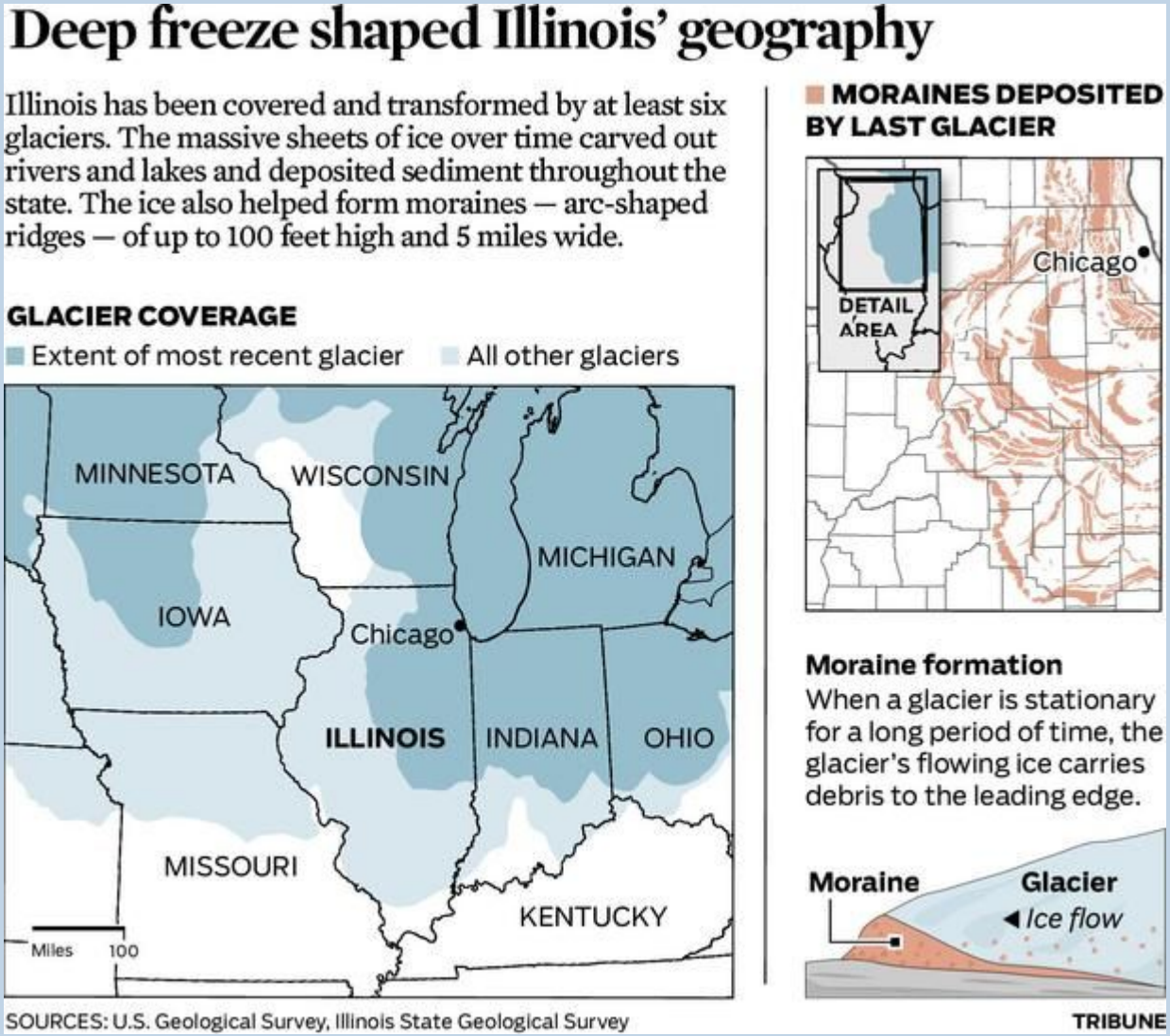
This is part of the tallgrass prairie region, sometimes called the true prairie.

The landscape is dominated by grasses such as Big Bluestem and Indian Grass. There are also a large number of other grasses and wildflowers.

Indian Grass

Big Bluestem

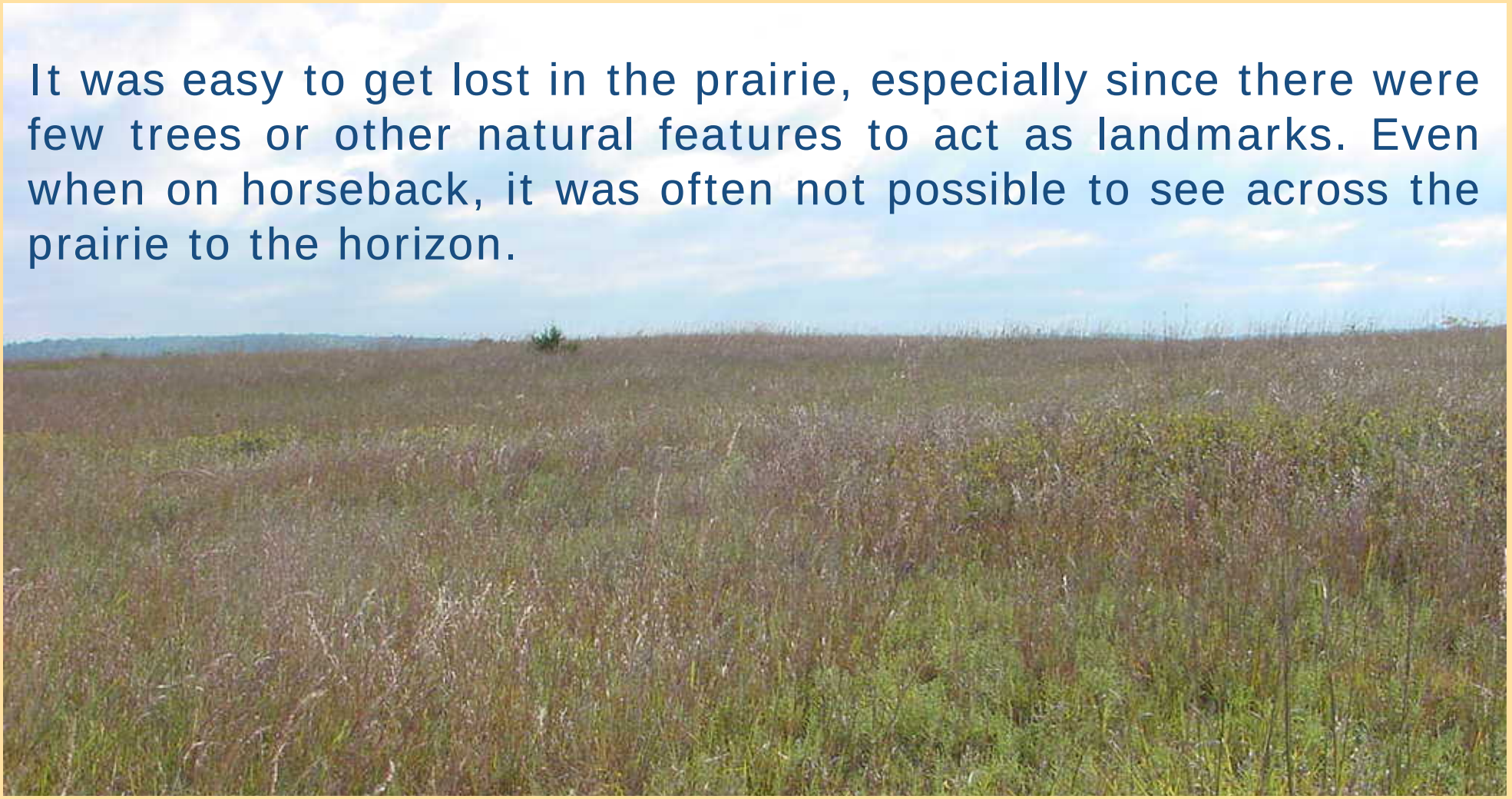
How Did the Illinois Prairies Form?



Most of the land in the northern two-thirds of Illinois is flat. The land here was shaped by the movement of glaciers. Four major glaciers have covered parts of Illinois during its past. The last glacier covered the state about 12,000 years ago. One of the glaciers traveled almost as far south as the location of present-day Carbondale.

Weather conditions in Illinois over thousands of years helped this area be a good spot for prairie plants to grow. A prairie climate has hot, dry summers and cold winters. When these conditions developed about 8,300 years ago, the tallgrass prairie became a major part of the Illinois landscape.

The first European settlers to Illinois were used to
the forests in the eastern United States.
To these settlers, the prairie seemed like an ocean of grass with no end.

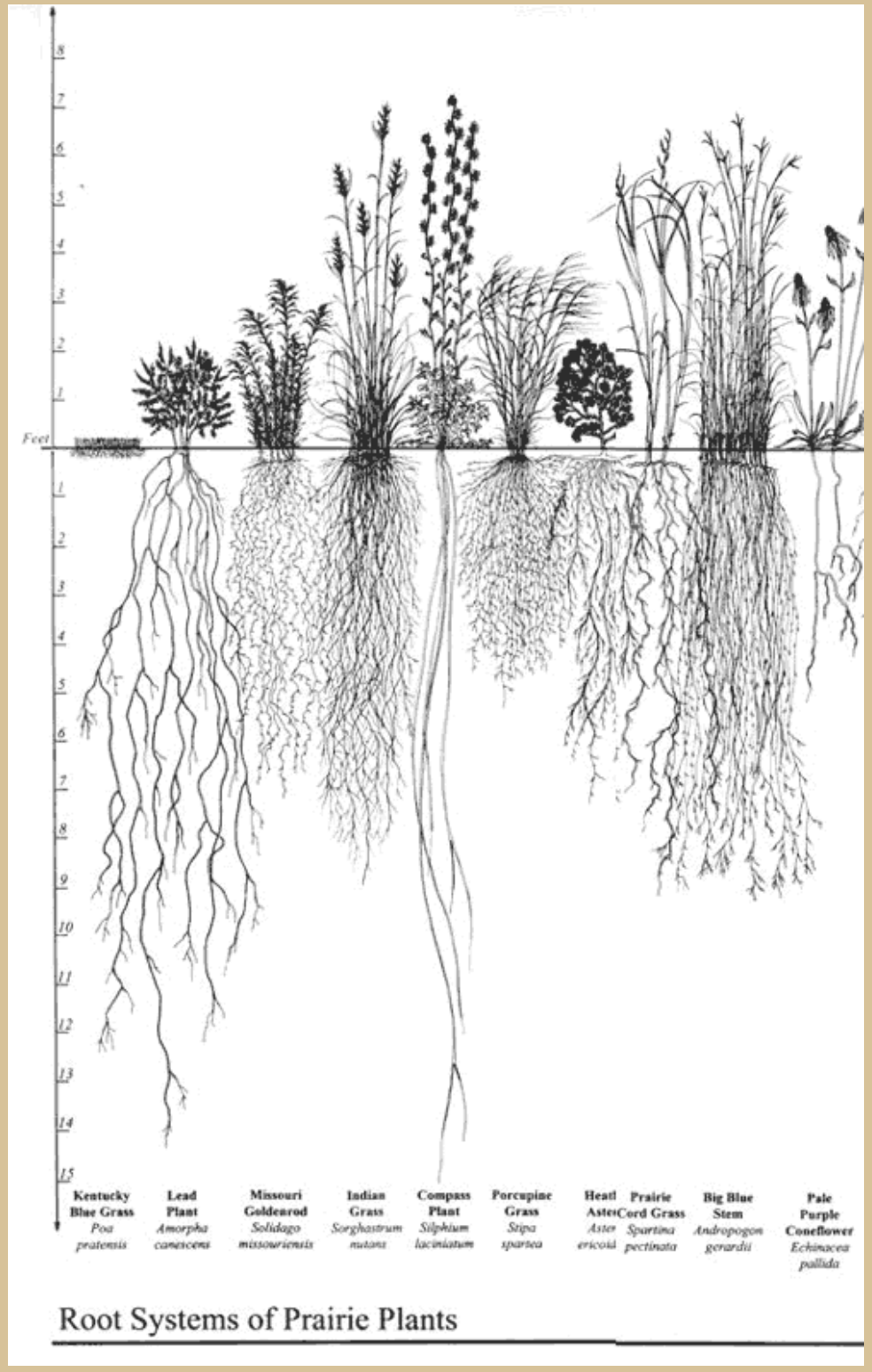


Early settlers did not settle on the prairie. They did not think it was a good idea for many reasons.

Settlers thought nothing would grow on a prairie. Also, there were no trees to use for fuel or for building materials. Soil hard to break and was not thought to be fertile. There were insects, harsh weather, and danger of fire in spring and fall.

However, those settlers were not quite right. The soil in the prairie was very rich and fertile. Beneath the thick grasses of the prairie, the European settlers found rich black soil. This soil was well-suited for growing crops. But, it was difficult to get through the strong, deep roots of the prairie plants to till the soil.

The prairie soil is so rich because of the large amounts of roots left behind in the soil. Prairie plants have large root systems, which contribute to the richness of the soil. Each year some of these plants die off, leaving behind roots in the soil. This continual cycle made the soil very rich.

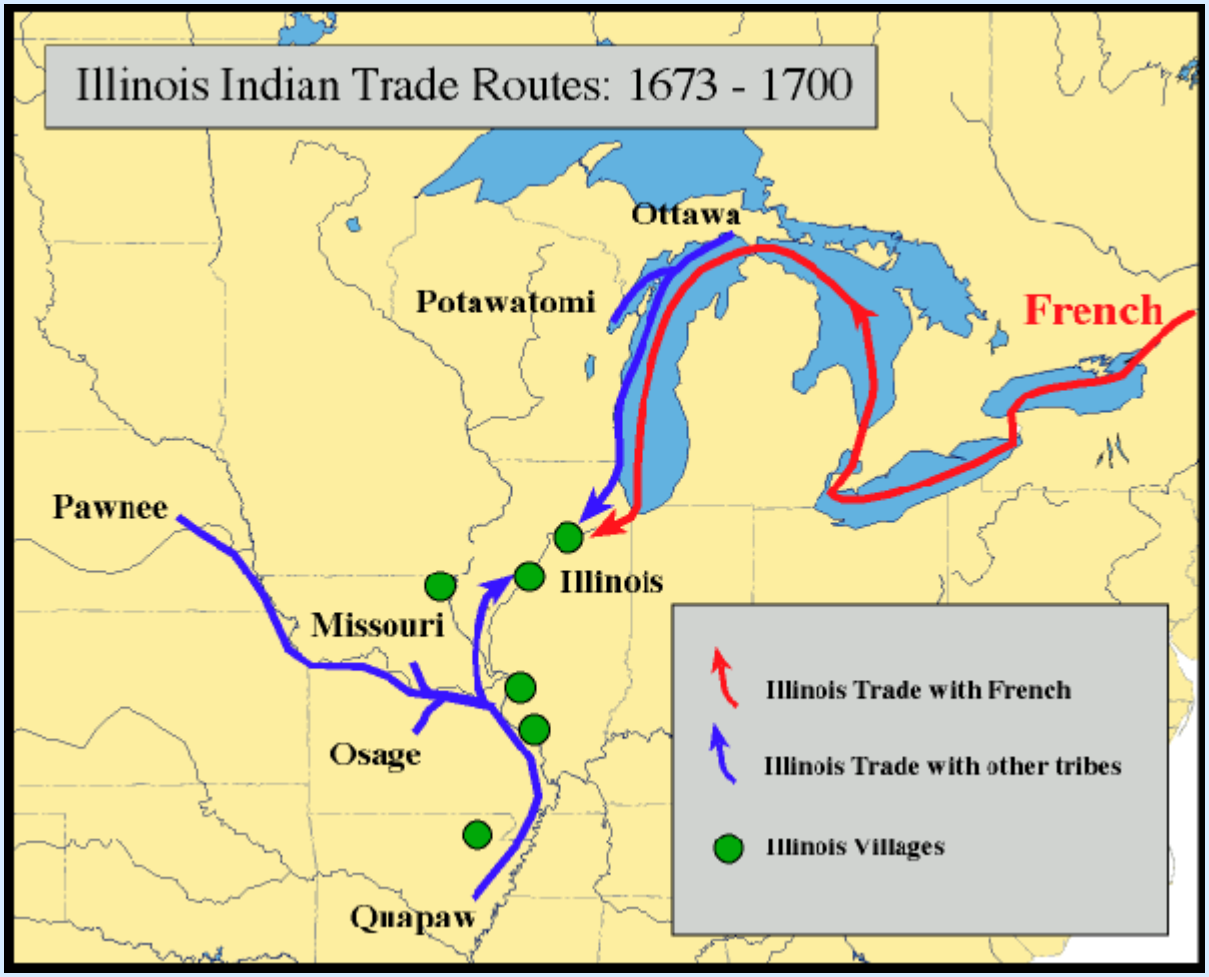


Root Systems of Prairie Plants

What Made the Chicago Area a Good Place to Settle?

This map shows Indian Trade Routes from 200 years before the West Chicago area was first settled. *What natural resource do the trade routes follow?*

Early settlers to the Chicago area knew what the Indians and French knew: that water provides life, but it also provides a way to transport goods and services.



Gary's Mill

In 1832 two brothers, Erastus and Jude Gary, came to this area from Connecticut. They traveled on the Erie Canal to get to Illinois. They investigated the land and found three "distinct sources of wealth to the farmer":

1. The rich rolling prairie awaiting the farmer's plow
2. Fine and well watered grazing lands (for animals)
3. Beautiful groves of timber, for fuel and building purposes

Gary's Mill. Art by H. Gilbert Foote

When their friends back east heard of these natural resources, they traveled west to join the Gary brothers. A settlement soon formed.

These natural resources allowed early settlers to build a life here in this area.

The Gary family built a sawmill along the West Branch of the DuPage River in 1837. The water powered the sawmill. Much of the timber used to build the first homes in the area came from the Gary's Mill. Gary School in West Chicago is named for this family.

How do we use natural resources of the area today?

Men harvesting grain with scythes.

How Did

Technology

Change the

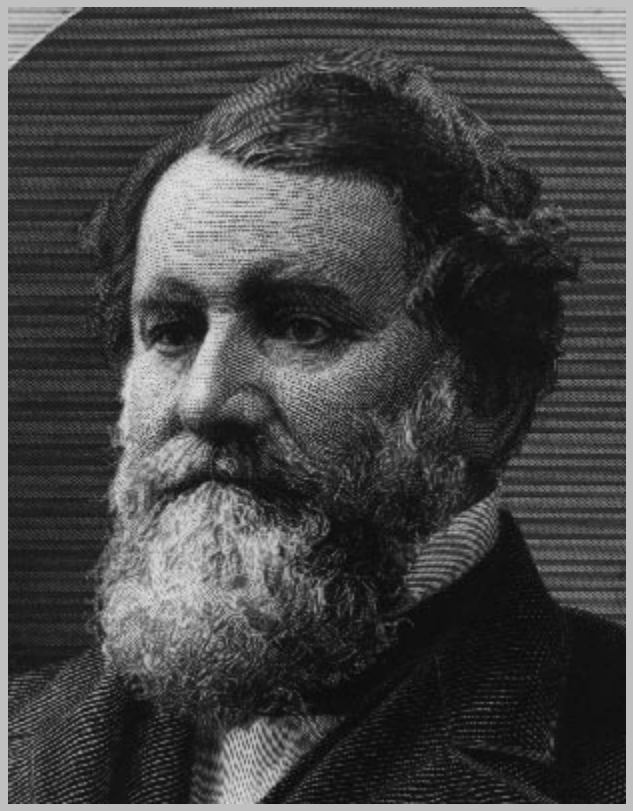
Prairie State?

It was very hard for farmers to remove the tall, tough prairie grasses and harder still to plow the soil.

THE FIRST PRACTICAL REAPER.

Invented and built by Cyrus H. McCormick in 1831.

Two inventions soon changed agriculture in Illinois and other prairie-covered states.



Cyrus McCormick : Inventor of the McCormick Reaper

In 1831, Cyrus McCormick was 22 years old. His father had been trying to design a mechanical reaper so that farmers could harvest more grain and do it more quickly.

The reaper that McCormick invented on his family's Virginia farm worked so well that many of the parts still exist in today's reapers. It also allowed farmers to produce more grain: in a few hour's time, the reaper harvested as much grain as two or three men could cut in a whole day.

McCormick Place is located near the shore of Lake Michigan south of downtown Chicago.

In 1847, McCormick moved his business to Chicago to be closer to the grain belt of the nation. His company experienced great success. Today many people come to Chicago to do business in the McCormick Place Convention Center, named for Cyrus McCormick.

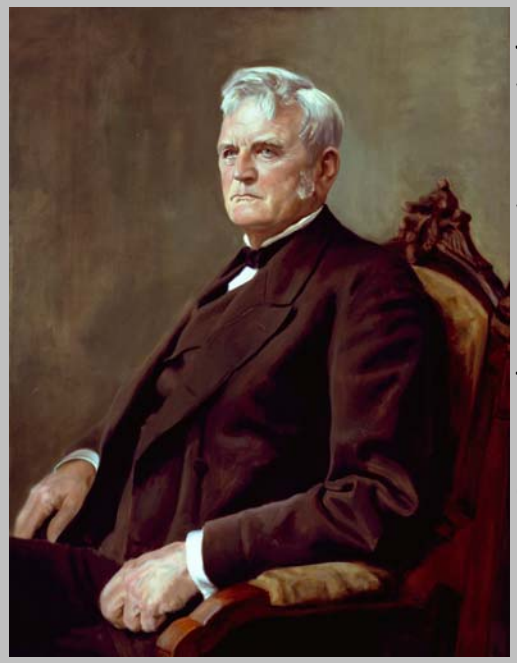
McCormick Reaper drawn by a horse

FUN FACTS:

McCormick was also an inventor of business practices. He was one of the first to do these things:

1. Offer a guarantee of his product
2. Offer buyers credit so they could afford the machine
3. Use traveling salesmen
4. Give demonstrations of his machine
5. Advertise using customer testimonials

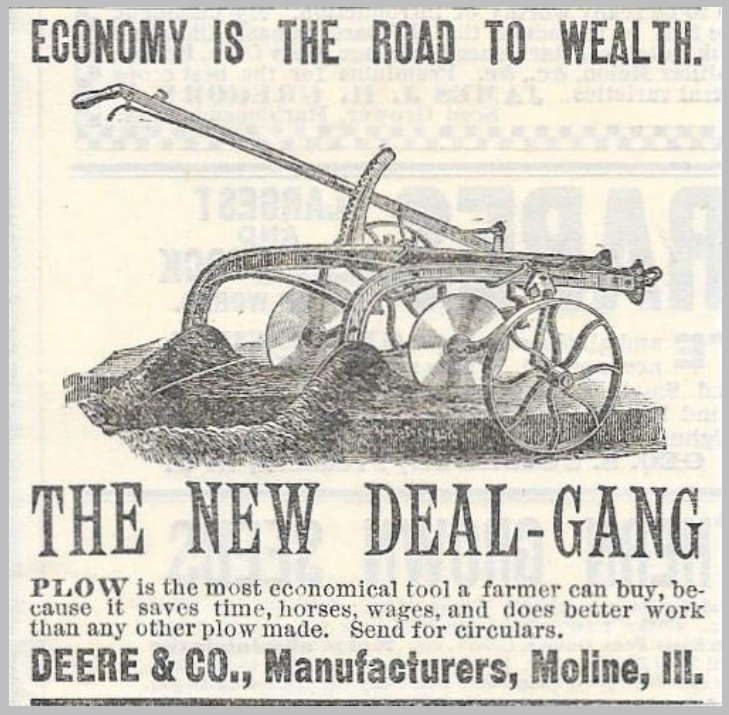
John Deere : Inventor of Curved Steel Plow



John Deere was born in 1804 in Vermont. When he was 17, he became a blacksmith. There was not much work for him in Vermont, so he moved his family to Grand Detour, Illinois.

In Illinois he had lots of work. One thing he often had to do was to repair the cast iron and wooden plows. These plows were designed in the east . They worked well with the sandy loose soil in that part of the country. But, the thick heavy soil of the prairie damaged the plows and stuck to the blades.

To solve the problem, Deere invented a plow with a curved steel blade in 1837. The smooth material and curved shape allowed the plow scour itself as it cut furrows in to the earth. In other words, it cleaned itself of the heavy prairie soil as it was being used. Using the new Deere plow, farmers took fewer hours to plow more acres than ever before.



1887 John Deere newspaper ad

Woman with original steel plow made by John Deere in Grand Detour, Illinois in 1838, at the Smithsonian Institution, Washington, D.C. Photo from Library of Congress. Date 1938.

Threshing at Bollweg Farm in present-day West Chicago

A threshing machine separates the grain from the rest of the plant.

The area now known as West Chicago had several farms in the mid-1800s.

John and James Fairbank were immigrants from England. They bought land just south of present day West Chicago in the late 1830s. They were reported to be the first to have a threshing machine in DuPage County.

The 1857 DuPage County History speaks of Winfield Township having a "productive soil and healthy climate." Joseph McConnell's 1857 account of Turner (as West Chicago was once known) describes the town as being in the "center of a rich and fertile plain." Major crops were corn and wheat.

Joseph McDonald, a local storekeeper, was paying cash to farmers for any of their produce. McDonald was trading goods for butter, lard, pork and wool.

In 1853, he received 1,200 bushels of grain in trade for goods.
In 1854, the amount of grain had grown two-and-a-half times.
By 1855, over 30,000 bushels of grain were traded.

By 1857, Turner had two groceries, a country tavern, and a butcher's shop.

Pictured: Reed-Campbell Dry Goods and Grocers

So...

How Did

Technology

Change the

Prairie State?

Farming Technology Changed the Population of the Prairie State

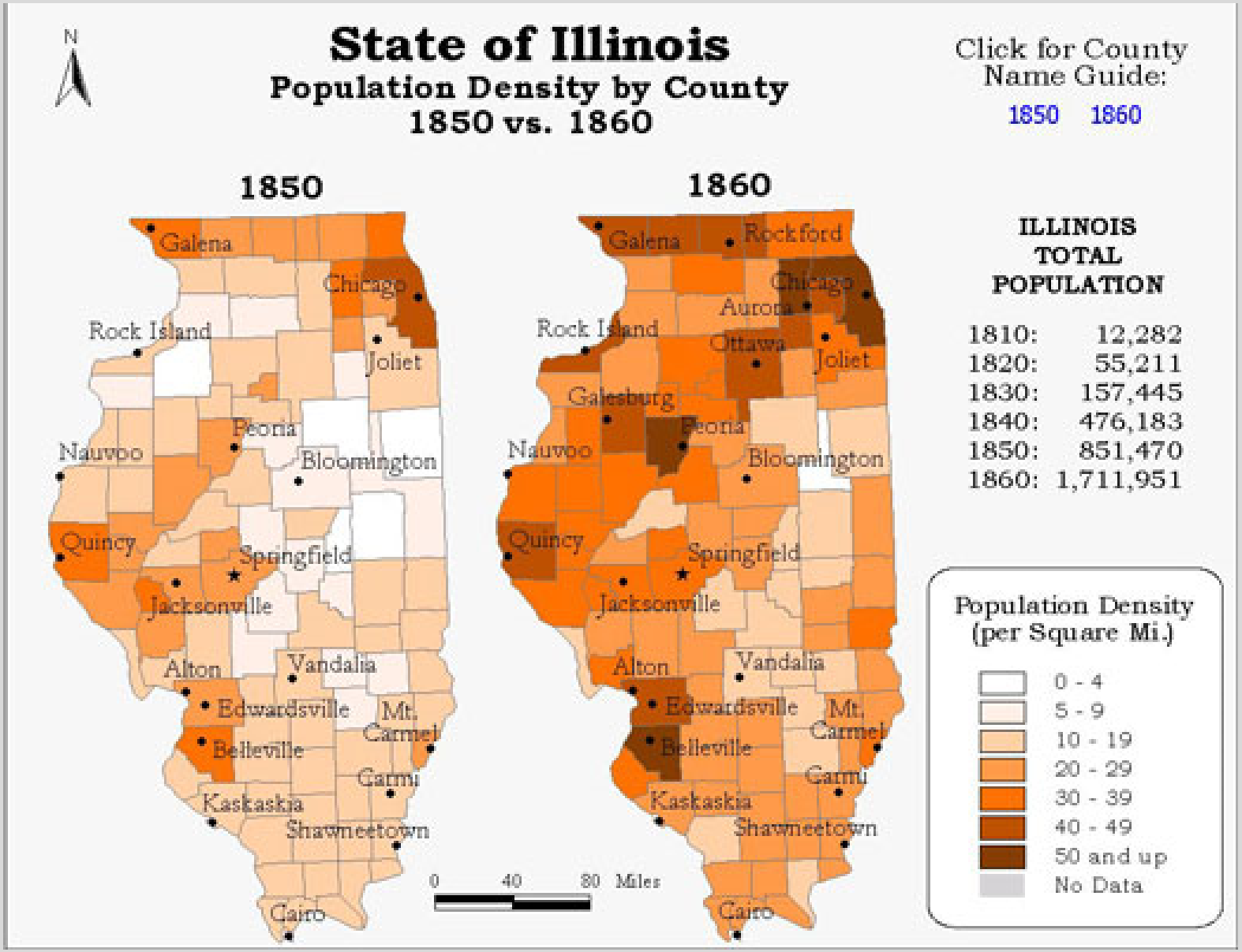
In the 1850s, the population of Illinois doubled.

New residents meant more workers to help produce food for our growing nation.

By 1860, Illinois was the fourth most populous state.

Farming was the fastest growing business in Illinois.

Chicago was becoming a railroad hub, shipping food and livestock to the rest of the country.



http://lincolnhome.dcl.niu.edu/remann_images.html

Sad Facts About the Illinois Prairie:

At one time, Illinois was about 60% prairie lands. Most of the prairie was destroyed between 1840 and 1900. Now only about 1/100 of 1% of the original prairie remains. The pieces of the prairie remaining tend to be very small patches. Most of them are smaller than 10 acres.

When people clear the prairie land to farm it, animals are effected. When the prairie habitat disappears, so do the animals that depends on the prairie for survival. They move to other areas or sometimes even become endangered species.

The soil is not as rich today as it once was. The plants grown on the prairie soils today do not have large root systems and do not leave as much organic material behind. This causes the soil to erode.

The soil is also becoming less and less fertile. The types of plants on the land now do not enrich the soil with their roots. Planting a monoculture like all corn or all soybeans means less fertile soil, which means more chemical fertilizers now need to be used on these lands.

Restoration: The Future of Illinois Prairies

Benefits of Protecting and Restoring Prairie Lands:

Protect water quality and quantity

Conserve cultural heritage and history of Illinois lands

Protect birds, native pollinators, and other wildlife by restoring their habitat

Provide educational opportunities, open space, and nature exposure for all people

Learn more about prairie restoration and what you can do to help with the Prairie Patterns activity included in this lesson

The Illinois Prairie Path:

Where West Chicago's Railroad History and Prairie History Meet

The Chicago, Aurora & Elgin electric line interurban railroad once ran through West Chicago. There were stops at Prince Crossing, High Lake, and West Chicago with connections to Elgin and Geneva.

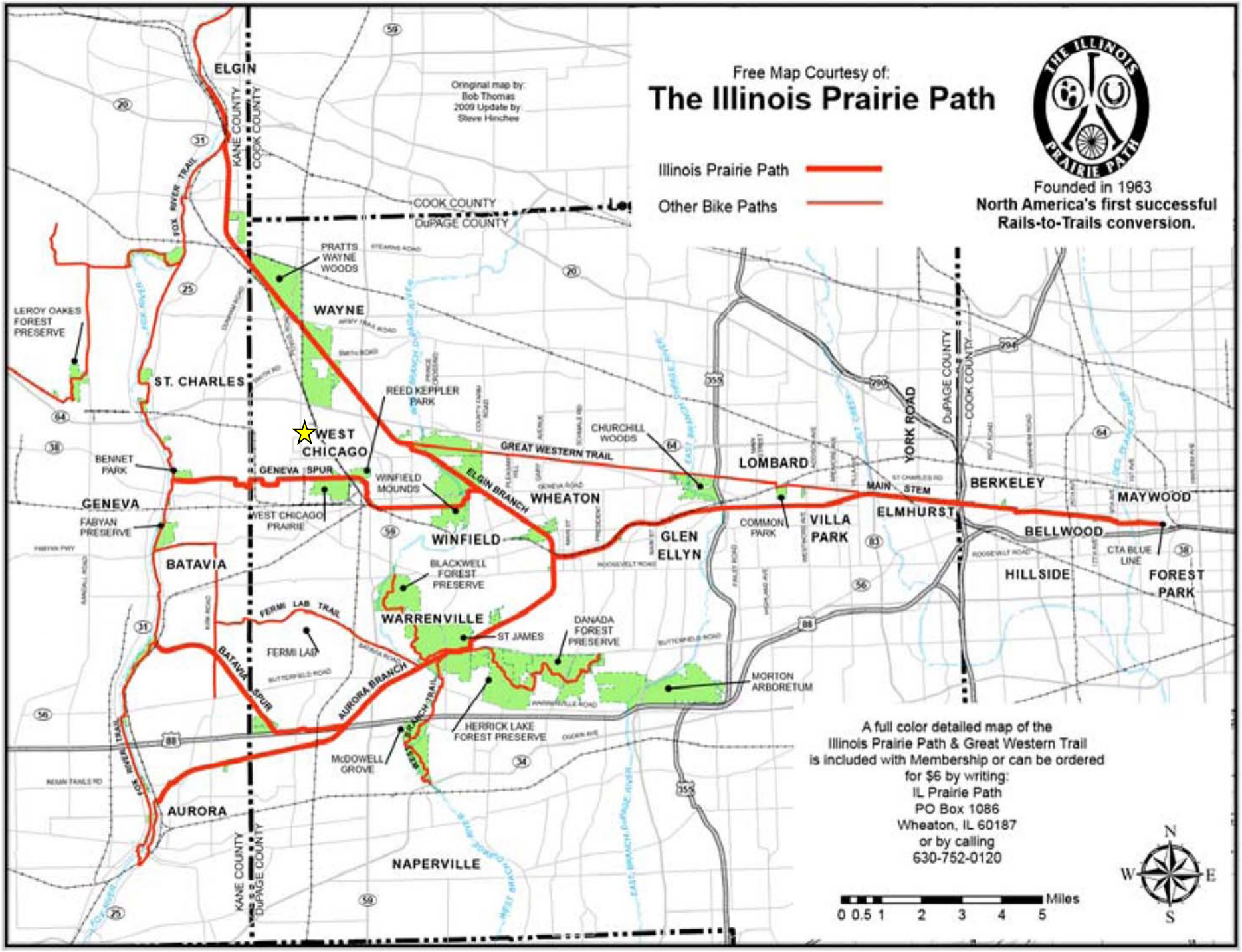
This railroad allowed for areas away from the center of town to develop. By using the CA&E, people could more easily commute to work from outlying areas of town.

Trains ran from 1902 until 1957 when the line was finally abandoned.

CA&E Station at Prince Crossing

One of the first CA&E cars in West Chicago

The Illinois Prairie Path began in 1963, when May Theilgaard Watts wrote a letter to the editor of the Chicago Tribune. She wanted to create a public path on the abandoned route of the Chicago, Aurora and Elgin Electric (CA&E) rail line. The path was built by many volunteers over many years. Now, you can walk, run, ride your bike, or cross country ski from Forest Park to Elgin or Aurora. The Illinois Prairie Path connects with other major greenways, making it possible to travel even further.


Free Map Courtesy of:
The Illinois Prairie Path
Original map by:
Bob Thomas
2009 Update by
Steve Hinchee
Illinois Prairie Path
Other Bike Paths
THE ILLINOIS PRAIRIE PATH
Founded in 1963
North America's first successful
Rails-to-Trails conversion.
ELGIN
KANE COUNTY
COOK COUNTY
COOK COUNTY
DuPAGE COUNTY
FOX RIVER TRAIL
PRATTS WAYNE WOODS
WAYNE
LEROY OAKES FOREST PRESERVE
ST. CHARLES
REED KEPPLER PARK
WEST CHICAGO
GREAT WESTERN TRAIL
CHURCHILL WOODS
LOMBARD
YORK ROAD
DuPAGE COUNTY
COOK COUNTY
BENNET PARK
GENEVA SPUR
WINFIELD MOUNDS
ELGIN BRANCH
WHEATON
MAIN STEM
BERKELEY
MAYWOOD
GENEVA
FABYAN PRESERVE
WEST CHICAGO PRAIRIE
WINFIELD
GLEN ELLYN
COMMON PARK
VILLA PARK
ELMHURST
BELLWOOD
BATAVIA
BLACKWELL FOREST PRESERVE
CTA BLUE LINE
HILLSIDE
FOREST PARK
FERMI LAB TRAIL
WARRENVILLE
ST JAMES
DANADA FOREST PRESERVE
FERMI LAB
BATAVIA SPUR
AURORA BRANCH
MORTON ARBORETUM
HERRICK LAKE FOREST PRESERVE
McDOWELL GROVE
AURORA
NAPERVILLE
KANE COUNTY
DuPAGE COUNTY
A full color detailed map of the
Illinois Prairie Path & Great Western Trail
is included with Membership or can be ordered
for $6 by writing:
IL Prairie Path
PO Box 1086
Wheaton, IL 60187
or by calling
630-752-0120
Miles
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Teacher Resources

Prairie Pages: Illinois Pioneers
https://www.illinois.gov/ihpa/Research/Documents/PioneersVol1n2.pdf

Prairie Pages: Early Years of Illinois Agriculture
https://www.illinois.gov/ihpa/Research/Documents/Vol4n3ILAgPP.pdf

Illinois DNR **Podcast** on Prairies—link at top of article
https://www.dnr.illinois.gov/education/Pages/ILPrairies.aspx

Fermilab Prairie Resources
https://ed.fnal.gov/data/prairie_resources.shtml

Morton Arboretum Activity
http://www.mortonarb.org/files/Prairie_Program_Post__Activity.pdf

Illinois State Museum Field Trip Pre/Post Activities—extensive lists of web and print resources at the end
http://www.museum.state.il.us/pdfs/pre-and-post-pdfs/ilprairieprepost.pdf

PRAIRIE PATTERNS

Teacher's Pre-Trip Information

The purpose of the following pre-trip information is to help the teacher prepare and motivate their class for their field trip to the forest preserve and to familiarize the students with vocabulary used during the program.

THEME: The prairie ecosystem supports a variety of life

GRADE LEVEL: Grades K - 8

OBJECTIVES

- Students will be able to name at least three reasons why prairies are important
- Students will be able to identify at least three common Illinois prairie plants
- Students will discuss the history of prairies in Illinois, and prairie today

LEARNING PLAN

Topics: history of the Central Illinois prairies, prairie plant morphology, prairie animals, habitat loss, extirpation, and prairie preservation and restoration

Student activities: introduction to prairies with visual aids, hiking through prairie habitat, identifying prairie plants, observing prairie animal signs, investigating galls, extirpation game, and reading excerpts from prairie journals

Learning Area	Goal #	Standard	Level and Benchmark
Science	12	B	1a-b, 2a-b, 3a-b
Language Arts	4	A	1a-d, 2a-c
	4	B	1a-b, 2a-b
Social Science	16	E	1, 2a, 3a-c (US)
	17	A	2a
	17	B	1b, 2a-b, 3a-b
	17	C	1a-b, 2a, 2c, 3c
Physical Education	21	A	1a-c, 2a-b

VOCABULARY

(Specific vocabulary covered may vary depending on grade level)

- **Respect** – to honor, to show concern for
- **Preserve** – to keep safe, to save or protect
- **Habitat**: The part of the physical environment in which a plant or animal lives; must include food, water, shelter and adequate space
- **Prairie** – a grassland habitat, characterized by periodic fires (tallgrass, mixed and shortgrass prairies exist in the U.S.)
- **Tallgrass Prairie**: Prairie characterized by an abundance of grasses that grow three or more feet tall. Prairies in Illinois are tallgrass prairies.
- **Prairie Restoration**: The effort to convert land that used to be prairie back to prairie habitat
- **Prescribed Burn**: A fire set by humans in a prairie area, with the purpose of restoring or maintaining prairie habitat
- **Extirpated**: An animal that is missing from part of its native range, but not extinct (for instance, the bison no longer lives in the wild in Illinois, but is not extinct)
- **Forb**: A broad leaf herbaceous plant (such as a prairie wildflower)
- **Adaptation**: a behavior, physical feature or other characteristic that helps an animal or plant survive

Supplemental Activities:

The following activities are suggestions for use in the classroom before and/or after the school program. Not all are appropriate for all age groups. Feel free to adapt them for your students' abilities.

Writing activities:

- **Alphabet Vocabulary**

Pass out posters and markers or crayons to every student. Each student should draw three lines from top to bottom and six lines from side to side, making a grid of 28 boxes on the poster. Show them an example. Begin assigning each letter of the alphabet its own box. Have the student come up with a prairie related word to match the alphabet boxes. They may uses prairie words that they are familiar with from the story, or you may have pre-made flash cards with definitions to assist them. Have students illustrate the posters. (http://www.openlands.org/midewin/grade3arts.html)

- **Vacancy: Habitats Available**

In this activity, students will each pick an native Illinois animal and write a classified housing ad to match the animal's habitat requirements. Have them think about what kind of shelter the animal needs, what kind of habitat they need, and where they get their food. For example, a student doing an ad for an eagle might write, "Tree needed, plenty of solitude required." Have students write out their ad or type it neatly. Paste all the ads, in the style of a classified ad page, onto a large piece of poster board and write the Activity title at the top of the poster board. Have students try to match each habitat ad with the animal it represents. You can have the students work in groups.
(http://www.openlands.org/midewin/grade6arts.html)

Research Activities:

- Have students choose a prairie animal and create a "Prairie Animal Report" describing what their animal needs in its habitat, what components of that habitat are available in their schoolyard, the connections the animal has to other organisms (plants or animals) in its habitat, and what they would need to add to provide a suitable habitat for their animal. Did they notice any similarities between the habitat needs of many of the animals their classmates presented? You may want to group students and have them create and present their reports by type of animal (e.g. birds,

mammals, reptiles).
(http://www.nationalgeographic.com/education/xpeditions/lessons/08/gk2/prairiek2.html)

- Have groups work together to create Same/Different charts, comparing prairie life in the 1800s with prairie life today. (http://www.teachervision.fen.com/us-history/lesson-plan/5324.html)

Suggested Readings:

- **Bluestem Horizon: A Story of a Tallgrass Prairie**

By Evelyn Lee
While growing up on the tallgrass prairie, Young Bison and his three companions experience a tornado which separates them from the herd and a prairie fire brought on by lightning.

- **The Prairie Builders: Reconstructing America's Lost Grasslands**

By Sneed B. Collard III
Collard chronicles the prairie restoration project at the Neal Smith National Wildlife Refuge in Iowa. His explanation of the complexities of returning farmland to tallgrass prairie incorporates information about the prairie ecosystem and accounts of the work of scientists and volunteers. Among the projects he describes are the locating and collecting of seeds of surviving native plants, managing controlled burns, reintroducing bison, and building a population of Regal Fritillary butterflies.

- **A Tallgrass Prairie Alphabet***

By Claudia McGehee
Illustrator Claudia McGehee brings the glory of the prairie back to life in *A Tallgrass Prairie Alphabet*. From the yellow stargrass that welcomes springtime to the butterfly weed that attracts summer's favorite winged visitors, from the horned lark that soars in the fall to the little bluestem that fights its way above the snow—each season unfolds in the vibrant color and vivid details of McGehee's scratchboard illustrations.

Additional Resources:

Web sites

- http://www.museum.state.il.us/muslink/prairie/index.html
- www.prairiepages.com

DNR Education Website: http://dnr.state.il.us/lands/education/index.htm

- Educational supplements (CD-ROMs for students and teachers, educational trunks, posters, books, etc.)
- ENTICE workshop schedule
- Project WET, Project WILD, and Project Learning Tree
- Contests and grants

Audubon Illinois Wildlife Series Display Boards*

- Butterflies and Moths
- Amazing Bats
- Illinois Owls

See www.champaigncountyaudubon.org for a list of resources for loan housed at the Education Center at the Homer Lake Forest Preserve.

**Available for loan from the Education Center at Homer Lake Forest Preserve. We have many more items in addition to those listed – please call 896-2455 for more information.*