UNIT TWO:
Lay of the Land

INTRODUCTION FOR THE TEACHER

Key Topics
Glaciation, waterways, transcontinental travel, early American history

Objectives
Students will:
1. analyze maps for natural and human-made transportation routes in the 18th and 19th centuries
2. identify the waterways associated with the Chicago Portage route,
3. use travel journals to understand the “experience” of travel on the waterways associated with the Portage Site
4. define the possibilities and decisions made in the development of waterway transportation
5. explain the geologic process by which this region was formed

Summary
This unit introduces the basic physical origins and characteristics of the Portage Route and helps to place it geographically as the link between two watersheds which form a transcontinental waterway for travel. The unit exercises students’ map skills as well as reading and analytical skills associated with primary sources. Since an excellent curriculum exists on the I & M Canal, Swamp to City does not investigate the canal directly. Call the Canal Corridor Association for more information.

State Goals and Standards Met by Unit 2
State Goal 1: A, C
State Goal 5: A, B
State Goal 15: D, E
State Goal 17: A, C, D
PORTAGES

Break into small groups. Each group is given a year and asked to brainstorm how people and goods move from place to place in North America.

_Suggested years: 1100, 1700, 1850, 1950, 2500._
LESSON 1

Water Makes the Road

14,000 years ago Lake Michigan was much larger than it is now. Virtually all of what is now Chicago was under water, part of the flat lake bed. In stages the water began to drain, receding and yielding up the dry land which would eventually become Chicago.

Where did the water go? Draining, it cut a path southwest through the soft limestone. It created that corridor between the hills and a waterway between the Mississippi and Great Lakes systems. It all started in the most natural way. Just a few miles west of Chicago’s lakefront—near present-day Kedzie Avenue—the earth’s surface formed a “divide” between two watershed systems. A slight ridge made all the water to the west flow into the Mississippi River and then to the Gulf of Mexico. Until the reversal of the Chicago River, all the water to the east flowed to the Great Lakes and then out to the Atlantic Ocean. Mud Lake—the Portage Site—is the swampy piece of land that bridged the two watersheds.

That same corridor, running from Chicago to Joliet, has been a channel for all kinds of transportation and communication. After the lake had receded to its present boundaries it left a thread of navigable water used for centuries by the First Peoples in the area. Explorers and fur traders of the 17th and 18th centuries adopted the path and called it the Chicago Portage Route. In the first half of the 19th century engineers and laborers constructed the Illinois and Michigan Canal near the original route and, at the end of the century, new minds and muscles built the mammoth Sanitary and Ship Canal. This confluence of rivers and canals became known as the Illinois Waterway.

But that’s not all. The tribal peoples’ footpaths that followed the waterways became roads for Euro-American wagons and railroad companies eventually constructed tracks along the route as well. In the 20th century, the now-historic Route 66 and the Stevenson Expressway were built with electricity transmission towers following the same pathway. Though modes of transportation change, the Portage Site remains.
**ACTIVITIES**

**It All Began With the Glaciers**

The Chicago region, with its ancient beaches, flat plain, swamps, rivers, few islands, and a ridge that divided two major watershed systems emerged from a geologic process that took place over thousands of years. The following series of images highlight the main stages in the formation of the land that greeted human beings.

1. Create a narrative for each image in which the geologic change in the land is explained. (See the introduction to this unit.)

2. Draw an image of what the area looked liked before Image 1.

3. Look at Images 1 and 2 and predict the area that became the Portage Site.

4. Estimate the future location of the Sears Tower.

5. Estimate the future location of your neighborhood.

6. Determine the time period for each stage illustrated in Images 1, 2, and 3. You will need to consult other books, the Internet, the Field Museum, or Notebart Nature Museum for more information about Ice Age Chicago.

7. Compare Image 3 to a contemporary map of the area. Find different kinds of maps, such as a GIS image, land use maps, or topographic maps. What do you think the Portage Site looks like today?
Lay of the Land

2.

Glaciers Set the Stage
Formation of the Land

Lay of the Land
2. Lay of the Land

**IMAGE 3**

*Formation of the Land Completed*
2. Lay of the Land

IMAGE 4
Close-up of Chicago Portage
LESSON 2

The Water Road is Developed in North America

Nature is not interested in getting animal furs or golden wheat to market nor is it interested in bringing manufactured goods to humans. But humans are interested in these things. Settlement in the Eastern portion of North America proceeded in stages from east to west starting on the Atlantic coast with settlements like Plymouth and Jamestown. Over years settlers moved across the mountains through Virginia, Kentucky and New York and across the plains and forests of Ohio, Michigan, Indiana, Illinois and Wisconsin. Before concrete and asphalt, roads were often difficult to use, frequently becoming muddy holes that would eat wagons down to the axles. In the early days, explorers had to find portages to link unconnected waterways; later, state governments constructed canals. Each water transportation system opened up a new area for settlement and exploitation. Because of the lack of good roads—and railroads until well into the mid-nineteenth century—often the best way to get goods to and from market was on the waterways.

VOCABULARY

Portage
an area between waterways where a boat would need to be carried
MAP ACTIVITY

The map entitled “Rivers and Lakes of a Portion of the Interior of North America” shows the natural waterways in the east and midwest as the early travelers would have experienced them.

1. Find the portages on the map. These are places between waterways where travelers would have to walk and/or carry their boats and goods. Write down what might make one route better than another, for example, the distance that you might have to walk or carry your boat.

2. Predict which portage sites grew into major cities.

3. Choose the best water route to travel from Lake Ontario to the Mississippi River. First, plot a trip from Lake Erie to the Mississippi. Then plot a trip from Lake Michigan to the Mississippi.

4. Locate the Chicago Portage. Is it shorter or longer than most? Does it require crossing plains or mountains? Why would the Chicago Portage have been attractive to early explorers? What information is not given on the map that you might need? What source(s) would you need to answer these questions?
2.

Lay of the Land

MAP
Rivers and Lakes in the Interior of North America
MAP ACTIVITY

From Portages to Canals

1. Compare the major canal routes map on the next page to the rivers map to see which places were chosen for development. Which parts were natural rivers and which parts had to be completely created by humans?

2. List the major canal routes, find the date of their completion, and identify the regions they opened for settlement.

3. Find four canals that connected the Great Lakes to the Mississippi River and opened up the settlement of Ohio, Indiana, Illinois and Wisconsin.

4. Identify the Illinois and Michigan Canal. Locate its proximity to the Portage Site. Why wasn’t it built on or through Mud Lake?
The Chicago Portage Route

As early as the 17th century, European explorers began planning how to “improve” the waterway so that it could be used for commerce on a larger scale than that being done by the Native Americans. The Europeans wanted to carry more goods, in larger boats. They were interested in taking the rich resources of the Illinois Country and sending them back home to Europe and sending European goods to settlers. With few roads developed, they looked to the water for their highways. The idea put forward by Jolliet in 1673 was that with the construction of a canal, a continuous waterway could be developed between the interior of the continent and Europe, by way of the Great Lakes and the Mississippi River. This would allow for the easy flow of people and products. One hundred and sixty years later, the state of Illinois, with the support of the U.S. government, initiated the construction of a canal which would create the final link in the waterway chain.

The Chicago Portage Route, the link between Lake Michigan and the rivers that flowed to the Mississippi had an east and west end. Traveling west from Lake Michigan, a canoe could easily travel around the sandbar at the mouth and into the Chicago River, then down the South Branch for a few miles. Then at a point near 27th and Leavitt the river would branch again with one arm reaching toward a swamp, Mud Lake. Canoes could be unloaded and carried a short distance to the lake which, if at high water, could be paddled to its western end near 48th and Harlem. In low water, the canoes needed to be pushed or carried through the muck. At the western end of Mud Lake was a small creek leading a short distance to the Des Plaines River. (See close-up image on page 8.)

Using maps, illustrations, and narrative accounts of eyewitnesses, we can place the Chicago Portage Site in the dreams and schemes of explorers, investors, and travellers.
LaSalle Assesses the Portage Site

“This is an isthmus which is 41 degrees 50 minutes elevation from the pole on the West of the Lake of the Illinois [Lake Michigan] where one goes by a channel formed by the junction of several small streams or gullies of the prairie [the Chicago River]. It is navigable about two leagues to the edge of this prairie. Beyond this at a quarter of a league distant toward the west there is a little lake [Mud Lake] a league and a half in length which is divided in two by a beaver dam. From this lake issues a little stream which after twining in and out among the rushes for half a league falls into the Chicago River [Des Plaines] and from there into the river of the Illinois. When this lake is full either from the great rains in summer or from the floods of the spring, it is discharged also into this channel which leads to the Lake of the Illinois [Lake Michigan] whose surface is seven feet lower than the prairie where is situated this lake....

“The Lake of the Illinois always forms a sand bank at the entrance of the channel which leads to it. I doubt very much in spite of what anyone says whether this could be cleaned out or cleared away by the force of the current of the Chicago River [Des Plaines] when it was made to flow therein, since much greater currents in the same lake cannot do it. Moreover the utility of a canal would not be very great, for I doubt when everything should succeed if a boat could overcome the great flood which the currents cause in the Chicago [Des Plaines] in the springtime.... Again, navigation would be only for a short time at most for 15 or 20 days in the year after which there is no longer any water. What confirms me still further in the thought that the Chicago River [Des Plaines] could not clean the mouth of the channel [Chicago River] is that when the lake is filled with ice it blocks up the most navigable mouths. At this time and when ice is formed there is no longer water in the Chicago River [Des Plaines] to hinder blocking this channel with sand. Also I would not have made mention of this way of communication if Jolliet had not proposed it without sufficiently examining the difficulties”
ACTIVITY

1. Review Jolliet’s account and map (Unit 1). Why might LaSalle and Jolliet differ?

2. Hold a debate between the two French explorers. Try to use only the knowledge of the land they would have had in the 17th century.
John Tipton was a legislator from Indiana who visited Chicago in 1821. This description by this self-taught man described the lay of the land.

“The village of Chicago consist[s] of about 9 or 10 houses & families mostly French Trader[s] without any kind of civil government. The village [is] situate[d] on Boath Side [s] of the mouth of [the] Chicago River. The Prairie here [is] high, Dry, Sandy Soil ellivated about 15 feet above the levil of the water of the Lake. Chicago River at is [its] mouth [is] about 3 or 4 chain wide. (It) puts in from west to east through the Prairie with a small grove on its S Bank & one of the north, neither of which continues down to the Lake Shoar. A high narrow Sod Barr puts out from the front of Land on the north Side of Chicago River [and] Runs parrellell with the Lake Shore about 40 chain. The River passes between this Barr and the main land below the village & its mouth [is] constantly chocked up with Sand, affording not more than 2 feet of water at the mouth while the common depth of the River from this Barr to the fork, the distance of half a mile, is 16 feet. (Through the Barr the soldiers have cut a pass for the water of the River opiset its mouth.) The north fork runs parrellell with the Lake Shore for some distance, then runs more west and extends 25 mile[s] in the country. The South fork Rises in a pond 5 mile west of the mouth in a levil prairie, through which pond there is ninemile of a portage to the Le Plein River, a Branch of Illinois. We are told in high time of water it flows out of this Pond into Boath River and that cannoes can pass [from] it out of one River into the other.

“A communication can easily be opened between them. The Greatest difficulty seemes to be that of the water beeing 5 or 6 feet higher in the Le Plein River than the levil of the Lake.

“...Throughout the whole country [there] seems to be a grate wont of Timer & what few groves we have seen is low scrubby Trees mostly oak and fiew of sufficient length to afford more than one rail length, an[d] many not so long. Grate part of the Prairie [is] low and wet, and the dry land [is] very sandy on the margin of the lake. Half mile south of Chicago are some hills of white sand that appeare to have been formed by the Beating of the waves and wind, [and are] ellivated some ten or 12 feet above the levil of the Prairie, and near 30 above the Lake on which grows a small grove of low pine.”
2. Lay of the Land

**QUESTION**

Tipton is describing the same route as Jolliet, LaSalle, and Major Steven Long (Unit 5). Why was he interested in learning more about Chicago?

**ACTIVITY**

Draw a picture based on Tipton’s description.
Gurdon S. Hubbard began his career as a clerk of the American Fur Company. He later became one of the most successful businessmen and leaders in the city of Chicago. His description of experiencing the portage as a young man gives insight into what a difficult task it was to use the portage commercially. As boats became larger to transport heavier loads, the typically shallow water was not deep enough to float fully loaded canoes in Mud Lake.

"After a few days at Chicago, spent in repairing our boats, we struck camp and proceeded up the lagoon, or what is now known as the South Branch, camping at a point near the present commencement of the Illinois and Michigan Canal, where we remained one day preparing to pass our boats through Mud Lake into the Aux Plaines River. Mud Lake drained partly into the Aux Plaines and partly through a narrow, crooked channel into the South Branch, and only in very wet seasons was there sufficient water to float an empty boat. The mud was very deep, and along the edge of the lake grew tall grass and wild rice, often reaching above a man's head, and so strong and dense it was almost impossible to walk through them.

"Our empty boats were pulled up the channel, and in many places, where there was no water and a hard clay bottom, they were placed on short rollers, and in this way moved along until the lake was reached, where we found mud thick and deep, but only at rare intervals was there water. Forked tree branches were tied upon the ends of the boat poles, and these afforded a bearing on the tussocks of grass and roots, which enabled the men in the boat to push to some purpose. Four men only remained in a boat and pushed with these poles, while six or eight others waded in the mud alongside, and by united efforts constantly jerking it along, so that from early dawn to dark we succeeded only in passing a part of our boats through the Aux Plaines outlet, where we found the first hard ground. While a part of our crew were thus employed, others busied themselves in transporting our goods on their backs to the river; it was a laborious day for all.

"Those who waded through the mud frequently sank to their waist, and at times were forced to cling to the side of the boat to prevent going over their heads; after reaching the end and camping for the night came the task of ridding themselves from the blood suckers.

"The lake was full of these abominable black plagues, and they stuck so tight to the skin that they broke in pieces if force was used to remove them; experience had taught the use of a decoction of tobacco to remove them, and this was resorted to with good success.

"Having rid ourselves of the blood suckers, we were assailed by myriads of mosquitoes, that rendered sleep hopeless, though we sought the softest spots on the ground for our beds. Those who had waded the lake suffered great agony, their limbs becoming swollen and inflamed, and their sufferings were not ended for two or three days."

"It took us three consecutive days of such toil to pass all our boats through this miserable lake; when we finally camped on the banks of the river, our goods had all crossed the portage and we were once more ready to proceed."
ACTIVITIES

1. Review all the narratives in this unit. Use the engineer-drawn map (from Unit 1) or the artist's rendition of the Chicago Portage Route in this unit to trace each traveller's journey. Locate the areas that were specifically noted by each traveler.

2. Create a Venn diagram that contains each person's description of the Portage site. What are the matters upon which they agree or disagree? These issues will be reviewed again in Unit 5.

3. Write a description of the “lay of the land” of your neighborhood so that an outsider to your community will be able to picture it.

4. Imagine yourself a big time film producer. Take either Hubbard’s or Tipton’s account and write a play or create a storyboard of it.

5. Look at a LAND USE map of the Chicago metropolitan area. Trace the railroads, highways, waterways, and air traffic that currently exist. How many paths cross or use the Portage Route in 2003?