

MICHIGAN HISTORY – THE PIONEERS

Michigan Lesson Plan

Objectives:

1. Relax and have fun, it is not nearly as hard as it sounds. Feel free to ask for help, clarification or demonstration.
2. To understand ways in which the natural and human history of Cass County has influenced the land and communities of this area.
3. To gain an appreciation for the thrifty and resourceful lifestyle of the pioneers.
4. To learn skills that the pioneers used in their daily lives as evidenced by taking part in a pioneer craft activity.
5. To understand the technology has extended the ability of people to make positive and/or negative changes in the world. That all technologies influence all living things.
6. To learn some basic thermodynamics concepts about heat transfer and state changes.

Key Terms:

1. **Natural History** = The study of plants or animals.
2. **Alliances** = to make treaties or partnerships with.
3. **Resources** = Materials or people available to help produce things with.

Materials:

Materials will depend on which craft activity you intend to do.

Procedures:

1. Ask students to imagine that they are living in the early 1800's. Ask questions to help them visualize some of the following:
 - A. Natural history: 10,000 years ago when the last glacier retreated to the north, chunks of ice made depressions in the land and melted to form lakes (like Shavehead Lake). Different types of soil were deposited by the glacier as it melted. Plants, woody shrubs and trees colonized the region as the climate warmed. In Cass County, where the glacier left lots of sandy soil, much of the land became covered by oak-hickory forests. Beech-maple forests were also common in more moist regions.
 - B. The Pottawattomi Indians inhabited southern Michigan for hundreds of years before European settlement. In the summer they grew corn, squash, beans, tobacco, and other crops along the river bottoms. In the winter and spring they hunted game and obtained maple sugar and other wild food from the forests. The following animals, no longer found in Cass County, lived here before 1850: Black Bear, River Otter, Beaver, Elk, Porcupine, Cougar, Gray Wolf, Passenger Pigeon.
 - C. From 1650-1825 the Pottawattomi in Cass County began seeing many white trappers, traders, explorers, and missionaries. At times they made alliances with these French and English people, but more often there were misunderstandings and conflicts over land and other resources. The first white settlers moved to Cass County in 1825, and within 15 years most of the

remaining Native people had been moved to Kansas. However, there are still many Pottawattomi people living in this area.

- D. The white settlers cleared forests and drained wetlands so that they could farm the land. They built schools, churches, log cabins, and roads. It was a rugged life for the pioneers, who were accustomed to established towns, roads, and the availability of goods back east.
2. Ask the students to imagine the work involved with managing a pioneer household in this early 19th century setting. In particular, ask the students how they would obtain their food, clothing, tools, heat, water, light, etc. Give examples of materials not present in nature, such as cloth, plastic, and concrete that have become available because of science and technology. Way back in the pioneer's days many of the materials hadn't been developed or at least advanced to today's level (for example plastic, concrete)
 3. Have the students brainstorm differences between the technologies of the 1800s versus today's technology. Some major examples cars, main stream electricity, computers, etc.) Each of these technologies has their advantages, but also drawbacks. Have the students come up with positive/negative changes that have happened or could happen because of technology. Show the students that we (humans) have the responsibility to use technology for the good. Explain how technologies influence all living things. One of the advantages of technology is that humans can match or exceed many of the abilities of other species. From canoes to electricity for many appliances to heat to sophisticated structures, etc., etc.
 4. Have the students participate in a craft activity. You may decide to have the students make one or more of the following: dipped candles or butter. See attached instructions. For the Indiana standards, do the candle making activity. Focus on standards.

In this activity you will boil water, melt the wax by placing in contact with hot water. Cool/Solidify the wax by placing in cold water.

5. Do the pioneer's supply list activity. Bringing in the concepts from above and other concepts from the sheet.
6. Students can make more wicks (rope) if they desire and finish early.

(Refer to Lesson Plan Folder for more detailed information on pioneer crafts, pioneer travel, and early Michigan stories.)

Candles

1. Explain the process of candle-making and the usefulness of candles prior to electricity. Tallow candles (made from beef or sheep fat) were typically made for everyday use, whereas beeswax candles were made for special occasions.
2. Start by making the wick (rope) out of cotton string (pictures and instructions are at the bottom of the page)
3. Make candles by dipping a wick in hot paraffin wax, allowing to cool by dunking in cold water, if students are going too fast remove the cold water and let them air cool, and repeating. While still warm but not too hot, the students can mold or bend them carefully for a variety of shapes or press beads and other objects into it. The base of the candle needs to be kept small enough to fit in a toilet paper tube, the students can each make 2.

Butter

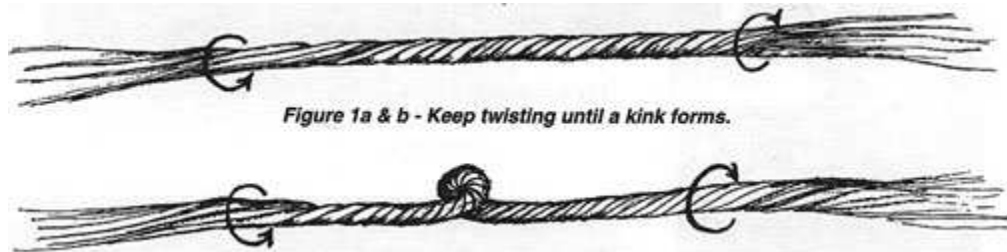
1. Pass out baby-food jars half-filled with heavy whipping cream. One good method of shaking the jars is to place each one in a sock (for protection), and then have two students toss it back and forth between them, giving it a good shake with each toss.
2. Before or during the shaking process, talk about the benefits, for a pioneer family, of owning a cow (to make cheese, butter, etc.). Explain that when cows were allowed to browse on garlic, wild onions, or turnips, the butter had an unpleasant taste. In winter, when cows couldn't browse on fresh grass, the butter was almost white, so carrot scrapings were added for color.
3. Explain the art of butter-making during pioneer days: Typically the women and girls were responsible for the dairy aspect of the farm. To make butter, the fresh milk was left out overnight in a shallow pan so that the cream would rise. Then the cream was skimmed off the top and left to sit until slightly sour. Next the cream was pounded into butter for about 30 minutes in the wooden churn. Then the buttermilk was drained off and saved for baking or as food for the pigs (or else it would turn the butter rancid). Finally, it was sprinkled with salt, pressed in a crock, and stored in a cool place. Sometimes when traveling, a leather sack of cream was hung from a moving wagon to make butter.
4. Encourage students to observe the cream changes in the jars. The shaking action separates the fat globules from the surrounding protein membranes, making the fat globules stick together. After about ten minutes, the cream should be separated into a bluish-white liquid (buttermilk) and pale yellow clumps (butter). Shake until there is a large lump instead of many tiny suspended particles.
5. Carefully pour the buttermilk off of the butter. Rinse the butter with water until the water is clear. Taste the butter on a cracker or piece of bread, then work in a little salt and taste again (use a wooden spoon as metal spoils the flavor).

Making Wicks (Rope)

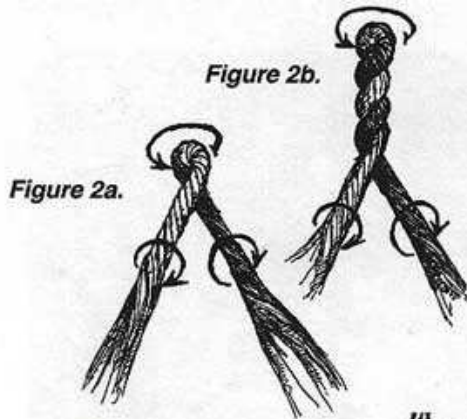
Making Cordage By Hand

by Norm Kidder

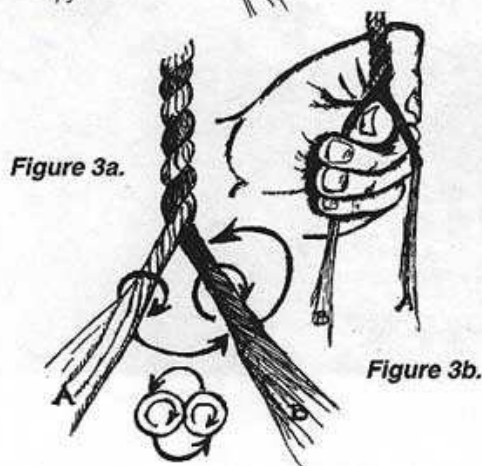
Cordage (rope and string) can be made from many different fibers including (Bast) Dogbane, Milkweed, Nettles, Hemp, Flax; (Leaves) Cattail, Yucca, Agave, Douglas Iris; (Bark) Willow, Maple, Basswood, Cedar; (Root) Leather Root, Beach Lupine; (Whole stem) Tule, straw, Juncus. Each material has specific requirements for extracting and preparing the fibers, but there are only two basic ways for using the fibers to make a cord: braiding (or plaiting) and twining. Braiding was usually done with flat, split materials such as cattail or flattened straw. The instructions in this article will deal only with twining, specifically with two ply (S-twist, Z ply, also called right handed) cordage.



After preparing a bundle of fiber half the thickness of the finished cord, place your hands six to twelve inches apart and about one third of the way from one end. Twisting the fibers clockwise with both hands, wind the bundle tight (making single-ply cordage).



Bring your hands closer together and keep twisting. The kink should rotate on its own in a counterclockwise direction (Fig. 1a & b). Twist until two or three rotations occur (Fig. 2a & b). This is the start of a two ply cord. At this time you can attach the end to something (or someone) which can rotate (free-end) and keep twisting with both hands turning clockwise OR you can attach the end to something solid (fixed-end) and begin twisting and counter-rotating (see below).



Counter-rotating, one form of finger-twisting, involves each hand applying a clockwise (S) twist into a ply, while passing the right ply over, and the left ply under (counter-clockwise or Z-plying). In Figure 3a, your left hand twists ply A clockwise,



Figure 5.

while your right hand does the same with ply B. At the same time, you pass ply B over and behind your left thumb and lock it in place with your remaining fingers, as in Figure 3b. You then take A in your right hand and B in your left and repeat, over and over and over again! These two methods are particularly handy with larger and coarser materials such as cattail and tule ropes.

Finger-twisting finer material is usually done completely in the hand, with the finished string being wound on a bobbin or netting needle as you go. Your left hand acts to control tension while your right hand does the twisting. Begin as in Figure 1, then place the Y (the point where the two plies come together) between your left thumb and forefinger. Take the lower of the two ply strands and twist it tightly clockwise until it begins to kink. Lock the twist in by closing your remaining three fingers over the strand (see Fig. 4a.). Then, while holding the twisted ply A securely, twist ply B with your right thumb and forefinger. As you twist, you should feel the completed string begin to twist counter-clockwise (step Fig. 4b.). Follow this motion

with your left thumb and forefinger while maintaining even tension and a symmetrical Y. Next move your left thumb up to the fork in the Y as before and repeat steps 1 and 2 until you need to add more fiber.

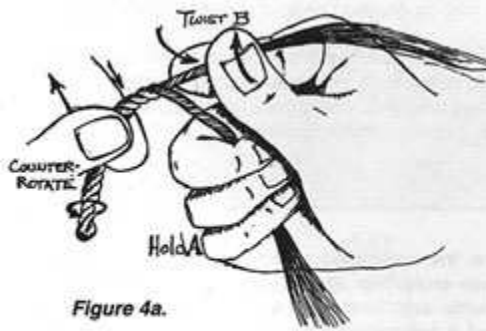


Figure 4a.

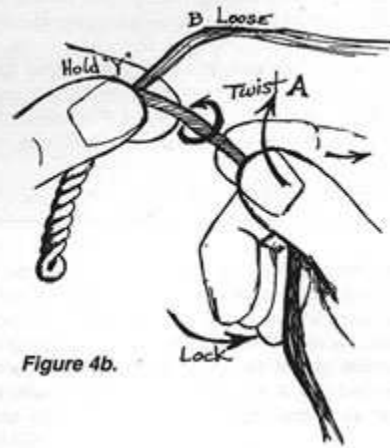
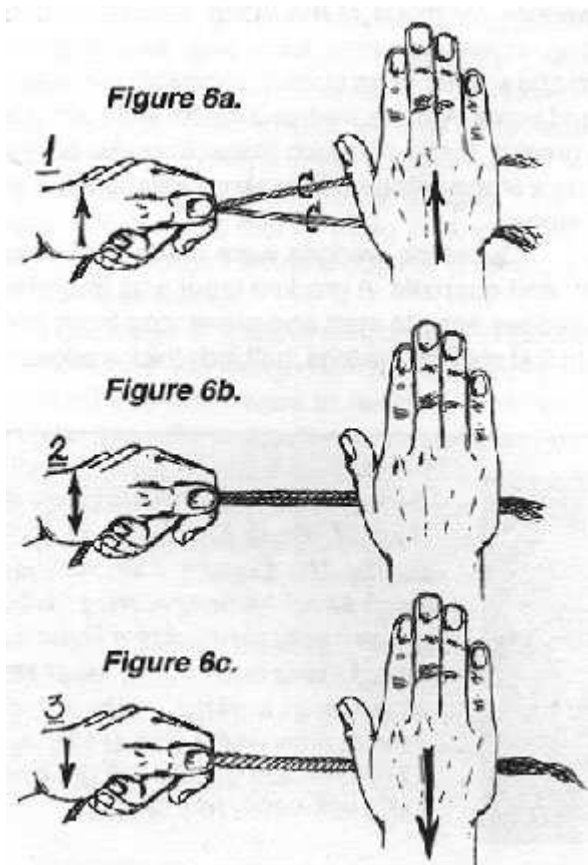


Figure 4b.

If you began your cord off-center, then one side will run out of fiber first. As you get to within about 3 inches of the end of this short ply, prepare another bundle of fibers the same size as you began with, but taper the end of the bundle for about 4 inches. Lay this bundle parallel to the bundle being replaced, and sticking out about an inch beyond the Y (Fig. 5). Continue twisting as before. You should also add in if one ply becomes thinner than the other, or if both plies become thinner than they started. In these cases add just enough fiber to bring them back to correct size. Ideally, your cord should stay the same size throughout, although aboriginal cordage did vary about fifty percent in nets. Bow strings and fish lines under heavy pull should be very even. It is also possible to add to both sides at the same time by bending a bundle of fiber in half and placing the Y of the bundle into the V of the Y, but it is harder to keep from making a lump at this point. After



your string is finished, you can cut or burn (carefully) off the overlap ends to make your string less fuzzy.

NOTE: dry surfaces tend to slip, so you should keep your hands and the fiber damp while you are working. Squeeze out excess water though or your string will be loose when it dries.

Finger-twisting methods are best used when a relatively small amount of string is being made and/or has to be very tight and even, and when very stiff or coarse materials are being used, such as cattail or tule. When making mass quantities of cordage, it is much faster and easier on the hands to use the leg (thigh) rolling method. The principle is the same, S-twist, Z-ply, but the twist is applied by rolling on the leg, rather than twisting between the thumb and finger. You can continue to work without getting cramps in your hand muscles, and you can (with practice) work faster (about ten feet per hour). The critical element in making this method work is having the right surface on which to roll.

Traditionally the bare left thigh is used. If you do not want to expose your skin, or if your legs are hairy, you can use pants, but these should be tight around your leg, so they won't bunch up as you roll, and they should have a rough enough surface to give traction. Keeping them damp is also critical. I keep a bucket of water next to me while work. This method is illustrated in Figure 6a-c.

Before you begin, prepare as much fiber as you will be using during that session. Once you get into the rhythm of the work, you won't want to stop and clean material.

Roll both plies away from you with the palm of your right hand (pre-roll each separately). Your left hand holds the Y and follows the movement.

Bring the two plies together by moving the left hand forward and back. If the two plies did not get tightly rolled the first time, carefully pick up both plies and repeat step one first.

When the plies are tight and touching, bring the right palm back towards you, counter-rotating the two plies into two-ply cordage.

Before repeating step one, it is necessary to untangle the loose ends of fiber, separate into two plies, and move the left hand up to the new Y.

Standards

Indiana-History

4th Grade

- 4.1.1 Identify and compare the major early cultures that existed in the region that became Indiana prior to contact with Europeans.
- 4.1.5 Describe the removal of Indian groups from Indiana in the 1830s.
- 4.4.1 Give examples of the kinds of goods and services produced in Indiana in different historical periods.
- 4.4.6 List the functions of money and compare and contrast things that have been used as money in the past in Indiana, the United States, and the world.
- 4.5.6 Investigate the contributions and challenges experienced by people from various cultural, racial, and religious groups in Indiana during different historical periods by reading biographies, historical accounts, stories, and electronic media.

Indiana-Science

4th Grade

- 4.4.8 Know and explain that artifacts and preserved remains provide some evidence of the physical characteristics and possible behavior of human beings who lived a very long time ago.

5th Grade

- 5.1.5 Explain that technology extends the ability of people to make positive and/or negative changes in the world.
- 5.1.7 Give examples of materials not present in nature, such as cloth, plastic, and concrete that have become available because of science and technology.
- 5.3.8 Investigate, observe, and describe that heating and cooling cause changes in the properties of materials, such as water turning into steam by boiling and water turning into ice by freezing. Notice that many kinds of changes occur faster at higher temperatures. Candle making only.

6th Grade

- 6.1.9 Explain how technologies can influence all living things.
- 6.4.13 Give examples of how human beings use technology to match or exceed many of the abilities of other species.

SUPPLY LIST FOR PIONEERS

Listed are supplies a Pioneer family of 4 people (2 adults and 2 children) may have taken on their 5-month journey by covered wagon. What would you take? Keep in mind; your wagon will only carry 2000lbs!!

Items:	pounds	Items:	pounds
coffee grinder	5	bacon	40
rug	40	fruit – dried	150
bedding	20	beans – dried	50
mirror	40	dried meat	150
dutch oven	70	vegetables – dried	150
butter churn	40	cornmeal	150
table with 4 chairs	200	split peas	100
piano	900	oatmeal	25
organ	2000	vinegar	25
cradle	75	lard	25
wooden bucket	10	pickles	50
bedpan	2	dried beef	25
butter mold	1	family Bible	2
rocking chair	50	books	2
pitcher with bowl	5	hunting knife	1
stove	700	bag of clothes	40
cooking utensils	2	fiddle	2
stool	10	snowshoes	8
spinning wheel	80	rifle	10
lantern	4	pistol	7
clock	1	ammo	20
10 candles	1	first aid kit	3
soap	5	doll	2
set of dishes	40	jump rope	1
salt pork	5	marbles	1
assorted spices	5	ax	15
barrel of water	350	shovel	12
grain for animals	400	hatchet	9
vegetables	5	hammer	7
flour	150	hoe	3
tea	10	anvil	150
salt	75	grinding stone	75
sugar	75	animal trap	15
coffee	50	rope	4

Have students make the outline of a covered wagon by taking a piece of sidewalk chalk and on cement, draw a wagon box 10 or 12 ft long X 4 or 6 ft wide and 2 ft tall. Students may then do the above activity. When they are finished, ask the students:

1. How and who chose what to take in the wagon?
2. Did anyone disagree on items to take?
3. What items were left behind?
4. How many family members and what ages are they?
5. What animals did they take?
6. What are some items you could order from a nearby store once you settled on your land? How would you pay for these items?

Complete Wagon Supply List

Can take 2000lbs., list has 1998lbs.

bedding	20	lard	25
coffee grinder	5	vinegar	25
butter churn	40	oatmeal	25
bucket	10	family Bible	2
butter mold	1	books	2
pitcher/bowl	5	knife	1
cooking utensil	2	clothes	40
lantern	4	fiddle	2
10 candles	1	rifle	10
soap	5	pistol	7
dishes	40	ammo	20
water	350	1 st aid kit	3
flour	150	doll	2
tea	10	rope	4
salt	75	animal trap	15
sugar	75	hoe	3
coffee	50	hammer	7
dried meat	150	hatchet	9
dried fruit	150	shovel	12
dried veggies	150	ax	15
cornmeal	150	marbles	1

Michigan History Review Sheet

1. Name three technologies that we have today that pioneers did not have.

2. What pioneer craft activity did you do? _____

3. Name three things pioneers had to have as they journeyed west. _____

4. Name three challenges that pioneers faced as they settled in a new area. _____

5. What would you miss the most about today, if you were transported back to 1830?

6. How could we make more candles faster? _____

Michigan History Review Sheet

1. Name three technologies that we have today that pioneers did not have.

Answers will vary...electricity, cars, tv, radios, cameras, etc.

2. What pioneer craft activity did you do?

3. Name three things pioneers had to have as they journeyed west.

Answers will vary...dried meat, dried vegetables, water, clothing, an ax, animal trap, etc. Answers can be provided through the supply list for pioneers.

4. Name three challenges that pioneers faced as they settled in a new area. Finding all of the supplies needed. They would need wood to build their house. Finding possible food, growing vegetables and hunting animals in the area. Learning about their new area, the danger and safety issues.

5. What would you miss the most about today, if you were transported back to 1830?

6. How could we make more candles faster? You can use cold water in between the layers of wax. You could also tie wicks onto a stick and dip more candles at one time.

Michigan History

- About 10,000 years ago** glaciers cut deeply into the earth and then melted, creating the five Great Lakes.
- About 1630** First explorers to reach Michigan.
- 1701** French fort established in Detroit to keep the Iroquois and English out of Michigan.
- 1751** there were seven French forts in Michigan.
- 1763** France loses French and Indian War, gave up practically all of its North American territory.
- 1776** The citizens of the 13 Colonies rose up to demand independence as the United States of America.
- 1783** Michigan became part of the Northwest Territory under American rule. The British remained at the forts at Mackinac and Detroit for another 10 years.
- 1796** British marched out of the Fort of Detroit. That was more than 10 years after the Revolutionary War.
- 1812** England and the United States were again at war. The war was finally ended by a ship fight in Lake Erie near Detroit. The Americans won the fight and the war was over.
- 1837** Michigan became the 26th state. Detroit was the capital of Michigan.
- Lumbering was big business from 1840 to 1900.** It is believed that about 170,000,000,000 board feet were cut. That is enough wood to cover Michigan and Rhode Island with boards. Many of the trees were over 150 feet tall, enough to build a whole house from one tree.
- 1848** Lansing became the capital of Michigan.
- 1861 to 1864** The war between the North and South.
- 1896** The first gasoline powered car was driven in Detroit by Charles King. He built the car in a Detroit machine shop.
- 1941** World War II begins
- 1947** Michigan's first TV station began in Detroit. It was the sixth station in the whole country.
- 1961** Roger Maris broke Babe Ruth's home run record. The record stood until 1998 when it was broken by Mark McGuire.
- 1963** Dr. Martin Luther King Jr. give his "I Have a Dream" speech.
- 1964** The Ford Mustang, one of the most popular cars of all time was introduced.
- 1969** In July, 1969 Neil Armstrong became the first person to actually step on the moon.
- 1982** People began to buy computers for home, school, and businesses.

Indiana History

- **Prior 10, 000 B.C. - During the Pleistocene period, also known as "THE ICE AGE," much of Indiana was covered by ice.**
- **1000 B.C. - 900 A.D. - Woodland Indian era: Archaeological evidence of cultivation, ceramic pottery, and burial mounds like those at [Mounds State Park](#) near Anderson, IN.**

17th century

- **1614,1615 - Samuel de Champlain, governor of New France was believed to be the first of the French explorers to have seen the Maumee in 1614 or 1615.**

18th century

- **1754-1763 - The French and Indian War**
- **1776-1787 - The Revolutionary War**
- **1794 - Anthony Wayne establishes a Fort at Kekionga, and names it "Fort Wayne".**

19th century

- **1800-1816 - The Indiana Territory**
 - **Indiana Territory was established from the Northwest Territory with William Henry Harrison (1773-1841) as the first Governor and Vincennes the capital.**
- **1803 - Potawatomi and others signed treaties at Fort Wayne, Fort Industry (1805), and Grouseland (1805), ceding portions of Ohio, Indiana, and Illinois..."**
- **1804 - Vincennes, the capital of the Indiana Territory, also served as the capital of the Louisiana Purchase for nine months in 1804.**
- **1805 - Michigan Territory separated from the Indiana Territory.**
- **1811 - Indians are defeated in the Battle of Tippecanoe under W. H. Harrison**
- **1825 - Indianapolis becomes the state capital**
- **1842 - The University of Notre Dame is founded in South Bend**
- **1851 - Indiana adopted a state constitution that included a measure protecting the property rights of married women.**
- **1889 - The Standard Oil Company builds an oil refinery in Whiting**
- **1897 - Tribal status of the Indiana Miami was terminated, however there were still 90 Miami listed on the 1910 census of Indiana.**

20th century

- **1906 - U.S. Steel Company builds steel plant and founds the city of Gary**
- **1911 - The first Indy 500 car race takes place**
- **1915 - Workmen's Compensation Act becomes law**
- **1932 - One-fourth of the workforce was unemployed.**
 - 1956 - The Northern Indiana Toll Road is completed.**