

LESSON 8



A Crop Duster Tour of the Midwest

Why do we call the Midwest “America’s Heartland”?

Introduction

Hi. My name is Mr. Ortiz, and I’ll be your guide as we explore the Midwest. I’m not normally a tour guide. I work as an economist at a bank in Chicago. My job is to study how people make, use, and manage goods and services. I wanted to lead your tour for several reasons. I want you to learn about the economy of the Midwest. I also want to show you the geography of this region and tell you about its colorful history. And most of all, I love to travel.

Over the course of this tour, we will visit nine of my favorite places in the Midwest. You’ll see great monuments, open spaces, an engineering solution to a problem, factories and towns, airports, and even a shopping mall. Along the way, look for answers to this question: How did this one region earn these two very different nicknames— “America’s Breadbasket” and “America’s Heartland”?

We will be touring in little planes called crop dusters. Most of the time, farmers use these planes to spray chemicals on crops. Because of their small size, crop dusters can fly close to the ground, so we should get some great views.

Fasten your seat belts for takeoff. Our first stop will be in Missouri, nicknamed the “Show Me State.”

Social Studies Vocabulary

assembly line

feedlot

fertile

frontier

livestock

meatpacking

prairie

reservation

transportation hub

◀ A crop duster, like this one, flies close to the ground. Crop dusters often fly over fields in the Midwest.



Civics



Economics



Geography



History

The Midwest Region



Corn, Wheat, Milk, and Milk Products in the Midwest





This is the Gateway Arch in St. Louis. It is a memorial to the pioneers who helped settle the West.

frontier the beginning of unexplored land

1. St. Louis, Missouri: Gateway to the West

Welcome to St. Louis, Missouri, and its Gateway Arch. I chose St. Louis as our first stop because of its history. This was also the first stop for many people who were traveling west to settle.

St. Louis began as a **frontier** town. The frontier was a region of wild country, unexplored by Europeans. French traders were the first people to settle in St. Louis. They chose this spot because it is near two mighty rivers, the Mississippi and Missouri. These rivers come together just north of St. Louis.

Pioneers were the first Americans to settle the West. Many of these pioneers started their journey by heading west from St. Louis. This is why St. Louis is called the “Gateway to the West.” The Gateway Arch was built to honor those pioneers. It is a proud reminder of St. Louis’s history.

The Gateway Arch is one of the most famous arches in the world. Made of gleaming stainless steel, it rises about 630 feet above the Mississippi River. Visitors can ride a tram inside it to the top. I did this a few years ago with my family. The cars are small and the ride is bumpy, but the view from the top is great.

2. The Farm State of Iowa

One of my best friends from college said, “If you wanted to invent a farming state, you couldn’t do much better than Iowa.” He grew up on an Iowa farm that looks a lot like the one you see here.

“First,” he said, “you would want your farm state to be mostly flat.” Iowa began as **prairie** land. A prairie is an area of flat or rolling land covered mostly with tall grasses. Later on, farmers planted crops on the prairie.

Next, you would want **fertile** soil. The word *fertile* means “able to produce good crops.” Iowa has so much fertile soil that farms cover almost all of the state.

Finally, you would want good transportation. Iowa lies between the Mississippi and Missouri rivers. Before there were trains, Iowa farmers used these rivers to send their crops to market.

Today, Iowa farms produce huge crops of corn, soybeans, and oats. Much of this harvest is fed to **livestock**. Livestock are animals raised on farms, such as cattle, hogs, and chickens. Iowa farm products are used in all kinds of foods. In fact, the chances are good that the next bag of popcorn you pop was grown on an Iowa farm just like this one.

prairie flat or gently rolling land that is covered with tall grasses and wildflowers

fertile able to produce good crops

livestock animals that are raised on farms, such as cattle, hogs, and chickens

The state of Iowa has fertile soil for its many farms. The Midwest grows many different types of food that we use every day.



3. Dodge City, Kansas: Where the Cattle Once Roamed

Welcome to Dodge City, Kansas. Kansas—a land made up of mostly flat plains—has long been famous for wheat and cowboys.

The plains of Kansas make it a wonderful place to grow wheat. In fact, Kansas produces more wheat than any other state. If you travel through Kansas in the early summer, you will see mile after mile of golden wheat.

Back in the 1870s, cowboys from Texas used to herd cattle across the Great Plains to Dodge City. Herding cattle is hot, dusty, smelly work, and cattle drives took weeks or months. When the cattle finally reached Dodge City, they were loaded onto trains and shipped east for sale.

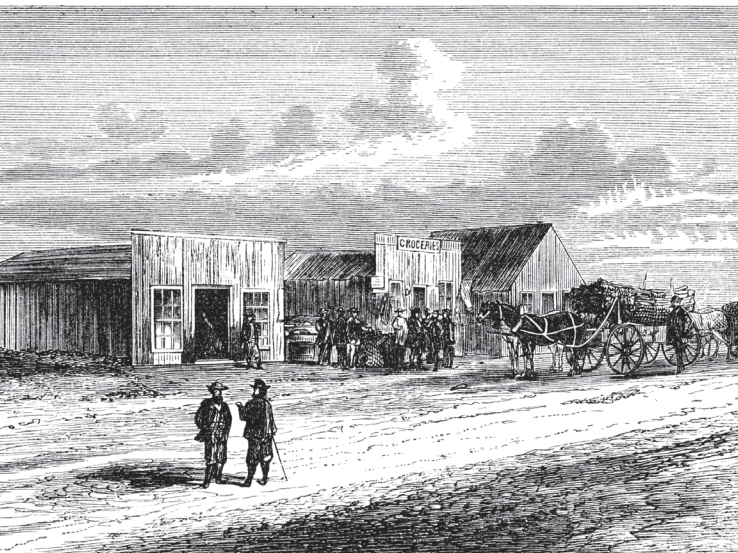
Today, fewer cattle graze on the plains. Cattle are mostly raised on a **feedlot**. Feedlots are areas or buildings where livestock are kept while being fattened for slaughter. Dodge City is home to some of the biggest **meatpacking** plants in the country. Meatpacking is the preparing of meat for sale. It's an important industry in the Midwest.

When I was your age, I wanted to be a cowboy—or, as my dad would say in Spanish, a *vaquero*. Some people still work as cowboys today, but they likely go home at the end of the day. We'll stop here to learn more about cowboys from long ago.

feedlot an area or a building where livestock are kept while being fattened for slaughter

meatpacking the preparing of meat for sale

Dodge City's streets were once filled with horses, wagons, and cattle. Today the streets look much different.





4. South Dakota's Heroes

Two huge monuments are carved into the Black Hills of South Dakota. The first is Mount Rushmore National Memorial. It shows the faces of four American presidents: George Washington, Thomas Jefferson, Theodore Roosevelt, and Abraham Lincoln. Each head is six stories tall.

The second monument honors an American Indian named Crazy Horse, who was chief of the Oglala tribe. It is still being carved into the Black Hills. When it is finished, Crazy Horse Memorial will be the world's largest statue.

The Black Hills are sacred to the American Indians who lived in this region. When white settlers moved into this area, they began pushing American Indian tribes off this land. American Indians fought back to keep their homeland. This struggle led to war with the United States.

During that war, an American leader named George Custer attacked a group of American Indians who were camping by Little Bighorn River in Montana. Crazy Horse led his warriors into battle. Soon, Custer and his men were dead.

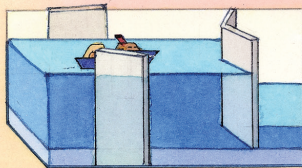
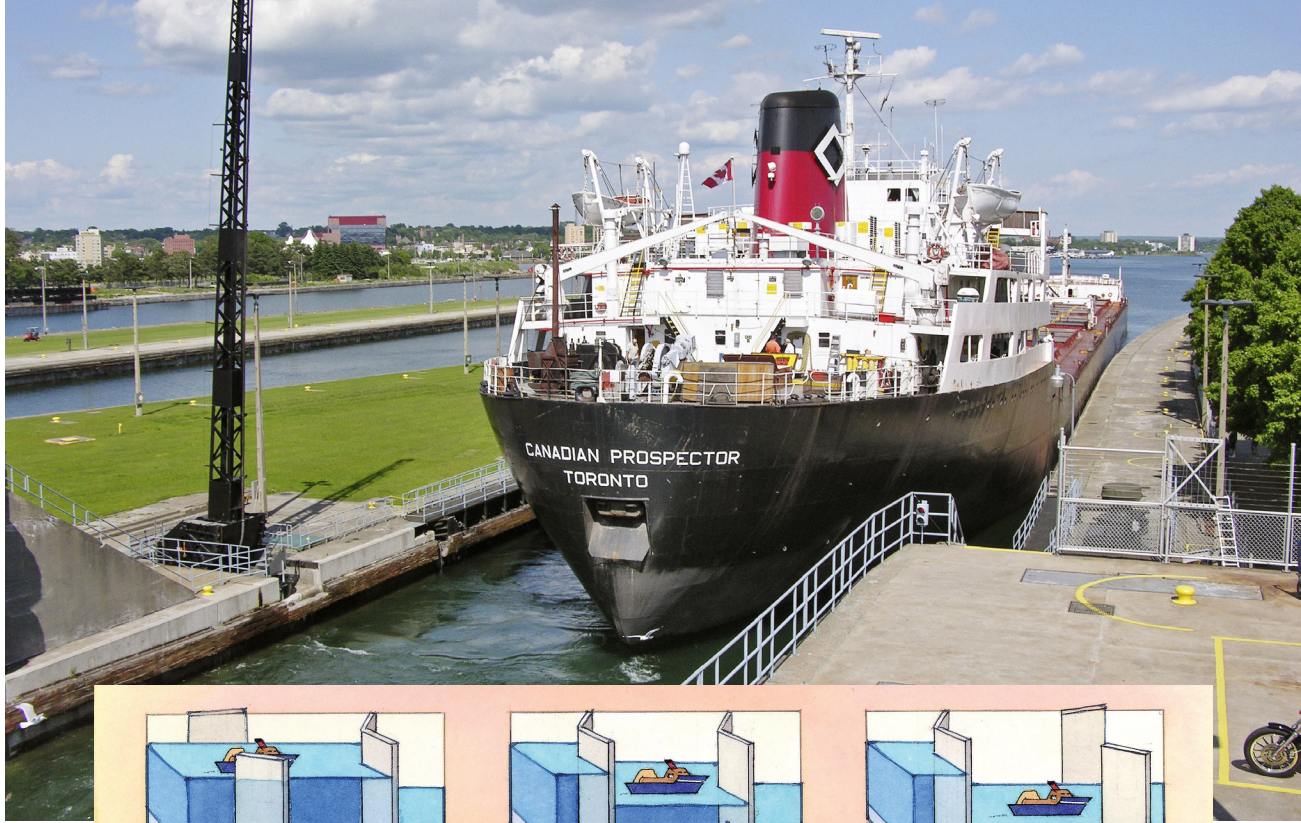
Despite this victory, the American Indians lost most of their land over time. Many American Indian tribes, like the Oglala, were pushed by white settlers onto **reservations**, or special areas set aside for American Indian tribes to live.

Mount Rushmore National Memorial honors four American presidents.

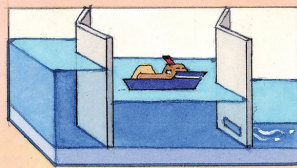


The Crazy Horse Memorial honors the Oglala chief Crazy Horse. It is still being built today.

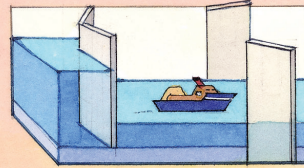
reservation public land set aside by the government for use by American Indians



The back gates open and the ship enters the lock. Then the gates close.



Water is taken out of or released into the lock to lower or raise the ship.



The front gates open and the ship leaves the lock.

In Lake Superior, a ship approaches the Soo Locks. The water in Lake Superior is higher than the water in Lake Huron. The Soo Locks will lower the ship to Lake Huron. The diagram shows how the lock raises and lowers ships between the two lakes.

5. Michigan's Soo Locks: Linking the Great Lakes

You are looking down on one of my favorite sights: the Soo Locks. Locks are used to raise and lower ships between different bodies of water. The Soo Locks are two of the longest locks in the world, and they can raise and lower ships that are about 1,000 feet in length. Many people say that these locks are one of the greatest wonders of the world.

The Great Lakes are part of a water highway that stretches from the Midwest to the Atlantic Ocean. Ships move from lake to lake along canals. Because the lakes are at different water levels, locks are used to lift and lower ships from one lake to the next. The Soo Locks raise or lower ships the 21 feet between Lake Huron and Lake Superior.

Many ships pass through the Soo Locks each day. Some are small passenger boats. Others are oceangoing ships filled with iron ore, coal, grain, or other cargo. People call these ships "salties" because they have journeyed from the Atlantic Ocean.

6. Detroit, Michigan: America's Motor City

In 1896, a Michigan farm boy named Henry Ford built his first car. At that time, automobiles were very expensive to buy. People saw cars as toys for the rich.

But Ford had different ideas. He dreamed of building cars that most people could afford. Ford's dream gave birth to the American automobile industry.

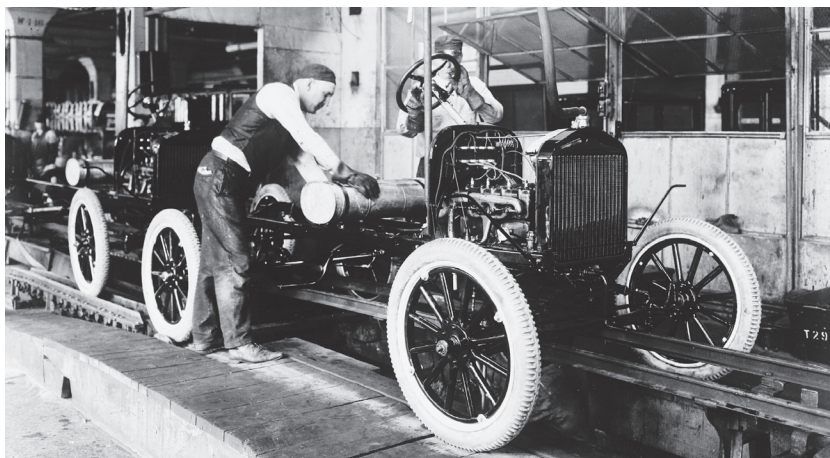
In 1903, Ford started an automobile factory in Detroit, Michigan. He needed a way to keep his costs down. In the past, workers could build only one car at a time. So Ford installed a moving **assembly line**. A moving belt carried unfinished cars past workers. Each worker did one task. One worker might install a windshield. Another might screw on a door handle. The time needed to assemble a car dropped from 12 hours to just 93 minutes. The assembly line lowered the cost of each car by reducing the time it took to make it.

Ford's success brought other carmakers to Detroit. Detroit became known as "Motor City," or "Motown" for short. The automobile industry attracted many other businesses to the Midwest, too.

Today, Midwest industries continue to look for better ways to manufacture goods. One example is the invention and use of robots, or computer-controlled mechanical devices, to speed up assembly lines.

We'll stop here and learn more about Ford's original assembly line.

assembly line a process in which each worker assembles one part of a product before passing it to the next worker down the line



Ford began using assembly lines to build his cars. Assembly lines sped up how fast each car could be created.

7. O'Hare International Airport: The Midwest's Transportation Hub

You are looking at O'Hare International Airport in Chicago, Illinois. It is one of the busiest airports in the United States. Hundreds of thousands of people pass through O'Hare each day. That adds up to millions of airplane passengers a year.

transportation hub a city that serves as a center for moving goods and people

Chicago has been a **transportation hub**, or a center for moving goods and people, for almost 200 years. In the 1800s, railroad tracks fanned out from Chicago across the Midwest. Trains left Chicago every day, carrying goods from factories to small farming towns. The trains returned loaded with corn, wheat, and livestock for the big cities.

Today, railroads, highways, airports, rivers, and lakes move more people and goods into and out of Chicago than they do in any other American city. Moving all these people and goods is a big business. O'Hare International Airport, by itself, employs about 40 thousand workers.

As an economist, I know how important transportation is to the economy of the Midwest. Last year, for example, my college friend from Iowa sold his entire soybean crop to a buyer in Japan. Without a good transportation system, how could my farmer friend move his crop halfway around the world?

People from the Midwest can travel all over the world. Many of them leave from O'Hare International Airport.





8. Chicago's Wrigley Field

For me, this is one of the best views in the world. You are looking down at Wrigley Field, home of the Chicago Cubs.

Sports are popular in the Midwest. The first professional baseball team played in the city of Cincinnati, Ohio. But soon sports teams began to appear in other cities around the Midwest.

As a kid, I listened to the Cubs play baseball on the radio. I became a big fan even though the Cubs had not won a championship called the World Series in a long time. After 108 years, the Cubs won the World Series again in 2016.

Wrigley Field is a special place for people who like baseball. It is the second-oldest baseball park in America, built in 1914. A lot of historic events have happened here. The most famous one may be Babe Ruth's "called shot," during Game 3 of the 1932 World Series. As the story goes, when Ruth came up to bat, he pointed to the bleachers. Then, on the next pitch, he hit a home run to that very spot. I wish I'd been there to see it.

Baseball is a popular sport in the Midwest. Many famous games have been played at Chicago's Wrigley Field.

9. Minnesota's Mall of America

Our last stop is the Mall of America, in Bloomington, Minnesota. This is the largest indoor shopping mall in the United States. The Mall of America was built in 1992.

The nation's first mall covered by a roof was built in 1956. Its purpose was to make shopping a more pleasant experience by protecting shoppers from bad weather.

People in the Midwest have to pay a lot of attention to the weather. In winter, storms called blizzards bring heavy snow and freezing winds. Spring brings hailstorms that drop hailstones, or lumps of ice, instead of rain. Spring is also when tornado season begins. When the weather gets bad, indoor malls are a good way to protect shoppers. These malls also offer customers lots of choices about what to buy.

The Mall of America has more than 500 stores. If you spent just ten minutes in each one, it would take you four days and three nights to visit the entire mall. And that time doesn't include eating in any of the 50 restaurants, visiting any of the 14 movie theaters, or playing in the amusement park.

The Mall of America has over 500 stores and an amusement park. It is one of the largest malls in the world.





The Mall of America is more important than just its size, though. As an economist, I have studied how big of an impact the Mall of America has had on the economy of the area. Each year, over 40 million people visit the Mall of America. That is more than the entire population of Canada! Many of these visitors come from different countries. Because of all these visitors, the Mall of America brings a lot of money to the area. This money is used by the state to improve people’s lives in many ways. The Mall of America also provides jobs for thousands of people.

Many people visit the Mall of America each year. These visitors have a large impact on the economy of the state.

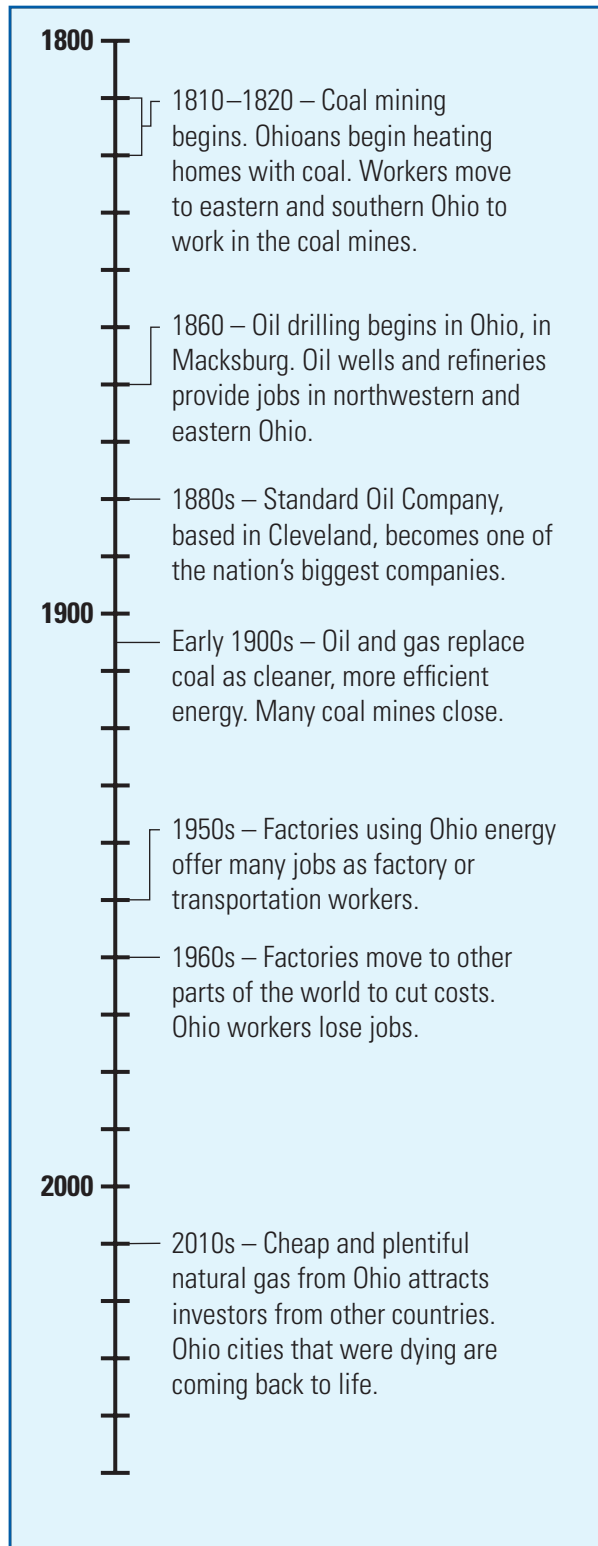
Lesson Summary

When we began, I asked you why the Midwest is called “America’s Breadbasket.” The answer is that Midwestern farmers grow a lot of the wheat we use to make bread.

I also asked you why we call the Midwest “America’s Heartland.” There are many answers to this question. One answer looks at geography. The Midwest lies at the heart, or center, of the United States. But it is also the point where pioneers began their westward journeys. The Midwest is also the heart of farming and industry. From corn to cars, many products you use every day come from America’s economic heartland.

Our crop dusters are about to land. Thank you very much for coming on my tour.

The Industries of Your State



You just read how industries help cities grow. Industries are groups of businesses, such as the automobile industry or entertainment industry. Do you know the biggest industries in your state? One place to find out is in an encyclopedia. Look up your state and then find a section called “Economy.” One of the major industries in Ohio is energy. These are companies that produce power to run machines and create light and heat.

Pick one of the important industries in your state. Write the name of the industry at the top of a piece of paper. Then write this question: How has this industry affected our state? You will need to do research to answer this big question. Find books, encyclopedias, and reliable Web sites that write specifically about this one industry in your particular state.

Research the history of the industry in your state and write your facts on a timeline like this one. Include a year or time period, what happened, and how it affected the state. Keep in mind that the growth of industry can make a city grow, but when an industry changes or leaves a state, this can cause problems such as unemployment.

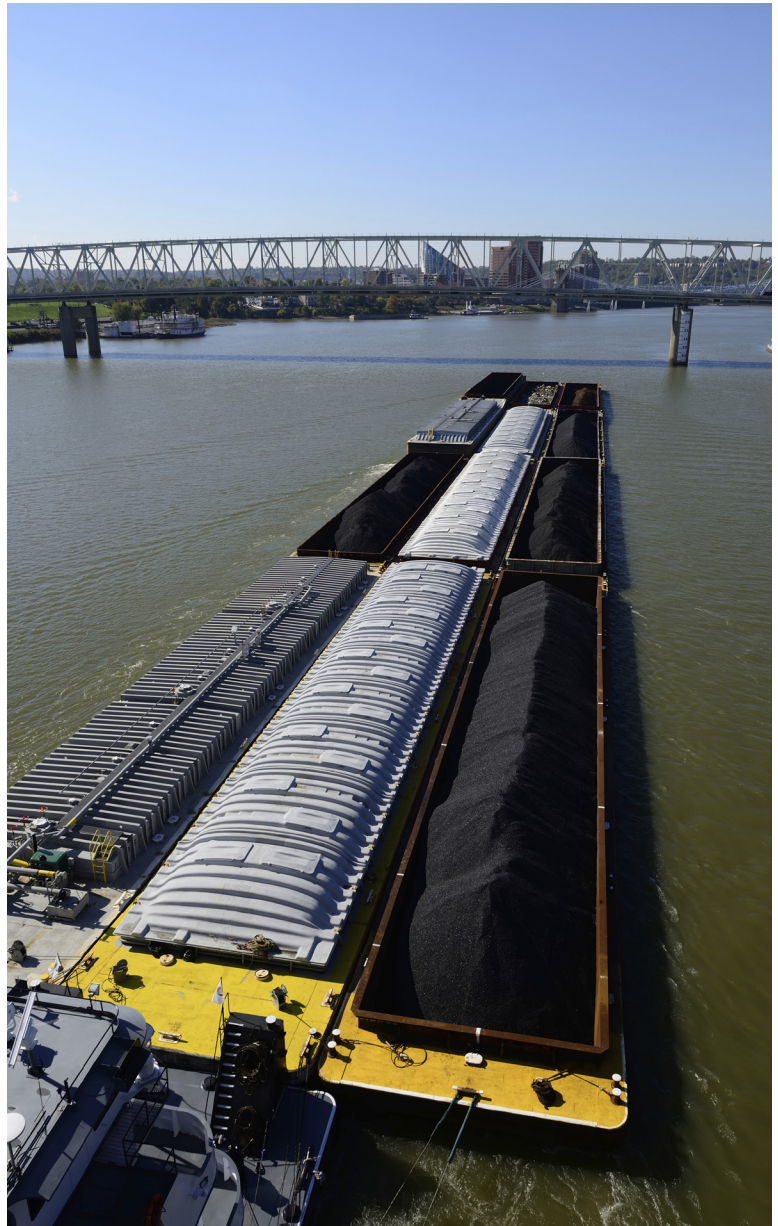
This timeline shows how the industries in Ohio have grown and changed. You can write a timeline for industries in your own state.

What Happened in Your State?

Through the years, companies in Ohio have mined coal, drilled oil, and produced natural gas. Coal mining, oil drilling, and other activities changed some of Ohio's physical land. People have been affected, too. When mines and oil and gas companies started, they created new jobs. When they closed, people lost jobs. When people lose jobs, they cannot buy goods in local stores. This affects the income of store owners.

Write a three-paragraph explanation that tells how one industry affected your state. Your first sentence should ask the question: How has the _____ industry affected our state? Use your timeline and research notes to construct an explanation to that question. Write your answer in a logical sequence, perhaps from its beginning to the present. Give examples of the different kinds of businesses and jobs in the industry. Add details about how industry affected the land, homes, jobs, daily life, or health in their communities. Add data, or number details, from charts, graphs, and articles that you find. For example, in 2013, 69 percent of Ohio's electricity came from coal, 15 percent from natural gas, and 12 percent from nuclear energy.

Exchange your explanation with a classmate. Read what your classmate wrote and tell him or her if you feel the reasoning, sequence, examples, and details are strong. Use your classmate's comments to revise your explanation.



Cleveland, Ohio, is a large city. There, in the late 1800s, Standard Oil Company was one of the first and largest oil companies in the nation.



Detroit During World War II

Detroit was already an important center of industry in 1941. That year, when the United States entered World War II, the city became even more important. People looked to Detroit to build the tanks and planes needed for the war. How did wartime change one Midwestern city?

Louise Thompson, an African American woman, already had a job. But in 1941 she heard that one of Detroit's factories was looking for workers. The factory made planes for the United States to use in World War II. It was paying high wages, and Louise was interested.

In the early 1940s, there were few good jobs open to African American women. But wartime was changing many things since many men were away fighting the war. This meant that thousands of workers were needed in factories and many of these jobs were open to women. Thompson decided to train for one of the factory jobs. It was a great opportunity, and she could help her country.

These women learned a new job—assembling planes. During World War II, many women were hired to work in factories.



Mr. and Mrs. Castle also saw an opportunity. Before the war, they had run a small business in their home, about 150 miles outside Detroit. When the war started, they closed their business and moved to Detroit. Both of them found jobs at the airplane factory near the city. But they had to live in a tiny trailer near the factory. It was a difficult change for the Castles, but they, too, wanted to help their country and themselves.



Willow Run workers built thousands of planes during World War II. The use of the assembly line allowed the workers of Willow Run to make a new bomber every hour.

Changes in Industry

Before World War II, Detroit had been home to the nation's auto industry. Many people worked to make cars in Detroit, and most of these workers were men.

In 1939, several countries went to war in Europe. Before long, countries in many parts of the world became involved. The United States entered World War II in December 1941.

The war brought many changes to the auto industry in Detroit. The country no longer needed new cars. People could make do with old cars during wartime. So the auto factories stopped making cars, and instead, some auto companies made tanks. Others made ship engines or airplanes.

Henry Ford built a new factory called Willow Run. This factory made a special kind of airplane called the B-24 bomber. The new factory was huge. The people who ran it wanted to use many of the same ideas that Ford had introduced to make cars, so they decided to use an assembly line to make planes.

It was a new idea for building planes, and the results were amazing. Before the war, building an airplane could take many workers several days to complete. By the summer of 1944, however, the workers at Willow Run were able to complete a new bomber every hour.



At Willow Run, many workers lived in dirty and unsafe conditions. They lived in these houses so they could have good jobs.

Changes in Everyday Life

It took many workers to keep Willow Run's assembly lines moving. By June 1943, more than 42,000 people worked at the factory. The large number of new workers created some changes for Detroit.

Workers needed to live near the factories, but at Willow Run and other factories, there were not enough houses for all the new workers. Many people, like the Castles, lived in small trailers, and some families even moved into old chicken coops. A lot of people were willing to accept such hardships to have a good job.

There were also shortages of many things. Goods such as gasoline and rubber were needed for the war, so the government put a limit on how much of these products people could use at home.

The Castles had trouble finding bottled gas for cooking. Once, they had to drive 150 miles to fill their bottles. They also had to pay high prices for things like restaurant meals. With so many new customers coming in, restaurants could charge more money for their food.

African Americans like Louise Thompson had to face similar problems, and more. Even though Thompson had been trained to work in a war factory, she had trouble finding a job. Even during wartime, some factories would not hire African Americans.

Conflict and Opportunity

With factories like Willow Run growing quickly, Detroit suddenly had thousands of new residents. Some longtime residents were unhappy to see their communities changing. Tension grew between the residents and newcomers as some of these newcomers were made to feel unwelcome.

Occasionally, these stresses and challenges led some people to become violent. In 1943, conflict between white and black Americans led to fighting in the streets of Detroit. Thirty-four people died before the fight was over. Hundreds were hurt.

But there were also many times when the people of Detroit worked together to meet the challenges of war. Workers at Willow Run made 8,685 airplanes. The Chrysler Company made 25,000 tanks. General Motors also made tanks. Other auto factories made engines for planes and ships. The people and the factories of Detroit played a key role in helping the United States win the war.

The war created many opportunities for individuals and families. Many people entered the workforce for the first time. Women had a wider range of jobs open to them. Different groups of people met and worked together for an important cause. ♦



People in Detroit worked together in new ways to support the war effort. This factory built tanks during the war.