The Making of Milwaukee

UNIT 3: WORKING IN MILWAUKEE

The Making of Milwaukee Table of Contents – Unit 3

Unit 3: Working in Milwaukee; Video Chapters 6 & 10, 8 & 13

The Making of Milwaukee

Unit 3: Working in Milwaukee:

Video Chapter 6 - City of Industries (18:45 min)

Video Chapter 8 - Machine Shop of the World (10:45 min)

Video Chapter 13 - The Roaring Twenties (4:42 - 6:42 min)

Essential Questions:

- What jobs do people want and need?
- Why do people work?
- How do natural resources influence the kind of work that is available?
- What kind of work is available at a given time and why?
- What do people want/need/deserve from the places they work?
- How do government decisions influence industry?

Video Chapter Overview:

Milwaukee has a rich industrial history. *The Making of Milwaukee* videos cover the important industrial history in Milwaukee. Specific industries and their locations are highlighted, as well as their need for workers. Milwaukee industries were a huge economic boost to Milwaukee's economy. The growth of Milwaukee manufacturing and industry also greatly influenced a major population growth. Milwaukee's industry provided many supplies and materials for WWI and WWII. This, too, was an economic boost for the city.

Standards:

SS.BH1: Students will examine individual cognition, perception, behavior, and identity.
SS.BH2: Students will investigate and interpret interactions between individuals and groups.
SS.BH3: Students will assess the role that human behavior and cultures play in the development of social endeavors.
SSGeog1: Students will use geographic tools and ways of thinking to analyze the world.
SS.Geog2: Students will analyze human movement and population patterns.
SS.Hist1: Students will use historical evidence for determining cause and effect.
SS.Hist2: Students will analyze, recognize, and evaluate patterns of continuity and change over time, and contextualization of historical events.
SS.Hist3: Students will connect past events, people, and ideas to the present; use different perspectives to draw conclusions; and suggest current implications.
SS.Hist4: Students will evaluate a variety of primary and secondary sources to interpret the historical context, intended audience, purpose, or author's point of view.
SS.Econ1: Students will use economic reasoning to understand issues.
SS.Econ2: Students will analyze how decisions are made and interactions occur among individuals, households, and firms or businesses.

The Making of Milwaukee

City of Industry

Learning Goals:

Students will learn about the industries that were huge benefits to Milwaukee's economy.

Objectives:

Students will be able to discuss the various resources that were available and how these resources were turned into processed goods in Milwaukee.

Possible Discussion Questions:

- What resources did Milwaukee ship?
- Why did so many people move to Milwaukee in the mid-1800s?
- How did iron production become Milwaukee's first heavy industry?
- How did Milwaukee become the largest producer of tanned leather on the planet in 1890?
- What were some of the family names associated with brewing in Milwaukee?
- Why is Milwaukee called the Cream City?
- Who were Edward Allis, Fredrick Layton, John Plankinton, and Patrick Cudahy?
- Why were they important to Milwaukee's growth and economy?

Additional Resources:

Recollection Wisconsin
Industrial Landscapes
Port of Milwaukee History
Making Milwaukee Mighty
Milwaukee Historic Photo Collection

Vocabulary:

industry	capital	work
manufacture	mill	transportation
resources	leather	livestock
tanning	tannery	prosperity
laborer	product	packing
consumer		

City of Industry

Overview:

Students will look at Milwaukee data and study immigration to determine who Milwaukee's people were.

Materials Needed:

The Making of Milwaukee student journals (digital or paper)
The Making of Milwaukee Chapter 6

Procedure:

Many activities in this section are consistent to each unit and video chapter section and can be used to help students develop knowledge of Milwaukee as a "City of Industries" and "Machine Shop of the World."

- **Learning activities** can be taught after or during the viewing of Video Chapter 6 – Milwaukee Industries.
- **A video notetaking guide** encourages students to write, draw, and record images during their viewing of the video. The teacher may want to strategically stop the video to allow students to write and discuss.
- **My Milwaukee Journal** activates student thinking and background knowledge. It allows students to make connections to Milwaukee history while making connections to their own lives.
- **Meet a Milwaukeean** – Frederick Miller. His name is not necessarily lesser known but his impact in Milwaukee is so important to Milwaukee
- **Meet a Milwaukeean** – Louis Hughes. Milwaukee's first published Black author of *Thirty Years A Slave*.

The way in which these activities are used with students is the teacher's choice. The goal is for students to discuss and think critically about Milwaukee's early history of the area. Activities can be used independently from each other or used together. Most questions are intended for students to think critically and may not have one right answer.

Learning Activities Overview

- *Types of Resources.* It is important for students to differentiate between three main resources. Students will categorize the resources on the list that were important to Milwaukee's industries. The resources are clarified on the activity for students. They are encouraged to add resources they see in the video or resources they can think of that fit the category. Encourage students to explain their reasoning for the choices they made.
- *Analyzing Resources.* Milwaukee was rich in resources. Resources in Milwaukee were often specific to the Milwaukee area. Available resources made industry decisions easier when industrialists were changing the landscape of Milwaukee economics. Good economic decisions were made based two things: the availability of resources and being able to make money. Encourage students to use reasoning skills to decide if these industries would be good for Milwaukee based on what they know and have learned about local resources.
- *Processing Resources.* This activity comes directly from the video and the six main production factories in Milwaukee. For years, Milwaukee was a shipping town and as the quote in the video says, "It was time for Milwaukee to start manufacturing their own goods." The top six resources that boosted Milwaukee's economy with a lot of money are listed. Students should be able to write what was developed from these resources.
- *The World's Leading Leather.* Students will analyze this primary source that is from a 1917 book analyzing the tanning industry. Students will find facts and information from several states that processed leather in 1909. The graph shows that Wisconsin may not have had the most tanning companies, but they made an incredible amount of money. Inform students that this was due to the ability to ship leather quickly and keep a large number of animals because they had the shipping and rail companies, farmland, and space in Milwaukee to do so.

The next set of activities are related to Milwaukee's industries but are not specifically referred to in *The Making of Milwaukee* videos. The next lesson page will include another video that John Gurda filmed with MMSD (Milwaukee Metropolitan Sewage District). The pollution of Lake Michigan and the Milwaukee rivers greatly impacted Milwaukee's residents in the past and in the present.

The Making of Milwaukee Video Notes
Chapter 6: City of Industries

While you watch the video, write words you think are important or make quick sketches of things you see that you want to remember. This could be names, places, dates, things from nature, things manmade, artifacts, quotes – whatever you take away from the video.

Student Journal: City of Industries

When you think of the word, “work,” what comes to mind? Do you work? Do you know someone who works? Why do people work?

What does work look like at school? What does work look like at home? Are the reasons we work at school different from the reasons we work at home?

Student Journal: Types of Resources

Milwaukee's economy, like the economy of every society, must have resources that are used to produce the goods and services it needs to be successful. These resources are called productive resources. Productive resources can be classified into three groups: natural resources, human resources, and capital resources.

Natural Resources: resources that come from that land. These are minerals, water, trees, and the land itself.

Human Resources: human work effort, both physical and mental, that it takes to produce something.

Capital Resources: man-made resources like buildings, tools, machines, and equipment.

Look at the resources below that are common in the Milwaukee and Wisconsin areas and categorize them into the three productive resource types defined above. Can you think of resources to add that are not on the list?

Lake Michigan	cows	leather	factory workers	clay
farmers	iron ore	railroads	factory	hogs
Menomonee River	barley	wagons	buildings	brewery
milling machines	ships	fishermen	tools	

Natural Resources	Human Resources	Capital Resources

The Making of Milwaukee

Student Activity: Resources Analysis

Many industries and jobs in a city are dependent on the resources that are available. Sometimes you can see similar jobs throughout the region, because a region is a section of land with similar characteristics, climate, and resources. Milwaukee is in the Midwest region. It is unique in the Midwest because of Lake Michigan.

Look at these industries and determine if they would be good industries for Milwaukee. Read the clues to help you figure it out if that would be a good industry in Milwaukee and write your notes in the empty box.

Orange Grove	Oranges grow best in tropical areas. They need at least 8 hours of sun a day and the temperature must to be between 60 and 90 degrees Fahrenheit consistently for 8 months. Anything below 50 will make the tree stop producing oranges.	
Boat Building	Boats can be used for many different purposes like shipping, recreation, and transportation on the water.	
Ocean Shrimp Farmer	Americans eat a lot of shrimp. Shrimp mostly live in the ocean salt water. Large ocean vessels throw out giant nets to farm for shrimp, and lots of shrimp are caught at once.	
Outdoor Theme Park	People like to be at outdoor theme parks. Some parks can have roller coasters and water slides and games to play. Roller coasters can only run when the temperature is above 40 degrees and water in water parks can freeze.	
Coal Mining	Coal is a nonrenewable resource mined from the earth. It takes millions of years of pressure and heat for coal to form. There are currently no coal deposits in Wisconsin.	

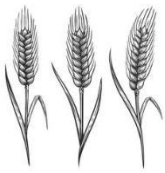
The Making of Milwaukee

Student Activity: Processing Resources

Milwaukee had always been a port city. Farm products were shipped out, finished goods were shipped in. It was time for Milwaukee to start making its own finished goods. This ability to process goods was a transformation for Milwaukee and its economy. Take a look at this chart and see if you can come up with something that was made with the natural resource.

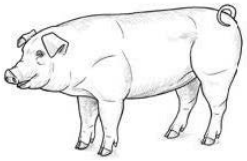
Iron Ore

The Milwaukee Iron Company



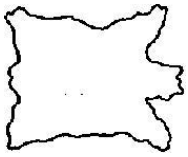
Wheat

Eagle Flour Mill



Meat

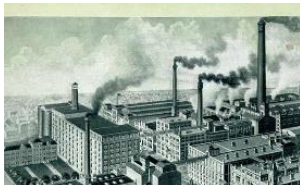
Layton and Plankinton



Animal Hide

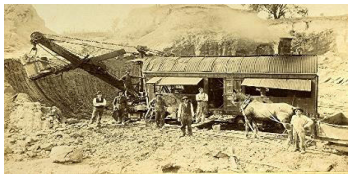
Tannery Row in Milwaukee

Barley



Pabst Brewery in Milwaukee

Clay



The Making of Milwaukee

Student Activity: The World's Leading Leather

The production of leather and leather goods were a huge part of Milwaukee's industry from 1840 to 1930. Milwaukee quickly became a national and international leader in tanning. Instead of shipping animals out for leather to be processed in other cities Milwaukee business leaders were doing it, and doing it well. Lake Michigan's water was useful in the tanning process as well as for transportation of finished hides. The railway system also made it easy to transport leather out of Milwaukee. Take a look at this graph and answer these questions. This graph came from Onthank, A. Heath. The Tanning Industry. Boston, Mass., National Shawmut Bank, 1917. Pdf. https://www.loc.gov/item/17028197/.

Tanneries and Leather Production by Principal States, 1909

	No. Estab.	Wage Earners			Value of Products		
		Av'ge No.	%	Rank	Amount	%	Ra
Pennsylvania	163	14,008	1		$77,926,321	23.8	1
Wisconsin	32	7,548	3		44,667,676	13.6	2
Massachusetts	132	10,252	2		40,002,079	12.2	3
New Jersey	86	5,560	5		28,430,955	8.7	4
New York	109	5,688	4		27,642,383	8.4	5
Michigan	24	2,291	8		15,331,104	4.7	6
Illinois	29	3,001	7		14,911,782	4.5	7
West Virginia	20	1,571	11		12,450,592	3.8	8
Delaware	16	3,045	6		12,079,225	3.7	9
Ohio	36	1,884	9		10,127,836	3.1	10
California	40	1,398	12		9,336,545	2.9	11
Virginia	39	1,590	10		8,266,850	2.5	12
North Carolina	39	832	13		5,415,495	1.7	13
Kentucky	18	630	14		4,240,795	1.3	14

What are some facts you can find about Wisconsin leather, based on this graph??

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Look at the top three states. What makes Wisconsin different than the other two?

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Tanning hides and leather working was a stable job in European Germany. What kind of immigrants do you think opened tanneries and worked with leather in early Milwaukee history?

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Meet a Milwaukeean: Frederick Miller

Frederick Miller was born in Germany in 1824. Frederick Miller learned the brewing business in Germany and brewed beer under a royal license. Miller, his wife Josephine, and son emigrated to the United States in 1854. When the Millers arrived in Milwaukee, it has been said that Frederick said “A town with a magnificent harbor like that has a great future in store.” The Millers moved to Milwaukee and purchased the Plank-Road Brewery for $8,000. It was previously owned by Frederick Charles Best. There is a lot of science that goes into brewing beer, Miller needed some kind of grain, fresh water, and hops to brew. Milwaukee was the perfect place to make this product. Miller’s time making beer in Milwaukee was very profitable. He made beer and was able to create a community of brewers at his brewery. He was a great contributor to Milwaukee, he established beer gardens and created places where German Milwaukeeans and others could come together. Miller Brewery has become an international name and his contributions to Milwaukee go well beyond 1854. Miller beer is enjoyed all over the world.

What influence does Fredrick Miller have on the development of Milwaukee?

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What resources in Milwaukee make it a good place for the making of beer?

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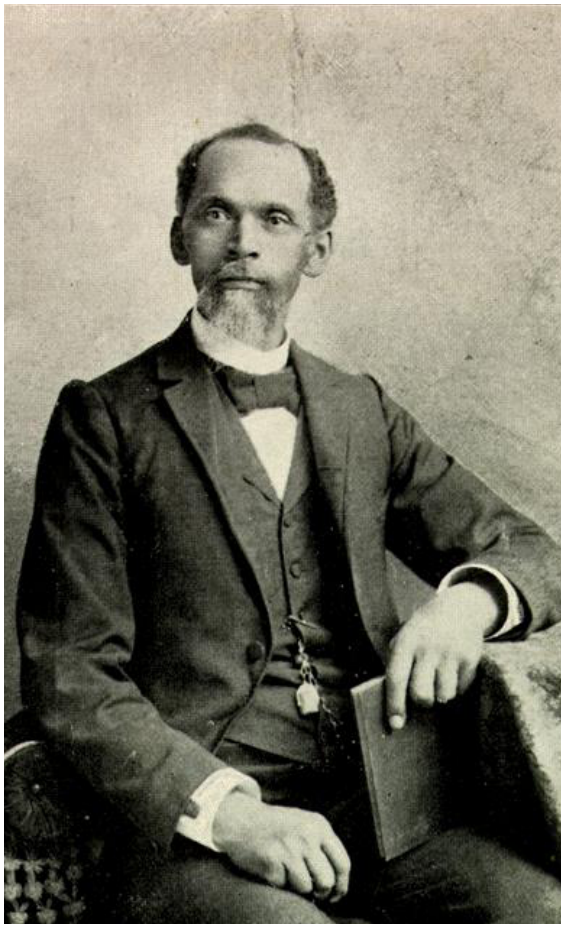
Meet a Milwaukeean: Louis Hughes

Louis Hughes was born into slavery in 1832 in Virginia. He escaped bondage in 1865 with his wife and children and lived in several Midwest cities. He was working at a Chicago hotel when he met John Plankinton from Milwaukee. Plankinton promised him a job in his new Milwaukee hotel with better pay. The Hughes family made their way to Milwaukee, and as promised, he worked at the Plankinton House for John Plankinton.

Louis was well known by travelers for his stories of being enslaved in the South. He decided to write a memoir of his life. The memoir, *Thirty Years a Slave*, was first published by Milwaukee's Southside Publishing Co. in 1897. The memoir contains simple but elegant language and describes the true story of the relationship between enslaved people and their owners. Louis also describes the cruel treatment of enslaved people and the demanding plantation work. Louis Hughes became the first African American to publish a book in Milwaukee. Louis and his wife, Matilda, started a successful laundry business in Milwaukee. He later became a nurse. The Hughes family were active members of St. Mark A.M.E. church. Louis Hughes died in 1913 and is buried in Forest Home Cemetery.



Why is Louis Hughes story important to Milwaukee history? How can we describe him?

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In the preface of his book, Louis Hughes writes, "As the enlightenment of each generation depends upon the thoughtful study of the history of those that have gone before, everything which tends to fullness and accuracy in that history is of value, even though it be not presented with the adjuncts of literary adornment or thrilling scenic effects." What do you think this quote means?

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Consequences of Industry

Overview:

Students will analyze what consequences industry and population growth had on the city, specifically the water supply.

Materials Needed:

The Making of Milwaukee student journals (digital or paper)
The Making of Milwaukee Chapter 10 These minutes only (2:30-5:10)
A Toxic Legacy: Cleaning up Milwaukee's Waterways MMSD Video featuring John Gurda

Procedure:
A contaminated water supply and the consequences of dumping pollutants, animal and human waste, and garbage into the Milwaukee River and Lake Michigan are problems that Milwaukee is still dealing with today. Throughout the history of Milwaukee, it is important to acknowledge the consequences of humans on the environment.

Video Chapter 10 of *The Making of Milwaukee* does not need to be watched in its entirety. The activity-appropriate sections of video chapter 10 starts at 2 minutes 30 seconds and stops at 5 minutes 10 seconds. There is another video included in this lesson. A Toxic Legacy: Cleaning up Milwaukee's Waterways created by the Milwaukee Metropolitan Sewerage District and narrated by John Gurda (7 min 57 sec). This video can be watched after selected activities have been chosen. The video includes a brief history of water pollution and current things that are being done to clean up the Milwaukee Estuary 100+ years later.

Activities

- *Consequences of Industry (Primary Sources and Question Set)*. Students will read and analyze the two newspaper quotes describing the Milwaukee River. Allow students to highlight, annotate, and use the glossary to help them understand what is being said. The questions can be used to guide student thinking and classroom discussion.
- *A Bad Time for Water*. This short reading will help students determine the three main reasons the Milwaukee River and surrounding waters were so polluted and disgusting. This activity includes a graphic organizer for students to note their ideas and organize their thoughts. Thinking should be directed toward (human, animal, and industrial waste).
- *Student Journal.* This should be done before the flushing station activity. The goal is to have students brainstorm solutions or possible solutions before reading what the city did initially.
- *Milwaukee Water Works: Flushing Station*. A short reading, diagram of the flushing station water flow and temporary solution. Note: the flushing station did not solve the problem and Milwaukee residents continued to get sick from the water until the use of chlorine to kill bacteria and a full water treatment plant was built on Jones Island.

The Making of Milwaukee Video Notes
Chapter 10: Trouble in Town
A Toxic Legacy - Cleaning up Milwaukee's Waterways

While you watch the video, write words you think are important or quick sketches of things you see that you want to remember from the video. This could be names, places, dates, things from nature, things manmade, artifacts, quotes - whatever you take away from the video.

My Milwaukee Journal: Consequences of Industry

Have you ever done anything fun near or in the water in Milwaukee? Have you been on a boat? Have you gone swimming in Lake Michigan? Have you thrown stones in the river?

The people of Milwaukee get their drinking water from Lake Michigan. How important do you think it is to have fresh water so close?

The Making of Milwaukee

Student Activity: Consequences of Industry - Primary Sources

Read the quotes below. The first quote comes from the local newspaper and the second quote comes from a national magazine. Read the quotes and underline words you may not know. There are definitions on the bottom of the page that may help you read these quotes. Answer the questions on the following page for more analysis.

The Milwaukee Journal Sentinel (August 13, 1878)

"Not a citizen of Milwaukee possessing a nose to smell, or a stomach to endure, but is already prepared to unanimously denounce the filthy, villainous, unhealthy, plague-breeding condition of the river. In its palmiest days, the Chicago River, which has been the scorn of vain-glorious Milwaukee, could never boast of a fouler collection of the seeds of death than now floats up on the odorous tide that passes through the heart of this city. In a day when an east wind prevents the sluggish current from setting outward, as was the case yesterday, life in the vicinity of East and West Water streets is simply unendurable."

Harper's Monthly (April 1881) Describing the Milwaukee River

"It is a narrow, tortuous stream, hemmed in by the unsightly rear ends of street buildings and all sorts of waste places; it is a current less and yellowish murky stream, with water like oil, and an odor combined of the effluvia of a hundred sewers. Nothing could better illustrate the contaminations of city life than the terrible change its waters undergo in a mile from their sparkling and rural cleanliness, up above, into this vile and noxious compound here among the wharves."

villainous – having evil characteristics
palmiest – flourishing, healthy
odorous – having a smell
unendurable – too unpleasant, painful, or difficult to accept
effluvia – an offensive smell
contaminations – soil, stains, infection, undesirable elements
current – the continual movement of a body of water
noxious – physically harmful to living beings
wharves – the bank of a river

Student Activity: Consequences of Industry Questions

What is the worst smell you have ever smelled? Describe it.

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How do the articles describe the Milwaukee River? Look for adjectives about sight and smell.

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About how far apart were these articles written? What does this tell you about the Milwaukee River?

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What do you think it was like for people to live and work near the Milwaukee River?

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What could possibly be the reason for the Milwaukee River to be described like this?

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The Making of Milwaukee

Student Activity: A Bad Time for Water

In the industrial boom of the late 1800s and into 1900 Milwaukee was growing fast. Milwaukee had a huge water problem. Milwaukee's rivers were very polluted.

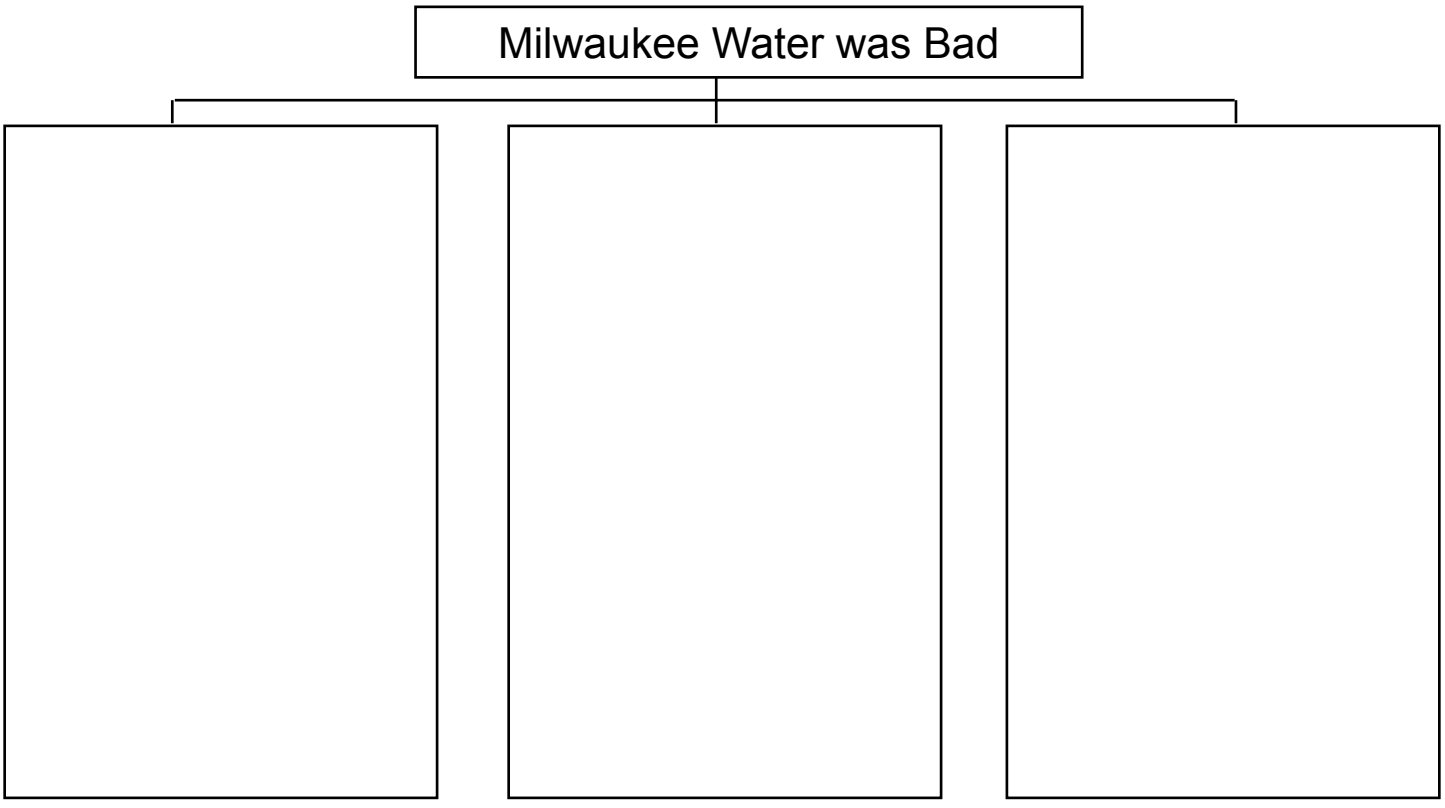
Milwaukee was growing as an industrial city. Milwaukee was number one in the world for leather products and flour mills. There were breweries, meatpacking factories, lumberyards, machine shops, and more. All these businesses were close to and depended on the water of Lake Michigan, Menomonee River and the Milwaukee River. Many of these industries used the Milwaukee's rivers as dumping sites for industrial chemicals. Tanneries used toxic chemicals like acids and bleach to process leather.

Water was used to clean oil from machinery and animal remains from meatpacking factories were emptied right into nearby waterways. The current of the rivers lacked movement, causing it to collect pollutants and bacteria over time.

Horse-drawn transportation was the main mode of transportation in the city. Horses relieved themselves anywhere. Horse manure landed on the city streets every day. When it rained and washed off the street, liquid manure flowed into the nearest river.

Milwaukee's population was growing fast. There were more people than ever living in the city. How did people get water to drink? They pumped water out of wells in the ground or drank water from Lake Michigan. Drinking water became contaminated when sewage from outhouses and sewers got into the well water. Many people got sick from contaminated water full of bacteria.

In the chart below, list the three main reasons for Milwaukee water to be so polluted.



Student Journal: Water

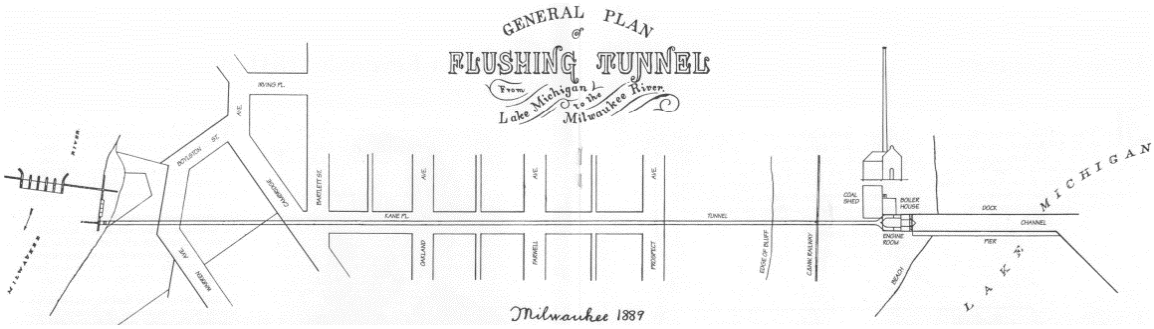
After reading about all the reasons the Milwaukee River was polluted, which do you think was the biggest problem? Why do you think that is the biggest problem?

Why is water so important to humans?

You are in charge of cleaning the Milwaukee River. Where would you start? What could you do?

Student Activity: Milwaukee Water Works - The Flushing Tunnel

Milwaukee was desperate for a solution to its water problem. In 1888 the city bored a tunnel, under the East Side of Milwaukee, from the Milwaukee River to Lake Michigan. The idea was to pump fresh water from Lake Michigan upstream. This would make sure that the stagnant water in the downtown area would be flushed every day. An engineer named Edwin Reynolds designed a screw pump for the flushing station. The Edward P. Allis Company build this giant pump. The pump poured more than 500 million gallons of lake water into the river every 24-hours. This magnificent flushing station and pump were located in a building on Milwaukee's lakefront. The building houses the pump and the boilers required to run the pump. The building is still there.



Find the Milwaukee River on this map and shade it yellow. Find Lake Michigan on this map and shade it blue. Color the pump and the building it is in light brown.

What problem did the 1888 Flushing Station solve for the City of Milwaukee?

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Milwaukee residents got their drinking water from Lake Michigan. What new problem do you think the flushing station made for Milwaukee residents?

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The Making of Milwaukee

Machine Shop of the World

Learning Goals:

Students will learn about the industries of manufacturing that were successful businesses in Milwaukee.

Objectives:

Students will be able to identify products and businesses that contributed to Milwaukee being the Machine Shop of the World.

Possible Discussion Questions:

- What resources were dominant in the manufacturing plants in Milwaukee?
- Why did more immigrants come to Milwaukee?
- What companies are still around today?
- What were working conditions like in Milwaukee?
- Why were children working in some factories?

Additional Resources:

Allis Chalmers Story
Commercial Landscapes

Vocabulary:

industry	factory	labor
manufacture	machinery	work
salary	resources	transportation
hazards	iron	gear
engine	laborer	logo
consumer	weld	rights
advertisement	union	

Machine Shop of the World

Overview:

Students will make connections to Milwaukee industry and economics of Milwaukee.

Materials Needed:

The Making of Milwaukee student journals (digital or paper)
The Making of Milwaukee Chapter 8
(Until 10:45 for third and fourth grade)
The Making of Milwaukee Chapter 13
(4:42-6:42 min)

Learning Activities Overview:

Many activities in this section are consistent to each unit and video chapter section and can be used to help students develop some knowledge of Milwaukee as the "Machine Shop of the World."

- **Learning Activities** can be taught after or during the viewing of these chapters: Video Chapter 8: *Machine Shop of the World* until 10 min 45 sec, and Video Chapter 13: *The Roaring Twenties* starting at 4 min 42 sec and stopping at 6:43. In Video Chapter 8: *Machine Shop of the World*, the last seven minutes cover unions and labor wars. Activities were not written about this, but you can use your judgment on showing it or not. It is covered in middle and high school social studies curricula.
- **A video notetaking guide** encourages students to write, draw, and record images during their viewing of the video. The teacher may want to strategically stop the video to allow students to write and discuss.
- **My Milwaukee Journal** activates student thinking and background knowledge. It allows students to make connections to Milwaukee history while making connections to their own lives.
- **Meet a Milwaukeean** features Women in Milwaukee industry during the World Wars. Here you will find a person included that is lesser known in the Milwaukee story in hopes to highlight marginalized or lesser heard stories of extraordinary people "making Milwaukee."

Machine Shop of the World

Activities:

- *What is Steel.* Steel manufacturing was the single largest and most profitable industry in Milwaukee. It is important that students know what steel is and how to identify the material.
- *Milwaukee Industry*. Image analysis activity using images from industrial factories in Milwaukee. Allow students to analyze images, generate questions, and thoughts on images. Have students share ideas in the classroom.
- *Working Conditions*. As industry growth increases, workers' rights decrease. Students should be able to identify the problems in the working scenarios in this activity. There are no laws about industry at this time to protect the workers and unions are just beginning to form; long hours, poor wages, child labor, no breaks or lunch, toxic working conditions should be identified.
- *Rights for Workers Sort.* Allow students to engage in inquiry into the needs for workers, both in history and now. Some of the benefits that workers have are necessary and expected for worker safety. Some benefits are extra. Students should sort out what they think are benefits that should be secondary to health and safety of a worker.
- *Industry that Made Milwaukee Famous.* Seven advertisements or posters directed to the average Milwaukeean are included in this activity for students to analyze. These advertisements would have been in newspapers and magazines. Make note to identify and talk about gender expectations.
- *Industry Poetry.* Two poems are included in these lessons from author Sue Doro. Sue Doro worked for 35 years as a machinist and was the first female machinist for the Milwaukee Road. Her poetry focuses on her time as a union member and machinist in a male dominated field. The poems "Sisters" and "Verona, Your Life" exemplify how difficult it was to be a woman machinist. Try to find the rhythm of the words and the expression used. Look for the tone of the poem and the emotion used to write. It looks like there are errors in the poem, but those were done intentionally by the writer. The poems are published here as they were published in her books. You may use the questions that follow the poems for provoking thought and discussion.

The Making of Milwaukee Video Notes
Chapter 8: Machine Shop of the World
Chapter 13: The Roaring Twenties

While you watch the video write words you think are important or quick sketches of things you see that you want to remember from the video. This could be names, places, dates, things from nature, things manmade, artifacts, quotes - whatever you take away from the video.

Student Journal: Machine Shop of the World

Think about all the things in your life. What kinds of things are made of metal and would be made in a factory?

When you think of business in Milwaukee and jobs what kind of jobs do you think about?

Describe your perfect job. How many days would you work? How much would you make? Would you be able to have a day off?

What is Steel?

Manufacturing items made from steel was a very important Milwaukee industry. What is steel and where does it come from? Read this short passage and then read about how it became so important to Milwaukee.

Steel is a metal. Steel is mostly made from iron ore. Iron ore is a natural resource that is mined. It is rock that comes from the earth that is full of minerals. Most of these minerals are metals that can be taken out of the rock. Wisconsin had many iron ore mines. These mines were underground, and the iron had to be dug out.

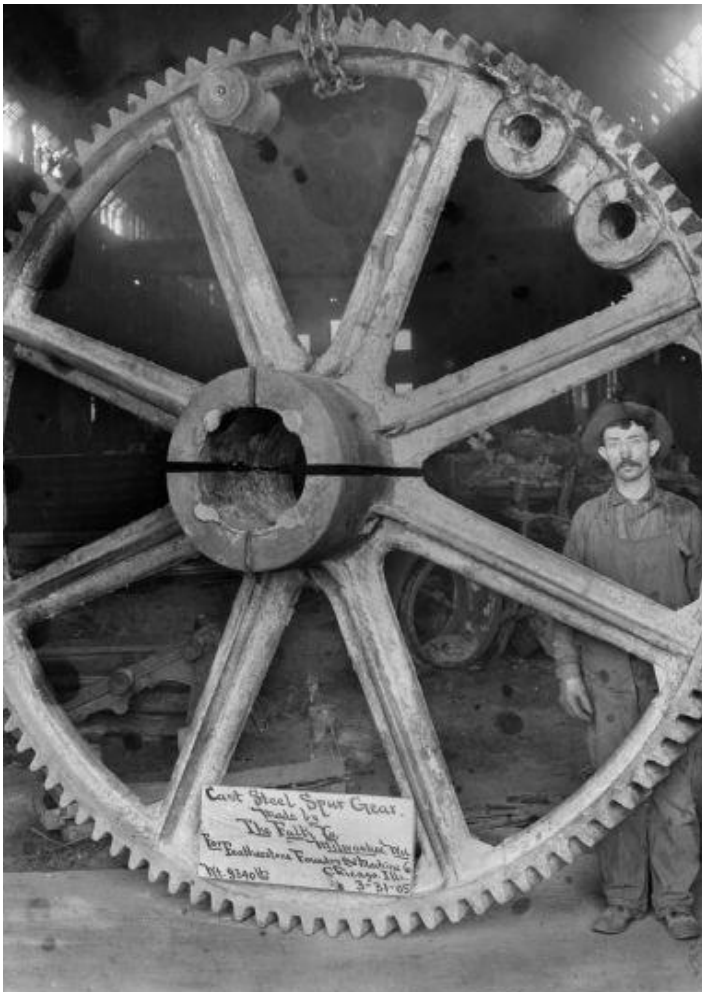
Steel is made when it is combined with carbon, which is also found in the Earth. When iron is mixed with carbon it becomes very strong. It is so strong it can make things that last a very long time, such as: skyscrapers, bridges, railroads, cars, and big machines. Steel can be used for a very long time and is much stronger than iron by itself. When manufacturers make steel, they melt iron at very high temperatures and add the carbon while it is melted. Then they put the liquid steel into molds or empty shapes. These are the shapes they need the steel to be. Once the steel is cooled, it can be used to make many things.

In the late 1880s, when people started using steel to build things, many people were needed for factory work. The factories were very hot, and the work was very hard. Milwaukee companies that made things from the steel became very important. They made products from steel for buildings and equipment all over the world.

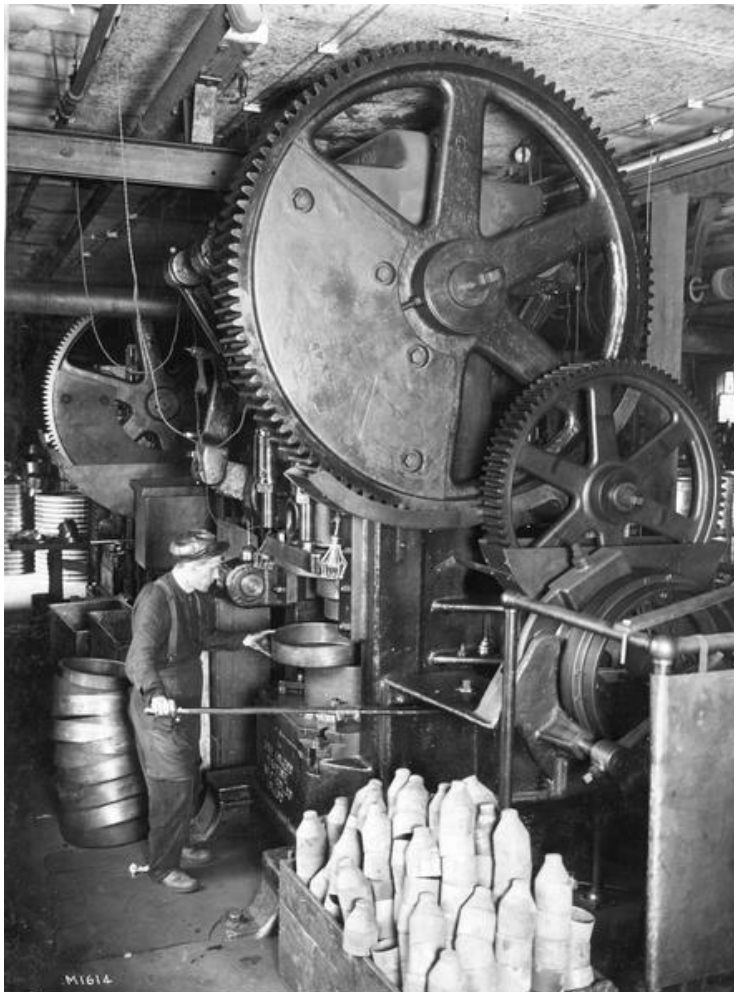
Draw or write as many things as you can think of that could be made of steel.

Student Activity: Milwaukee Industry

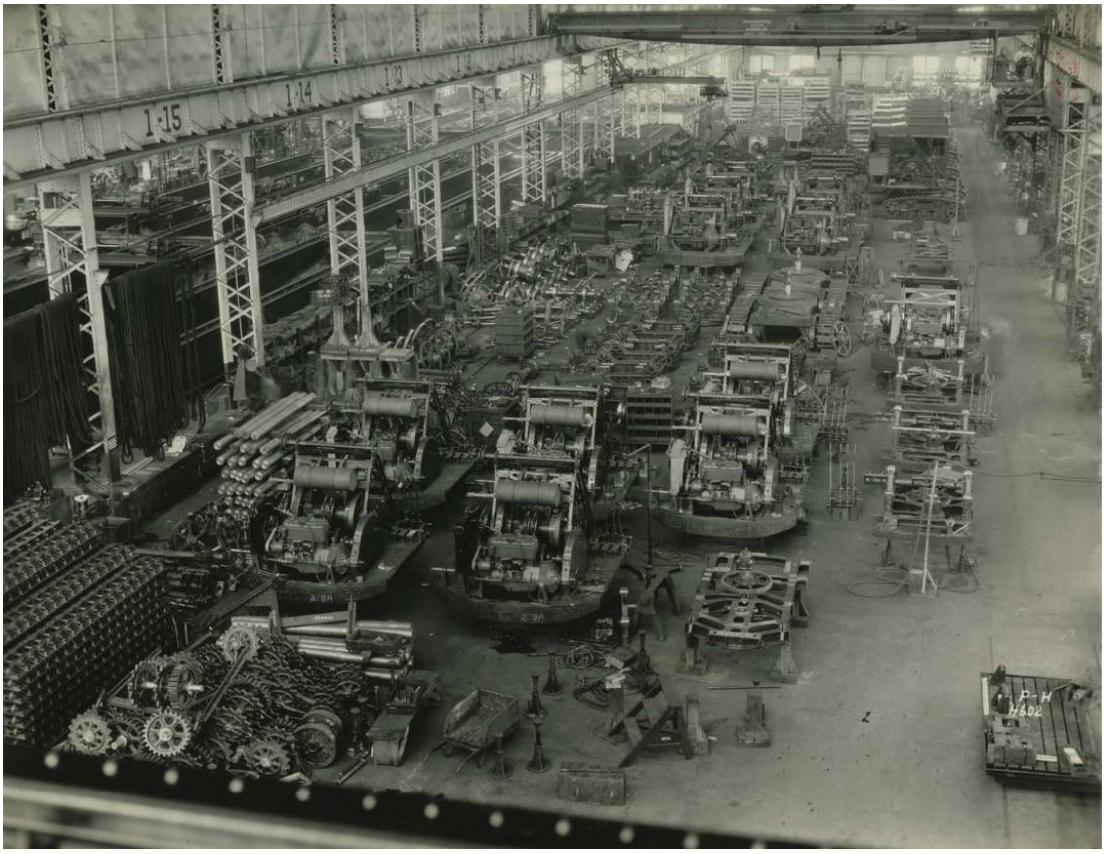
These four pictures are images from different steel factories in Milwaukee. Look at the four pictures. Write a list of questions you have looking at the pictures. Make a list of facts or things you can for sure see in the pictures. Do you see people? What do you think is going on in the pictures? Talk about the pictures with a partner or your class.



Cast Steel Spur Gear made by the Falk Company. 1905.



A worker at International Harvester's Milwaukee Works draining fluid from a machine with a large gear poised over his head.



Pawling & Harnischfeger were manufacturers of mining equipment.

Worker stand on a Nordberg machine on the floor of what is likely a plant owned by Republic Iron & Steel Co.

The Making of Milwaukee

Working Conditions

In the early 1900s, working in the United States could be very challenging. There were a lot of factories and industrial jobs. There were a lot of European immigrants coming to Milwaukee, because there were so many jobs. People worked very hard. Sometimes the working conditions were not safe. There were many people that joined together to fight for laws to protect working people. The government listened to these people and groups and made laws to protect workers. Read the examples below with a partner or a small group. Find the things that you think may not be safe or healthy for workers and explain why.

A worker works in a steel factory, and he must work quickly. The person in charge says the worker cannot take any breaks today. They must come into work at 6am and cannot leave until the job is done, even if that means it is 7pm. They may stop for ten minutes at noon to eat their lunch but if it is any longer than ten minutes the boss will take money away from their pay. The worker does this six days a week, and cannot take a day off.

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A worker works in a tanning factory making fine leather. Tanning is very hard because many toxic chemicals are used. The chemicals burn the worker's skin, and the smell makes the worker have headaches and feel dizzy. The worker keeps working on the animal skin all day without gloves or a mask. The company does not provide these protections, and the worker works very long hours. Working with these toxic chemicals is very harmful for the worker's lungs and skin.

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The boss of a brewery asks his workers if they have children that would like to work. The brewmaster needs little bodies to clean the vats of beer. The workers need more money for their family and tell the boss they have children that can work. Children ages 6-12 are taken out of school to work all day in the brewery. The yeast smell makes their stomach hurt and they are always covered in sticky malt water.

_____

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Rights for Workers

Milwaukee workers today are protected by many laws. Wisconsin and United States lawmakers saw the need for protecting workers and created many laws for the workers. These laws help keep workers safe at their jobs, protect them from being overworked, and ensure that workers have the training and the education they need to do the job. Many of the descriptions on this page were work issues that workers were faced with while working industrial jobs in Milwaukee. When working conditions were very bad, sometimes workers would refuse to work. This is called going on strike. All workers unite to stop working until conditions were changed. Sometimes companies would make changes and sometimes companies would find other workers to do the job and not make changes. Many workers created unions that would unite workers to make positive and safe changes for their workplaces. The collective actions of workers helped make many changes in workforce and industry in Milwaukee. Sort these rights into two categories; rights that are important for safety and rights that may be of secondary importance or not necessary. Identify why these could be problems.

Many companies expected workers to work early in the day and late into the night. There should be laws to set working limits and if employees want to go over those hours, then they will be paid more.

Many workers were discriminated based on the color of their skin. African American workers were only allowed to do low level work and were not paid at the same rates as their White coworkers.

Laws need to protect young workers. Young children were recruited because they were small and could get their hands into machines easier or climb into machines to clean them.

Industrial companies must provide fence guards around machines with moving parts. Many workers would get their clothing, hair, or tools caught in the moving parts and could be seriously injured, or die.

Industrial companies should let everyone have a vacation. Vacations are very important for families, and fun and relaxation are important.

Workers should be allowed time to use the bathroom and take a break. There should be a time that they can stop working and eat their lunch.

Companies should provide high quality uniforms that look good and can be worn outside of work so that everyone knows what company they work for.

It is important that workers get free or discounted products from the companies they work for. They made it, so they should be able to use it for free.

Workers should be adequately trained for the jobs they do. It is required that they have a certain number of hours in training, so they know how to stay safe.

It is important that companies pay workers a living wage. This means they must pay an employee a fair wage that is agreed upon by and matches the cost of living in society.

Companies should provide free transportation to work. It is important that workers get to work, and the companies should pay for it.

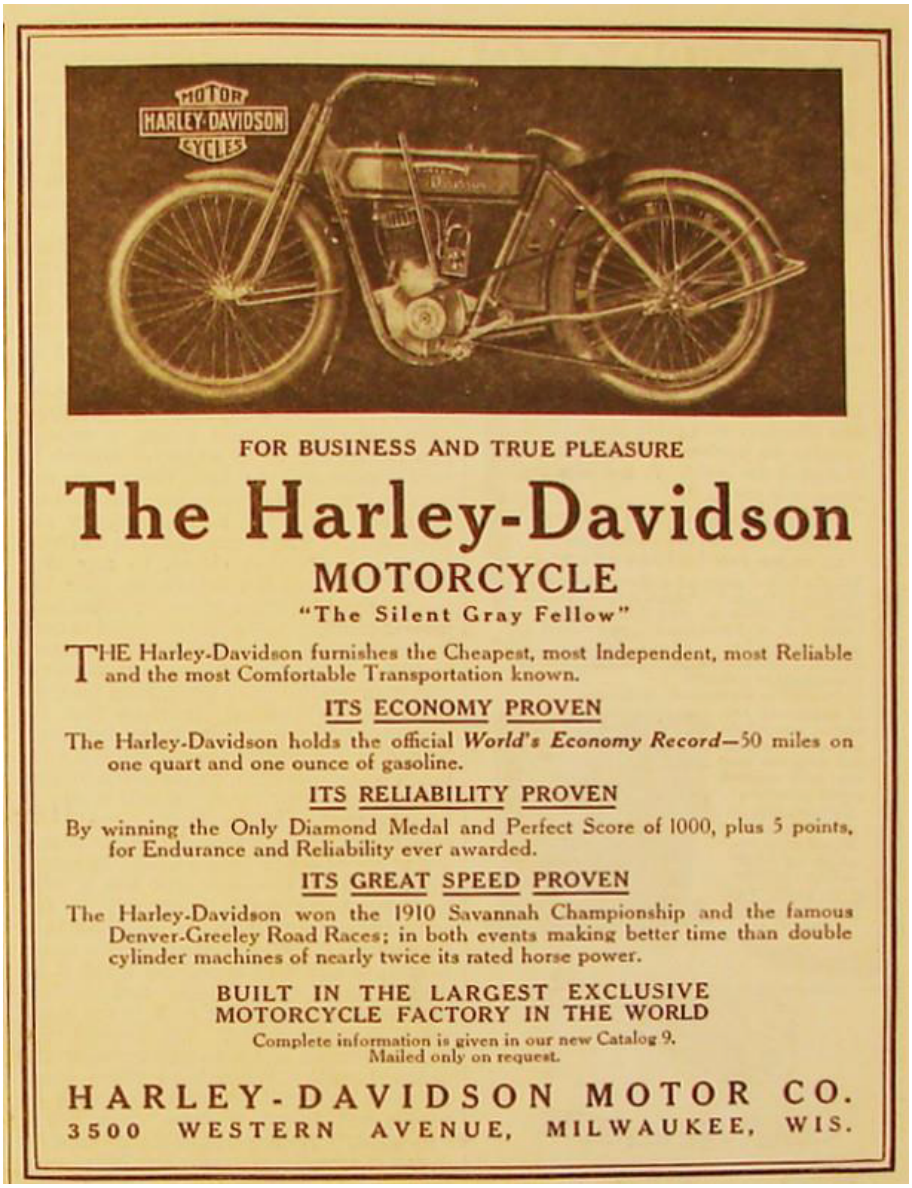
Buildings that employees work in should be safe. There should be exits in case of an emergency, and safety measures in case an employee gets hurt.

Employees that are sick should be allowed days to call in sick to protect themselves and others. They should not lose their jobs when they become ill.

It is very important for the workplace to look nice and smell nice. Every once in a while, there should be fresh flowers and a fancy lunch that is served for employees.

Industry that made Milwaukee Famous

There are many products that were started and made in Milwaukee and are still made today. It was very important for businesses to brand their products. That means that they work hard to make people remember their product. They advertise and make good products that people want to buy. Look at these advertisements from some important Milwaukee industries. Can you figure out what the product is. Have you ever heard of this product? Do you think the advertisement is important? What about the advertisement would make a consumer buy it?



The result of good brewing—

Careful selection of materials — a generous amount to each brew, never less—proper aging in wood, an indispensable feature of good brewing—up to the minute, absolutely cleanly bottling methods—have won for HIGH LIFE the distinction of being the most wholesome and *"Finest tasting beer ever produced."* Convince yourself — order a case today.

We use light bottles exclusively for this high grade beer—common beer comes in dark bottles

THE BROWN BOTTLE JOKE

The brown bottle fallacy has been so completely exploded that little is left to be said in defense of that side of the question which advocated the use of dark bottles to the absolute exclusion of light bottles. It is admitted that common beer comes in dark bottles and that beer of a high degree of stability is preferably bottled in light bottles.

Wahl-Henius Institute of Fermentology (America's greatest authorities on brewing) are in accord with this view. Here is their statement in relation to the bottling of high-grade beer:

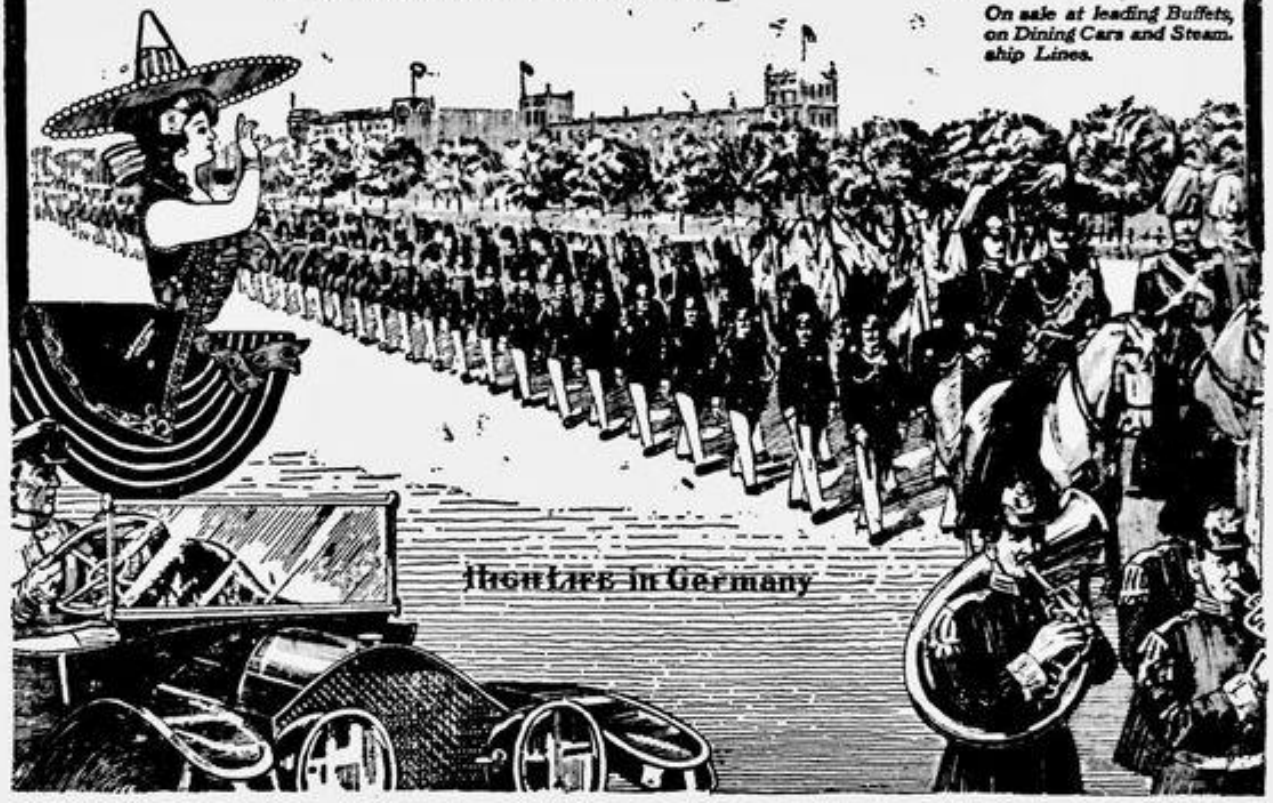
"FOR SUCH BEERS THE LIGHT BOTTLE is PREFERABLY EMPLOYED because it can more readily be inspected before filling to insure thorough cleanliness, and because the finished package reveals at a glance whether the contents meet the requirements of the consumer as to color, clarity and freedom from sedimentation."

Miller HIGH LIFE

The Champagne of Bottled Beer

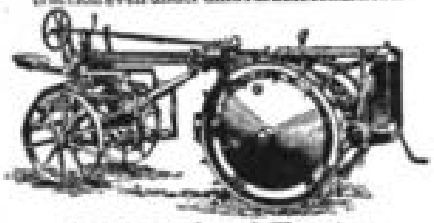
Brewed in Milwaukee by Miller Brewing Co.

On sale at leading Buffets, on Dining Cars and Steamship Lines.

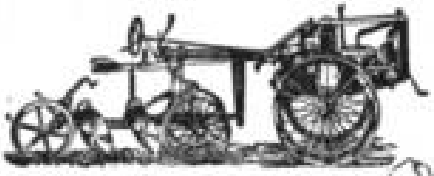


The New A-C 12-20

EVERY feature of the famous A-C 18-30 has been copied in this model. It is a 2-3 plow tractor with a guaranteed drawbar pull of 2000 lbs. It represents what foremost tractor engineers and farm power authorities class as modern design—dust-proof, accessible, compact, under-rated and possessing sure-footed traction even under unfavorable conditions.



6-12 Orchard Tractor



6-12 General Purpose

THIS year, even more than 1920, will be an Allis-Chalmers year. For the farmer with an Allis-Chalmers tractor faces doubtful times with calmness. His production cost is low—his producing capacity high. And with this combination profits cannot help but follow.

Wherever Allis-Chalmers tractors serve, they have come to mean to owners, "Standard of all Power Farming Machinery." Farmers have watched them handle heavy work in record time—accomplish many things not generally believed a tractor can do. First-time owners who have kept close check on operating costs have seen their farms put on a better business basis.

How the Factory Serves You

Allis-Chalmers' obligation does not end with the sale. A staff of skilled mechanics—long trained in the building of Allis-Chalmers tractors—make it their business to call on every Allis-Chalmers owner at the beginning of each season. Carefully they inspect each machine, make helpful suggestions and co-operate in the "tuning-up" of the tractor to top-notch efficiency. And besides this, every month the factory keeps in touch with the Allis-Chalmers owner by a letter which points out many timely ways in which his tractor can be made to produce greater profits.

Every Allis-Chalmers model is factory-built by the $42,500,000 Allis-Chalmers Manufacturing Company. Each represents the climax of seven years' development by one of the largest engineering staffs in the world.

Read the story of how these better tractors were built.
It appears in this issue of Farm Mechanics, page 3

ALLIS-CHALMERS MFG. CO.

Dept. 30-J. MILWAUKEE, WIS.

18-30

3-4 Plow


EVINRUDE
DETACHABLE ROWBOAT & CANOE MOTORS
enable you to instantly convert any kind of craft—rowboat, sailboat, houseboat or canoe—into a power boat. The Evinrude drives an ordinary rowboat 7 to 8 miles an hour—a canoe 10 to 12 miles—and runs four hours on less than a gallon of gasoline.
So light that it can be carried with you anywhere. So strong that it is practically unbreakable. So simple that women and children find no difficulty in operating it the first time they try.
Write today for booklet describing the 1915 model—the last word in portable marine motors.
Evinrude Motor Company
45 Evinrude Blk., Milwaukee, Wis., U. S. A.
Distributing Branches:
69 Cortlandt St., ... New York, N. Y.
218 State St., ... Boston, Mass.
436 Market St., . . . San Francisco, Cal.
182 Morrison St., ... Portland, Ore.
38137-41201


112 POPULAR MECHANICS ADVERTISING SECTION
Best Outdoor Friend
THE Smith Motor Wheel wins friends quickly. One short ride is your introduction and in a few moments you are on friendly terms with this new travel comrade.
It attaches in five minutes to any bicycle.
Two easy turns of the pedals send the power flowing into the steel sinews of your wheel and you coast magically along.
There is a simple "grip" control—a turn of the wrist gives you 4 to 20 miles, as you choose. No troublesome levers, belts, clutch or transmission. Your new steed needs but a gallon of gasoline for up to 125 miles, and any bicycle road—uphill or down—invites you.
No special riding togs are needed—you travel the clean way.
Get acquainted with the "Smith" at your dealer's, or write for free illustrated catalog. More than 10,000 Motor-Wheelists have found this new pleasure, and the same outdoor joy may be yours.
Smith Motor Wheel
DETACHABLE
MOTOR WHEEL DIVISION
A. O. SMITH COMPANY, Milwaukee, Wisconsin
World's Largest Manufacturers of Automobile Parts
DEALERS: A few exclusive territories remain open for the right sort of dealer. Write for particulars.
Please Mention Popular Mechanics


TRY Usinger's
INCOMPARABLE
BRAUNSCHWEIGER
The tantalizing flavor of this delicately smoked and seasoned liver sausage is achieved only through the "know how" of generations of sausage makers and the use of finest government inspected meats and rare imported natural spices.
FRED USINGER, INC.
1030 NORTH THIRD STREET
MILWAUKEE 3, WISCONSIN
Matchorama
ARISTOCRAT
MANUFACTURED EXCLUSIVELY BY
UNIVERSAL MATCH CORP.
ST. LOUIS, MO.
COVERS BY DEXTER, WEST NYACK, N. Y.
PATENT PENDING


Holeproof Hosiery
Hosiery—The Most Important Detail of Dress Today
IN these days of ankles on display, it's rather nice to display one's ankles—provided, of course, that the hose are Holeproof.
Elegant, lustrous appearance and fine texture mark Holeproof as the hose of style and refinement—and it is famous for its wonderful wearing qualities. The new spring colors in staple and fancy styles in Pure Silk, in Silk Faced, and in Lisles, for men and women, are now being shown by leading stores everywhere.
Holeproof Hosiery
This trade-mark identifies the genuine
If your dealer cannot supply you, write for illustrated booklet and price list
HOLEPROOF HOSIERY COMPANY, Milwaukee, Wisconsin
Holeproof Hosiery Co. of Canada, Limited, London, Ont.

The Making of Milwaukee

Industry that made Milwaukee Famous

What is the advertisement? _____

What describing words or phrases are used (adjectives) to get the consumer to buy that product?

_____

_____

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Could the advertisement be used today? _____

_____

Is that company still around? Are they still making that product? _____

What is the advertisement? _____

What describing words or phrases are used (adjectives) to get the consumer to buy that product?

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Could the advertisement be used today? _____

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Could the advertisement be used today? _____

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Is that company still around? Are they still making that product? _____

Industrial Poet Sue Doro

Sue Doro was a female Milwaukee iron worker - a nontraditional job for women in the 1970s and 1980s. Sue worked for Hellwig, Allis Chalmers, and then The Milwaukee Road until the railroad went bankrupt and closed. She was the first female machinist for The Milwaukee Road. Sue eventually moved to California and became the Executive Director of the Tradeswoman, Inc. A nonprofit organization of women in blue collar jobs. Sue Doro's poems represent how challenging industry work was in Milwaukee and the difficulty of being accepted into a male dominated field.

Sisters
Milwaukee Road
now don't get me wrong! but don't get me wrong
The guys i work with the guys i work with
are a good old bunch are a good old bunch
it's just that sometimes it's just that sometimes
when i look around when i look around…
and see no one like me
i think of two
who used to be here
in this factory full of men
two other women
one two three we were
sisters in hard hats
with bobbie pins and wrenches
in our pockets
sharing those working women's
special blues
like sisters we were
trading stories of different jobs
laughing crying together
in the foreman's tiny bathroom
where our lockers stood
like sister we were
and there was nothing like it!
now one's gone
one's laid off
and there's only me again
but don't get me wrong
the guys i work with
are a good old bunch

it's just that

when i look around...

Heart. Home & Hard Hats **by Sue Doro 1986**

Verona, Your Life

is a victory
and your story should be told,
how your blue collar work began
at the railroad in Milwaukee
at the end of the Second World War.
you'd be a waitress at the cafeteria
till it shut down after the men came home.
Not much sense, but that's the railroad.
The waitresses were told to me a choice:
become laborers, or quit.
Some of them tried. One of them stayed.
Who said the war was over?
You fought a battle every day they didn't want you there.
And that was everyday you worked.
The foreman had you hauling rocks in a wheelbarrow
from one pile to another,
to make you tired,
to make you give up.
Instead, they got tired of watching.

Blue Collar Goodbyes **by Sue Doro 1992**

Industrial Poet Sue Doro

What do you think the message is in the “Sisters” poem?

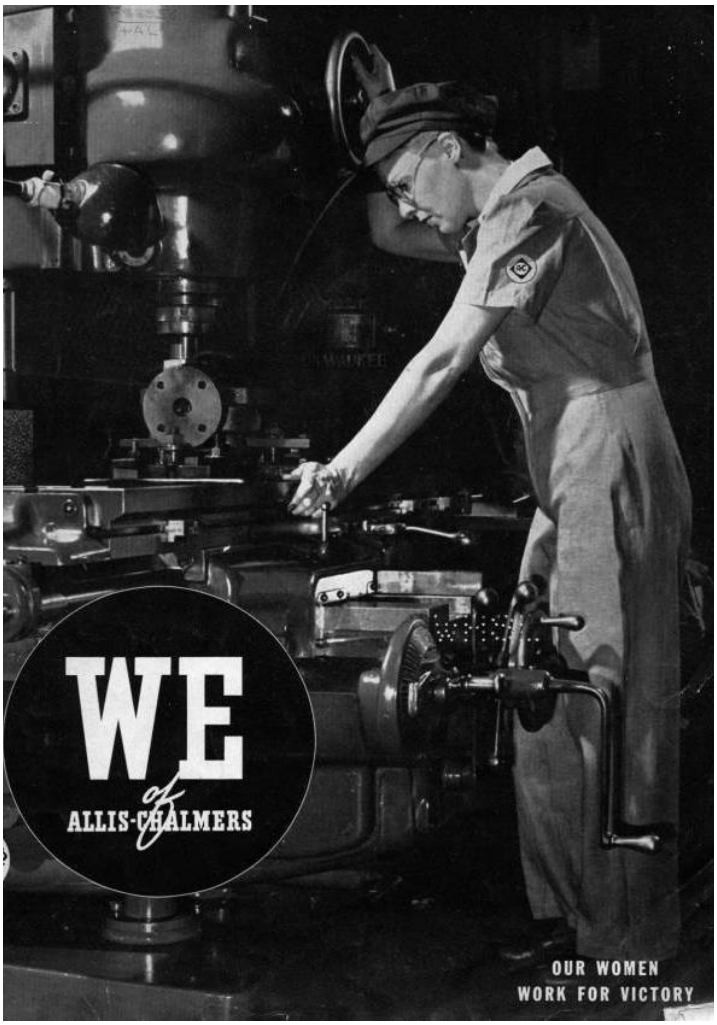
Do you think women laborers were well respected? Prove your answers with evidence.

What kind of jobs were women expected to have at this time?

What do you think Sue is trying to say about working with other females? Use evidence.

Student Activity: Meet the Women in the Industry

The United States participated in World War I and World War II. Many countries fought in these wars. Many soldiers were needed to fight in these wars. Most of the soldiers were men. When men left the factories to go to war, Milwaukee women did the jobs. Many of the products that were made in Milwaukee factories were used for equipment during the war. It was rare to see women in the factories before the wars. The jobs were usually only done by men and women had domestic jobs. Women proved that they were capable and strong enough to do the jobs that men had done. The role of women working would slowly start to change. Women were capable!



This was a turning point in Milwaukee industrial history. Do you think women felt powerful and important when they were working in the factories?

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Should women be equal to men in the workplace?

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Unit 3: Working in Milwaukee
Engaging In Inquiry

Students can further study the early manufacturing history through the lens of the entrepreneurs that started the businesses.

Students can analyze and further study the history of advertising and draw out what characteristics for life were important to Milwaukee residents.

Students can make a connection to popular sports and culture that was influenced by industry in Milwaukee.

Students can study child labor and how it affected education in Milwaukee.

Students can make an inventory of things made of steel in their life and why that makes a difference in economics.

Students can research another company in Milwaukee that was successful in manufacturing.

Students can follow the chain of supply of an iron item, from where the iron came from, to where it was made, to where it was sold.

Students can do research on the perspective of manufacturing work from women and minorities. Their experiences were very different.

Unit 3: Delving Deeper into Milwaukee History
Engaging in Inquiry

Students research Milwaukee's early manufacturing history through the perspectives of the entrepreneurs that started the business.

Students research women and minority perspectives on jobs they were able to secure.

Students research a successful Milwaukee company.

Students follow the supply chain of an item made from iron. (From its source to the manufacturer, to the buyer, and the consumer.)

Children's Literature Connections

Beaty, A. (2013). *Rosie Revere, Engineer.* Harry N. Abrams.
Rosie dreams of being an engineer and her room becomes a secret workshop where she constructs inventions. PIC BEATY (MPL)

Becker, A. (2023). *The Tree and the River.* Candlewick Press.
A mighty tree and river witness a city and its industries develop over time. Citizens learn how to manipulate resources. PIC BECKER (MLP)

Berne, E. (2023). *Rose Spoke Out.*
When Rose was just thirteen she saw that women workers were paid less than men and that the factories were Unsafe. She spoke up and organized 20,000 women to strike. 92 S3595B (MPL)

Cameron, P. (2019). *Sport: Ship Dog of the Great Lakes.* Wisconsin Historical Society Press.
A stray puppy is rescued from the Milwaukee River and named "Sport." For 12 years he witnesses Great Lake shipping. 629. 70886 C182 (MLP)

Chagollan, S. (2020). *Immigrant Innovators: 30 Entrepreneurs Who Made a Difference.* Duopress: Illustrated edition.
Biographies of inspiring immigrants and the companies they created. Stories of the strength that comes from diversity. 338.040922 C433. (MLP)

Cohn, D. (2002). *Si, Se Puede! = Yes, We Can!*
This bilingual picture book tells the story of Carlitos and his classmates who help support his mom during the successful janitors' strike in LA in 2000. PIC COH (MPL)

Donoso, R. (2022). *Viva's Voice.* Kind World Publishing.
When Viva's father's bus driver union goes on strike, Viva uses her voice to give her father courage. PIC DONOSO (MPL)

Doro, S. (1986). *Heart, Home & Hard Hats*. Midwest Villages and Voices.
A working class poet who writes about the difficulty of being a women in a male dominated field. 811.54 D715H (MPL)

Doro, S. (1992). *Blue Collar Goodbyes*. Papier Mache Press.
A female industry worker in Milwaukee writes emotional poems about her work and the dying industry 811.54 D715B (MPL)

Drake, J. & Love, A. (1997). *Mining.* Kids Can Press.
Fact, fiction, and illustrations introduce the people, machines and environmental concerns in the mining industry. 622.00973. D761 (MLP)

Drogni, M. (2017). *Harleys and the Davidsons.* Crestline.
A roll down memory lane with numerous early and modern Harley illustrations. 629.227 T349 (MPL)

Duncan, A. (2018). *Memphis, Martin, and the Mountaintop: Sanitation Strike of 1968*
When sanitation workers are killed by unsafe equipment in factories a nine year old watches her father go on Strike, supported by MLK. PIC DUNCAN (MPL)

Children's Literature Connections

Farrell, M. (2016). *Fannie Never Flinched: One Women's Courage in the Struggle for American Labor Rights.* Abrams Books for Young Readers.
During the Gilded Age of American Industrialization, Fannie becomes a union activist and fights for workers Rights in factories. 92 S4674 (MPL)

Fehring. T. (2017). *The Magnificent Machines of Milwaukee, and the Engineers Who Created Them.* CreateSpace Independent Publishing Platform.
An encyclopedic collection of photos and information that describe machines and the Milwaukee engineers and industries that created them. 977.595 F296 (MPL)

Gilbert, J. (2019). *Lucy Fights the Flames: a Triangle Shirtwaist Factory Survival Story.* Capstone Press.
In 1911, a 14 year-old girl who works to support her family at a shirtwaist factory in New York becomes one of 100's who must fight for survival as the factory burns. X Series CHAP GIRLS SURVIVE (MLP)

Gurda, J. (2007). *Cream City Chronicles.* Wisconsin Historical Society Press.
Short descriptive stories of Milwaukee's past business/industrial leaders & events bring Milwaukee's history to life. 977.595 B978CR (MPL)

Heos, B. (2018). *Who Made my Lunch? (Series) From Milk to Cheese.* Amicus Ink.
Who Made my Lunch? From Wheat to Bread.
Who Made my Lunch? From Milk to Ice Cream.
Books that describe the natural resources that lead to various products and the industries that make them. 664.7523 H528 (MPL)

Hill, R. (2023). *Old Enough to Make a Difference.* Magic Cat Publications.
12 kids from around the world who have started businesses. 338.04 H898. (MLP)

Hirsch, A. (2022). *The Transcontinental Railroad: Crossing the Divide.* First Second.
This graphic novel describes the great race to complete a continental railroad across the U.S. The perilous work and amazing feats of engineering are accomplished by immigrants. GRAPH HISTORY COMICS. (MPL)

Joose, B. (2021). *The Fisherman, the Horse, and the Sea.* Wisconsin Historical Society Press.
Based on a true story, a family witnesses the various moods of Lake Michigan, from calm to monstrous. A wicked storm puts the lives of a crew in peril. 977.4. J815 (MPL)

Krull, K. (2020). *The Only Woman in the Photo.*
Discover how the first women to serve in a presidential cabinet lead the charge to create the safety net that Protects American workers and their families to this day. 92 P4475K (MPL)

Kulling, M. (2016). *On Our Way to Oyster Bay: Mother Jones and Her March for Children's Rights.*
The famous Mother Jones helps children at an oyster shucking farm and demands fair labor. PIC Kull (MPL)

Markel, M. (2013). *Brave Girl.*
The true story of immigrant Clara Lemlich who led the strike of women workers in US History. 92 L55472m (MPL)

Children's Literature Connections

Meyer, M. (2021). *Supply Jane Clears the Way: A Supply Chain and Manufacturing Adventure for Kids.*
The adventures of Supply Jane and Fifo bring supply chain, logistics, and inventory management principles to life.

Meyer, M. (2023). *Supply Jane and Fifo Fix the Flow: A Supply Chain and Logistics Adventure for Kids.*
Supply Jane fixes a logistical problem in a business.

Price, S. (2007). *Smokestacks and Spinning Jennys: Industrial Revolution.* Raintree.
Technological developments, economic and social changes, working conditions and child labor during the Industrial Revolution. MPL 909.81 P946. (MPL)

Professor, B. (2021). *What Was it Like to Work in a Factory in the 1880s.* Baby Professor.
How was there an explosion of industry work in the 1880s and what were working conditions like.

Telchin, E. (2021). *The Black and White Factory.* Little Bee Books.
Animals work in a color factory, but when the machines break down they have to solve a problem.

Torres, J. (2022). *Lola Out Loud.*
When Lola sees injustices in her neighborhood, she knows she can't keep quiet and uses her loud voice. Inspired by the real-life civil rights activist and labor leader Dolores Huerta

Wallace, R. (2020). *The Teacher's March!: How Selma's Teachers Changed History.* Calkins Creek Books.
Reverend F.D. Reese was a leader in the Voting Rights Movement in Selma, Alabama. He recognized that all citizens should vote and it should start with teachers.

Williams, V. (2020). *The industrial revolution.* Pogo Books.
Describes the causes, outcomes and conclusions of the Industrial Revolution. 330.973.w68(MPL)

Winter, J. (2020). *Mother Jones and Her Army of Mill Children.*
Mother Jones, tired of the unsafe working conditions of child labor, leads one hundred boys and girls to a march from Philadelphia to the front door of President Theodore Roosevelt's home. 92 J77685W (MPL)

Wisconsin State Historical Society. (1978). *Early Wisconsin Industry.* The Wisconsin Historical Society Press.
49 pages illustrating Wisconsin early industries such as leather, flour, milk, blacksmiths, etc 077.5. B135e (MPL County Cat)

Yamada, K. (2014). *What do You Do With an Idea?* Compendium.
This is the story of a brilliant idea and the child that brings it to the world. As his confidence grows so does he. PIC YAMADA (MPL)

Zimm, J. (2015). *John Nelligan: Wisconsin lumberjack.* Wisconsin Historical Society Press.
Through the story of John Milligan, we learn the history of the Wisconsin lumber industry. 92.N422Z (MPL)