

## 1. Introduction



The tragedy began late in the afternoon on March 25, 1911. The quitting bell had just sounded at the Triangle Shirtwaist Factory in New York City. Nearly 500 employees, most of them young immigrant women, headed toward the exit. It was Saturday, and they were looking forward to a day off with family and friends.

One woman sniffed the air. Something was burning! Another spotted flames leaping out of a pile of cloth scraps. Before she could react, the wooden table above the fabric was ablaze. From there, the flames jumped to the paper fabric patterns hanging above the table. Flaming bits of paper and fabric whirled around the room, setting other tables on fire. The room filled with smoke. The air became so hot that it burst the windows. Fresh air poured into the room, sending the flames even higher. The fire started to scorch workers' clothing and hair.

"I heard somebody cry, 'Fire!' I left everything and ran for the door," recalled one woman. "The door was locked and immediately there was a great jam of girls before it." She could see at once that "if we couldn't get out, we would all be roasted alive."

Factories and their dangers were a relatively new part of life in the United States. The Industrial Revolution spread to the United States in the early 1800s. After the Civil War, new inventions and business methods allowed Americans to create industry on a much larger scale than ever before. The nation's new mills and factories produced an amazing assortment of goods that made life better for many. Industrial progress, though, brought not only economic benefits, but also serious social costs. The people who were employed in these new industries often lived and worked in the most miserable, even dangerous, conditions.

In this chapter, you will read the rest of the story of the Triangle Shirtwaist Factory fire. You will also learn about both the benefits and the costs of industrialization.

## 2. A Nation Transformed

Industrialization clearly brought benefits to some. On March 26, 1883, Alva Vanderbilt threw a party to show off her family's new home in New York City. It was not just a party, it was a grand ball—the most dazzling social event in the city's history. And it was not just any home. The Vanderbilts had built a mansion in the style of a European castle, complete with medieval furniture, tapestries, and armor.

But then, the Vanderbilts were not just any family. Mrs. Vanderbilt's husband was William Kissam Vanderbilt, a railroad industrialist. He was the grandson of Cornelius Vanderbilt, who had made a fortune in banking and shipping. The Vanderbilt clan was one of the country's wealthiest and most powerful families.



More than 1,200 of New York's social elite flocked to Mrs. Vanderbilt's ball, dressed in glittering costumes. Many of the guests came as kings and queens. But Mrs. Vanderbilt's sister-in-law decided to be more modern. She came dressed as the electric light.

Mrs. Vanderbilt's party reflected the way industrialization was transforming American life in the decades after the Civil War. Cities like New York were booming. **Entrepreneurs [Entrepreneur: a person who assembles and organizes the resources necessary to produce goods and services. Entrepreneurs are willing and able to take the risks involved in starting and managing a business.]** in banking, commerce, and industry were gaining enormous wealth. Technological marvels like the electric light were changing how Americans lived and worked. But as the workers in the Triangle Shirtwaist Factory knew, not everyone

benefited from this progress.



**The Growth of Big Business** Families like the Vanderbilts made huge profits from the growth of big business after the Civil War. Businesses got bigger in part because of new technology and manufacturing practices. They also grew because there was more money to **invest [invest: to give money to a company or bank, or to buy something, in order to make a profit later]** in them. Bankers and investors were happy to provide the necessary funds in hopes of earning large returns. Some of the money that fueled industrialization came from the large-scale mining of gold and silver in the West.

Government policies also contributed to the boom in big business. According to the theory of **laissez-faire [laissez-faire: a theory that economies work best when there is minimal involvement from government]** (leh-say-FAIR), economies work best with minimal government involvement. (*Laissez-faire* is French for “to let alone.”) The idea of *laissez-faire* was that government should not regulate the price or quality of goods, the working conditions of laborers, or the business practices of bankers and industrialists.

Some types of government involvement protected business and industry. Federal, state, and local governments helped business and industry through favorable laws and subsidies, such as the land grants given to railroads and farmers. Congress passed higher and higher tariffs. These made imported goods

more expensive and, therefore, less competitive with those produced in the United States.

The business boom fed the growth of American cities. For 100 years, Americans had been going west to seek their fortunes. In 1890, the Census Bureau said that the frontier line no longer existed. This was the imaginary line on the continent beyond which the country’s population density was less than two persons per square mile. The 1890 census marked the closing of the frontier. The new “land of opportunity” was located in the cities of the Northeast and around the Great Lakes, where factories provided thousands of new jobs.

Outside the cities, even farming was getting to be big business. In the Midwest, commercial farmers used new machinery and techniques to grow crops on a larger scale than ever before. “The wildest dream has become reality,” marveled one writer in 1887. “Nothing is too large for belief. Twenty and even thirty thousand acre farms, and a hundred bushels to the acre . . . The New West . . . is a veritable ‘Wonderland.’”

**The Gilded Age** As businesses got bigger, so did the fortunes of those who owned or invested in them. Between 1860 and 1892, the number of millionaires in the United States grew from 400 to more than 4,000. The newly rich filled their palace-like homes with elaborate decorations and European art and antiques. In 1873, the great American writer Mark Twain dubbed this time of showy wealth “the Gilded Age.” (*Gilded* means overlaid with gold.)

Twain’s name stuck, but it did not describe the lives of most Americans. While wealthy capitalists lived like royalty, many workers lived in dismal poverty. Those who were immigrants often faced prejudice and discrimination. During business downturns, many workers lost their jobs. People were angry about the relationships between some business owners and politicians that resulted in widespread corruption. As you will learn, these conditions eventually sparked protests and calls for reform.

### 3. Improved Technology

By the 1860s, many of the factors necessary for the rapid industrialization of the United States were already in place. Machines had taken over much of the work once done by hand. Work had moved from homes to factories. Railroads had begun to connect customers and manufacturers with an efficient transportation system.

After the Civil War, new inventions and improved technology prompted the growth of new industries. Some of these innovations, or new ideas, helped businesses to grow and become more efficient. Others made daily life easier for many Americans.

**The Age of Steel** Before the Civil War, the nation’s railroads ran on iron rails that wore out quickly. Railroad owners knew that rails made of steel—a mixture of iron, carbon, and sometimes other metals— were stronger and would last longer. Steel, however, was difficult and costly to make.

In 1872, a Scottish immigrant named Andrew Carnegie went to England to study a less expensive method of making steel, a method invented by Henry Bessemer. Carnegie owned a company that made iron bridges for railroads. He knew that his bridges would be better if they were made of steel. Carnegie was so impressed by the Bessemer process that he brought it back to the United States. “The day of iron has passed,” he announced. “Steel is king!”

Carnegie was right. Within a decade, steel was replacing iron in rails, locomotives, and bridges. Other industries took advantage of steel, which was less expensive than iron. Steel nails, needles, and knives became common household items.

Many steel companies competed fiercely to supply steel for such products. To remain the leader, Carnegie hired scientists to improve the quality of his company’s steel. He employed good managers to make his steel mill run efficiently. His recipe for success was “adopt every improvement, have the best machinery, and know the most.”

To keep costs low, Carnegie set out to control every step in the steelmaking process. He purchased iron mines to supply his ore, coalfields to fire his furnaces, and railroads to ship his finished steel to customers.

To reduce his competition, Carnegie also bought up several rival steel companies. He then combined them all to form the giant Carnegie Steel Company. By 1900, Carnegie Steel produced a quarter of the nation’s steel.

**Electric Power** In 1876, Thomas Edison opened an “invention factory” in New Jersey. With a team of workers, he set out to create a “minor” invention every ten days and a major one “every six months or so.”

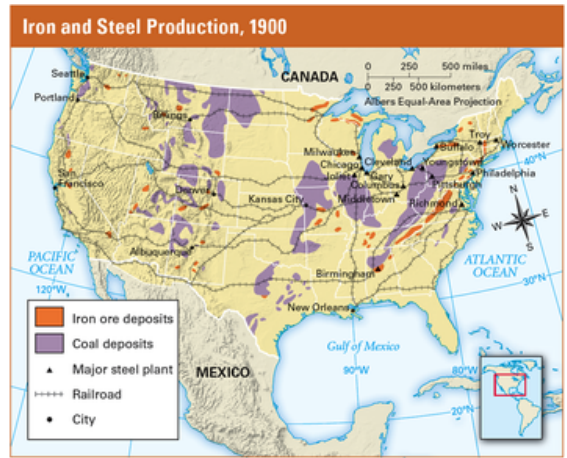
Edison succeeded brilliantly. More than any other inventor, he helped turn electricity into an everyday source of light and power. His workshop turned out the first practical electric lightbulb, the phonograph (record player), the motion picture projector, and many other inventions.

In 1882, Edison built the first electrical power station and distribution system in New York City. His team invented everything the system required, including generators, regulators, meters, switches, light sockets, fuse boxes, and underground electric cables. When he finally turned the generator on, electricity began to flow to homes, stores, and factories. The age of electricity had begun.

By 1900, some 25 million lightbulbs were glowing across the country. Many factories were replacing waterwheels and steam engines with electric motors. Streetcars powered by electricity carried workers and shoppers along city streets. New electric-powered devices, such as washing machines and vacuum cleaners, were making housework easier.

**The Telephone** The telephone was invented by a Scottish immigrant, Alexander Graham Bell. In 1876, as he was getting ready to test his “talking machine,” Bell spilled acid on himself. “Watson—come here—I want to see you,” he commanded his assistant. Thomas Watson, who was in another room, heard every word over Bell’s telephone.

Bell’s invention worked so well that, by 1915, Americans were communicating with one another over 9 million telephones. All these telephones made American industry more efficient and competitive by allowing producers, sellers, and customers to communicate quickly and easily.



This collage features several historical documents. On the left, a newspaper clipping titled "The Triangle Factory Fire Ends in Tragedy" reports on a fatal fire at the Triangle Shirtwaist Company in 1911. In the center, a photograph shows a group of workers, likely the victims of the Triangle fire, standing together. On the right, another newspaper clipping titled "FIRE TRAP VICTIMS BURIED" reports on the discovery of bodies in the rubble of the Triangle factory. The text in the clippings describes the horrific conditions and the loss of life during the disaster.

**New Production Methods** New methods of organizing work were also making businesses more efficient. Factory owners adopted Eli Whitney’s idea of assembling a wide variety of products from interchangeable parts. They also used the assembly line. In a shoe factory, for example, one worker operated a heel-cutting machine. Another operated a sole-cutting

machine. Another made shoelaces. Still other workers assembled, labeled, and packaged the shoes.

Henry Ford was one person who foresaw the great potential in the assembly line. Ford created a moving assembly line to mass-produce automobiles. In Ford plants, workers stood in place all day, while a conveyor brought the work to them. After each worker did one or two tasks, the belt moved the product to the next worker's station.

These techniques of **mass production [mass production: the use of interchangeable parts and assembly lines to make large quantities of identical goods]** enabled workers to produce more goods per day at a lower cost. As prices dropped, more Americans could afford to buy manufactured products. More customers meant more factories. By 1900, almost four times as many Americans worked in factories as had a generation earlier.



**Air Transport** While Henry Ford was turning out cars on the assembly line, brothers Orville and Wilbur Wright were experimenting with flying. In 1903, with his brother Wilbur running alongside, Orville successfully piloted the first “flying machine” in Kitty Hawk, North Carolina. Although the flight was only 12 seconds in duration, it sparked worldwide interest in flying.

By the late 1920s, an industry based on air travel had emerged. The U.S. postal service used planes to transport mail across the country while the military used planes for exploration and scouting. At the same time, wealthy Americans took their first commercial flights across the country.

#### 4. The Rise of Big Business

When Andrew Carnegie opened his first factory in 1865, most businesses were still owned by one person or a few partners. Because the owners' funds were limited, businesses were small. Owners knew their employees and often treated them like family.

**Growth of Corporations** A partnership might work well for a garment, or clothing, factory. But big businesses, such as railroads, needed much more capital (money to start a business) than a few partners could provide. To raise larger sums of money, entrepreneurs set up corporations. A **corporation [corporation: a business that is owned by many investors]** is a business that is owned by many investors, or people who help pay the business's **initial [initial: at the beginning]** expenses.

A corporation raises funds by selling stock, or shares in a business. Investors who buy the stock are known as stockholders. In return for their investment, stockholders hope to receive dividends, or a share of the corporation's profits.

The money invested by the stockholders is used to build the business. To make sure their money is used properly, stockholders elect a board of directors. The people on the board of directors oversee the running of the corporation.

After the Civil War, corporations attracted large amounts of money from investors. By the 1880s, thousands of corporations were doing business across the United States.

**Rockefeller's Oil Trust** A giant in the oil business, John D. Rockefeller introduced another form of business organization, the **trust [trust: a group of corporations that unite in order to reduce competition and control prices in a business or an industry]**. A trust is a group of corporations run by a single board of directors.

Rockefeller invested in his first oil refinery in 1862, at the age of 23. At that time, petroleum, or oil found underground, was just becoming a valuable resource. Oil refineries purify petroleum into fuel oil. During the 19th century, oil was used to light homes, cook food, and run engines and generators.

Before long, many small refineries were competing fiercely in the oil business. The amount of oil these firms produced rose



and fell wildly, along with prices. Rockefeller saw this as wasteful and inefficient. To reduce competition, he did everything he could to drive his rivals out of business. Companies he could not destroy, he bought.

Like Carnegie, Rockefeller took control of every step of his business. He bought oil fields along with railroads, pipelines, and ships to move his oil. He built his own warehouses and even made his own oil barrels for storing oil products. By 1880, Rockefeller controlled 95 percent of the nation's oil-refining industry.

To manage his many businesses, Rockefeller combined them into the Standard Oil Trust. The trust made the oil industry more efficient than ever before. But, as a **monopoly [monopoly: a company that controls all production and sales of a particular product or service]**, the trust had the power to control oil prices. This worried people who depended on oil in their homes and businesses.

<p><b>The Triangle Factory</b> <b>The Owners</b></p> <p>The Triangle Shirtwaist Factory would never be the size of U.S. Steel or Standard Oil. However, it was the largest shirtwaist factory in the entire country. The two men who owned the factory, Max Blanck and Isaac Harris, were famous in the garment industry and had been nicknamed "the shirtwaist kings."</p> <p>The owners worked well together. While Blanck entertained buyers from stores to convince them to carry Triangle products, Harris ran the factory. Harris kept up with garment production, machinery maintenance, and work flow. He did not, however, try to keep up with his workforce.</p>	<p>The factory had too many workers for him to get to know them all personally.</p> <p>The shirtwaist business made Blanck and Harris very wealthy. They drove fancy cars and enjoyed comforts that their workers could only dream about. Both had worked hard in a competitive business and probably felt they had earned their success.</p>
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Following Rockefeller's example, entrepreneurs created trusts in other businesses such as railroads, meatpacking, sugar, whiskey, and tobacco. The business leaders who controlled these huge trusts became fabulously wealthy. Because most had made their fortunes by crushing their competitors, critics called them "robber barons."

**The Evils of Trusts** The growth of trusts alarmed many Americans. They saw these monopolies as a threat to the free-enterprise

system. This system depends on free competition among businesses to provide the public quality products at fair prices. A monopoly, people argued, has little reason to improve its products or to keep prices low because it has no competition.

People also worried about the influence of trusts on the political process. Wealthy entrepreneurs, they complained, were using their enormous wealth to buy elections and corrupt public officials. As the *Chicago Tribune* warned, "liberty and monopoly cannot live together."

## 5. The Growth of Cities

Industrialization brought with it **urbanization [urbanization: the growth of cities]**, or city growth. Most of the nation's new industries were located in **urban [urban: relating to cities] areas**. Immigrants and **rural [rural: relating to the country, as opposed to the city] Americans** flocked to these industrial centers looking for jobs. Chicago, for example, more than tripled its population between 1880 and 1900.



**Urban Tenements** As urban populations increased, demand for cheap housing exploded. To meet this demand, developers threw up cheap apartment buildings called tenements.

One person described tenements as "great prison-like structures of brick, with narrow doors and windows, cramped passages and steep, rickety stairs." By 1900, about two-thirds of New Yorkers lived in such buildings.

A poor family might occupy just one or two rooms in a tenement, usually with no heat or water. Friends or family often took in newcomers who arrived in cities without money for rent. As a result, tenement neighborhoods were some of the most densely populated areas on Earth.

Tenements were unclean and even dangerous places to live. Only a few rooms had windows to provide light and fresh air. The rest were dark and airless. In some tenements, the only source of water was a single faucet in a courtyard. Many lacked sewer services. In such conditions, diseases such as typhoid and cholera spread quickly, killing infants and young children. Fire was another constant worry.

**The Triangle Factory**  
**The Building and the Workers**

Read and discuss these short stories about the Triangle factory. The first story is about the building and the second is about the workers.

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The Triangle Factory's location was made up of plenty of young, intelligent workers. Most of these workers were Italian and Irish from Boston through 1880. Their jobs provided their family's only source of income. Most of these workers had been born in the building's main problem, they could not be removed by the factory's management by the city.

The main factory workers thought conditions could afford being only as crowded as they had in a two-room apartment with one another and low wages and the factory had no safety laws. The workers had no safety laws. The workers had no safety laws.



Photograph of the Triangle Shirtwaist Factory building in New York City, showing its height and the dense urban environment.

**Cities Expand Upward** As cities expanded, urban land costs shot up. In New York, land that had sold for \$80 in 1804 was selling for \$8,000 by 1880. Such prices inspired builders to construct more building space on less land by expanding upward. Using lightweight steel beams to support walls and ceilings, builders constructed skyscrapers that rose ten or more stories into the air. Electric elevators whisked people and freight effortlessly from floor to floor.

Businesspeople rented space in city skyscrapers for their offices and factories. Factory owners preferred the top floors. Rents were cheaper higher up, and the natural light was better, saving owners money on electric lighting. The cost of insurance was low as well because steel buildings were thought to be fireproof. By the early 1900s, more than half of New York City's workers labored above the seventh floor.

**City Excitement** For all their problems, cities were also exciting places to live. Stores were filled with products never seen by people who had grown up on farms. City dwellers enjoyed all sorts of entertainment, from operas and art museums to dance halls and sporting events. When writer Hamlin Garland came to Chicago with his brother, he found that "Everything interested us . . . Nothing was commonplace; nothing was ugly to us."

**6. Working Conditions**



Working conditions in most industries were appalling. Gone were the days when business owners knew and cared about the people who worked for them. Men like Carnegie and Rockefeller knew little about their workers.

**Working Families** Gone too were the days when factory workers could expect decent pay. With so many people looking for jobs, business owners could pay low wages. Many wages were so low that men could not support their families. To get by, wives and children had to work as well, usually at even lower wages.

Most factory women earned about \$1 to \$3 per day. If business was slow, wages dropped. A boss might not pay a new worker anything until she had learned her job. Then he would charge her for maintaining the sewing machine she worked on. If a worker complained, she could easily be replaced with a new one, perhaps for less money.

**The Triangle Factory**  
**A Hazardous Workplace**

Read and discuss these short stories about the Triangle factory. The first story is about the building and the second is about the workers.

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Photograph of a young child working in a dark, cramped space, likely a coal mine, illustrating hazardous working conditions.

Millions of young children worked in mines, mills, and factories. A newspaper reported that young boys hired by coal miners to separate lumps of coal from rocks "go to work . . . at seven o'clock in the morning and work till it is too dark to see any longer. For this they get \$1 to \$3 a week." They also got curved spines from bending over piles of coal all day.

**Inside the Factories** Mills and factories were hot in summer and cold in winter. To keep costs low, owners crowded workers together rather than finding additional space.

Of all workplace dangers, fire claimed the most lives. In New York, tall buildings often lacked fire escapes. New York City's fire chief wanted buildings to have fire escapes and sprinkler systems that could put out fires quickly. But factory owners objected to such expenses.

New York City did require that factory doors "open outwardly" and "shall not be locked" so workers might escape quickly in a fire. The law was not enforced, however. In 1910, about 94 percent of all factory doors in the city opened inward instead of outward.

## 7. Labor Unions



As a teenager, Rose Schneiderman found work in a cap factory. After three years, she later wrote, “It began to dawn on me that we girls needed an organization. We were helpless; no one girl dare stand up for anything alone.”

Workers like Schneiderman had been forming unions since the 1830s. These early organizations were **labor unions** [**labor union: an organization that brings together workers in the same trade, or job, to fight for better wages and working conditions**]. They organized workers in the same trade, or job, to fight for better wages and working conditions. Sometimes workers in these unions went out on strike, refusing to work until their employers agreed to meet their demands.

**Knights of Labor** In 1869, Uriah Stephens organized a new union known as the Knights of Labor. Stephens hoped to unite “men and women of every craft, creed, and color” into “one common brotherhood.” The Knights led several successful strikes against telegraph and railroad companies. With such victories, the union grew to over 700,000 members.

In 1886, nearly 200,000 workers went on strike nationwide to demand an eight-hour workday. During a rally at Haymarket Square in Chicago, someone threw a bomb at police. The police shot back, injuring many workers. Four workers were sentenced to death for the bombing, even though no evidence tied them to the bomb.

Fearing more violence, employers fired anyone associated with the Knights. Membership dropped quickly, and the organization faded away.

### The Triangle Factory Fire Ends in Tragedy

About 5,000 workers from the Triangle Shirtwaist Factory were part of the strike of 1909. Their demands included unlocked doors during working hours and safer fire escapes in the Asch Building.

Rather than meet these demands, Blauck and Harris responded by locking the strikers out of the factory and advertising for replacements. “If the union had won, we would have been safe,” said striker Rose Schiff. “But the bosses defeated us and we didn’t get the open doors or the better fire escapes.” Because of that defeat, 146 workers would die tragically.

The cause of the fire that swept through the Triangle Shirtwaist Factory in 1911 was never known. But one Saturday afternoon, people on the eighth floor began to cry, “Fire!”

Within minutes, the entire floor was a “mass of flames.” Escaping workers rushed to the stairs or probed their way into the two small elevators. The stairs, however, were soon ablaze, and the elevators stopped running.

On the tenth floor, Mary Aber was warned of the fire by telephone. Owner Isaac Harris and production manager Sam Horowitz led some people out onto the roof. People from nearby buildings stretched

ladders between the rooftops to help those on the roof escape.

Workers on the ninth floor had no warning. The fire just appeared. Some women died immediately. Firemen later found them as “skeletons heaving over sewing machines.” Those who had time to escape found themselves trapped by the locked factory door. In desperation, they rushed to the windows and began to jump.

The crowd that gathered outside the Asch Building watched in horror as girls began to fall out of the sky—“fire streaming back from their hair and dresses”—and drop to their deaths on the pavement below.

Firefighters arrived quickly but had trouble bringing their equipment close to the build-

ing because of the bodies on the pavement. There was little the firemen could do, however. Their ladders were not tall enough to reach beyond the sixth floor.

Their safety nets were just as useless. The workers fell with such force, said one fireman, that they “went right through the life nets.”

It was all over in half an hour. At the funeral for the victims, garment workers marched under a banner proclaiming, “We demand fire protection.” As she marched, Rose Schneiderman glanced up at the buildings lining the funeral procession. “There they were, girls right at the top of hundreds of buildings, looking down on us,” she recalled. “The structures were no different from the Asch Building. . . . many were in a far worse condition.”

**American Federation of Labor** As the number of Knights declined, a group of local trade unions formed the American Federation of Labor. Led by Samuel Gompers, the AFL tried to negotiate agreements with employers on such issues as wages.

Despite the AFL’s peaceful approach, many employers made their workers sign pledges not to join unions. They also fired union members and exchanged lists of such “troublemakers” with other employers.

**The Homestead Strike** Some business owners used force to defeat unions. When workers struck at a Carnegie steel plant in Homestead, Pennsylvania,

Henry Clay Frick, Carnegie’s partner, refused to talk about their demands. Instead Frick made plans to reopen his plant with non-union workers. To protect these strikebreakers, he hired 300 armed guards.

When the guards arrived in Homestead, they faced an angry crowd of strikers. A battle broke out in which both guards and strikers died. Still, Frick went ahead with his plan. When the Homestead plant reopened with strikebreakers, the union collapsed in defeat.

**Working Women Organize** Such tactics kept many women from joining unions, but not Rose Schneiderman. Upset by pay cuts, Schneiderman organized the women in her factory as part of the National Board of United Cloth Hat and Cap Makers. Soon after she joined the union, she wrote,

*A strike was declared in five of the biggest factories. There are 30 factories in the city. About 100 girls went out. The result was a victory, which netted us—I mean the girls—\$2 increase in our wages on the average. . . . But all was not lovely by any means,*

*for the bosses were not at all pleased with their beating and had determined to fight us again.*

The largest women's union was the International Ladies' Garment Workers' Union (ILGWU), which represented women in clothing factories. In 1909, thousands of New York City garment workers walked off their jobs to protest poor working conditions and low pay. As the strike grew, so did public sympathy for the young women. The newspapers called this movement "The Uprising of the 20,000."

The strike ended months later when employers agreed to a shorter workweek and better pay. They also ended fees for the use of factory equipment. The employers refused, however, to meet the workers' demands for safety improvements. Most garment factories remained unsafe.

## Summary

**In this chapter, you read about the rapid industrialization of the United States and how this progress influenced the way average people earned their livings.**

**A Nation Transformed** Rapid industrialization transformed American life in the decades following the Civil War. Entrepreneurs in banking, commerce, and industry amassed enormous wealth. Businesses grew larger in part because of new technologies, new investors, and policies such as laissez-faire. According to this theory, economies work best when governments do not interfere.

**Improved Technology** New inventions and manufacturing methods prompted the growth of new industries. A less expensive method of making steel made it possible for businesses to grow in size and efficiency. Other inventions, such as the electric light and the telephone, made daily life easier for many Americans.

**The Rise of Big Business** While new innovations allowed more Americans to afford manufactured items, there was a hidden price. With the rise of big business through corporations, trusts (such as Rockefeller's Standard Oil Trust), and monopolies, the wealthy got wealthier and the poor got poorer.

**The Growth of Cities** As cities grew, factories rose ten or more stories above the ground, and people from all over came looking for jobs. People lived in crowded, unclean, and dangerous tenement buildings.

**Working Conditions** Men, women, and children worked long hours for low wages in crowded, unsafe factories. Doors were kept locked, and workers could not leave their stations without permission. Workers didn't dare speak up for fear of losing their jobs.

**Labor Unions** By joining labor unions, workers could fight as a group for better wages and working conditions. When organized workers went on strike, factory owners often responded with violence or by hiring non-union workers. Although labor unions had some successes, many factories remained unsafe.

Write a dialogue between a factory owner and a worker that highlights the costs and benefits of industrialization in the early 1900s. Your dialogue must begin with these opening lines:

**Worker:** The workers in this factory aren't happy. They demand changes!

**Owner:** You are lucky to be working in this modern factory!

**Worker:** I've got a list of complaints and I demand to know what you will do about them. To begin with, . . .

- 1) contain at least four concerns of workers at the turn of the century.
- 2) contain a response by the factory owner to each concern.
- 3) use these terms: assembly line, working conditions, labor unions, strike, profit.
- 4) use language that reflects the passionate feelings of workers and owners.
- 5) be free of spelling and grammatical errors.

## Reading Further - The Celebrity Inventor





**Thomas Alva Edison was a legend in his own time. In part, his fame came from inventing things that changed people’s lives—things we take for granted today like recorded music, the lightbulb, and movies. Edison was also a legend because he invented his own image. He knew how to get publicity and make himself a star.**

From her home in Norton, Kansas, Mrs. W. G. Lathrop felt moved to write a fan letter. The letter wasn’t going to a rock star, a movie star, or a sports hero. It was 1921, and Mrs. Lathrop was writing a fan letter to her favorite inventor, Thomas Edison. “Dear Sir,” she began,

*It is not always the privilege of a woman to thank personally the inventor of articles which make life livable for her sex. I feel that it is my duty as well as privilege to tell you how much we women of the small town are indebted to you . . . Positively as I hear my wash machine chugging along . . . as I write this it does seem as though I am entirely dependent on the fertile brain of one [who is] thousand[s of] miles away for every pleasure and labor saving device I have.*

Lathrop then filled in the specifics. She described how Edison’s inventions affected a typical day in her life.

*The house is lighted by electricity. I cook on a Westinghouse electric range, wash dishes in an electric dishwasher. An electric fan even helps to distribute the heat over part of the house . . . I wash clothes with an electric machine and iron on an electric mangle [pressing machine] and with an electric iron. I clean house with electric cleaners. I rest, take an electric massage and curl my hair on an electric iron . . . Then start the Victrola [record player] and . . . listen to [music], forgetting that I’m living in a tiny town of two thousand where nothing much ever happens.*

It is strange today to think about writing a letter like this one. But Thomas Edison was a celebrity. How did an inventor—someone who worked in a laboratory that was anything but glamorous—become so famous and well loved?

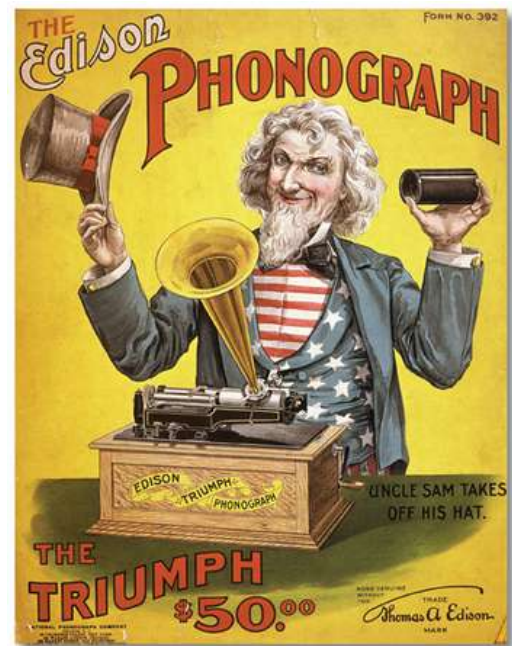
### **The Invention that Launched the Legend**

No one but his mother would have guessed that little Thomas Edison would one day become a famous inventor. He was a poor student, “dreamy” and distracted. He doodled and didn’t complete his lessons. He had such a hard time at school that after only three months, his mother decided to teach him at home.

When he was 15, Edison learned how to run a telegraph machine. The telegraph used bursts of electric current to send messages quickly over long distances. Edison was fascinated by the machine.

It was while trying to improve the telegraph that Edison made a momentous discovery. He developed a machine that could record and transmit the sound of a human voice. He called it a phonograph.

It is hard to imagine today just how amazing this was. Until the phonograph, people had only heard the voices of those who were physically near them. But Edison had made a machine that could record a voice. The recording could be played when the speaker was nowhere to be seen. It could, in fact, be played long after the speaker had died. The phonograph seemed magical.



Soon, a promoter was traveling the country, demonstrating how the phonograph worked. Audiences were thrilled.

*You should hear me bring down the House by singing in the Phonograph . . . The effect when they hear me is stupendous, but when they hear the Phonograph reproducing my song with all its imperfections they endanger the walls with clamor.*

—Edward Johnson, 1878



*The New York Sun* newspaper ran this headline about Edison and his phonograph on February 22, 1878: “A Man of Thirty One Revolutionizing the Whole World.” Thomas Edison became a celebrity.

Once Edison saw the public’s enthusiasm, he was more than happy to promote the new machine. By mid-1878, he published a list of ten possible uses for the phonograph. The list included recording books, music, and lectures. Edison also thought the phonograph could be used to teach languages and write letters. Today, we use recordings for all those purposes—and many more that even Edison could never have dreamed up.

## Electricity and the Lightbulb

Edison is most famous today for inventing the electric lightbulb. In fact, other inventors had been working on lightbulbs for 50 years. But it was Edison who solved the problem that had plagued them all: how to make a bulb that would burn for more than just a few minutes.

A lightbulb works by electric current moving through a filament (thread). When the filament gets hot, it gives off light. Other inventors knew this, but they had not been able to figure out what kind of filament to use. After years of trying to use platinum, Edison switched to carbon. A carbon-coated thread did the trick. It would not melt or catch fire, and it could produce light for hours.

In October 1879, the *New York Herald* poetically described the light emitted by Edison’s bulb. It was “like the mellow sunset of an Italian autumn . . . a little globe of sunshine, a veritable Aladdin’s lamp,” reporter Marshall Fox gushed. Better yet, it stayed lit for 13 and a half hours. Previous bulbs had lit up for only a few minutes.

A full year before he so impressed the *New York Herald*, Edison had announced that making a lightbulb was so simple that “everybody will wonder why they have never thought of it.” Unfortunately, it was not so simple. When Edison made that statement, he was still struggling to get his electric lightbulb to work. But he was happy to keep the public interested with promises that the light from his bulb would last “almost forever.”

At the same time that Edison was working on the lightbulb, he was also working on a way to distribute electricity. He planned to build a power plant on Pearl Street in lower Manhattan. The power plant would light the whole neighborhood.

Before the Pearl Street plant was finished, Edison had a private customer. William Vanderbilt, son of the railroad tycoon, wanted to outfit his house on Fifth Avenue with electricity. So Edison had an electrical power plant built in the basement. On the chosen evening, the lights came on as planned. Everything seemed to be going well— until someone noticed the smell of something burning. It turned out that the wallpaper had metallic thread in it and had almost caught fire. Mrs. Vanderbilt was not at all pleased. She demanded that the entire electrical system be removed.

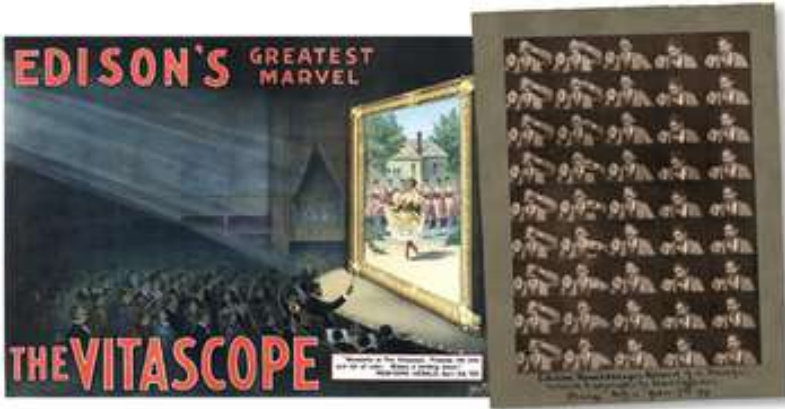
At last, on September 4, 1882, the Pearl Street generator started up and a small part of Manhattan lit up. But it was not the earth-shattering event that some books describe. It had taken Edison four years to fulfill his promise of centrally generated



electricity. The public had become bored. For his part, Edison was eager to start making money from his years of hard work. He was also ready to cement his reputation as an earth-changing inventor, regardless of how long it took him to follow through on his promises.

## An Inventor Who Changed the World

Edison kept his inventions coming. As the 1800s came to a close, he applied himself and his staff to making moving pictures. He called his device a kinetoscope, which means “an instrument for viewing movement.” He promised that it would do “for the Eye what the phonograph does for the Ear.”



As with the phonograph, Edison did not immediately see how much people would like moving pictures. And as with the lightbulb, he was not the only inventor working on the device. Edison faced stiff competition. But in 1897, he starred in his own 30-second moving picture, *Mr. Edison at Work in His Chemical Laboratory*. The public loved it.

Thomas Edison had indeed changed the world. He invented—and helped invent through his competition with others—the phonograph, the electric lightbulb, the centralized distribution of electricity, the movies, and more. It is nearly impossible to imagine life today without any one of these or the later inventions they led to.

Decades before he died, Edison reached heights of celebrity and fame. The “Man Who Defeated Darkness,” the “Dean of Inventors,” and the “Greatest Citizen of the World” are just some of the titles given to him. He was happy to accept the praise, and people today are happy to accept his inventions.

### Preparing to Write: Identifying Effects

Thomas Edison is known as a man who revolutionized the world. His inventions changed people’s everyday lives in profound ways.

Edison did not actually invent most of the conveniences that W. G. Lathrop described in her letter. What do these devices have in common, for which she thanks the inventor?

- 1) What made the phonograph seem magical when it was first invented?
- 2) What were some practical uses of the phonograph that Edison suggested?
- 3) How do you think the first electric lights would have changed people’s lives?
- 4) In what way does a movie do “for the Eye what the phonograph does for the Ear”?

### Writing an Explanatory Paragraph

W. G. Lathrop gave Thomas Edison credit for all of the electrical appliances and machines in her home. How would your life be different if Edison had not invented a successful lightbulb or figured out how to distribute electricity throughout neighborhoods? Write a paragraph explaining how your life would be different without Edison’s electrical inventions.

Use this rubric to evaluate your paragraph. Make changes in your paragraph if you need to.

**Score****Description**

- |   |   |
|---|---|
| 3 | The paragraph gives multiple differences between life with and without electricity. There are no spelling or grammar errors.  |
| 2 | The paragraph gives some differences between life with and without electricity. There are some spelling or grammar errors.    |
| 1 | The paragraph does not give differences between life with and without electricity. There are many spelling or grammar errors. |