The Rise of the Cities

The population explosion that had begun during the 1700s continued through the 1800s. Cities grew as rural people streamed into urban areas. By the end of the century, European and American cities had begun to take on many of the features of cities today.

Medicine Contributes to the Population Explosion

Between 1800 and 1900, the population of Europe more than doubled. This rapid growth was not due to larger families. In fact, families in most industrializing countries had fewer children. Instead, populations soared because the death rate fell. Nutrition improved, thanks in part to improved methods of farming, food storage, and distribution. Medical advances and improvements in public sanitation also slowed death rates.

The Fight Against Disease Since the 1600s, scientists had known of microscopic organisms, or microbes. Some scientists speculated that certain microbes might cause specific infectious diseases. Yet most doctors scoffed at this germ theory. Not until 1870 did French chemist Louis Pasteur (pas TUR) clearly show the link between microbes and disease. Pasteur went on to make other major contributions to medicine, including the development of vaccines against rabies and anthrax. He also discovered a process called pasteurization that killed disease-carrying microbes in milk.
In the 1880s, the German doctor Robert Koch identified the bacterium that caused tuberculosis, a respiratory disease that claimed about 30 million human lives in the 1800s. The search for a tuberculosis cure, however, took half a century. By 1914, yellow fever and malaria had been traced to microbes carried by mosquitoes.

As people understood how germs caused disease, they bathed and changed their clothes more often. In European cities, better hygiene helped decrease the rate of disease.

Hospital Care Improves In the early 1840s, anesthesia was first used to relieve pain during surgery. The use of anesthetics allowed doctors to experiment with operations that had never before been possible.

Yet, throughout the century, hospitals could be dangerous places. Surgery was performed with dirty instruments in dank rooms. Often, a patient would survive an operation, only to die days later of infection. For the poor, being admitted to a hospital was often a death sentence. Wealthy or middle-class patients insisted on treatment in their own homes.

“The very first requirement in a hospital,” said British nurse Florence Nightingale, “is that it should do the sick no harm.” As an army nurse during the Crimean War, Nightingale insisted on better hygiene in field hospitals. After the war, she worked to introduce sanitary measures in British hospitals. She also founded the world’s first school of nursing.

The English surgeon Joseph Lister discovered how antiseptics prevented infection. He insisted that surgeons sterilize their instruments and wash their hands before operating. Eventually, the use of antiseptics drastically reduced deaths from infection.

**Checkpoint** Which factors caused population rates to soar between 1800 and 1900?

**City Life Changes**

As industrialization progressed, cities came to dominate the West. City life, as old as civilization itself, underwent dramatic changes in Europe and the United States.

**City Landscapes Change** Growing wealth and industrialization altered the basic layout of European cities. City planners created spacious new squares and boulevards. They lined these avenues with government buildings, offices, department stores, and theaters.

The most extensive urban renewal, or rebuilding of the poor areas of a city, took place in Paris in the 1850s. Georges Haussmann, chief planner for Napoleon III, destroyed many tangled medieval streets full of tenement housing. In their place, he built wide boulevards and splendid public buildings. The project put many people to work, decreasing the threat of social
unrest. The wide boulevards also made it harder for rebels to put up barricades and easier for troops to reach any part of the city.

Gradually, settlement patterns shifted. In most American cities, the rich lived in pleasant neighborhoods on the outskirts of the city. The poor crowded into slums near the city center, within reach of factories. Trolley lines made it possible to live in one part of the city and work in another.

**Sidewalks, Sewers, and Skyscrapers** Paved streets made urban areas much more livable. First gas lamps, and then electric street lights illuminated the night, increasing safety. Cities organized police forces and expanded fire protection.

Beneath the streets, sewage systems made cities much healthier places to live. City planners knew that clean water supplies and better sanitation methods were needed to combat epidemics of cholera and tuberculosis. In Paris, sewer lines expanded from 87 miles (139 kilometers) in 1852 to more than 750 miles (1200 kilometers) by 1911. The massive new sewer systems of London and Paris were costly, but they cut death rates dramatically.

By 1900, architects were using steel to construct soaring buildings. American architects like Louis Sullivan pioneered a new structure, the skyscraper. In large cities, single-family middle-class homes gave way to multistory apartment buildings.

**Slum Conditions** Despite efforts to improve cities, urban life remained harsh for the poor. Some working-class families could afford better clothing, newspapers, or tickets to a music hall. But they went home to small, cramped row houses or tenements in overcrowded neighborhoods.

In the worst tenements, whole families were often crammed into a single room. Unemployment or illness meant lost wages that could ruin a family. High rates of crime and alcoholism were a constant curse. Conditions had improved somewhat from the early Industrial Revolution, but slums remained a fact of city life.

Jacob Riis, a police reporter, photographer, and social activist in New York City, published *How the Other Half Lives* in 1890 in an effort to expose the horrible living conditions of the city slums and tenements. Conditions among the urban working class in Britain (right) were similar to those in New York described by Riis:

**Primary Source**

"Look into any of these houses, everywhere the same . . . Here is a "flat" or "parlor" and two pitch-dark coops called bedrooms . . . One, two, three beds are there, if the old boxes and heaps of foul straw can be called by that name; a broken stove with crazy pipe from which the smoke leaks at every joint, a table of rough boards propped up on boxes, piles of rubbish in the corner. The closeness and smell are appalling. How many people sleep here? The woman with the red bandanna shakes her head sullenly, but the bare-legged girl with the bright face counts on her fingers. . . "Six, sir!""

**Vocabulary Builder**

*illuminated* (ih LOO muh nayt) v. to light up; to give light to
The Lure of the City

Despite their drawbacks, cities attracted millions. New residents were drawn as much by the excitement as by the promise of work. For tourists, too, cities were centers of action.

Music halls, opera houses, and theaters provided entertainment for every taste. Museums and libraries offered educational opportunities. Sports, from tennis to bare-knuckle boxing, drew citizens of all classes. Few of these enjoyments were available in country villages.

✓ Checkpoint How did industrialization change the face of cities?

The Working Class Advances

Workers tried to improve the harsh conditions of industrial life. They protested low wages, long hours, unsafe conditions, and the constant threat of unemployment. At first, business owners and governments tried to silence protesters. By mid-century, however, workers began to make progress.

Labor Unions Begin to Grow

Workers formed mutual-aid societies, self-help groups to aid sick or injured workers. Men and women joined socialist parties or organized unions. The revolutions of 1830 and 1848 left vivid images of worker discontent, which governments could not ignore.

By the late 1800s, most Western countries had granted all men the vote. Workers also won the right to organize unions to bargain on their behalf. Germany legalized labor unions in 1889. Britain, Austria, and France followed. By 1900, Britain had about three million union members, and Germany had about two million. In France, membership grew from 140,000 in 1890 to over a million in 1912.

The main tactic of unions was the strike, or work stoppage. Workers used strikes to demand better working conditions, wage increases, or other benefits from their employers. Violence was often a result of strikes, particularly if employers tried to continue operating their businesses without the striking workers. Employers often called in the police to stop strikes.

 Pressured by unions, reformers, and working-class voters, governments passed laws to regulate working conditions. Early laws forbade employers to hire children under the age of ten. Later, laws were passed outlawing child labor entirely and banning the employment of women in mines. Other laws limited work hours and improved safety. By 1909, British coal miners had won an eight-hour day, setting a standard for workers in other countries. In Germany, and then elsewhere, Western governments established old-age pensions, as well as disability insurance for workers who were hurt or became ill. These programs protected workers from poverty once they were no longer able to work.

Analyze Cause and Effect The long-term effects of the Industrial Revolution touched nearly every aspect of life. Identify two social and two economic effects of the Industrial Revolution.
Standards of Living Rise  Wages varied throughout the industrialized world, with unskilled laborers earning less than skilled workers. Women received less than half the pay of men doing the same work. Farm laborers barely scraped by during the economic slump of the late 1800s. Periods of unemployment brought desperate hardships to industrial workers and helped boost union membership.

Overall, though, standards of living for workers did rise. The standard of living measures the quality and availability of necessities and comforts in a society. Families ate more varied diets, lived in better homes, and dressed in inexpensive, mass-produced clothing. Advances in medicine improved health. Some workers moved to the suburbs, traveling to work on subways and trolleys. Still, the gap between workers and the middle class widened.

**Checkpoint**  How did workers try to improve their living and working conditions?

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**Terms, People, and Places**
1. For each term, person, or place listed at the beginning of the section, write a sentence explaining its significance.

**Note Taking**
2. Reading Skill: Identify Supporting Details  Use your completed outline to answer the Focus Question: How did the Industrial Revolution change life in the cities?

**Comprehension and Critical Thinking**
3. Recognize Cause and Effect  Why did the rate of population growth increase in the late 1800s?
4. Summarize  What are three ways that city life changed in the 1800s?
5. Analyze Information  What laws helped workers in the late 1800s?
6. Synthesize Information  How did the rise of the cities challenge the economic and social order of the time?

**Writing About History**
Quick Write: Brainstorm Possible Solutions  Choose one topic from this section, such as the hardships of city life, about which you could write a problem-solution essay. Use the text and your own knowledge to create a list of possible solutions to the problem that you’ve chosen to write about. Next, organize your list to rank the solutions from most effective to least effective.