

Name \_\_\_\_\_

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# The Industrial Revolution

Starting in the mid-18th century, a 150-year period of technological innovation laid the groundwork for the world we know today, transforming the way we work, travel, communicate, and more.

Prior to the Industrial Revolution, most people lived a subsistence lifestyle. Families, including children, worked all day to produce what they needed to survive, and the few goods that were fabricated by skilled craftspeople couldn't be made in large quantities. Having to support yourself like this meant that there was little time for leisure activities, and most people never left the town where they were born. In short, labor was centered around the home, and life was generally pretty difficult.

But in the early 1700s, major changes were underway in England. With a stable government, lots of natural resources, and a strong economy underpinned by colonial resource extraction, the country was in an ideal position to support the development of new technologies. Plus, with recent innovations in the agricultural sector, food production was more efficient than ever before, giving people time to do things like tinker with gadgets and think about science. Better nutrition also led to longer lifespans, and Europe's population skyrocketed—effectively creating millions of new workers and consumers.

The first phase of the Industrial Revolution, which ran from roughly 1760 to 1830, can be defined by three major inventions. Back in 1712, before things really got started, a man named Thomas Newcomen had made a groundbreaking discovery: machines could be operated using the steam generated by burning coal. Six decades later, James Watt created a new and improved steam engine, fueling an explosion of factories around the world. Around the same time, the power loom and a new blast furnace were invented. A mechanized loom wove cloth much faster than any person could, while the furnace enabled the mass production of steel, a strong metal alloy often used in construction.

Though the First Industrial Revolution was led by England, its effects were felt across the pond. With the invention of the power loom, plantations in the American South were struggling to keep up with the demand for cotton from British cloth factories. A breakthrough came in 1793 when Eli Whitney invented the

cotton gin, which quickly separates cotton fibers from their seeds. Though this task no longer required the manual labor of enslaved people, the greater efficiency made cotton-growing wildly profitable for enslavers. This in turn increased demand for enslaved labor as plantation owners sought to grow as much cotton as possible. Meanwhile, in the North, factory workers pioneered the assembly line. With one person assigned to each step of the production process, manufacturing goods was faster and easier than ever before.

The second phase of the Industrial Revolution took place during the second half of the 19th century. This time, it was spearheaded by American inventors. This period saw significant progress in transportation, including the invention of steam-powered trains and ships. Scientists also learned how to harness electricity, leading to the creation of the telegraph, telephone, and light bulb. These inventions completely transformed the way people lived, making travel more widely accessible and enabling instant communication across long distances.

But it wasn't just the new technologies that changed things. In the US and Europe, the entire social and economic landscape was undergoing a massive shift. Since factories were concentrated in cities, people left their countryside homes in droves to find work. But cities were unable to accommodate such a major population influx, and workers often ended up living in unsanitary, overcrowded apartment buildings called tenements. Conditions in the factories weren't much better. Workers, including young children, toiled up to 16 hours a day, six days a week, performing the same repetitive tasks over and over again. Dangerous machinery often caused serious injuries and even death, and pay was extremely low. This terrible treatment inspired a movement for workers' rights that helped secure better compensation, workplace safety measures, and an end to child labor. Those fortunate enough to not have to work on an assembly line were experiencing changes of their own, as new inventions led to new consumer goods. The emerging middle class, made up of skilled workers and factory overseers, suddenly had money to burn—and lots of different items to spend it on.

Explain the Industrial Revolution's impact on one of the following: workers' rights, consumption trends, and urbanization.

The Industrial Revolution transformed just about everything in our world—including the physical world itself. It marked the beginning of human-made climate change, as the constant burning of coal and, later, oil has caused the planet to grow steadily warmer. It has also led to extensive deforestation, pollution, and habitat destruction. The benefits of industrialization are many, but they've come at a great cost to the Earth.

