

The Industrial Revolution

The Industrial Revolution began in England in the 1700's. However, an Agricultural Revolution had to come first. It created the conditions that allowed the Industrial Revolution to happen.

The **Agricultural Revolution** was a *change in the way farming was conducted*, and it was characterized by the **Enclosure Movement**. This was when wealthy landowners bought up the many smaller, poorer farms in England. They then *created large fields that were closed off by hedge rows or fences*. These **enclosures**, as they were called, were now large enough for farmers to experiment with ways to make farms more productive. New methods such as crop rotation were used. **Crop rotation** is a technique where different crops are planted in different fields one year, and then moved to a neighboring field the next year to keep soil fertile and put nutrients back into the land. **Selective breeding** of livestock was also a new technique. It mated only the best animals – so average weights of animals increased, as did production of wool and other livestock-related products. Also, large fields meant that **technology** such as the **seed drill** could be used. This invention plowed, planted and covered in one pass. It was more efficient and saved time and labor. With new efficiencies and techniques in farming, not as many farmers were needed to work the same amount of land. Thus some of the small farmers worked on these new enclosures as tenants, but most moved to city to look for new work. Overall, the **Agricultural Revolution** resulted in bigger yields and *more food being produced*. More food meant people were living longer, and having more children. *The population of England exploded*. With this came a *demand for new products*, which made factories necessary. Finally, this *large population served as the labor force* needed to work in the many new factories to come.

The Industrial Revolution - *was a change from producing goods at home by hand, to making them in a factory with machines*. It began in England because it had advantages such as natural resources, a large labor pool, a stable economy willing to invest in new ideas and technology, and a stable government that passed favorable trade and tariff laws for business.

Natural Resources:

- Water power and coal - to fuel machines
- Iron ore - to create machines
- Rivers - for inland transportation and water power
- Labor - large population to work in factories
- Harbors - merchant ships load and set sail

The **textile industry** was the first to be transformed. Inventions such as the Spinning Jenny, the Spinning Mule, the water loom, and the power frame all sped

up the yarn-making and weaving processes. It created better quality cloth faster and more efficiently. The **steam engine** allowed factories to be located anywhere, instead of only on rivers. This allowed industry to spread to all corners of England. It also ushered in the railroad era. Thousands of miles of railroads were built across England and Europe, resulting in faster, cheaper transport of people and goods. **It created jobs** by the thousands. Not only were people needed to build and run the railroad, it required coal and iron to be mined and smelted to create the track, locomotives, machinery and building materials to be used in these industries.

The Industrial Revolution not only changed the way goods were produced, but it also affected the development of England and the way people lived. Most European **urban areas at least doubled in size** as factories developed in clusters near power sources and industrial towns grew near natural resource pockets. People moved to the cities for jobs, resulting in rapid, unplanned growth. There were no building or sanitary codes to regulate development, and many cities lacked proper services (police and fire protection, sewer, sanitation, schools) and adequate housing. The result was **very poor living conditions** and a short life expectancy for the working class. The tenements they lived in were crowded, dirty, and characterized by garbage, filth, and sickness. Rivers and water supplies were polluted by factories, and the air was black with coal smoke.

Working conditions in factories and mines **were not much better**. Workers toiled through 14-18 hour days, with short breaks. Factories and mines were extremely dangerous with poor lighting, no ventilation or heating and no safety features on machines. Serious injury and death were fairly common occurrences, and there was no government assistance to help such workers or their families. Many women and children were employed because they could be paid less. Since most were working, children could not attend school and were thus uneducated and illiterate. Workers were now at the mercy of their employer. Daily life had changed dramatically from the old days of work on the farm or in the home. Family life in urban areas ceased to exist as workers used to know it.

Despite the negative aspects of industrialization, there was a positive side. Tremendous wealth was created, both for individuals and England. Entrepreneurs took risks, invested time and money to grow business, thus creating jobs. Technology improved products and drove down the costs, making them available to all eventually. Tax revenue enabled services such as clean water systems, sewage systems, and paved roads to be developed. Building codes improved housing. While the middle and upper classes enjoyed the benefits of the Industrial Revolution immediately, **the standard of living for everyone, including workers, was raised eventually.**

The Industrial Revolution– Chapter 25

Industrial Revolution – the shift from making goods by hand at home to making them in a factory by machine

Enclosures – one of the fenced-in fields created by wealthy landowners on land that was formerly worked by village farmers

Crop rotation - a system of growing a different crop in a field each year to preserve the fertility of the land

Industrialization – the development of industry for the machine production of goods

Factors of production - the resources (land, labor and capital) that are needed to produce goods and services

Entrepreneur – a person who organizes, manages, and takes on the risks of a business

Urbanization – the growth of cities and the migration of people into them

Middle class – a social class made up of skilled workers, professionals and business people

