

# The first and second Industrial Revolutions

The **first Industrial Revolution** refers to the period of dramatic technological, socio-economic and cultural changes in Britain between 1750 and 1850. Britain gradually abandoned its agrarian system and passed to a new organisation based on large-scale machine production. Many factors were at the origin of this industrialisation:

- natural and financial resources coming from colonies;
- abundance of natural energy sources on its territory;
- dense population, which provided the necessary labour force;
- the increasing number of technological innovations of those years.

## ■ New inventions

Inventions like the **flying shuttle**• and the **spinning jenny**•• made mass production possible, and Watt's **steam engine** (1765), which powered machines, made the complete mechanisation of textile manufacturing possible.

Organic fuels derived from wood were replaced with fossil ones based on **coal** and Bessemer's **converter** allowed the production of stronger steel, necessary for building complicated machinery. The production of iron and steel increased and, thanks to the advent of new **roads, railways, canals** and **steamships**, raw materials and finished products could be moved rapidly at a lower cost.

**life expectancy:** *durata media della vita*  
**overseas:** *d'oltremare*  
**pig-iron:** *ghisa*  
**to spin:** *filare*

**to spread:** *diffondersi*  
**to spring up:** *nascere*  
**starvation:** *fame*  
**trade union:** *sindacato*

Device which made cotton weaving faster and easier.

Simple device which allowed spinners to spin a lot of threads at the same time.

Britain was producing half of the world's **pig-iron** and more than half of the world's cotton cloth; it had the longest railway in the world and its production of coal was much higher than in any other country. Its merchant fleet was the world's largest one and exported more manufactured products than any other nation.

## ■ Effects on social life

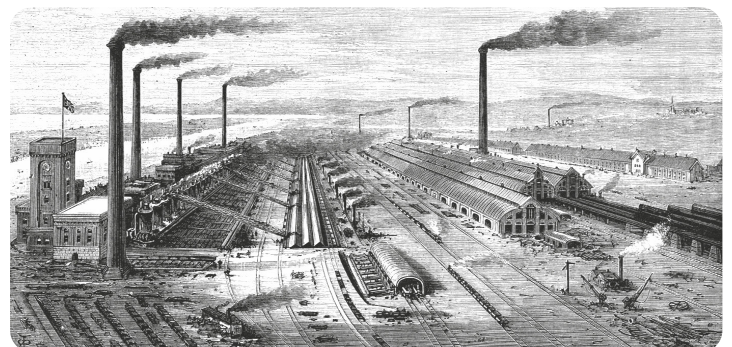
Industrialisation had a tremendous impact on society. People migrated to the areas where factories and mines were situated and new industrial towns **sprang up**, densely populated and heavily polluted. Living and working conditions were extremely difficult, but the new job opportunities enabled urban workers to avoid **starvation** and children's **life expectancy** even increased. Industrial growth was also the basis for the rise of new professions and the development of the middle class.

## ■ Second Industrial Revolution

The building of the first public railway in 1830 marked the transition from the first to the **second Industrial Revolution**, which transformed Britain into the wealthiest and most powerful nation on earth. The railway had caused a boom in the demand for coal and iron, **overseas** countries had started to buy British engineering products, and the whole country was rapidly transformed into a huge workshop to meet demand. Banks **spread** and London became the new financial capital of the world. Standards of life improved and advances were made in health care, democratic participation, education and women's rights.

## ■ London's Great Exhibition

On 1 May 1851, Queen Victoria opened the Great Exhibition in London and showed the rest of the world the new industrial, economic and military superiority of Britain. The Great Exhibition marked the climax of the second industrial revolution,••• which continued into the 20<sup>th</sup> century with early factory electrification and the production line and which ended at the beginning of World War I.



### 1 Decide if the statements are true or false. Correct the false ones.

1. The flying shuttle and the spinning jenny replaced hand-operated machines.
2. Fossil fuels based on coal were replaced with organic ones derived from wood.
3. The converter allowed the production of stronger steel, necessary for building complicated machinery.
4. Raw materials and finished products could be moved rapidly but at a higher cost.
5. The second industrial revolution took place during the 20<sup>th</sup> century.
6. British economy remarkably improved after the building of the public railway.
7. Overseas countries started to buy British engineering products.
8. The Great Exhibition marked the increasing power of Britain.

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The Great Exhibition

### 2 Read the text and fill in the blanks with the words given below.

water • young • rise • law • urban • employers • speed • paid • polluted • industrial

#### Living Conditions During the Industrial Revolution

The new factory system led to the

1. .... of the modern city, transforming much of the population from rural workers into 2. .... workers. Industrial workers were in fact better 3. .... than rural ones and consequently people crowded the 4. .... areas, living and working in very bad conditions. Factory towns were extremely dirty and 5. ...., and workers' houses were dark, humid places without sanitation or a 6. .... supply.

Working conditions were also very harsh since workers were expected to work up to 18 hours a day, following the 7. .... set by the machines, with very low wages. Child labour was allowed and favoured by 8. .... since children were paid less than adults. The situation improved after the Factory Act of 1833: the first 9. .... against child labour. Children were not permitted to work night shifts and were forbidden to work if they were younger than nine. The working day for 10. .... people up to 18 was limited to 12 hours.

Adapted from: <https://courses.lumenlearning.com/suny-hccc-worldhistory2/chapter/urbanization/>

### 3 Answer the questions.

1. What radical changes took place in Britain between 1750 and 1850?
2. What factors were at the origin of British industrial growth?
3. Why was the steam engine a turning point in the process towards industrialisation?
4. What changes occurred in metallurgy?
5. How did industrial growth change people's lives and the social structure?
6. How important was the railway in Britain?
7. Why was Great Britain transformed into a huge workshop?
8. What was the Great Exhibition? What did it show?