**Why was Britain the first country to have an industrial revolution?**

<table>
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<th>Timeline of British Industrial Development</th>
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<td>1733: John Kay's 'Flying Shuttle' invented; it increases the speed of textile weaving machines</td>
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<td>1767: James Hargreaves's 'Spinning Jenny' invented; it greatly increases the output per person</td>
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<td>1769: Richard Arkwright's 'Water Frame'</td>
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<td>1779: Samuel Crompton takes out a patent for spinning by 'mule'</td>
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<td>1780s: 477 inventors' patents registered (in the 1710s there had been only 38) Value of exports from Britain (mostly manufactured goods) top £10 million for the first time (in the 1700s they had been less than £5 million)</td>
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<td>1782: James Watt's rotary steam-engine invented; it enabled concentration of power away from fast-flowing streams and thus aided growth of industrial towns</td>
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<td>1783-4: Henry Cort's 'puddling' process allowed coal, rather than charcoal, to be the main fuel used in iron refining</td>
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<td>1786: Edmund Cartwright's power loom invented; it promises to increase speed of weaving, but is not widely introduced to textile areas until 1820s</td>
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<td>1802: The value of exports of cotton goods exceeds those of woollen ones for the first time</td>
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(above) Hargreaves's 'Spinning Jenny' enabled a single worker to operate eight or more spools at once

**Why was Europe first?**

One question of interest to historians is why the industrial revolution occurred in Europe and not in other parts of the world in the 18th century, particularly China, India, and the Middle East, or at other times like in Classical Antiquity or the Middle Ages. Numerous factors have been suggested, including education, technological changes (especially the Scientific Revolution in Europe), "modern" government, "modern" work attitudes and culture.

Some historians such as David Landes and Max Weber credit the different belief systems in China and Europe with dictating where the revolution occurred. The religion and beliefs of Europe were largely products of Judaeo-Christianity, and Greek thought. Conversely, Chinese society was founded on men like Confucius, Mencius, Lao Tzu (Taoism), and Buddha (Buddhism). Whereas the Europeans believed that the universe was governed by rational and eternal laws, in the East it was more generally believed that the universe was in constant flux and, for Buddhists and Taoists, not capable of being rationally understood.

**Why Britain?**

Economic historians are agreed about very little in this area, but on one point there is unanimity. No one reason by itself explains why Britain, a fairly remote group of islands in the north-west corner of Europe, became the world's first industrial nation. We can, however, identify a number of factors that gave Britain an advantage.

1. **Geography:** Britain is a small country with many navigable rivers, good mineral deposits and relatively few huge natural obstacles to movement of trade and people. Water power, crucial for technological development, is abundant.

2. **Diversity:** Britain has a diverse climate, enabling good-quality wheat to be grown in the south and east and animals to be nourished in lush western pastures. Diversity aids growing specialisation in agriculture, while Lancashire's famously mild and wet climate was conducive to the processing of raw cotton.

The period of time covered by the Industrial Revolution varies with different historians. Eric Hobsbawm held that it 'broke out' in Britain in the 1780s and was not fully felt until the 1830s or 1840s, while T. S. Ashton held that it occurred roughly between 1760 and 1830. Other historians such as John Clapham and Nicholas Crafts have argued that the process of economic and social change took place gradually and the term revolution is not a true description of what took place. This is still a subject of debate among historians.

What was the Industrial Revolution?

The Industrial Revolution was a period from the 18th to the 19th century where major changes in agriculture, manufacturing, mining, and transport had a profound effect on the socio-economic and cultural conditions in the United Kingdom, and then subsequently spreading throughout Europe, North America, and eventually the world. The onset of the Industrial Revolution marked a major turning point in human history. Almost every aspect of daily life was eventually influenced in some way, from where people lived and worked to how people viewed the world and their life expectations.

Starting in the later part of the 18th century there began a transition in parts of Great Britain's previously manual labour and draft-animal based economy towards machine-based manufacturing. It started with the mechanisation of the textile industries, the development of iron-making techniques and the increased use of refined coal. Trade expansion was enabled by the introduction of canals, improved roads and railways. The introduction of steam power fuelled primarily by coal, wider utilisation of water wheels and powered machinery (mainly in textile manufacturing) underpinned the dramatic increase in production capacity. The development of all-metal machine tools in the first two decades of the 19th century enabled the manufacture of more production machines for manufacturing in other industries. The effects spread throughout Western Europe and North America during the 19th century, eventually affecting most of the world, a process that continues as industrialisation. The impact of this change on society was enormous.

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3. **Earlier economic development:** The eighteenth century had seen remarkable advances in both trade and industry, resulting in rising incomes and the capacity for many people to consume manufactured goods.

4. **Rising population growth:** Britain’s population almost doubled in the course of the eighteenth century and the growth was most marked towards the end of the century. More people in society mean more opportunities for production and consumption.

5. **The profitability of overseas trade and the advantage of empire:** Britain had a healthy lead over European competitors in overseas trade, particularly in India and the Americas. Successes in war up to 1763 had extended this advantage. Success in war against France reinforced it as every other major European competitor had been economically damaged by war.

6. **The role of government:** After the Glorious Revolution in 1688, Britain was relatively stable but open to change. (see point 9) Strategic considerations induced eighteenth-century governments to involve themselves in wars which had substantial commercial advantage. The frequent wars of the period 1689-1815 gave periodic boosts to the iron industry because of the need for armaments. Soldiers also need uniforms, which helps the textile industry. British governments nearly always gave high priority to naval expenditure and a fighting navy could form useful protection for overseas traders. During the late eighteenth and early nineteenth centuries, furthermore, governments were less and less likely to uphold apprenticeship regulations and other feudal restrictions on the free movement of labour.

7. **Britain as an inventive society:** Britain generated a huge number of innovative ideas during the eighteenth century. The famous industrial innovations - the Water Frame, Power Loom and the rest - were symptomatic of a much wider commitment to experiment, from which society benefited. Also new institutions, such as the Royal Society of Arts (1754), promoted innovation and diffusion of scientific and technological ideas. The development of transport networks helped to spread such ideas in the second half of the century. So did the increased availability of newspapers and magazines. Provincial newspapers had begun to appear in England at the beginning of the eighteenth century.

8. **Britain’s advantage as a Protestant country:** This explanation has its origins in the views of the German sociologist Max Weber who argued that Protestant values and lifestyles were more conducive to thrift, hard work and accumulations of money than were Catholic ones.

9. **Britain as an 'open society':** Some social historians, notably Professor Harold Perkin, have laid particular stress upon the unique nature of British society. He sees a relatively liberal society open to talent in which the ablest can rise to wealth, influence and power. Also Britain’s aristocracy was not a closed caste; younger sons often married the heiresses of bankers and overseas traders, while very successful entrepreneurs from humble backgrounds.

### Activities

1. Explain the view that ‘the Industrial revolution was much more than a revolution in industry’.

2. Why do you think some historians have been unhappy to use the term ‘revolution’ for the industrial changes in the late 18th and early 19th century?

3. What reasons have been suggested to explain why Europe was the first continent to industrialise? Why is it impossible to ‘know’ for certain why Europe was first?

4. This worksheet suggests nine different reasons why the industrial revolution occurred first in Britain. Can you combine and reorganise the reasons into no more than five factors? For each factor make a big point, explain it and give an example. (PEE)

5. In your view, which is the most persuasive explanation for why Britain industrialised first?