







Knowledge Organiser – Year 8: The Industrial Revolution








Industrial Revolution Timeline

1.	1712 – Thomas Newcomen invented a steam engine to pump out water from coal mines.
2.	1760 - The First Industrial Revolution begins in the textile industry in Great Britain.
3.	1779 - The Spinning Mule is invented by Samuel Crompton .
4.	1796 - Edward Jenner performed the first vaccination against smallpox, this vaccine was widely used by 1840.
5.	1801 - The population of Britain is about 9 million.
6.	1825 - The first passenger railway opens.
7.	1833 - The Factory Act bans children under 9 from working in textile mills. Children aged 13 to 18 are not to work more than 69 hours a week
8.	1848 - Cholera strikes British towns.
9.	1865 - Antiseptic surgery is introduced.
10.	1875 - A law bans boys from climbing up chimneys to clean them.
11.	1901 - The population of Britain is about 41 million.

Key Concepts

12. Industrial Revolution 	The Industrial Revolution was a huge change in Britain between 1750-1900 where the country changed from living and working on the land, to living in cities and working in new factories.
13. Vaccination 	A substance that is usually injected into a person or animal to protect against a particular disease. Edward Jenner invented and administered the first vaccine against smallpox in 1796.
14. Economy 	The system of how money is made and used within a particular country. A country's economy is based on how many goods and services are produced and how much money is spent
15. Public Health 	The approach to medicine that is concerned with the health of the public as a whole. During the Industrial Revolution, Public Health Acts were passed to ensure all people were safe at work and in their home.

Key Words

17. Textiles 	Cloth made by weaving or knitting fibres together. The textile industry grew rapidly due to the invention of machines.
18. Cholera 	A disease that causes diarrhoea and was spread by the faeces in the streets. John Snow discovered the link between water, sewage and cholera in 1849.
19. Agriculture 	Agriculture is the process of producing food, and fibres by farming of certain plants and the raising of animals. Agriculture is also known as farming.
20. Canals 	Canals, as well as coastlines and rivers, allowed transportation around Britain affordable and quick.
21. Sanitation 	Sanitation is any system that disposes of human waste and separates sewers and drinking water. Sanitation was poor during the Industrial Revolution.
22. Mass Production 	The production of many products, e.g. textiles. This method was introduced into the spinning of cotton thread by Richard Arkwright.
23. The Luddites 	A worker who destroyed machinery, especially in cotton and woollen mills, that they believed was threatening their jobs.

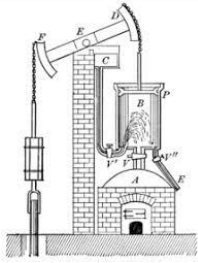


Factories
mechanised production and allowed goods to be produced faster and more cheaply



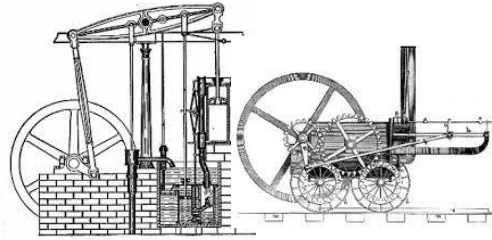
Urbansation
the development of towns grew as more people moved there from the countryside

Inventions using Steam power



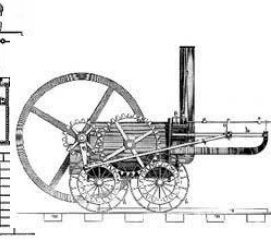
1712 – The steam engine
Thomas Newcomen

It was mostly used for coal mining to pump water out from the mines which would allow the miners to dig for coal further down.



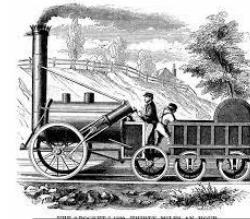
1776 – Watt Steam Engine

Watt's engine was similar to Newcomen's, but it required less fuel to run and was much more efficient and attractive to potential buyers.



1812 – The first locomotive

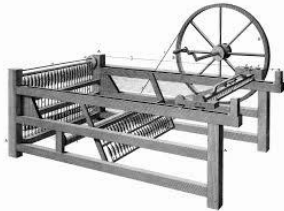
Richard Trevithick's 'Pen-y-derren' locomotive carried ten tons of iron, five wagons and seventy men 9.75 miles in four hours and five minutes. The journey had an average speed of c. 2.4 mph.



1829 – The Rocket

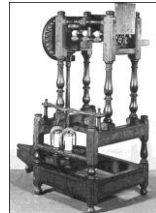
George Stephenson and his son, Robert, designed 'Stephenson's Rocket', the most advanced locomotive of its day. The Rocket's design became the template for future steam locomotives for the next 150 years.

Inventions in the textile industry



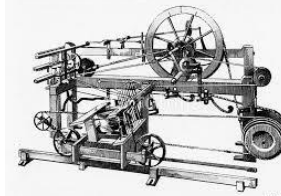
1764 – The Spinning Jenny
James Hargreaves

Able to be operated by unskilled workers, it was a key development, as it could spin many spindles at a time.



1769 – The Water Frame
Richard Arkwright

Arkwright was impressed by John Kay's work and offered to employ him to make this new machine. Arkwright's machine was able to produce a thread that was far stronger than that made by the Spinning-Jenny.



1779 – The Spinning Mule
Samuel Compton

The Spinning Mule used both the spinning jenny and the water frame. This created a very even yarn that was used in a lot of the textile industries.



Coal
was the most important fuel of the Industrial Revolution



Steam
(produced from coal) powered the machines in the factories