

Year 8 Industrial Revolution— Section 1—Key Words

Acts	laws passed by Parliament.
Aqueduct	a bridge that carries a canal over an obstacle.
Canal	a long narrow, man made channel of water.
Census	official count of the population, done every ten years in Britain.
Cholera	a deadly disease caused by infected (dirty) water. Victims suffer from diarrhoea, vomiting and can die.
Domestic System	the system where workers worked in their homes or small workshops rather than factories.
Emigrated	moved to another country to live.
Exported	sent out to other countries, usually to be sold.
Factory system	the system where people worked in factories to mass produce products. It replaced the domestic system.
Immigration	coming to a foreign country in order to settle there.
Imported	brought in from another country, usually to be sold.
Industrial Revolution	A complete change in the way things were made. A time when factories replaced farming as the main for business in Britain. Sometimes used to describe the changes in population/ transport/ manufacturing between 1750—1900.
Laissez faire	A French word meaning 'leave alone' this was the policy of the British Government towards issues such as public health.
Manufacture	To make goods in a factory.
Population	The number of people in a particular place at a particular time.
Turnpike Trust	A group of businessmen who improve and maintain a stretch of road and charge people to use it.
Viaduct	A long high bridge that carries a road or railway over an obstacle (such as a valley or river).

Section 2—An overview of how a town grew from 1500 to 1900

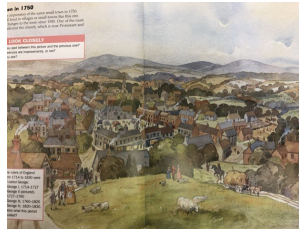


1500—most people lived in villages and villagers would travel to towns like this to sell their spare produce. Most houses have fireplaces and chimneys and some have glass in the windows. Everyone is free to work and live where they want. Most people own their own land. The church is Roman Catholic.



1750—the population of the town has increased and some of the outlying field have been built on. The castle has gone.

The church has become protestant and the Church of England has been established.



1850— The Industrial Revolution has changed the town forever. More than half the population of England now live in town. Factory owners are getting rich but the workers who work long hard hours are poorly paid. Working and living conditions are bad. Railways ensure goods can be moved around quickly.



1900—The town has continued to grow. New laws allow working class men the right to vote. New technologies have developed new jobs, for example there are now telephone exchanges. The empire allows foods from all over the world to be sold in towns. Children have to go to school. Living conditions have improved.

Section 3—Population growth

Population grew from 7 million to 37 million between 1750 and 1900 for a number of reasons:

1. the number of births increased
2. the number of deaths decreased
3. People moved into the country (immigration)

Contributing factors:

Farming—methods changed that allowed farmers to produce more food so people could have a better diet.

Healthcare—Midwifery—hospitals started to provide maternity wards. Injections—medical knowledge was improving—Edward Jenner discovered vaccination—this protected people against Smallpox which was a deadly disease. Doctors and nurses—after 1870, anaesthetics and antiseptics were used in surgery—this meant fewer people died from shock and infection—nurses were better trained too.

Cleaner cities— in 1875 the Second Public Health Act was introduced, this made councils clean up their towns—they had to provide clean water, sewers and better housing.

Section 4—Mining

The Industrial Revolution was pushed forward through the development of the use of coal and iron, both of which were mined from the earth. Iron ore was dug from the ground and through the process of melting turned into liquid to then be poured into casts to make pots and pans, pipes and beams. When cast iron was reheated it became wrought iron that could be used for nails, chains, tools and furniture. Later iron would be used to build railways, locomotives, buildings, machinery, cranes and ships.

Coal is a rock found under ground. In 1750 it was mainly used to heat houses and cook with. With the Industrial Revolution more coal was needed—it was used to power the steam engines in factories and ships. It was used in the making of bricks, pottery, glass, beer, sugar, soap, and iron. Coal mines were dug deeper underground—it was a dangerous job—over 1000 people died each year.

Section 5—The Factory System

Before 1750—people worked in their homes—it was called the domestic system but the Industrial Revolution brought the factory. This allowed goods to be made more quickly and more cheaply. But the conditions were not good for the workers:

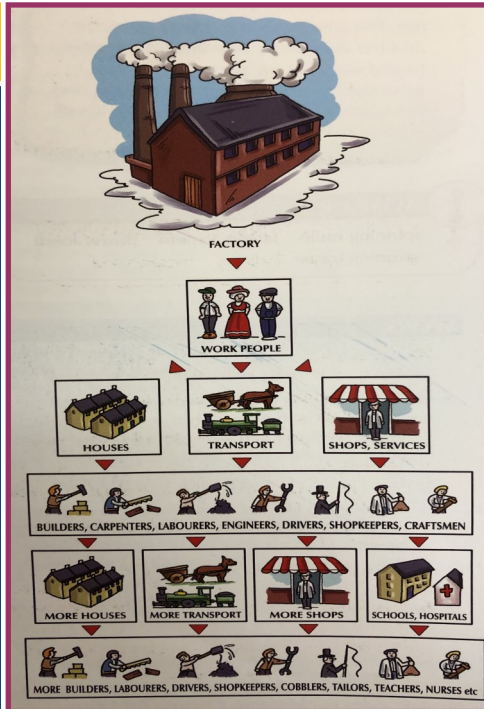
Long working hours: normal shifts usually 12-14 hours a day. Worked 6 days a week and sometimes half day on a Sunday

Low wages: typical wage for male workers was about 15 shillings (75p) a week, but women and children were paid much less, with children three shillings (15p). For this reason, employers preferred to employ women and children. Boys often sacked when they become adults.

Cruel discipline: whipped and hit with hands, sticks or with leather strap. Other punishments included nailing children's ears to the table, and dowsing them in water to keep them awake, fines and not allowing toilet breaks

Accidents: forcing children to crawl into dangerous, unguarded machinery led to many accidents and deaths.

Health: The air was full of dust, which led to chest and lung diseases and loud noise made by machines damaged workers' hearing.



Look at the flow diagram above—you can see how the building of a factory in a town increases the population in the town.

Section 6—The development of transportation.

Turnpike fever— the government divided the roads into sections and rented them to 'turnpike trusts' - these trust improved the road and then charged a 'toll' for people to use the road.

By 1830, 20,000 miles of roads were controlled by trusts and the travel time from London to Edinburg had reduced from 2 weeks to 48 hours.

Canal Mania—the Duke of Bridgewater was finding the transportation of his coal on the roads too expensive. He came up with the idea of canals—man made waterways. The first canal opened in 1761, by 1830 over 4000 miles of canals existed. However, canal mania did not last long—it was going to be quickly overshadowed by the railway.

Railways—George Stephenson is credited with the creation of the first railway between Liverpool and Manchester—it would need 63 bridges, a tunnel and a viaduct—all engineering problems Stephenson overcame. By 1831 steam trains were taking over £200000 in fares and were much quicker than roads or canals. By 1850, there were 7000 miles of track linking London.

By 1880 it is thought that over 300,000 jobs were connected to the railways. The trains changed peoples lives too; daytrips to seaside towns became a reality. Food could arrive in towns—still fresh. National newspapers could be read on the same day in different parts of the country. In 1900 the journey from London to Edinburg now took 9 hours.

Section 7—Invention

Richard Arkwright—opened Britain's first steam powered cotton factory.

Isambard Kingdom Brunel—designed the Clifton Suspension Bridge in Bristol, designed the Great Western Railway, and built 3 record breaking steam ships.

Henry Bessemer—invented a converter that turned iron into steel. (Steel is a stronger material.)

Michael Faraday—in 1831 he discovered how to generate electricity.

George Stephenson—designed the first steam locomotive.

James Watt—developed the steam engine so that it could rotate a wheel—this was called 'rotary motion' - steam power replaced horse, water, wind and muscle power.

Section 8—Why did the Industrial Revolution happen?

Britain's Empire—brought raw materials cheaply into Britain from colonies—sold finished goods back to colonies at a profit.

Resources—Britain had the necessary raw materials; coal and iron ore to begin it's Industrial Revolution.

There were more people—they needed more goods; from clothes, shoes, knives and forks—keeping factories going.

Inventors—Lots of brilliant inventors who changed the way things were done.

Entrepreneurs—people who were prepared to take risks in creating business.