

The Industrial Revolution

The Industrial Revolution - key words starter



Mission - to match up the vocabulary, images and definitions

| Word | Definition | Translate / Similar |
|---------------|------------|---------------------|
| Revolution | | R _ _ _ _ _ |
| Agriculture | | F _ _ _ _ _ |
| Yield | | Q _ _ _ _ |
| Entrepreneur | | |
| Urban | | |
| Laissez Faire | | |
| Industrial | | |
| Textile | | F _ _ _ _ _ |

The overthrow of the existing rule - often quick and using violence

Woven cloth

More heavily populated areas - towns and cities

The process of working the soil, growing crop and raising animals

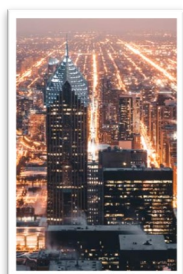
Manufacture (making) of goods on a large scale

Meaning an amount - such as food grown and harvested

A person who sets up a new business - usually taking some risk to do so

A French term meaning - to leave alone





The Industrial Revolution



Understand - what life was like before the Industrial Revolution and begin to explore some of the positive / negative effects of the Industrial Revolution.

Quickly

Labour

World

People

Faster

Change

Coal

Hungry

Steam

Watt

1750

Petrol

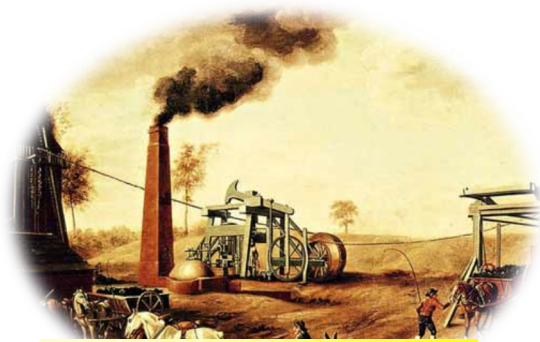
Killed

Inventors

The Industrial revolution was a time of great _____ for the _____. It was a period of time from around _____ to 1914 when new machines were used to replace human _____. Many things that exist today were made during the Industrial Revolution such as the car, assembly line and other ground breaking inventions. The Industrial Revolution changed the way people thought, behaved and things that no one ever dreamed of seemed possible. One of the earliest and most important inventions of the Industrial Revolution was the _____ engine, perfected by James _____. The _____ engine powered things like trains and other heavy machinery used in factories. Another thing created as a result of the Industrial Revolution was the assembly line which meant complicated things could be made much more _____ and then sold in larger quantities. The Industrial Revolution was when the _____ finally began to move into the future and more like the one we live in today. Not every change brought about by the Industrial Revolution can be thought about in a positive way. Factories needed workers, and often children were used as cheap employees. Many children were _____ during the Industrial Revolution, some as young as four years old; these children didn't have the motor skills or coordination to be working in factories. Eventually child labour laws were created to put restrictions on the use of child workers. Many similar laws are still in use today. This period of history also brought pollution and the use of fossil fuels such as _____. The effects of this are a major cause of the climate change we see today. If the Industrial Revolution never took place, we would still be stuck in our old ways. Factories would not exist, and our primary source of transportation would still be a horse and buggy. The Industrial Revolution changed the _____ as we know it; it changed lives, and took some. We can only give credit to the great _____ of that time that made the world we live in today a reality.



Pre Industrial



Signs of Change



Human Impact

(Student Article - Caleb's Summary)

- 1: How has the Industrial Revolution helped cause climate change?

- 2: Give one positive (good) effect of the Industrial Revolution.

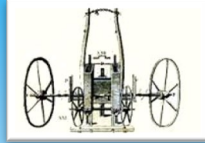
- 3: Give one negative (bad) effect of the Industrial Revolution.

Subsistence Farming



Before 1700 most people survived by growing food on small plots of land. Planting was done by hand, usually just scattering the seeds on the soil. Yields were often small - hopefully enough to live on.

Seed Drill - 1701



Jethro Tull invents the seed drill. Seeds now planted much faster, in neat rows and at the right depth. A revolutionary invention that saved time, increased crop yields and helped population growth.

'Man' ... power - 1801+



More efficient farming meant fewer people needed to work on the land = **people had to find work in towns + cities**. Lower mortality rates meant there were **more children** without much else to do!

Coal - 1800 to 1850



Britain had an abundance of coal - fuel for new machines such as steam engines. The coal was near the surface so easy enough to get to.
1800 - 10 million tonnes.
1850 - 50 million tonnes.

Steam Engine - 1783



James Watt invented a much better version of the steam engine - previously developed by Thomas Newcomen in 1712. Human and animal power could now be replaced by machinery.

Water Frame - 1769



James Arkwright invented the **Spinning Jenny** in 1764 - it was 8 x faster making textiles than a wheel. Richard Arkwright realised a better machine could use water to spin 128 threads at a time.

Steel - 1856



Henry Bessemer found a better and **much cheaper way to make steel** using coal rather than charcoal. Steel was the essential building material for all manner of things after 1856.

British Empire - 1600+



The British Empire had provided wealth + additional resources and a market for exports with exclusive trade.
North America - wood.
India - cotton / indigo.
Slave Trade - money, money.

Finance - c1775



London became the centre of finance and **private banks doubled from 1775 - 1800**. Entrepreneurs were described at the 'shock troops' of the revolution. **Banks gave loans to men with 'big ideas'**.

Acts of Union - 1706 / 07



Acts signed to end wars between Scotland + England. Afterwards, **Britain enjoyed a period of relative peace**. Rivals such as France were focused on unrest rather than growth / industrialisation.

Enlightenment - 1685



The start of the Age of Reason - **a new way of thinking**. This was a move away from tradition + towards new ideas, about limiting the role of authority, individualism and our innate ability to create.

Roads + Macadam



John Macadam created better paved roads in the 1820s. **Transporting goods became faster and smoother**. Roads had already improved a lot after the creation of Turnpike Trusts in 1663.

Canals - 1759+



The Duke of Bridgewater paid for canals to be constructed from Runcorn to Manchester. He wanted to more easily bring in coal to run his mills. Britain would soon have a large system of waterways.

Factory System - 1769+



Before 1700 most manufacturing was domestic and only goods sold in local markets. After 1700 new inventions **allowed large scale manufacturing** with machines housed in mills + factories.

Laissez Faire - c1750



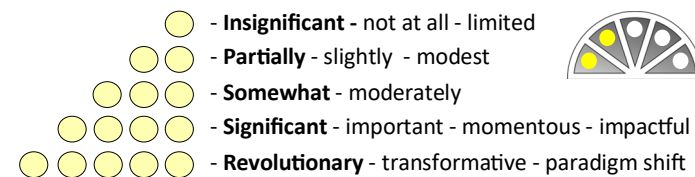
Britain's government was open to a very new way of thinking ... leaving businesses + entrepreneurs alone and / or helping generate wealth.
Low taxes + free trade policies.

Railways - 1829+



In 1829 George Stephenson invented a locomotive engine - named the Rocket. He went on to build the Liverpool to Manchester railway line.
L to M by road = 4 hours.
L to M by rail = 2 hours.








What Factors Helped Fuel Britain's Industrial Revolution?




Note - events may fit into more than one category

| Date | Event | Resources | Technology | Transport | Political | Economic | Social | Other | Significance | Rank |
|------|-----------------------|-----------|------------|-----------|-----------|----------|--------|-------|--------------|------|
| --- | Subsistence Farming | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1600 | British Empire | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | |
| 1685 | The Enlightenment | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | |
| 1701 | Seed Drill | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | |
| 1706 | Acts of Union | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | |
| 1750 | Laissez Faire Gov't | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | |
| 1759 | Growth of Canals | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | |
| 1769 | Water Frame | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | |
| 1769 | Factory System | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | |
| 1775 | London Finance | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | |
| 1783 | The Steam Engine | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | |
| 1800 | Coal | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | |
| 1801 | Manpower - Population | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | |
| 1820 | Better Paved Roads | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | |
| 1829 | Rocket + Railways | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | |
| 1856 | Cheaper Steel | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | |

What Were Conditions Like For Children Working in Factories?

| Source | | Positive <input type="radio"/> Negative <input type="radio"/> Both <input type="radio"/> |
|---|--|--|
| <p>'The scavengers, who have been said (in the Report of the Factory Committee) to be "constantly in a state of grief, always in terror, and every moment they have to spare stretched all their length upon the floor in a state of perspiration." I have seen scavengers idle (not working)for four minutes at a time, and certainly could not find that they displayed any of the symptoms of the condition described in the Report of the Factory Committee.'</p> <p>E. C. Tufnell, one of the Factory Commissioners, wrote about the work of scavengers in 1834.</p> |  | 1 - <input type="radio"/> |
| <p>"I have visited many factories, both in Manchester and the surrounding districts, during a period of several months and I never saw a single instance of corporal punishment inflicted on a child. The children seemed to be always cheerful and alert, taking pleasure in using their muscles. The work of these lively elves seemed to resemble a sport. Conscious of their skill, they were delighted to show it off to any stranger. At the end of the day's work they showed no sign of being exhausted."</p> <p>An extract from the book titled 'The Philosophy of Manufacturers' . The book was published in 1835 by Andrew Ure a wealthy Scottish businessmen.</p> |  | 2 - <input type="radio"/> |
| <p>"The noise was what impressed me most. Clatter, rattle, bang, the swish of thrusting levers and the crowding of hundreds of men, women and children at their work. Long rows of huge spinning-frames, with thousands of whirling spindles, slid forward several feet, paused and then slid smoothly back again, continuing the process unceasingly hour after hour while cotton became yarn and changed to weaving material. Often the threads on the spindles broke as they were stretched and twisted and spun. The broken ends had to be repaired; the piecer ran forward and joined them swiftly, with a deft touch that is an art of its own.</p> <p>John Clynes became a piecer at the age of 10.</p> |  | 3 - <input type="radio"/> |
| <p>"At a meeting in Manchester a man claimed that a child in one mill walked twenty-four miles a day. I was surprised by this statement, therefore, when I went home, I went into my own factory, and with a clock before me, I watched a child at work, and having watched her for some time, I then calculated the distance she had to go in a day, and to my surprise, I found it nothing short of twenty miles."</p> <p>John Fielder - Factory Owner.</p> |  | 4 - <input type="radio"/> |
| <p>Many children worked 16 hour days under terrible conditions. Parliamentary laws to try and reduce the working hours of children in factories and cotton mills to 12 hours per day had been passed in 1819. After protesting in 1831 further reforms were passed but only in the textile industry, where children were put to work at the age of 5, and not to most other industries. The new laws were monitored and enforced in the whole of England by a total of four inspectors.</p> <p>David Cody, Professor of English at Hartwick College, New York. Online article - 2016</p> |  | 5 - <input type="radio"/> |
| <p>"The infants, when first introduced to these abodes of torture, are put at stripping the full spools from the spinning jennies and replacing them with empty spools. They are put to work in a long room where there are about twenty machines. The spindles are apportioned to each child, and woe be to the child who shall be behind in doing its allotted work. The machine will be started and the poor child's fingers will be bruised and skinned with the revolving spools. While the children try to catch up to their comrades by doing their work with the speed of the machine running, the brutal overlooker will frequently beat them unmercifully, and I have frequently seen them strike the children, knocking them off their stools and sending them spinning several feet on the greasy floor. "</p> <p>Samuel Fielden was a social reformer who had worked in a Lancashire factory in 1877.</p> |  | 6 - <input type="radio"/> |
| <p>Children as young as six years old worked hard hours for little or no pay. Children sometimes worked up to 19 hours a day, with a one-hour total break. This was a little bit on the extreme, but it was not common for children who worked in factories to work 12-14 hours with the same minimal breaks. Not only were these children subject to long hours, but also, they were in horrible conditions. Large, heavy, and dangerous equipment was very common for children to be using or working near. Many accidents occurred injuring or killing children on the job. Not until the Factory Act of 1833 did things improve.</p> <p>From a modern history text book.</p> |  | 7 - <input type="radio"/> |

The Industrial Revolution - what was work like for children?

 **Mission:** to analyse, evaluate and compare historical sources to find out life for child workers during the Industrial Revolution.

"I have visited many factories, both in Manchester and the surrounding districts, during a period of several months and I never saw a single instance of corporal punishment inflicted on a child. The children seemed to be always cheerful and alert, taking pleasure in using their muscles. The work of these lively elves seemed to resemble a sport. Conscious of their skill, they were delighted to show it off to any stranger. At the end of the day's work they showed no sign of being exhausted."

An extract from the book titled 'The Philosophy of Manufacturers' . The book was published in 1835 by Andrew Ure a wealthy Scottish businessmen. The book was aimed a factory managers and owners and to make production more efficient.

A

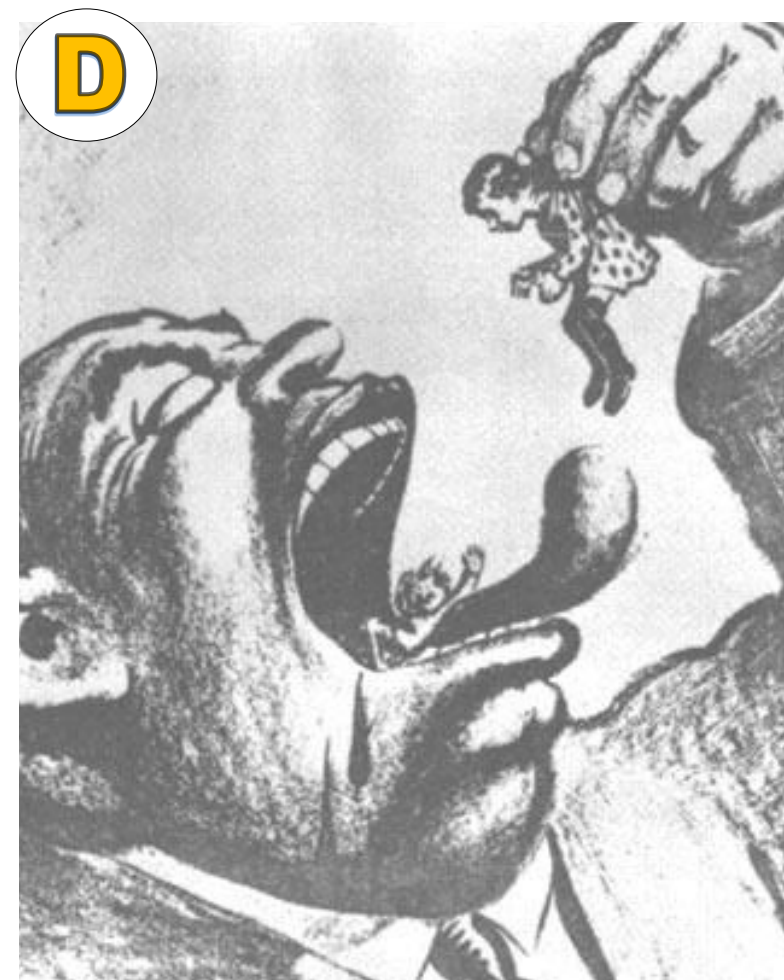
B 'Children as young as six years old during the industrial revolution worked hard hours for little or no pay. Children sometimes worked up to 19 hours a day, with a one-hour total break. This was a little bit on the extreme, but it was not common for children who worked in factories to work 12-14 hours with the same minimal breaks. Not only were these children subject to long hours, but also, they were in horrible conditions. Large, heavy, and dangerous equipment was very common for children to be using or working near. Many accidents occurred injuring or killing children on the job. Not until the Factory Act of 1833 did things improve.

From a modern history text book.

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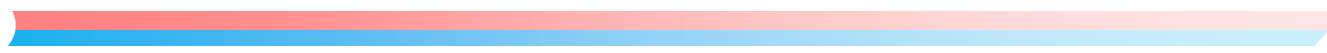
**David Cody, Professor of English at Hartwick College, New York:
Online article: Victorianweb.org c2016**

C



Source Skills

I can ... analyse, compare, interpret and evaluate



Q1

What is the main point or message of source A?

Q2

Provide a sub-point or message from source A

Q3

How similar are the MAIN messages from sources B and C? Not similar: somewhat similar: very similar (Explain answer)

Q4

How similar are the sub-messages from sources B and C? Not similar: somewhat similar: very similar (Explain answer)

Q5

What is the main message of source D?

Q6

Give an example from source B, C or D that corroborates (supports) source A.

Q7





Give an example from source B, C or D that does NOT corroborate (support) source A.

Q8

How reliable is source A? Circle a score then explain your reason (Not Reliable 1 2 3 4 5 6 7 8 9 10 Reliable)

Q9

What are the most important AND / OR most surprising things you learned from these sources?

| <p>Source</p> <p>The main + sub points summary</p> | <p> Content</p> <p>Language : tone : balance etc</p> | <p> Origin</p> <p>Who : when : where</p> | <p> Purpose</p> <p>Motive : why : audience</p> | <p> Supported</p> <p>Corroboration or contrast?</p> |
|--|--|--|--|---|
| <p>A _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Circle source 'value' after your COPS analysis --- 1 2 3 4 5 6 7 8 9 10</p> | <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> | <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> | <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> | <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> |
| <p>B _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Circle source 'value' after your COPS analysis --- 1 2 3 4 5 6 7 8 9 10</p> | <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> | <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> | <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> | <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> |
| <p>C _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Circle source 'value' after your COPS analysis --- 1 2 3 4 5 6 7 8 9 10</p> | <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> | <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> | <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> | <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> |
| <p>D _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Circle source 'value' after your COPS analysis --- 1 2 3 4 5 6 7 8 9 10</p> | <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> | <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> | <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> | <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> |



Source Limitations

Source Values

Identifying Source Types

Discover : examples of sources **Explore** : how to categorise these sources **Skill**: source investigation and evaluation

A source is anything that gives us information about history. It could be a letter, a picture, an audio clip a computer game, a book, a film, a diary or an object. There are three main types of historical source.

Primary (contemporary) , **Secondary** and **Tertiary**.

Original information that originates / c _ _ _ _ from that time in history.

Information created / m _ _ _ after that time in history , or, a copy.

Created later but includes some primary information .

For each of the sources below decide if they are: Primary (P) Secondary (S) or Tertiary (T)

1

3

5

7

9

11

2

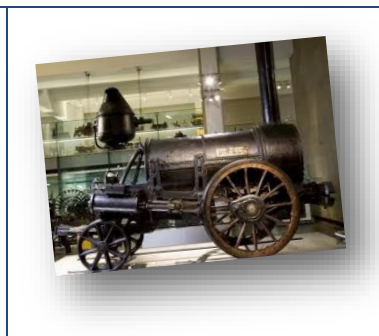
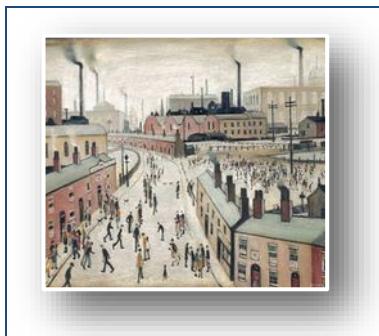
4

6

8

10

12

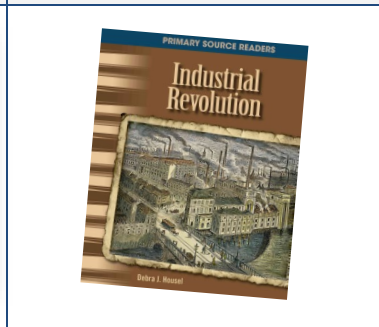


1 : Painting by S.Lowry

2: Queen Victoria Cartoon

3: Photograph

4 : Stephenson's Rocket



5 : Coronation Street

6 : Song

7: Canal Postcard

8 : School textbook



| | |
|----|----------------------|
| 1 | <input type="text"/> |
| 2 | <input type="text"/> |
| 3 | <input type="text"/> |
| 10 | <input type="text"/> |

| | |
|----|----------------------|
| 1 | <input type="text"/> |
| 2 | <input type="text"/> |
| 3 | <input type="text"/> |
| 10 | <input type="text"/> |

9: YouTube Clip

10 : Rocket Model

Rank reliability!

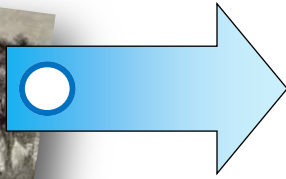
Rank usefulness!

The Transport (and communication) Revolutions



Activity - to complete the tasks outlined bellow!

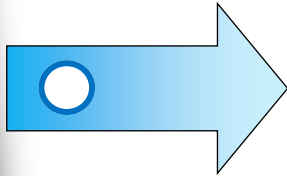
Task - 1 : colour code or label each of the four circles below. **2** : Read the sources provided **3** : Write a short summary of your findings / a few sentences about each in the space provided. **4** : Answer the questions asked.



Roads

.....
.....
.....
.....

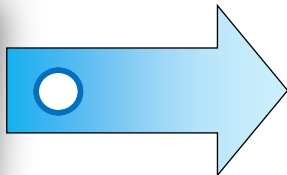
What can we learn from John Metcalf ?



Canals

.....
.....
.....
.....

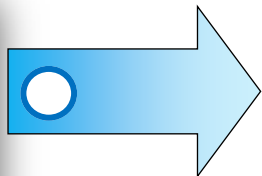
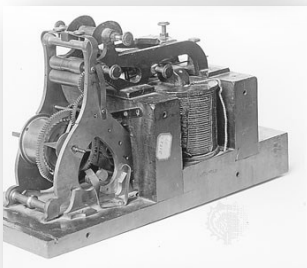
What advantages did canals have over roads ?



Railways

.....
.....
.....
.....

Write a question of your own about the railways



Communications

.....
.....
.....
.....

Can you write the 'Morse Code' signal for your first name ?.

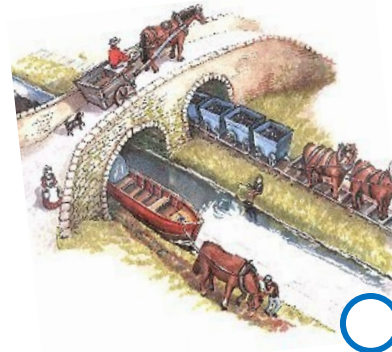
How, one wonders, did the roads of Britain manage to get into such an appalling (bad) state? Sadly, it was the result of 1,400 years of shameful neglect. During the Roman occupation of Britain, a fine network of roads had been built throughout the country, but even the work of the brilliant Roman engineers could not have possibly endured so many years of neglect.
Look and learn.



The Industrial Revolution also helped bring about a revolution in communication. In the 1830's, Samuel Morse helped to invent the telegraph. This worked by sending electrical signals over a wire laid between two places. In addition Samuel Morse developed a code (Morse Code) that matched a set of dots and dashes to each letter of the alphabet. This allowed complex messages to be sent easily across telegraph lines. In 1844, Morse sent his first message, from Washington, D.C. By 1866, a telegraph line had been laid across the Atlantic Ocean from the U.S. to Europe. Without the telegraph we may not be using phones or the internet today. **History.com (adapted)**

The Industrial Revolution brought factories, mines and machinery. Towns grew rapidly and with them came slums as well as elegant city centres. Steam trains and the Royal Mail made communication easier. There were massive advances in medicine and public health. Political and social reforms changed people's lives and at a personal level, there were lots of little developments from umbrellas to bicycles. **BBC History.**

The first railway was the Stockton and Darlington Railway in 1825. George Stephenson built the (steam powered) Rocket train in 1829. Other achievements included the London Underground (1863) and the Forth Bridge (1890). There was a 'Railway Mania' in the 1840s. £3 billion was spent building railways between 1845 and 1900. In 1870, 423 million passengers travelled on 16,000 miles of line.
BBC History.



Canals were needed for the Industrial Revolution to move heavy produce which had to be moved. Roads simply could not handle such weights and the vehicles needed to move this produce did not exist. Canals were the answer to moving heavy objects large distances. **History Learning Site**

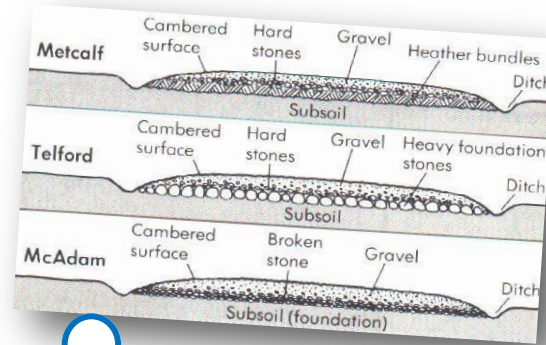
Daniel Defoe wrote in 1772 :
"This is not passable, just in the summer after the Coal Carriages have beaten the way, the ground is a stiff clay, after rain, the water stands as in a dish, and horses sink in it up to their bellies." A journey was extremely dangerous, uncomfortable and required courage and determination.



Stephenson's Rocket

When asked by a committee of enquiry about the state of the roads in his area, a Member of Parliament replied, "We travel in ditches, Sir!".

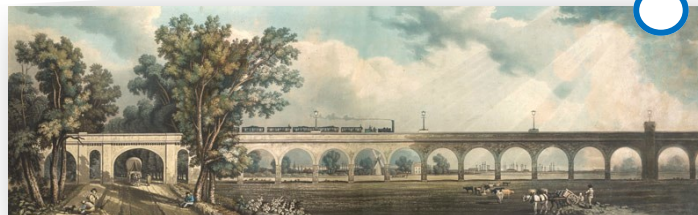
The changes came in several stages. First Roads were improved, then Canals were built and finally the Railway was developed. Each change had an impact upon life in the country, each shortened travel times over longer distances and each enabled industrialists to seek new markets in previously out of reach areas of the country. Materials and goods could be shipped to and from factories, providing further impetus to the industrial age. **Schools History**




"They used to carry their coal upon horses' backs, but he (*Abraham Darby*) got roads made and laid with sleepers and trails, as they have in the north of England. And one wagon with three horses will bring as much as 20 horses used to bring on their backs. But this laying the road with wood caused a scarcity (*of wood*) and raised the price of it, so that of late years, the laying of the rails of cast iron was substituted, which through expensive, answers well for wear." **A letter to her friend - Mrs Asiah Darby, 1775**

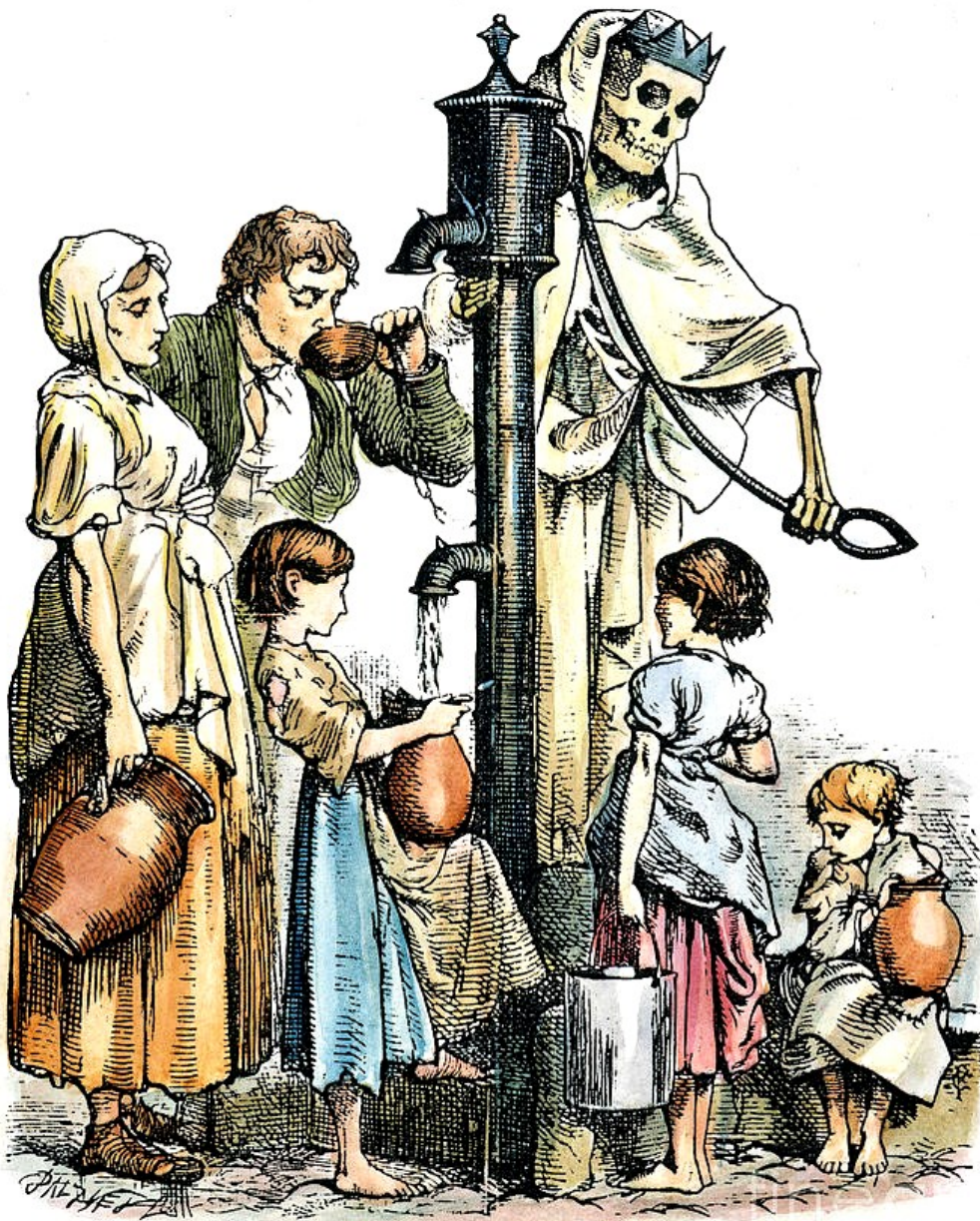
Canals could make those who invested in them vast sums of money. In the 1790's so-called "canal mania" took place when people invested money into every canal project. Canals were good at moving fragile goods such as pottery and also heavy goods such as coal. They were actually faster than road carriages as once a horse got a barge moving it could keep it going at a decent pace. By 1840, there were nearly 4,500 miles of canals in Britain. **History Learning Site**

In 1765, John Metcalf engineered the first of Britain's really good roads. Interestingly, Metcalf had not seen a road since he was six years old as he had been blinded by smallpox. "Blind Jack" never allowed this blindness to stop him from achieving his aims. He was an excellent violinist, a fine athlete, and a great walker. Metcalf began his road-building career by improving three miles of road on the new Harrogate to Boroughbridge Turnpike. A very important contribution to Metcalf's new roads was made by John McAdam (1756-1836). He added a new surface to the roads. "The first operation in making a road," he said, "should be the reverse of digging a trench." Instead of a ditch McAdam created a raised roadway built up by thin layers of hard, dry stone which would then be packed down into a hard surface by the passing traffic. This very simple solution was to revolutionise roads not only in England but throughout the world.



The Cartoon About the Skeleton And the Kids

 **Know** - how to identify main features of a cartoon + how to interpret these features



DEATH'S DISPENSARY.

OPEN TO THE POOR, GRATIS, BY PERMISSION OF THE PARISH.

Message of the cartoon (write this AFTER completing DEC process)

Describe the main features of the cartoon.

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Explain what each of these features means / represents


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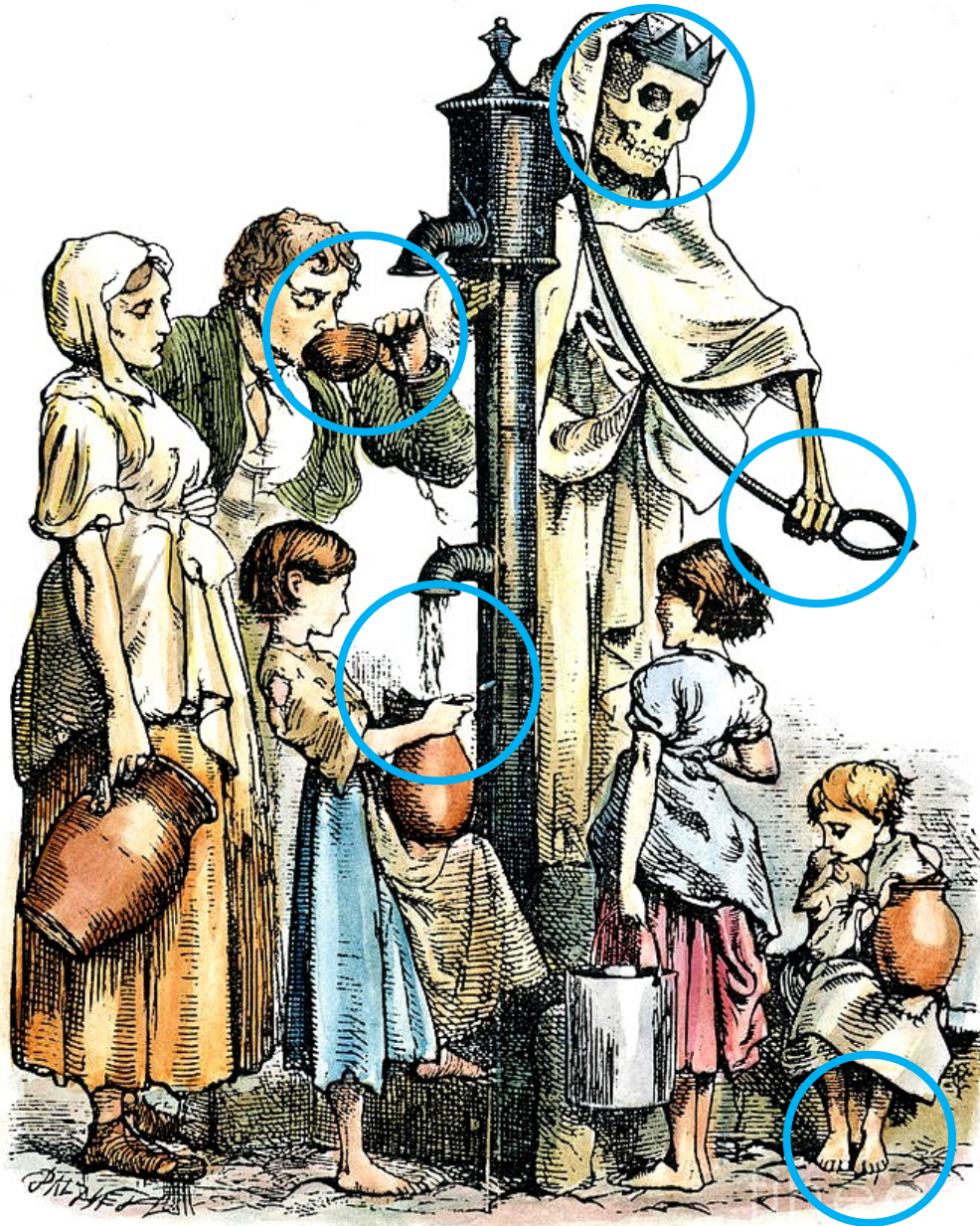
Context: what historical event is this cartoon about?

Reliable or Not? (Circle a score below)

Unreliable 1 2 3 4 5 6 7 8 9 10 **Reliable**

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