

Industry, Innovation and Infrastructure – Year 5 Autumn 2. “Is all innovation good?”

Prior Learning (What we already know?):

How to develop and upgrade sustainable, resilient and inclusive infrastructures.

To assess the impact of improvements in transport / railways across the UK.

Name some important individuals, famous locomotives and early railway lines – Richard Trevithick / Isambard Kingdom Brunel.

Describe the different locomotive technologies that have developed over time.

Have a chronological understanding of how locomotives and the railway network changed over time and a comprehensive understanding of the contribution by significant individuals.

Confidently debate the positive and negative effects of the railways on different aspects of society.

Consider the effects of human activity on the local and wider area.

To explore how land use has changed over time.

To explain how human factors have influenced the geography of some cities.

To describe how transport in London and beyond has evolved over time.

To explore the factors that influence population distribution.

New Learning:

To understand what industry, innovation and infrastructure mean.

To understand why Britain was so successful during the industrial revolution and link it to the success of the British Empire and naval trading routes.

To assess the impact of the improvement of technology during the industrial revolution

To understand that the whole world did not benefit from the same success.

To use sources to understand colliery working conditions

To interpret historical sources

To explore the day to day life of a collier

To understand how and why communication has changed over time

To evaluate the impact of particular innovations

To examine artefacts (or photos of artefacts) and explain what they tell us about life in the past

New Skills:

I can make comparisons between different times in the past

I can sequence key events of the time studied

I can use relevant terms and period labels

I can compare accounts of events from different sources – fact or fiction

I can offer some reasons for different versions of events

I can begin to identify primary and secondary sources

I can use evidence to build up a picture of a past event

I can select relevant sections of information

I can use the library and internet for research with increasing confidence

I can recall, select and organise historical information

Key Questions:

Why was Britain so successful during the industrial revolution?

How did the British Empire help Britain trade?

What was the significance of the naval trade routes?

How did improved communication help other industrial and technological advances?

Why did not all countries benefit from industrial and technological advances and how would you resolve this?

What was a day in the life of a miner like?

Why did coal mines need to get bigger and deeper?

How has communication and technology changed over time?

Is all innovation good?



Vocabulary:

Hard and soft infrastructure, environmental degradation, sustainable, resilience, inclusive, infrastructure, innovation, industrialisation, trade links, natural resources, settlement, least developed countries, industrial revolution, British Empire, fossil fuel, mining, Communication and technology.

Key Facts:

The agricultural revolution led to the industrial revolution as the need to transport more goods arose.

The industrial revolution led to a significant growth in industry and heavy machinery.

The British Empire ensured that Britain had access to far more trading rights and favourable prices.

Naval capability was strong.

Steel and iron ore led to bigger and better ship production.

Infrastructure is the network where things are carried. Infrastructure also includes airports, railway stations, bus stations and seaports (docks).

Infrastructure is usually built by governments and paid for by taxes from the citizens of a country or region.

Not all countries thrived and many were exploited for their natural resources.

Coal is non-renewable, which means we will run out of coal at some point.

Burning coal produces carbon dioxide gas which contributes to climate change.

Burning coal pollutes the air – coal is the worst pollutant we have.

This means that coal is an unsustainable resource and energy source.

Key Resources:

<https://www.bbc.co.uk/bitesize/clips/z73b4wx>

<https://player.bfi.org.uk/free/film/watch-coal-mining-today-1946-online>

[Coal Mining \(1950\) - YouTube](#)

<https://www.bbc.co.uk/bitesize/articles/zpfy3j6>

<https://www.bbc.co.uk/programmes/p0115g6d>

<https://player.bfi.org.uk/free/film/watch-a-day-in-the-life-of-a-coal-miner-1910-online>

Can I do this?

I can explain what industry, innovation and infrastructure is.

I can create a timeline of innovations and explain how each helped latter innovations on the timeline.

I can explain the significance of these communication innovations to communication today.

I can explain how The British Empire helped fuel the industrial revolution.

I can describe how the improvement of technology during the industrial revolution has impacted on today.

I can identify different sources of energy used in communities.

I can explain how governments work together to share resources across the world.

I understand that not all sources of energy are sustainable.

I can analyse the benefits and drawbacks of different forms of infrastructure and industry.

I can explain why coal mines needed to expand

I know the difference between a primary and a secondary source of information.

I can compare sources of information on the same subject/event and understand why they may be different.