

Year 1/2

The Historical Association's Scheme of Work for Primary History

George Stephenson and the development of railways



The
Historical Association
The voice for history

About this unit

This unit of work is intended to teach children about George Stephenson as a significant individual in history, his achievements and the impact that he had locally, nationally and internationally. It also includes some introductory lessons based around vocabulary for consolidation of terms relating to the passing of time, which may want to be combined for older children who may already have a grasp of this knowledge. The overarching theme is to understand why Stephenson was such a significant figure and leads to the final enquiry of the children explaining this.

Key vocabulary: past, then, now, significant, development, achievement, impact, local, national, international

Unit Structure

This unit is structured around the development of Stephenson's ideas. It starts with an introduction to vocabulary linked with the passing of time and chronology before looking at who George Stephenson was and his achievements. It then moves on to analysing his local, national and some of his international impacts.

Lesson 1: Chronology and Vocabulary

Lesson 2: Using chronological vocabulary with a timeline

Lesson 3: Who was George Stephenson?

Lesson 4: When was George Stephenson alive?

Lesson 5: What did George Stephenson do?

Lesson 6: Stephenson's Rocket

Lesson 7: Changes in railways and trains

Lesson 8: Stephenson's impact locally and nationally

Lesson 9: Enquiry – Was George Stephenson all that significant?

How this unit links to the national curriculum for primary history

- The lives of significant individuals in the past who have contributed to national and international achievements.
- Significant historical events, people and places in their own locality.

How will this enquiry help children to make progress in history?

They will start to understand how to construct an argument using evidence and understand that there isn't always one answer to a question. That people's opinions are valid and should be considered if provided with supporting evidence. Children will learn how to make a valid judgement and how to respond appropriately to an historical enquiry.

How this enquiry might be adapted for children of different ages and different abilities?

- The actual question could be more focused onto a single aspect of Stephenson's life, such as The Rocket and asking how significant that particular achievement was
- Supporting materials could be withdrawn so that the children have to use their own knowledge and understanding
- Children could be asked to give a balanced argument, stating both sides and giving evidence for why others might disagree with them

Enquiry: Who was George Stephenson and why was he so significant?			
LEARNING OBJECTIVES	KEY CONTENT AND SUGGESTED LESSON IDEAS	SUGGESTED RESOURCES	Assessment
<ul style="list-style-type: none"> • To use appropriate vocabulary to describe the passing of time • To identify that events happen in chronological order 	<p><u>Chronology and vocabulary</u></p> <p>Ask the children if they know what 'in the past' means – take feedback and explain that things happen in a certain order. Explain that LOTS of things have happened in the past over millions of years! Highlight that this is much, much, much older than even their grandparents. Go through some of events – people looked differently and lived in caves; terrible accidents like fires; lots of wars where people have died; lots of discoveries and explorers; lots of inventions like computers. Ask children if some of the pictures look like they are from today or in the past – why do they think this? What can they see to tell them that (black and white photos, houses don't look modern, computers look old etc.)</p> <p>Reinforce the use of the word 'yesterday' and use it to explain how anything that has HAPPENED is in the past, including yesterday, this morning, lunchtime etc. (Add in appropriate pictures to show what happened yesterday in school) Then ask children to say what</p>	<p>Photos of significant people and events from the past</p> <p>Photos of things that happened in the recent past/at school</p>	<p>Children can use appropriate vocabulary to show the passing of time</p> <p>Children can identify events that happened in chronological order</p>

	<p>happened to them yesterday AFTER school. Demonstrate that they have learnt lots of new words already – past, yesterday, happened, after etc.</p> <p><i>(For Y2, you may want to develop some of the phrases or over a longer period of time – what happened last week? Can you use the words and phrases ‘A fortnight ago’ ‘Previously’ etc.)</i></p> <p><u>Task</u> Explain that they are going to try and write a few short sentences explaining some of the things that happened to them yesterday. Show examples and have children practice by telling a partner first. Extension – write a few sentences about a favourite memory, something that made them happy, using phrases like ‘this was in the past’ or ‘a long time ago’</p> <p><u>Plenary</u> Children to read out their sentences and the class decide whether the correct words have been used and other words or phrases that could have been used to improve it further.</p>		
<ul style="list-style-type: none"> ▪ That events within their own lives have happened in chronological order ▪ To confidently use phrases to indicate the passing of time 	<p><u>Chronology and vocabulary</u></p> <p>Ask children to recap on some of the words that they learnt in the previous lesson to do with the passing of time – remind them of any words they forget.</p> <p>Explain that they are going to be using those words to explain some events that have happened in their own lives. Ask children to think about some of the things that have happened in their lives that they can remember – riding a bike, birthdays, Christmas, siblings being born etc.</p> <p>Now ask if they think that they could put those in order starting with the earliest event and ending with the latest one – show children some simple life events – being born, crawling, walking etc. Children to try and sequence obvious life events from ppt. Children to then try and verbally order some of their own life events using words like ‘before’, ‘after’, ‘then’ and ‘now.’ Do they notice in changes in some of the events as they got older? Is this what happens when people</p>	<p>Pictures of various life stages and events linked to their own lives (crawling, walking, birthdays etc.)</p>	<p>Children can order their own life events in chronological order using appropriate vocabulary</p>

	<p>get bigger and older? How has the classroom changed as you have become older? Let children explain about events/classroom changing and give examples of how we change as we become older.</p> <p><i>(For Y2, you should include more life events and certain events that they HAVE to include from school. You could also include events from any previous historical topics such as people or events if appropriate.)</i></p> <p><u>Task</u> Given children blank timelines to add a number of life events onto in chronological order. Children to then say how some of these things changed – ‘First I crawled and then I walked.’</p> <p><u>Plenary</u> Ask some children to share their timelines and have the rest of the class listen. Do they think that the timelines are in order? Have they used any of the words that we learnt in the previous lesson?</p>		
<ul style="list-style-type: none"> • Who George Stephenson was • How to use sources as evidence • How to use sources to make simple inferences 	<p><u>Who was George Stephenson?</u></p> <p>Prepare a suitcase with objects relevant to Stephenson (trains, railway tracks, clothing, gas lamp etc.)</p> <p>Explain that lots of events have happened in the past and how lots of people have lived in the past. Explain that things were different at different times in history and not everyone had things like computers, cars, internet, phones or even fridges!</p> <p>Show the children the suitcase and pull out each of the objects. The children try to guess who the suitcase belongs to - why do they have these things? Are they from our time or from in the past? How do you know this?</p> <p>Once you have established that it is George Stephenson, explain how we can use the objects to work out who it belongs to and how different objects tell us different things – a hose could mean a fireman, handcuffs could mean a police officer, a space helmet could mean an astronaut etc.</p>	<p>An old suitcase</p> <p>Items that can relate to Stephenson – a model of The Rocket, an old gas lamp, train tracks, a photograph of an old house, appropriate clothing</p> <p>Pictures relating to Stephenson, his house, trains and railways</p> <p>https://www.theschoolrun.com/homework-help/george-stephenson-and-the-development-of-the-railway</p> <p>(Scroll down to Gallery)</p>	<p>Children can begin to identify potential individuals from history using sources as evidence</p> <p>Children can begin to suggest why certain items are linked to an individual</p>

	<p>Explain that things like houses, travel, clothes etc. have all changed and that people lived in different styles of houses, rode horses instead of driving cars and wore different clothes than we do today. Show some examples of changes in travel, houses and clothes.</p> <p><u>Task</u> Children to have pictures of certain Stephenson-related objects and write down how they know that he is from the past – ‘This house is different to mine’, ‘This house looks very old’, ‘Trains don’t look like this now’, ‘His clothes aren’t like ours’ etc.</p> <p><u>Plenary</u> Chn feedback on what they have found out about the past and about George Stephenson from the pictures that they looked at. Did everybody think the same thing? Why was this?</p>		
<ul style="list-style-type: none"> ▪ Where Stephenson fits into the wider chronology of history ▪ That Stephenson lived a long time before they did ▪ That life was different for different people in history 	<p><u>When was George Stephenson alive?</u></p> <p>Ask children to think back to the first few lessons and the language that they were using – ‘past’, ‘then’, ‘now’ etc. Recap on our own timelines and how we listed the things that we had done or things that had happened in our lives so far. Explain that we are going to be looking at when George Stephenson lived and the things that happened in his life.</p> <p>Use PPT (L4 – GS Timeline) to go through the key events in Stephenson’s life. Note the lengths of the periods and how far away our lives are from George’s. What does that tell us about when he lived? Was it only a short time from our lives or a long time?</p> <p>Compare the duration of Stephenson’s timeline to that of theirs – why is his so much longer and why does it have more events on it? Will our timeline ever grow to be as long as George’s?</p> <p><u>Task</u> Children to look at the timelines of Stephenson and themselves and begin to make simple comparisons – ‘George’s timeline is longer than mine. This means he lived longer.’ ‘George’s timeline starts in 1781 but mine starts in 2013/14.’ ‘George’s timeline starts a lot earlier than mine does. That means he lived before I was born.’ Etc.</p>	<p>L4 - GS Timeline</p>	<p>Children can begin to make chronological comparisons about duration and placement</p> <p>Children can identify that people have lived in the distant past</p>

	<p><u>Plenary</u> Children to read out their sentences and ask class whether they are correct or not. Did anybody have something similar? Did anybody have anything different?</p>		
<ul style="list-style-type: none"> ▪ The achievements of George Stephenson ▪ Why his achievements were significant generally 	<p><u>What did George Stephenson do?</u></p> <p>Use the PowerPoint (L5 – Achievements) to recap on what we know about George’s life so far. We know that he did lots within his life and these are known as achievements – to do something that might not have been done before or something that you thought you couldn’t do.</p> <p>Explain how George managed to achieve a lot in his lifetime because he lived for quite a long time. Go through each of his achievements highlighting WHY each one was so important:</p> <ul style="list-style-type: none"> • First engine made him interested in engineering and he started making a name for himself • Safety lamp kept miners safe and was used for nearly 100 years until electric lighting was common – he had also worked in the mines and this was a way of repaying them • Building the Stockton to Darlington railway was the first time the general public could ride a train – had only been industry prior to this • Manchester to Liverpool railway saw him expanding his name and reputation and saw the growth of railways being used by the general public • Winning the race showed that he had built the fastest steam engine in the world and that they could go even faster • Advising in other countries meant that his ideas were spreading as were railways that he helped to pioneer <p>Now ask chn why we are learning about all of this? Ask the children the various questions so that they understand his significance and importance in our history.</p> <p><u>Task</u> Either individually, in pairs or as a small group, chn to look at each of the events and write down WHY it was important – ‘It made him</p>	<p>Achievements PowerPoint</p>	<p>Children can begin to identify why events and achievements were important</p> <p>Children can begin to identify which achievements were more significant and give a reason why</p>

	<p>interested in engineering,’ ‘It made mines safer when using light’, ‘Ordinary people could now ride trains,’ ‘George created the fastest train in the world,’ ‘Railways were spreading across the country,’ ‘Railways were spreading across the world.’</p> <p>Extension – children choose one of the events and say why they think this was the most important</p> <p><u>Plenary</u> Chn share why they thought each event was so important – does everybody agree? Does anybody have a different answer? Which do you think was the most important event and why?</p>		
<ul style="list-style-type: none"> ▪ About the achievements of George Stephenson ▪ About the significance of The Rocket ▪ About the impact that The Rocket had on future innovations 	<p><u>Stephenson’s Rocket</u></p> <p>Recap on some of George’s achievements from the previous session. Explain that we are going to look at one of his biggest achievements that helped to make his name and is still celebrated today. Show the children the Mozaik3D model of the Rocket https://www.mozaweb.com/en/Extra-3D_scenes-Stephenson s Rocket 1829-4050 (Requires a free account to be made using an email address and to download the free 3D viewer.)</p> <p>Ask children if they recognise it. Explain that this is ‘The Rocket’, the steam engine that won the race in 1829 and was the fastest engine in the world at that time. Look at the various scenes and examine how it actually worked. Highlight how the changes that George and his son Robert made to the Rocket meant that it was quicker, more efficient and very reliable, meaning that it didn’t break down very often. This was also the basis for most steam engines and trains for a long time after it was created.</p> <p><u>Task</u> Stick in a picture of the Rocket and chn to write a few sentences saying why it was so important and why we still celebrate the train now – ‘It was the fastest train at the time. It was very reliable. The Rocket helped other steam train designs for a long time afterwards.’</p>	<p>Free Mozaweb account and 3D viewer installation</p> <p>Pictures of The Rocket to stick in to books</p>	<p>Children can identify why The Rocket was so significant at the time</p> <p>Children can identify the significance of The Rocket for future trains</p>

	<p><u>Plenary</u> Children share their sentences – class to check accuracy and say whether they agree or not.</p>		
<ul style="list-style-type: none"> ▪ About changes in railways and rail travel ▪ About the impact that Stephenson had on the local area and nationally 	<p><u>Changes in railways/trains</u></p> <p>Recap on what the Rocket was, what it looked like and how it operated.</p> <p>(YouTube has various videos showing or explaining how it worked, e.g. https://www.youtube.com/watch?v=xs8CFXmbYcw; or search Google/Bing images for diagrams of Stephenson’s Rocket’s engine.)</p> <p>Explain that the firebox produces heat, which heats up the water, creating steam that is used to push the ‘eccentric’ rod which is attached to the wheels.</p> <p>Now we know HOW the Rocket worked, do we think that ALL trains still use this system? Explain that trains and railways have changed A LOT since the Rocket and Stephenson. Highlight how railways had been used initially just for mining, sending materials backwards and forwards and not for people. George changed this with the Rocket and this meant PEOPLE could use trains to go to where they wanted. Ask chn where their nearest train station is and if they’ve been on a train anywhere – where did they go? Was it near or far? Explain that we now have railways all over the country that can take us to virtually anywhere, even into other countries!</p> <p>Use the Mozaik3D model ‘BR Standard Class’ to show how steam trains have evolved since the Rocket. This was used in Britain during the 1950s which was over 100 years since the Rocket was built. What similarities and differences can they see? Look at the ‘Operation’ and ‘Steam Output’ tabs to note the similarities to George’s original designs – fire used to heat water, steam used to push rods that move wheels.</p> <p>https://www.mozaweb.com/en/Extra-3D_scenes-BR_Standard_Class_3_2_6_2T_steam_locomotive-146840</p> <p>Load up the ‘TGV POS Train’ 3D scene and again, note the similarities and differences. Look at how much faster it’s moving, the shape and</p>	<p>Take screenshots of the trains in the 3D scenes for the children to stick in so that they can make notes about them</p> <p>Mozaik3D scenes –</p> <ul style="list-style-type: none"> • BR Standard Class • TGV POS Train • Maglev Trains 	<p>Children can identify changes in railways and trains over time</p> <p>Children can begin to identify the significance of changes over time</p>

	<p>how it is running. Look at the Cutaway tab and note the lack of steam. This particular train is powered by electricity and huge batteries, which most trains run on now. Why do you think George’s trains didn’t use electricity? Why do modern trains use electricity? (Quicker, easier, safer, cheaper and doesn’t require people to shovel coal the entire time.)</p> <p>https://www.mozaweb.com/en/Extra-3D_scenes-TGV_POS_train-170475</p> <p>Finally, show the ‘Maglev Trains’ 3D scene to show how future trains won’t even use electricity, but magnets! Quickly and simply explain how this works in the ‘Levitation’ tab by stating that magnets can push against each other and come nearer to each other. Engineers are using this to move trains at faster speeds. It also means that there are no wheels or moving parts to wear out, it’s a lot quieter and it’s better for the environment, but it is VERY expensive!</p> <p>https://www.mozaweb.com/en/Extra-3D_scenes-Maglev_Trains-38658</p> <p><u>Task</u> Have pictures of each train (screenshots from 3D models) and chn to compare how trains have changed, writing basic facts – ‘The Rocket used steam to move’, ‘This train (BR Standard) used steam to move but was much bigger and quicker’, ‘This train (TGV POS) used electricity because it was easier and quicker’, ‘These trains (Maglev) use magnets because they are quieter and quicker, but more expensive.’</p> <p><u>Plenary</u> Chn share their work and see if they can spot the differences between each train – Steam, steam, electricity, magnets.</p>		
<ul style="list-style-type: none"> ▪ How Stephenson’s innovations impacted locally and nationally ▪ Why Stephenson is a significant figure 	<p><u>Stephenson’s impact – local/national</u></p> <p>Ask chn if they understand WHY we’re studying George Stephenson (he was very important and did lots of things in his lifetime.) Explain that George was known as ‘the Father of the railways’ – what do you think this means? – (what does ‘father’ mean?) Ask chn to discuss why they think he is known as this from previous learning – created the Rocket, helped build lots of railways across the world etc.</p>	<p>L8 – Growth of railways picture</p> <p>L8 – Stockton and Darlington Railway picture</p> <p>L8 – Beeching Railways picture</p>	<p>Children can identify the impact of Stephenson locally, nationally and internationally</p>

Explain that George's influence on both trains and railways was incredible. Show the picture of the Stockton to Darlington Railway (L8 – Resources) and highlight the black lines as the original railway and the red ones as the railways we have today – what do they notice?

Now show the Growth of Railways picture and ask chn to explain what they can see – explain that this only goes up to 1914, which was over 100 years ago. Since then, there might be EVEN MORE railways not on the map but lots of them were cut in the 1960s so they were taken away. Quickly show the Beeching Railways picture to show how the number of railways then decreased. Why do they think so many railways were built initially? Who do you think was fairly important in that happening? Highlight George as being very important as he helped develop some of the first proper railways. His ideas were then taken to various parts of the world and used to build more railways there. Without George's inventions and input, we might not have the trains or railways that we have today.

Highlight that, because of the railways, lots of areas grew for a number of different reasons. As an example, because of mining and easier and cheaper travel, places like Redcar and Saltburn became popular holiday towns. Teesside has become famous for the railways and for people like George and his son Robert. Look at the picture of the railways lines across Teesside (Stockton to Darlington line in red) from 1904 and compare that with the original line which was the only one in the area. Can they see how much it grew in under 100 years? Can they see any places or railway stations that they recognise or are still there today?

(You may want to look at examples of the development of railways in your own area, finding maps and photographs to show the changes and developments and why and how those developments impacted your local area. Are they still relevant today? Can you still see the impact of the railways today?)

Task

Children to draw a simple poster showing how the local area has improved from Stephenson's achievements – children could draw railways, trains, seaside scenes, more people coming to the town or

	<p>elements of mining to show the effect of railways on the mining industry. Children could write a simple sentence explaining what their drawings show.</p> <p><u>Plenary</u> Children show their posters and explain WHY they have drawn those elements. Other children assess whether it is relevant or correct.</p>		
<ul style="list-style-type: none"> ▪ To make judgements about aspects of history ▪ How to answer an historically-based enquiry using evidence ▪ That some people might agree or disagree with their own opinions 	<p><u>Enquiry Question</u> Display the question ‘Was George Stephenson all that significant?’ Allow the children some time to discuss amongst themselves. Take feedback and ensure that children understand what the term ‘significant’ means. When that is clear, ask the class to think again now that they fully understand what the term means. Has anyone’s opinion changed? Explain that a part of history is asking and answering questions about people and events from the past so that we can understand things fully. Why do you think we should ask the question about someone’s significance? Does it matter if someone is important or not? Should everyone from the past be studied? Why not?</p> <p>Explain that they will be answering the question above. Tell them that this particular question asks them to make a judgement and give an opinion, but in history, we need to say WHY we have that opinion or judgement. Give an example of someone who IS important (someone who has helped lots of people or had a big impact locally/nationally/internationally) stating why they are important and someone who has only had an immediate impact (perhaps a family member that the children don’t know of) stating why they aren’t so important to the children so that they can begin to make their own judgements. Example: The Prime Minister makes lots of decisions that affect EVERYBODY everyday but your (distant family member) only sees you twice a year so they don’t have as big of an impact on you as the Prime Minister might have.</p> <p>You may want to give the children access to work that they’ve done previously to help them understand the things that Stephenson did and his impact, or provide appropriate materials that might demonstrate this:</p>	<p>Previous work readily available</p> <p>Age-appropriate materials that show Stephenson’s impact (including maps from the previous lesson charting the growth of railways in the UK and the local area)</p> <p>Potentially you could create a sheet stat with two sides – why he WAS significant and why he WASN’T significant</p>	<p>Children can begin to answer a simple enquiry using selected sources as evidence</p> <p>Children can begin to form an opinion with reasoned evidence</p>

- Some children might agree with the statement because lots of people use trains today and they use them themselves or have been on them before
- Some might disagree because THEY don't use trains themselves and they don't know anybody that does. Or that cars and planes are much more convenient or quicker ways of travelling, especially to other countries.

Task

Children to write a short response to the statement. They can present this in any way that they choose, so long as they show a judgement and provide evidence for why they think that.

Plenary

If possible, find a mixture of those that agree and disagree. Share their judgements and help to highlight why both could be right/wrong and emphasise the evidence/lack of evidence that has been used with their statements.