

History
Transport Through the Ages

We will be learning about how transport has changed through history. The horse was the main form of transport for thousands of years, and nothing was really faster than them until the **steam engine**. The invention of the steam engine **revolutionised** transport.

Key things to know/learn:

- That we can use **historical** sources of information, that were from the time, or written by historians afterwards, to find out more, such as:
- That **George Stephenson's Rocket** was the first successful and reliable steam engine that could pull a heavy load, and at a reasonable speed, faster than anything else ever before
- That steam trains continued, so that about 40 years later, the major towns and cities of the UK were connected onto a **national network**
- It wasn't just trains during this period – the **steam engine invention** meant that making things could now be done in **factories**, which made Britain the richest country in the world at the time – this was called the **Industrial Revolution**
- (However the Industrial Revolution certainly wasn't good for everybody, and many people were extremely poor and had horrible lives)
- Steam engines and other inventions meant that **boats and ships** could begin to be made out of metal, so that travel across the oceans became much much faster, and no longer relied on sailing with the wind
- About 60 years after the steam engine, the smaller **internal combustion engine** meant that the people could have their own personal transport (**the car**)
- These engines became powerful enough that 30 years later, they could 'beat' gravity, and take to the skies! (**Aeroplanes!**)
- That there have been many more developments through the 20th Century that bring transport up to date, including driverless cars!

Ideas for home:

- Using books/the Internet, research the **Rocket**, **George Stephenson**, **James Watt**, and the **Industrial Revolution**.
- Create a timeline of important transport inventions, beginning with: When was the aeroplane invented, and who by? When was the car invented, and who by?
- How have car/air/train travel changed our lives?
- Discuss and argue – which has had the biggest impact on modern lives? **Cars, boats, trains or planes?**

*In English, we will be reading **The Boundless**, and we will continue to improve our writing, including spellings, using paragraphs, speech marks, and becoming more descriptive and imaginative with our writing for our audience. We will be reading a novel called **The Boundless** by Kenneth Oppel, the story of a legendary steam train travelling across Canada in the 1890s.*

Geography
Human and Physical Geography

We will be learning about how different countries around the world are different, focussing on the UK, Spain, and Canada. These three countries are similar, but they have a lot of differences. **Size, population, wealth, land, and climate** all vary greatly!

Key things to know/learn:

- That we live in **Colburn**, a village in the **county** of **North Yorkshire**, within the **country** England, which is part of the wider **United Kingdom**, within the continent of **Europe**.
- **Spain** is also in **Europe** to the **south** of the **UK**, but **Canada** is in **North America**, to the **west**.
- To use maps/atlas/eight points of a compass to explore geographically
- That the world is made of seven continents, five oceans, and world maps also show some main lines - the Equator and the Tropics of Cancer and Capricorn. Where are these? What do they show?
- The world is also split into **time zones** – America is 5-8 hours behind our time, but Australia, Fiji and New Zealand are 9-13 hours in front!



- The countries, focussing on the UK/Spain/Canada, differ in their: **Climate**, meaning weather/temperature/seasonal patterns- **Physical features**, meaning mountains, rivers and other environments **Land use**, meaning the split between urban/rural **Natural resources**, meaning farmland, and stores of coal/oil/gas **Population and wealth**, meaning number of people and how much money they have

Ideas for home:

- Use atlases/Google Maps/Google Earth to explore the world, learning the names of different countries, flags, capital cities, and famous physical features such as **Everest**/the **Himalayas**, the **Nile**, the **Amazon**, and the **Mississippi**
- Learn about **Spain** and **Canada** in particular, finding out about their features, such as their **languages**, **populations**, **climate**, and **land**.
- Learn about **time zones** – how many hours ahead/behind are certain countries?




In maths, we will be continuing to work through the Year 4 curriculum, but this term we will pay particular attention to fractions and decimals. Why not practice these on MyMaths?!

Science
States of Matter

We will be learning about how everything around us is made of **particles**, which are so small that they are impossible to see. On the palm of your hand, there are trillions of them! Everything around is a **solid** (like ice), a **liquid** (like water), or a **gas** (like steam)...

Key things to know/learn:

- That materials can be grouped together and organised into solids, liquids and gases.
- That in solids, the particles are packed tightly together, meaning that solids **hold their shape**.
- In liquids, the particles are **looser** and 'floating', meaning that liquids **can be poured** and **take the shape of the container**.
- In gases, the particles are **excited**, and can escape easily, usually upwards **against gravity**, as they are lighter than air

State	<u>Solids</u>	<u>Liquids</u>	<u>Gases</u>
Examples	Wood, metal, plastic... LOADS of things!	water, drinks, oil, honey...	steam, air, smoke, oxygen, carbon dioxide, helium
Particles diagram			

- That materials **change state** when they are heated or cooled to a certain ° (degree) Celsius, like boiling water → steam at **100°C**, or freezing water → ice at **0°C**
- That all of the water in the world travels in the **water cycle**, from **sea** → **clouds** → **rain** → streams/rivers/**groundwater**, and the way it does this is mostly through **condensation/evaporation/precipitation**.

Ideas for home:

- Be a scientist at home! With an adult, experiment/investigate what happens when you heat butter/cream/chocolate!
- Research – at what temperature does iron melt into liquid iron? At what temperature does oxygen **condense** into a liquid? And so on!
- Find out what **evaporation** and **condensation** mean.
- Explore and research the **water cycle**, finding out how water travels from the sea, into the clouds, falls as rain, and then flows into the sea again. How does this happen at each stage?

*Our **PE** this term will be swimming every Friday, but the children know that I 'owe' them four PE lessons from last term. So please can PE kits be in school, and we will fit in PE wherever we can!*

