Class 2

Spring Term 2022

The Invention of Flight:

Half Term 1: How the invention of flight changed the world.

Half Term 2: Trade

Curriculum Intent:

To foster children who are aware of the world and their position within it by knowing how lucky they are and how others are far less fortunate. To actively be able to look out for, support and show kindness and empathy towards others, so they become citizens of the world whose aim is the betterment of society. To know and to be proud of where they are from and to fluently use a wide range of appropriate vocabulary when discussing and writing across our wide curriculum.

During this topic, the children will develop an understanding of the chronology of the invention of the aeroplane. They will appreciate how lucky they are in today's world due to the opportunities created by the aeroplane. Children will understand Derby's crucial impact in the development of planes through a study of Rolls Royce and the national issues which caused Rolls Royce to develop aeroplane engines. The topic will give children aspirations for the future by considering the potential future of flight.

Morley Journey	
Whole School	
Class 1	Neil Armstrong significant historical figure.
Class 3	Class 3 focus on the impact of Rolls Royce in Derby and how significant this local company was to the Battle of Britain with the production of The Spitfire. They will understand how different aircrafts were used in a variety of ways in WW2: Lancaster Bomber, German Messerschmitt, Spitfire, Hurricane. The children will also develop their understanding of how destructive an aeroplane was during The Battle of Britain.
Subjects	**Areas Covered**
English/Books	Taking Flight (Wright brother story) Adam Hancher FarTHER by Grahame Baker-Smith Amelia Earhart (Small People Big Dreams) Taking Flight video
Science	Y4 Sound Y4 Electricity
History	Development of flight How the development of commercial flight changed people's lives: opened up the world, trade, food, holidays, Chronological focus of the aeroplane. Look to the future – space tourism.

	Cause and Consequence – WW1 caused Rolls Royce to change direction from building car engines to plane engines. Change – purpose of flight, power, length, size, weight, materials, technology. Compare and contrast: life before and after jet engines: food, tourism, travel. What opportunities has flight given
Geography	Local and global trade. Global supply chain. Imports and exports. What does Derby export? Fair trade (bananas)
Art	Movement and perspective – flight.
D&T	Fair trade project – chocolate.
Music	Charanga and Wider Opportunities (Violin)
Computing	Understanding Computer Networks
RE	L2.3 Why is Jesus inspiring to some people? L2.4 Why do people pray?
PHSE	Being Responsible Money Matters
Enrichment	*Derby Museum of Making – Flight Fantastic* Royal Air Force Museum, Cosford East Midlands Airport

Key Knowledge: Half Term 1 How the Invention of Flight Changed the World

What I should know at the start of the topic	• How people use flight to travel around the world and into space (links to explorers topic, class one). • How to construct a timeline of events based on dates.
Significant People	**The Wright Brothers** – Orville and Wilbur Wright are credited with inventing the airplane. Wilbur was born in Indiana in 1867 and Orville was born in Ohio in 1871. They grew up loving to invent. They became interested in flying when their dad gave them a toy helicopter that flew with the help of rubber bands. They experimented with making their own helicopters and Orville liked to build kites. In 1903 they made the first flight, which lasted for 12 seconds. Around a year later, after continuing to perfect their craft, they took a newly designed plane to air and the flight lasted over five minutes. They were the first to make a successful human flight with a craft that was powered by an engine and was heavier than air. It took some time to perfect, but in later years people could travel large distances at much less time. Today, trips that previously would have taken months by boat and train, can now be travelled by plane in a few hours.  **Frederick Henry Royce** and **Charles Stewart Rolls** were pioneers of the automobile industry. They made engines for cars and planes. In 1908, their factory moved to Derby. **Amelia Earhart** was born in 1897 in Kansas. When she was eleven years old, in 1908, she saw one of the Wright Brothers first aeroplanes at the Iowa State Fair but didn't have much interest in flying at the time. In 1920 Amelia and her father visited an air show in California. Amelia went on her first plane flight that day. She later said that "I knew I had to fly" as soon as the plane was just a few

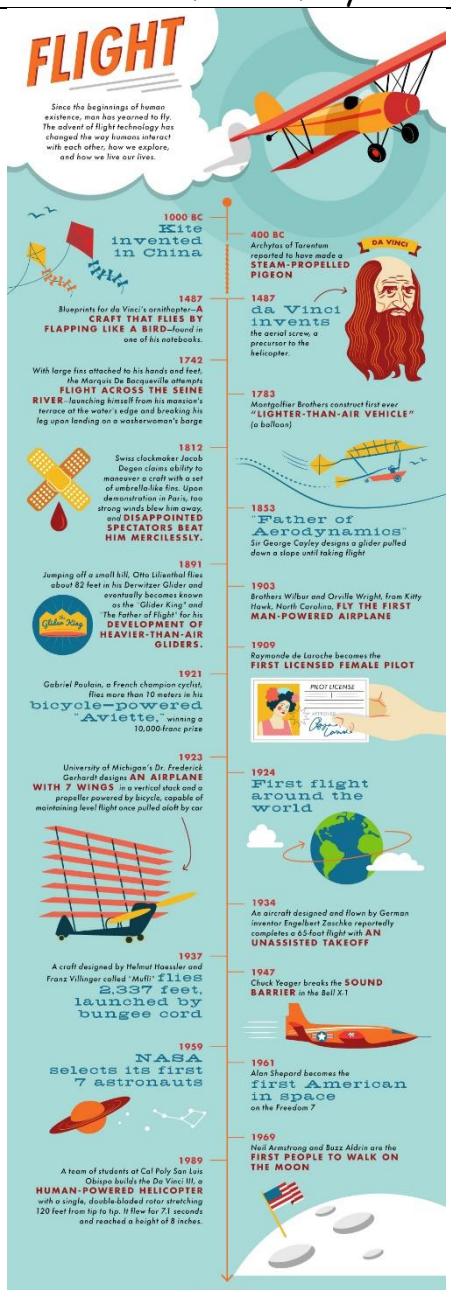
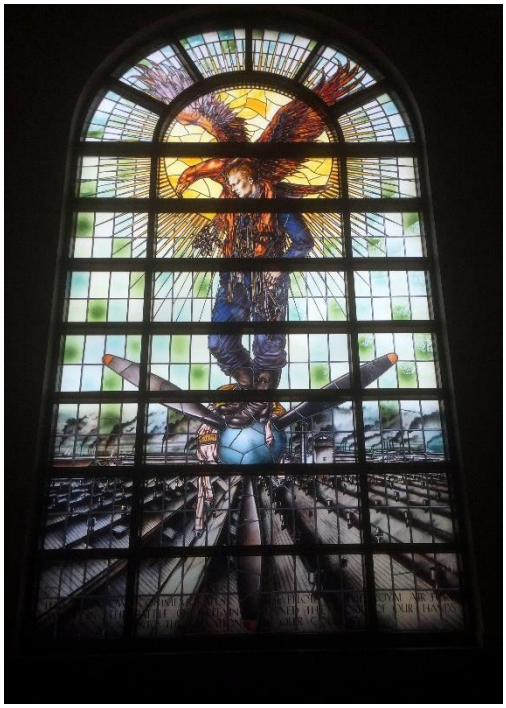
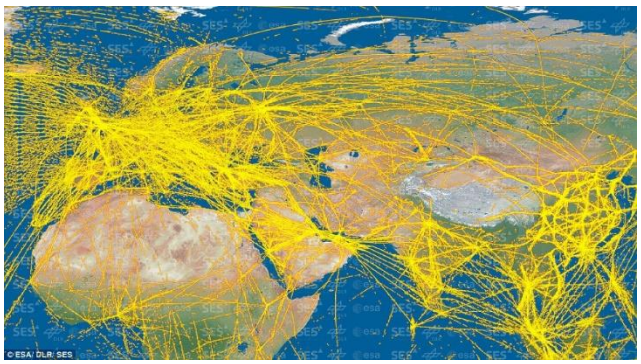
hundred feet off the ground. Amelia worked hard and, together with some money from her mother, she was able to pay for flying lessons. Eventually she purchased her own plane nicknamed the "Canary". She also got her pilot's license and set a new altitude record for female pilots of 14,000 feet. In 1928 Amelia was invited to take part in a historic flight across the Atlantic. Together with pilot Bill Stultz and co-pilot Slim Gordon, Amelia flew across the Atlantic Ocean. Amelia was the navigator on the flight. On June 18, 1928 after 21 hours, the plane landed in Wales. She was the first woman to make the flight across the Atlantic. In 1932 she embarked on a solo flight in dangerous conditions crossing the Atlantic Ocean. She became the second person to successfully fly across the Atlantic Ocean solo. Although she was the most famous woman pilot in the world, Earhart wasn't satisfied and wanted to be the first woman to fly around the world. On June 1, 1937 Amelia and Fred Noonan, her navigator, took off from Miami, Florida. They flew a number of flights, eventually getting all the way across Africa and Asia to New Guinea in the South Pacific. On July 2nd they took off from New Guinea to fly to Howland Island in the Pacific Ocean, but they were never seen from again.



Elon Musk was born in 1971 in South Africa but moved to Canada, then America. He is the CEO of Tesla Motors and SpaceX, an aerospace company. He **h**as made space flight reusable and sustainable. Musk has sought to reduce the expense of spaceflight by developing a fully reusable rockets that could lift off and return to the pad from which it launched.

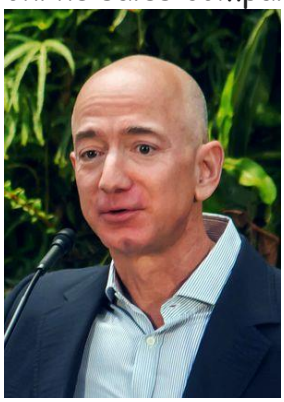


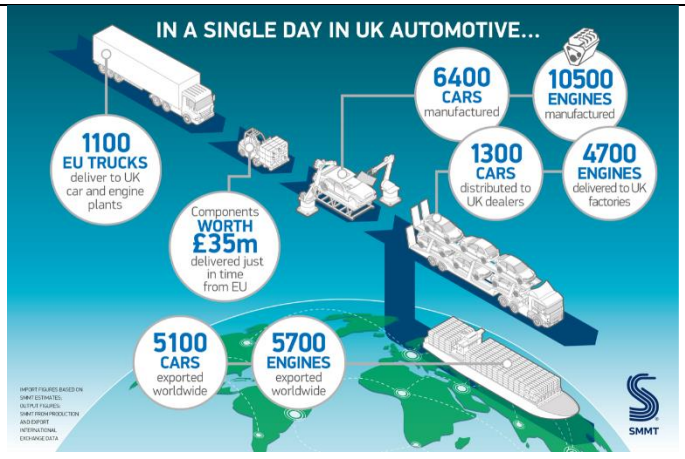
Derby	**Rolls Royce -** In 1884 Frederick Henry Royce started an electrical and mechanical business. He made his first car, a "Royce", in his Manchester factory in 1904. He was introduced to Charles Stewart Rolls the same year, and the pair agreed a deal where Royce would manufacture cars, to be sold exclusively by Rolls. A clause was added to the contract, stipulating the cars would be called "Rolls-Royce". The company was formed on March 15, 1906. The company moved to Derby in 1908. The company's first aero engine was the Eagle, built from 1914. Around half the aircraft engines used by the Allies in WW1 were made by Rolls-Royce. By the late 1920s, aero engines made up most of Rolls-Royce's business. During WWII, Derby was under threat by the axis because Rolls Royce was so prominent in making engines to serve in the Second World War (their best engine; Merlin, powered the RAF fighters Hawker Hurricane, Supermarine Spitfire and Lancaster) Today Rolls-Royce engines continue to power many of the world's civil and military aircraft and the company has been particularly effective in reducing noise and adverse emissions from its aviation products, anticipating international regulations arising from community campaigns and improved environmental understanding.
Key Information	• There are many myths and legends involving flight e.g. Daedalus and Icarus. • People flew for the first time in 1783. Two French brothers built the first hot air balloon out of cloth and paper. They lit a fire under the balloon. Hot air is lighter than cold air so it lifted the balloon off the ground. The first people to try a hot air balloon ride flew over Paris for twenty-five minutes. • In 1852, Henri Giffard hung a steam engine under the balloon to turn a propeller so the balloon, or airship, could be steered in any direction. • In 1902, the wright brothers tested their gliders over North Carolina. Once they knew how to fly a glider, they wanted to build a plane with an engine that would stay in the air longer. In 1903, the tested and flew the first plane with an engine for 12 seconds. • In 1927, Charles Lindbergh took off from New York for the first non-stop flight over the Atlantic Ocean. • During WWII, aircraft became more advanced and aviation made huge leaps. Planes were used to spy on enemies and to drop bombs on enemies. • In 1970, the first Boeing 747 started a New York – London route.

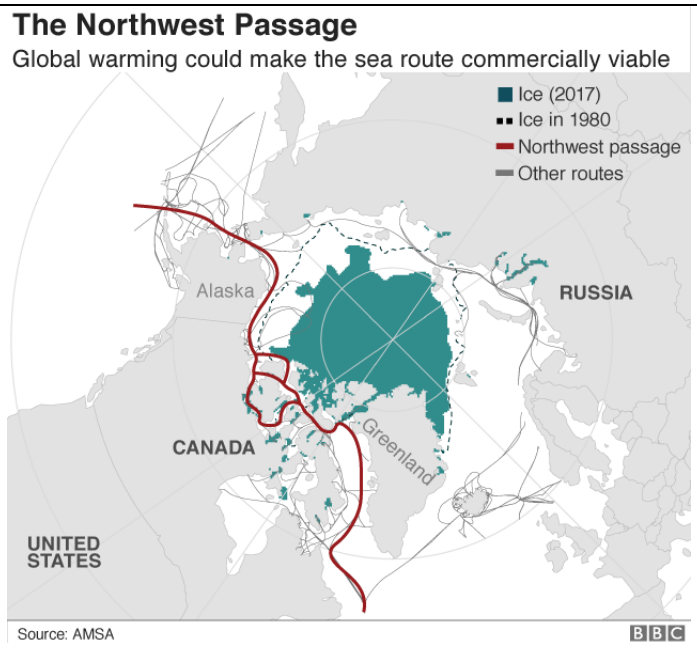
	• In 1975, the Concorde, the fastest aircraft the world has ever known took its first commercial flight. It could cross the Atlantic Ocean in three and a half hours. In 2003 it was retired from service after safety concerns.	
Diagrams	  	
	Aviation	*The world of aircraft and air travel.*

Vocabulary Ninja 	Invent	*To create or produce for the first time.*
	Industry	*The businesses that provide a particular product or service.*
	Engine	*Machine the provides power*
	Force	*Lift, thrust, wight, drag.*
	Myth	*A story often describing the adventures of superhuman beings that attempts to describe the origin of a people's customs or beliefs or to explain mysterious events.*
	Kite	*A light covered frame for flying in the air at the end of a long string.*
	Glider	*Light, unpowered aircraft with wings*
	Aeroplane	*Powered flying machine with fixed wings*
	Propeller	*Turning part with blades that power and aeroplane.*
	20th Century	*The period between January 1st 1901 and December 31st, 2000.*
	21st Century	*The period between January 1st 2001 and December 31st, 2100.*

Key Knowledge: Half Term 2 Trade

What I should know at the start of the topic	• That transport has helped us have more foods and products available to us in the UK. • Half of the children in the class will have learnt about fair trade through the Americas topic and links to chocolate.
Significant People	**Jeff Bezos** founded Amazon in late 1994 on a cross-country road trip from New York City to Seattle. The company began as an online bookstore and has expanded to a variety of products and services, including video and audio streaming. It is currently the world's largest online sales company.  - **John Lombe's** was the first successful silk throwing mill in England. It was built in an island on the River Derwent in Derby. John Lombe visited Piedmont in 1717 and studied details of the Italian silk throwing machines- the *filatoio*, and the *torcitoio*. Then, he returned to England with some Italian craftsmen, and built the mill. This mill is significant as it was the first successful silk throwing mill in England, and probably the first fully mechanized factory in the world. 

Derby	- The Toyota Corolla is manufactured at the Derbyshire (Burnaston) branch. The UK's third largest exports are cars. - Cadbury Crème Egg is produced at Burton on Trent. Cadburys walked away from being Fairtrade in 2016.
Key Information	- **Climate change** is increasingly opening up the Northwest Passage, an Arctic Sea route north of Canada. In the 19th Century there was a race to map and navigate the Northwest Passage through the Arctic Ocean as a shortcut between the North Atlantic and North Pacific. The problem was that, even in the summer, the route was mostly blocked by impenetrable ice. On one of the best-known expeditions - that of the UK's Sir John Franklin in 1845 - all 129 crew members perished after their two vessels got stuck. Today, more than 170 years later, a warming Arctic means that the route is increasingly accessible for a few months each summer. According to some estimates, Arctic ice is retreating to the extent that the Northwest Passage could become an economically viable shipping route. For shipping firms transporting goods from China or Japan to Europe or the east coast of the US, the passage would cut thousands of miles off journeys that currently go via the Panama or Suez canals. - Fair trade is **a way of buying and selling products that allows the farmers to be paid a fair price for their produce**, and have better working conditions. Trade is 'unfair' when farmers receive very low income and have poor conditions while the companies that sell their products make lots of money from them.
Diagrams	



FAIRTRADE

1 OPPORTUNITIES FOR DISADVANTAGED PRODUCERS

2 TRANSPARENCY & ACCOUNTABILITY

3 FAIR TRADE PRACTICES

4 FAIR PAYMENT

5 NO CHILD LABOUR, NO FORCED LABOUR

6 NO DISCRIMINATION, GENDER EQUITY, FREEDOM OF ASSOCIATION

7 GOOD WORKING CONDITIONS

8 CAPACITY BUILDING

9 PROMOTE FAIR TRADE

10 RESPECT FOR THE ENVIRONMENT

TEN PRINCIPLES OF FAIR TRADE

WORLD FAIR TRADE ORGANIZATION



5p



1p



4p



7p



13p

Vocabulary Ninja



Import	*Buying things from abroad.*
Export	*Selling goods abroad.*
Trade	*Buying or selling goods or services.*
Fair trade	*Trade between companies in developed countries and producers in developing countries in which fair prices are paid to the producers.*
Climate	*The average measurements of temperature, wind, humidity, snow, and rain in a place over the course of years.*
Producer	*Producers create, or produce, goods and provide services.*
Demand	*The more people want something, the more demand there is.*
Consumer	*A person who buys and uses goods.*
Manufacturer	*Manufacturers take raw materials and turn them into products to sell.*
Raw materials	*The basic materials from which a product is made.*
Retailer	*A business that sells goods to consumers.*
Economy	*The system of business and industry by which a country makes wealth.*