

Year Group: 2	Term: Summer 1 Enquiry: How many features of an aircraft can we include in our models?	Unit Title: Flying High Driver Subject/s: Geography and Science	
<p><b>Science: Properties of materials</b></p> <p><u>What are materials used for?</u></p> <ul style="list-style-type: none"> <li>Materials are used for different <b>purposes</b> based on their <b>properties</b>.</li> <li><i>For example, wood</i> is used to make furniture and floors.</li> <li><b>Metal</b> can be used to make coins, cans, cars and cutlery.</li> <li><b>Glass</b> can be used to make windows.</li> </ul> <p><u>What properties of materials make them suitable for a particular use?</u></p> <ul style="list-style-type: none"> <li>Glass can be used to make windows because it is transparent.</li> <li>Rulers can be made from wood, plastic or rubber because these materials are smooth and can be cut straight.</li> <li>Spoons are made from metal, because it is waterproof and can be cleaned easily. They can also be made from plastic for children because plastic is light and it cannot hurt children's growing teeth.</li> <li>Discuss and investigate the suitability of different materials for different purposes.</li> </ul> <p><u>How can you change the shape of materials?</u></p> <ul style="list-style-type: none"> <li>The shape of some materials can be changed when they are stretched, twisted, bent and squashed.</li> <li>Explore how different materials and objects can change shape while others cannot.</li> </ul>	<p><b>History of flight</b></p> <ul style="list-style-type: none"> <li>The Wright brothers, Orville and Wilbur, were two American brothers and inventors.</li> <li>They invented and built the world's first successful aeroplane called The Wright Flyer.</li> <li>Their famous flight happened on December 17<sup>th</sup> 1903 in Kitty Hawk, North Carolina, USA.</li> <li>North Carolina is in USA which is on the continent of North America.</li> <li>They flew for 12 seconds and covered 120 feet. (36.6m)</li> <li>The plane was made mostly of wood and fabric with some steel wires.</li> <li>Before then, most people could only fly in balloons or gliders but they couldn't control them.</li> </ul> <p><u>Amy Johnson – significant person</u></p> <ul style="list-style-type: none"> <li>Amy Johnson is Britain's most famous female pilot.</li> <li>She was the first ever woman to fly to Australia on her own.</li> <li>She made the flight in a Gypsy Moth plane named 'Jason' which was made of wood and fabric.</li> <li>She made the flight from London on 5<sup>th</sup> May 1930 and landed in Australia 19 days later in 24<sup>th</sup> May.</li> <li>Australia is a country in the continent of Australasia (Oceania)</li> </ul> <p><u>History of Concorde and local significance</u></p> <ul style="list-style-type: none"> <li>Concorde was a type of supersonic airliner, this means it could fly faster than the speed of sound. It is the only supersonic plane that passengers could buy a ticket to travel in.</li> <li>It was built by Britain and France together. The British company that worked on it was based in Bristol – The Bristol Aeroplane Company.</li> <li>Bristol is the nearest city to Thornbury.</li> <li>It could travel at 2179 kph (1354 mph) It was significant as no passenger plane had ever travelled that fast before.</li> <li>This means that a normal transatlantic flight to New York from London only took 3.5 hours rather than 8 hours. The Atlantic Ocean lies between North and South America and Europe and Africa.</li> <li>New York is a city in USA in the continent of North America. Britain and France are countries in Europe.</li> <li>The first official passenger flight was on January 21<sup>st</sup> 1976.</li> <li>Concorde was made from a range of metals, alloys and fibreglass.</li> <li>The last time a Concorde flew was on 24<sup>th</sup> October 2003.</li> </ul> <p>There is a Concorde on display at Filton Airport.</p>		

**Key Vocabulary: Science: Materials**

absorbent - material that soaks up liquid easily  
bendy - an object that bends easily into a curved shape  
elastic - a rubber material that stretches when you pull it and returns to its original size and shape when you let it go  
material – what certain objects are made from.  
opaque - you cannot see through it  
properties – words to describe the material  
purpose - the reason for which it is made or done  
raw materials - things that exist in nature and are not made by people  
squash - pressed or crushed with such force that something loses its shape  
stretchy - slightly elastic  
suitable - something that is suitable for a particular purpose or occasion is right or acceptable for it  
synthetic materials - things are created by people  
transparent - you can see through it  
twist - turn something to make a spiral shape  
unsuitable - someone or something that is unsuitable for a particular purpose or situation does not have the right properties for it  
waterproof - does not let water pass through it  
weightlessness - lack of weight in space which allows objects to float around

**Key Vocabulary: History of flight**

airliner – a large aeroplane that takes passenger  
Atlantic Ocean – one of the main bodies of water on the Earth  
continent – a large group of countries in an area  
famous - recognised or liked by the public.  
flight - an act of passing through air or space by flying  
glider- a light aircraft that can fly without engines  
history - everything that has happened in the past to people or things  
inventor – a person who designs and creates new objects  
passenger - a person who is travelling on a plane, bus or train  
significant – very important or worthy of attention  
supersonic – travelling faster than the speed of sound  
aeronautics – the study and designing of machines that can fly  
international – between two or more nations  
hero - a person who is admired for their courage and outstanding achievements

