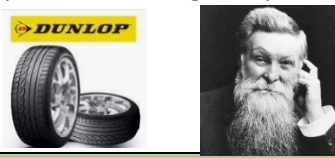
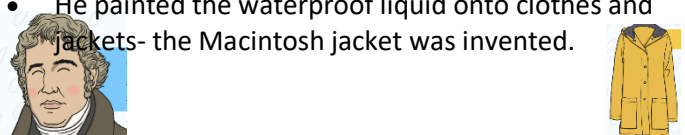
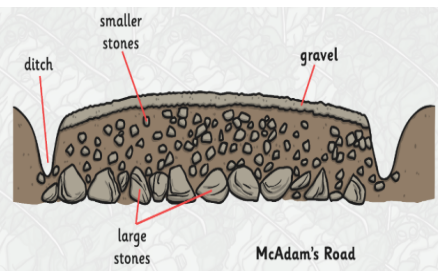
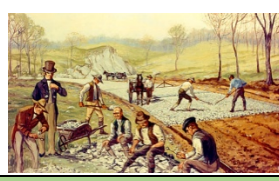


Year 2 Science Knowledge Organiser Topic: Materials Matter



Key questions:	
How can I use different everyday materials for more than one purpose? What are different everyday materials and how are they used? What is the suitability of different materials for different purposes? How can shapes of solid objects be changed?	
Materials Key knowledge:	John Dunlop Key knowledge
<p>Suitability means having the properties which are right for a specific purpose. Metal, wood and plastic are all suitable for spoons because:</p> <ul style="list-style-type: none"> • Metal is strong, lasts a long time and is malleable (can be reshaped); • Wood is strong, has a high heat tolerance; and • Plastic is light, cheap, impermeable and can be easily reshaped. • Glass – transparent, impermeable and can be shaped • Brick/stone/rock- impermeable, strong, rigid • Cardboard- light, cheap, can be cut to different sizes, recyclable 	<ul style="list-style-type: none"> • Invented the first inflatable rubber tyre. • Found that wood, rubber or iron wheels made cycling bumpy. • Rubber is waterproof, can change shape and light. <div>  </div>
Charles Macintosh key knowledge	Recycling Key knowledge: What can be recycled?
<ul style="list-style-type: none"> • Scottish inventor who invented a waterproof material- found that rubber dissolved in a liquid called naphtha. • He painted the waterproof liquid onto clothes and jackets- the Macintosh jacket was invented. <div>  </div>	<ul style="list-style-type: none"> - Paper and cardboard - such as newspaper and cardboard - Plastic - such as yoghurt pots and milk bottles - Metal - such as cans - Glass - such as bottles and jars - Clothes - such as trousers and jumpers - Garden waste - such as grass trimmings - Food - such as apple cores and leftovers
John McAdam Key knowledge:	
<ul style="list-style-type: none"> • Experimented with road building. At the time, roads were made of mud or cobble stones. • Curved roads allowed water to run off. The layers larger and smaller stones gave the road structure and strength. • Roads were a success and were built this way across the world. • Tar was later added to roads. Known as Tarmacadamisation or Tarmac. 	
Key vocabulary:	
<ul style="list-style-type: none"> • Materials: The parts of which something is made or can be made. • Properties: Things that can be observed using the five senses. • Suitable: Having the properties which are right for a specific purpose. • Squash: Pushing both hands together with material in between. • Bend: Grabbing both ends of the object and bringing the ends inwards together. • Twist: Turning your hands in opposite directions. • Stretch: Pulling your hands slowly and gently apart. • Recycle: Using things that have already been used, to make new things. • Biodegradable: Can be broken down into smaller pieces. • Greenhouse gases: Gases in the air that trap energy from the Sun, heating the Earth. • Macadamisation: Name given to John McAdam's construction process of building roads. 	<ul style="list-style-type: none"> • Flammable- can be set on fire • Inflammable- cannot be set on fire • Malleable- can change shape after heating • Porous- tiny holes allow water through • Permeable- tiny holes allow water through • Impermeable- water cannot pass through (waterproof) • Transparent- light can pass through (see-through) • Tar- thick black substance made by heating coal. Mixed with stones to create tarmac. • Economical- cheap <div>  </div>
Output:	Working like a scientist:
<ul style="list-style-type: none"> • create reports on inventors, inventions, their materials and impact • Explanation of the recycling process • Explanation- why London was rebuilt using different materials 	<ul style="list-style-type: none"> • Investigate suitability of a range of product materials • Classify materials