



## Wheeler Lane Primary School Curriculum Concepts and Knowledge Journey

**STEM Faculty: DT**

The building blocks of learning. Our concepts stem from our whole school curriculum intent and thread through our entire school curriculum.

Strand	Year 3	Year 4	Year 3	Year 3	Year 4
<b>Focus</b>	Aspect of DT: <b>Structures</b> Focus: shell structures	Aspect of DT: <b>Food</b> Focus: healthy and varied diet	Aspect of DT: <b>Mechanisms</b> Focus: Levers and Linkages	Aspect of DT: <b>Textiles</b> Focus: 2D shape to 3D product	Aspect of DT: <b>Electrical Systems</b> Focus: simple circuits and switches
<b>Final Product</b>	Memory box	<i>Biscotti Biscuits</i>	<i>Pop up greeting cards</i>	<b>Purses</b>	<i>Reading light</i>
<b>Concept 1</b> Heritage (Birmingham)	Would you put Aston Hall into a memory box about Birmingham?	Would Peter De Bermingham have considered a varied choice of ingredients to sell at his market?	Why were the post boxes painted gold in Birmingham?	Where does the Queen get her Launer London Traviata bag from?	Why would Hamstead in North Birmingham have used Davy Lamps?
<b>Concept 2</b> Communication	What is your earliest memories about?	Investigate and discuss the purpose of a healthy varied diet together.	Discuss how cards help people to feel appreciated and cared for.	Discuss whether a bag has the same purpose as a purse.	Discuss the pros and cons of having a lamp vs candles
<b>Concept 3</b> Powerful Stories	Yours Sincerely Giraffe <u>Megumi Iwasa</u>	Chef Academy Steve Martin	Flat Stanley Jeff Brown	The money tree Sarah Stuart	Frank Einstein and the Antimatter Motor Jo Scieszka
<b>Concept 4</b> Sustainability, Rights and Responsibilities	Discuss environmental issues relating to the wastage of materials when packaging items, including reducing, recycling and reusing.	Can you reduce the amount of energy used to transport your product to the shops?	How to use resources in a sustainable way	What are the 6 R's of sustainability?	Is renewable electricity the way forward?
<b>Concept 5</b> Powerful people	Sir Thomas Moore	Rustie Lee	Georgina Fihosy	Martine Rose	Humphry Davy
<b>Concept 6</b> Me - now and in the future	Will there be any good memories from the Covid pandemic?	Will there be electric aeroplanes to take passengers on holiday?	Will there still be post men and woman delivering mail?	Will I even touch money when I am older?	Will I be able to switch my lights on when I am not at home?
<b>Subject area 1</b>  <b>Working with tools, equipment, materials and components to make quality products</b>	<ul style="list-style-type: none"> <li>Create a product that is made stronger by the addition of triangles.</li> <li>Children will select and use, with greater accuracy, the appropriate tools (rulers, tapes, scissors, saws, punch and drills) and techniques (measuring, scoring, cutting and</li> </ul>	<ul style="list-style-type: none"> <li>Children will use their knowledge of food preparation and hygiene to create a food product by measuring out ingredients (either by weight or quantity) and using scales where appropriate.</li> </ul>	<ul style="list-style-type: none"> <li>Children create a product by joining and combining materials accurately to demonstrate their understanding of double arm linkages, fixed and loose pivots.</li> </ul>	<ul style="list-style-type: none"> <li>Create a product by using their knowledge of measuring templates, taping, pinning and joining that changes the surface texture of fabrics e.g. sticking things on, sewing on beads.</li> <li>Use pinking shears to stop fraying. Measure, make and use a paper / card template or patterns.</li> </ul>	<ul style="list-style-type: none"> <li>Create a product which includes components that can be controlled by switches or by ICT equipment.</li> </ul>

	marking out) for making their products.				
<b>Subject area 2 Evaluating processes and products</b>	<ul style="list-style-type: none"> <li>Throughout the process children reflect on their designs and develop them bearing in mind the way they will be used.</li> </ul>	<ul style="list-style-type: none"> <li>Evaluate consumer acceptability of their products using tests with verbal and or pictorial scales.</li> <li>Their food product uses a selection of ingredients to meet an identified need e.g lunchtime snack, healthy sandwich, low gluten.</li> </ul>	<ul style="list-style-type: none"> <li>Children evaluate their product against the original design criteria</li> </ul>	<ul style="list-style-type: none"> <li>Children evaluate their product against a given criteria e.g. does it incorporate the purpose and views of the intended users.</li> </ul>	<ul style="list-style-type: none"> <li>To disassemble and evaluate familiar products. .</li> </ul>
<b>Subject area 3</b>					