



# Wheeler's Lane Primary School Curriculum Overview

## DESIGN AND TECHNOLOGY

AUTUMN						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>UNIT</b>	Mechanisms Sliders and levers	Textiles and joining techniques	Mechanisms levers and linkages	Electrical System Simple circuits and switches	Mechanisms Pulleys or Gears	Textiles Combining different fabric shapes
<b>PRODUCT</b>	Pop up Cards	Christmas Decorations	Pop up greeting card	Night Light	Toy Vehicle	Mobile Phone Cases/ Holders
<b>KEY KNOWLEDGE AND SKILLS</b>	working with paper and card to make simple flaps and hinges simple cutting, shaping and joining skills using scissors, glue, paper fasteners and masking tape. Select and use tools, Explore a range of everyday products that use simple sliders and levers.	join fabrics using different techniques e.g. running stitch, glue, over stitch, stapling. Explore different finishing techniques e.g. using painting, fabric crayons, stitching, sequins, buttons and ribbons.	Use annotated sketches and prototypes Order the main stages of making. Understand and use lever and linkage mechanisms.	Gather information about needs and wants, Use annotated sketches, cross-sectional and exploded diagrams Understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs and buzzers. Evaluate their ideas and products against their own design criteria	Generate innovative ideas by carrying out research using surveys, interviews, questionnaires and web-based resources. Develop and communicate ideas through discussion, annotated drawings, exploded drawings and drawings from different views. Compare the final product to the original design specification. Test products with intended users and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose.	To know fabrics can be strengthened, stiffened and reinforced where appropriate. join textiles using a greater variety of stitches, such as backstitch, whip stitch, blanket stitch; to know a 3-D textile product can be made from a combination of accurately made pattern pieces, fabric shapes and different fabrics.
<b>KEY FIGURES/ STORIES/ CONCEPTS</b>		Lucienne Day Samuel Parkinson Louis Vuitton	Mum-of-three Georgina Fihosy, becomes the first black-owned greeting cards publisher to be stocked by a major bookshop chain	Sir Humphry Davy		

SPRING						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>UNIT</b>	Free standing structures	Mechanisms Wheels and Axles	Textiles 2D shape to a 3D product	Food Healthy and varied diet	Structures Frame structures	
<b>PRODUCT</b>	Playground	Vehicle with a break	Purse	Biscuit	Bird hide	
<b>KEY KNOWLEDGE AND SKILLS</b>	Select and use tools, skills and techniques, explaining their choices Select new and reclaimed materials and construction kits to build their structures. Use simple finishing techniques suitable for the structure they are creating.	Explore and evaluate a range of products with wheels and axles. Select from and use a range of tools and equipment to perform practical tasks such as cutting and joining to allow movement and finishing. Distinguish between fixed and freely moving axles.	Know how to strengthen, stiffen and reinforce existing fabrics. Understand how to securely join two pieces of fabric together. Understand the need for patterns and seam allowances.	Plan the main stages of a recipe, listing ingredients, utensils and equipment. Carry out sensory evaluations of a variety of ingredients and products. Record the evaluations using e.g. tables Use annotated sketches and appropriate information and communication technology, such as web-based recipes, to develop and communicate ideas.	Develop a simple design specification to guide the development of their ideas and products, taking account of constraints including time, resources and cost. Competently select from and use appropriate tools to accurately measure, mark out, cut, shape and join construction materials to make frameworks. Investigate and evaluate a range of existing frame structures.	
<b>KEY FIGURES/ STORIES/ CONCEPTS</b>	Louisa Ryland Lady Allen of Hurtwood	Naughty Bus	Sir Tom Moore		Stephen Sauvestre Thomas Farnolls Pritchard	

SUMMER						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>UNIT</b>	Food Preparing Fruit and Vegetables		Structures Shell Structures		Food Celebrating Culture and Seasonality	Electrical Systems More Complex Switches and circuits
<b>PRODUCT</b>	Fruit kebab		Memory box		Dips selection	Burglar alarm
<b>KEY KNOWLEDGE AND SKILLS</b>	<p>Design appealing products for a particular user based on simple design criteria.</p> <p>Use simple utensils and equipment to e.g. peel, cut, slice, squeeze, grate and chop safely.</p> <p>Understand where a range of fruit and vegetables come from e.g. farmed or grown at home.</p>		<p>Develop ideas through the analysis of existing products and use annotated sketches and prototypes to model and communicate ideas.</p> <p>Order the main stages of making.</p> <p>Explain their choice of materials according to functional properties and aesthetic qualities.</p> <p>Develop and use knowledge of how to construct strong, stiff shell structures.</p>		<p>Explore a range of initial ideas, and make design decisions to develop a final product linked to user and purpose.</p> <p>Write a step-by-step recipe, including a list of ingredients, equipment and utensils; Make, decorate and present the food product appropriately for the intended user and purpose.</p> <p>Evaluate the final product with reference back to the design brief and design specification, taking into account the views of others when identifying improvements.</p>	<p>Use research to develop a design specification for a functional product that responds automatically to changes in the environment.</p> <p>Formulate a step-by-step plan to guide making, listing tools, equipment, materials and components.</p> <p>Communicate ideas through annotated sketches, pictorial representations of electrical circuits or circuit diagrams.</p> <p>Test the system to demonstrate its effectiveness for the intended user and purpose.</p>
<b>KEY FIGURES/ STORIES/ CONCEPTS</b>	Jamie Oliver					