



## Design and Technology Long Term Overview

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Autumn – Mechanisms</b>	<p>The premise of this whole school project is to ensure every child makes an item to sell/promote at a pop-up shop within our local town. Every item should be useable or possible to play on and covers the cost of the materials that have been used (enterprise/economy link) The children then display their items for sale at the pop up shop, making money for our school resources.</p> <p>All lessons follow the DT format of research - design - make - evaluate.</p>					
	Using wheels, axels and a chassis, children design a toy car to sell.	Using both slides and levers, children design and create two Christmas themed pop up toys. One should use a pivot, the other a pull tab.	Children design and make an electrical loop game in groups.	Using corrugated card and split pins, children work on design brief of 'something that climbs or jumps'.	<p><b>Individual:</b> Children design and create a flag for the North Pole, using a pulley system.</p> <p><b>Class challenge.</b> Each child makes a gear to a specification. Can the class get all the gears to link and move at the same time?</p>	Children start by investigating different types of cam mechanisms, considering in their design process ways to improve the strength and structure of their design. Children can use a cardboard box structure for their cam mechanism.

<b>Spring 1 – Graphics &amp; Construction</b>	<p><b>This whole school project is developed with the idea of becoming a designer and architect! Children have a designers and creators day, where they start by generating, developing and communicating their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. They then make their designs, using the appropriate tools and materials. Each year group designs a different structure based on their History/ Geography learning.</b></p> <p><b>All lessons will focus on research and design.</b></p>					
	Design and make a food package for bananas to be transported in.	Design and make a bird feeder for a native bird of the UK.	Design and make a musical instrument that can be played.	Design, make and evaluate a model of a building that could withstand an enemy attack.	Design, make, test and evaluate a backpack that could be used for mountain climbing.	Design, make, test and evaluate an appropriate boat that could be used to transport goods across the ocean.
<b>Spring 2 -Textiles</b>	<p><b>The premise of this whole school project is to ensure every child makes an item to sell at our summer fare. Every item is based on a textile design and flower theme and focuses on a recycling/environmentally friendly aspect to creating products. The children then display their items for sale at the fare, making money for our school resources.</b></p> <p><b>All lessons follow the DT format of research - design - make - evaluate.</b></p>					
	Children to make a flower themed collage from recycled materials where the colour corresponds to what it represents e.g. green for the leaves	<p>Children to create a tree design.</p> <p>Children can sew an over stitch using a guide and then move to fabric.</p>	<p>Children to create a daisy.</p> <p>Children to create a felt flower and use attached features on their final pieces such as buttons etc</p>	<p>Children to create a sunflower.</p> <p>Children can practise a stitched hem.</p>	<p>Children to create a bunch of flowers.</p> <p>Children can create a square patch of material with an embroidery design.</p>	<p>Children can make their final piece of a leaf design using materials of their choice.</p> <p>Children can use more than one stitching technique</p>

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						for their chosen final design.
<b>Summer – Food and Hygiene</b>	<b>The premise of this whole school project is to ensure every child explores the properties, preparation and design of a food product for a class picnic – The Mad Hatter’s Tea Party!</b>					
	<b>All lessons follow the DT format of research - design - make - evaluate.</b>					
	Make a fruit salad.	Design, prepare and cut a range of vegetables to make a healthy salad and a dressing.	Prepare a healthy and balanced sandwich.	Create and adapt a healthy flapjack recipe.	Design and make a healthy smoothie recipe.	Design and prepare a balanced picnic meal, including carbohydrates, fats, fruit and vegetables, protein and sugars.

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