

Design Technology LTP Overview						
	Autumn Term		Spring Term		Summer Term	
Year 1	<u>Structures:</u> Constructing windmills		<u>Textiles:</u> Puppets		<u>Food:</u> Fruit and Vegetables	
Year 2		<u>Structures:</u> Baby Bears chair		<u>Mechanisms:</u> Fairground wheel		<u>Mechanisms:</u> Making a moving monster
Year 3	<u>Food:</u> Eating Seasonally		<u>Digital World:</u> Electronic Charm		<u>Structures:</u> Constructing a castle	
Year 4		<u>Structure:</u> Pavilions		<u>Mechanical systems:</u> Making a slingshot car		<u>Electrical systems:</u> Torches
Year 5	<u>Electrical systems:</u> Doodlers		<u>Mechanical systems:</u> Making a pop-up book.		<u>Food:</u> What could be healthier?	
Year 6		<u>Textiles:</u> Waistcoats		<u>Structure:</u> Playgrounds		<u>Digital World:</u> Navigating the world.

	Year 1	Year 2
Autumn Term	<p><u>Structures: Constructing windmills</u></p> <p>Designing, decorating and building a windmill for their mouse client to live in, developing an understanding of different types of windmill, how they work and their key features.</p>	<p><u>Structures: Baby bear's chair</u></p> <p>Using the tale of Goldilocks and the Three Bears as inspiration, children help Baby Bear by making him a brand new chair. When designing the chair, they consider his needs and what he likes and explore ways of building it so that it is strong.</p>
Spring Term	<p><u>Textiles: Puppets</u></p> <p>Exploring different ways of joining fabrics before creating their own hand puppets based upon characters from a well-known fairytale. Children work to develop their technical skills of cutting, glueing, stapling and pinning.</p>	<p><u>Mechanisms: Fairground wheel</u></p> <p>Designing and creating their own Ferris wheels, considering how the different components fit together so that the wheels rotate and the structures stand freely. Pupils select appropriate materials and develop their cutting and joining skills</p>
Summer term	<p><u>Food: Fruit and vegetables</u></p> <p>Handling and exploring fruits and vegetables and learning how to identify which category they fall into, before undertaking taste testing to establish their chosen ingredients for the smoothie they will make a design packaging for.</p>	<p><u>Mechanisms: Making a moving monster</u></p> <p>After learning the terms; pivot, lever and linkage, children design a monster which will move using a linkage mechanism. Children practise making linkages of different types and varying the materials they use to bring their monsters to life.</p>

	Year 3	Year 4
Autumn Term	<p><u>Food: Eating seasonally</u></p> <p>Discovering when and where fruits and vegetables are grown. Learning about seasonality in the UK and the relationship between the colour of fruits and vegetables and their health benefits by making three dishes.</p>	<p><u>Structure: Pavilions</u></p> <p>Exploring pavilion structures, children learn about what they are used for and investigate how to create strong and stable structures before designing and creating their own pavilions, complete with cladding.</p>
Spring Term	<p><u>Digital world: Electronic charm</u></p> <p>Designing, coding, making and promoting a Micro:bit electronic charm to use in low-light conditions. Children develop their understanding of programming to monitor and control their products.</p>	<p><u>Mechanical systems: Making a slingshot car</u></p> <p>Transforming lollipop sticks, wheels, dowels and straws into a moving car. Using a glue gun to, making a launch mechanism, designing and making the body of the vehicle using nets and assembling these to the chassis.</p>
Summer term	<p><u>Structures: Constructing a castle</u></p> <p>Learning about the features of a castle, children design and make one of their own. Using configurations of handmade nets and recycled materials to make towers and turrets and constructing a base to secure them.</p>	<p><u>Electrical systems: Torches</u></p> <p>Applying their scientific understanding of electrical circuits, children create a torch, designing and evaluating their product against set design criteria.</p>

	Year 5	Year 6
Autumn Term	<p><u>Electrical systems: Doodlers</u></p> <p>Explore series circuits further and introduce motors. Explore how the design cycle can be approached at a different starting point, by investigating an existing product, which uses a motor, to encourage pupils to problem-solve and work out how the product has been constructed, ready to develop their own.</p>	<p><u>Textiles: Waistcoats</u></p> <p>Selecting suitable fabrics, using templates, pinning, decorating and stitching to create a waistcoat for a person or purpose of their choice.</p>
Spring Term	<p><u>Mechanical systems: Making a pop-up book</u></p> <p>Creating a four-page pop-up storybook design incorporating a range of mechanisms and decorative features, including: structures, levers, sliders, layers and spacers.</p>	<p><u>Structure: Playgrounds</u></p> <p>Designing and creating a model of a new playground featuring five apparatus, made from three different structures. Creating a footprint as the base, pupils visualise objects in plan view and get creative with their use of natural features.</p>

Summer term	<u>Food: What could be healthier?</u> Researching and modifying a traditional Bolognese sauce recipe to make it healthier. Children cook their healthier versions, making appropriate packaging and learn about farming cattle.	<u>Digital world: Navigating the world</u> Programming a navigation tool to produce a multifunctional device for trekkers. Combining 3D objects to form a complete product in CAD 3D modelling software and presenting a pitch to 'sell' their product.
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