

	<b>Cooking and Nutrition</b> <b>Healthy Choices</b>	<b>Structures &amp; Mechanisms</b> <b>Sliding Scenes Card and Construction</b>	<b>Textiles</b> <b>Minibeast Weaving</b>
<b>EYFS</b>	Learn how to manage own basic hygiene and personal needs including oral health and healthy food choices.	Create collaboratively, sharing ideas, resources and skills. Return and build on their previous learning, refining ideas and developing their ability to represent them.	Safely use and explore a variety of materials, tools and techniques experimenting with design, texture and function. Share their creations, explaining the process they have used.
	<b>Structures</b> <b>Stable structures, Pencil Pots</b>	<b>Cooking and Nutrition</b> <b>Fruit and Vegetables</b>	<b>Mechanisms</b> <b>Wheels and Axles (option 1)</b>
<b>Year 1</b>	Inspired by the song, 'Mouse in a windmill', children design and construct a windmill for a client (mouse) to live in. Explore various types of windmill, how they work and their key features.  1. To explore stability by balancing. 2. To explore wide and narrow bases by building towers. 3. To test a structures stability with weight added in different places. 4.	Children will learn to distinguish between fruit and vegetables and where they grow. They will learn food preparation skills and design a fruit and vegetable smoothie and accompanying packaging.  1. To identify if a food is a fruit or vegetable 2. To identify where plants grow and which part to eat 3. To taste and compare fruits and vegetables 4. To make a fruit and vegetable smoothie	Pupils learn about the key parts of a wheeled vehicle, to develop an understanding of how wheels, axles and axle holders work. Design and make a moving vehicle.  1. To understand how wheels move 2. To identify what stops wheels from turning 3. To design a moving vehicle 4. To build a moving vehicle
	<b>Cooking and Nutrition</b> <b>A Balanced Diet</b>	<b>Mechanisms</b> <b>Moving Monster</b>	<b>Textiles</b> <b>Pouches</b>
<b>Year 2</b>	Children learn about the food groups (carbohydrates, proteins, fruits and vegetables, dairy, oils and spreads) to understand a balanced diet to develop a healthy wrap to meet a design brief.  1. To recognise food and their food groups 2. To identify the balance of food groups in a meal 3. To design a healthy wrap 4. To make and evaluate healthy wraps	Children explore levers, linkages and pivots through existing products and experimentation, use this research to construct and assemble a moving monster.  1. To look at objects and understand how they move (pivots, levers and linkages) 2. To look at objects and understand how they move (making linkages) 3. To explore different design options 4. To make a moving monster	Children learn how to sew a running stitch ready to design, make and decorate a pouch using a template.  1. To sew a running stitch 2. To sew a running stitch (using a template) 3. To join fabrics using a running stitch 4. To decorate a pouch using fabric glue or stitching
	<b>Cooking and Nutrition</b> <b>Eating Seasonally</b>	<b>Mechanical System</b> <b>Pneumatic Toys (option 1)</b>	<b>Textiles</b> <b>Cushions</b>
<b>Year 3</b>	Children discover when and where fruits and vegetables are grown. Learn about the colour of fruits and vegetables and their health benefits.  1. To explain the benefits of eating seasonal food 2. To evaluate seasonal ingredients 3. To design a mock-up using criteria 4. To evaluate a dish	Pupils design and create a toy with a pneumatic system, learning how trapped air can be used to create a product with moving parts while also building on their design knowledge. They will then be introduced to thumbnail sketches and exploded diagrams.  1. To understand how pneumatic systems work 2. To design a toy that uses a pneumatic system 3. To create a pneumatic system 4. To test and finalise ideas against design criteria	Children learn how to use cross-stitch and appliqué when designing and making a cushion.  1. To know how to use a cross-stitch to join two pieces of fabric together. 2. To design and cut the template for a cushion 3. To know how to use cross-stitch and appliqué to decorate a cushion face. 4. To make a cushion that includes appliqué and cross-stitch.
	<b>Digital World</b> <b>Monitoring Devices</b>	<b>Structures</b> <b>Pavilions</b>	<b>Electrical Systems</b> <b>Making a Torch</b>
<b>Year 4</b>	Children design, program, prototype and brand a Micro: bit mindful moments timer, to a specified amount of minutes.  1. To create a design criteria for an electronic timer based on analysis of existing products 2. To apply understanding of computer programming to instruct and control a Micro:bit to function as a timer 3. To design, make and develop a prototype case for my mindful moment timer 4. To design a logo for a mindfulness company using computer-aided design	Pupils explore pavilion structures, learning about what they are used for and investigating how to create strong and stable structures before designing and creating their own pavilions, complete with cladding  1. To create a range of different shaped frame structures 2. To design a structure 3. To build a frame structure 4. To add cladding to a frame structure	Children explore and evaluate a range of existing torches and design a functional torch for a target audience.  1. To analyse and evaluate electrical products 2. To design a product to fit a specific set of user needs. 3. To make and evaluate a torch.

<b>Year 5</b>	<p align="center"><b>Electrical Systems</b> <b>Doodlers</b></p> <p>Pupils will investigate existing Doodler products as well as circuits and motors. They will problem-solve and determine what constitutes an effective, functional Doodler, as well as write design criteria based on what they have learned. Children will build their design with an electric system that includes a motor.</p> <ol style="list-style-type: none"> <li>To understand how motors are used in electrical products.</li> <li>To investigate an existing product to determine the factors that affect the product's form and function.</li> <li>To apply the findings from research into practice to develop an improved product.</li> </ol>	<p align="center"><b>Cooking and Nutrition</b> <b>Developing a recipe</b></p> <p>Pupils will learn a simple recipe, bolognese or pasta salad, and adapt it to improve nutritional content.</p> <ol style="list-style-type: none"> <li>To make adaptations to design a recipe</li> <li>To evaluate nutritional content</li> <li>To practice food preparation skills</li> <li>To design a product label</li> <li>To follow and make an adapted recipe.</li> </ol>	<p align="center"><b>Mechanical Systems</b> <b>Making a Pop-up Book</b></p> <p>After choosing a simple story or nursery rhyme, children create a four-page pop-up storybook design. They will also add accompanying captions, incorporating a range of mechanisms and decorative features, including: structures, levers, sliders, layers and spacers</p> <ol style="list-style-type: none"> <li>To design a pop-up book</li> <li>To follow my design brief to make my pop up book</li> <li>To use layers and spacers to cover the working of mechanisms</li> <li>To create a high-quality product suitable for a target user</li> </ol>
	<p align="center"><b>Digital World</b> <b>Navigating The World</b></p> <p>Program a navigation tool to produce a multifunctional device for trekkers. Combine 3D objects to form a complete product in CAD 3D modelling software.</p> <ol style="list-style-type: none"> <li>To write a design brief and criteria based on a client request</li> <li>To write a program to include multiple functions as part of a navigation device</li> <li>To develop a sustainable product concept</li> <li>To develop 3D CAD skills to produce a virtual model</li> </ol> <p>To present a pitch to 'sell' the product to a specified client</p>	<p align="center"><b>Structures</b> <b>Playgrounds</b></p> <p>Design and create a model of a new playground featuring a pulley system, five apparatus made from three different structures. Creating a footprint as the base, pupils can practise visualising objects in plan view and also get creative with their use of natural features and cladding for their structures</p> <ol style="list-style-type: none"> <li>To design a playground with a variety of structures</li> <li>To build a range of structures and a pulley system</li> <li>To improve and add detail to structures</li> <li>To create the surrounding landscape</li> </ol>	<p align="center"><b>Cooking and Nutrition</b> <b>Come Dine With Me and prepare a three-course meal.</b></p> <p>Taste-test and score their food. Research the journey of their main ingredient from 'farm to fork'.</p> <ol style="list-style-type: none"> <li>To research and design a three-course meal</li> <li>To prepare culinary skills and knowledge: starters</li> <li>To prepare culinary skills and knowledge: the main course</li> <li>To prepare culinary skills and knowledge: desserts</li> </ol>
<b>Year 6</b>			

## Design

The art of process of deciding how something will look or work.

## Make

Create something by combining materials or putting parts together.

## Evaluate

Form an opinion of the value of quality of something after careful thought.

## Apply

Use something or make something work in a particular situation.

### Substantive Knowledge

Substantive knowledge is the carefully sequenced, factual knowledge that we learn through our curriculum. It includes concepts, facts, and information about materials, tools, techniques, and processes used in design and making. For example, substantive knowledge in Design and Technology includes understanding different materials like wood, plastic, and metal, and knowing how to use tools like scissors, glue, and tape. By acquiring substantive knowledge, children develop a foundation of understanding that forms the basis for their design and making skills.

### Disciplinary Knowledge

Disciplinary knowledge in Design and Technology refers to the specific ways of thinking and working that are unique to this subject. In DT we learn through researching, designing, making and evaluating products. It involves using design thinking processes and applying design and making skills to solve problems and create products. Disciplinary knowledge includes understanding the iterative design process, where children generate and refine ideas, create prototypes, test them, and make improvements. It also includes understanding the importance of collaboration, creativity, and critical thinking in design and making. By developing disciplinary knowledge, pupils learn how to approach design challenges and become effective designers and makers.

### Integration of Substantive and Disciplinary Knowledge

In Design and Technology, substantive and disciplinary knowledge are integrated to develop students' overall understanding and skills. By applying substantive knowledge, children are able to identify, select, and use appropriate materials, tools, and techniques to create products. They also use disciplinary knowledge to think critically, analyse problems, generate creative solutions, and evaluate their designs. Through the integration of substantive and disciplinary knowledge, pupils become confident and competent designers and makers.