

## Long Term Plan for DT (Topics taught for half a term within each term Year 1 blocked for a week each half term)

Year	Autumn	Spring	Summer
1	<p><b>Main Topic: Mechanisms: (Sliders and Levers)</b></p> <ul style="list-style-type: none"> <li>Design purposeful, functional appealing products for themselves and other users based on design criteria</li> <li>Generate, develop, model, and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</li> <li>Explore and evaluate a range of existing products</li> <li>Explore and use mechanisms [for example, levers, sliders, wheels and axles]</li> <li>Select and use a range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing)</li> <li>Explore and evaluate a range of existing products</li> <li>Evaluate their ideas against design criteria</li> </ul>	<p><b>Main Topic: Food (Preparing fruit and vegetables)</b></p> <p><u>Cooking and Nutrition</u></p> <ul style="list-style-type: none"> <li>Understand where food comes from and that food has to be farmed, caught, or grown</li> </ul> <p>Use the basic principles of a healthy and varied diet to prepare dishes</p>	<p><b>Main Topic: Structures (Freestanding structures)</b></p> <ul style="list-style-type: none"> <li>Explore and evaluate a range of existing products</li> <li>Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and where appropriate, information and communication technology</li> <li>Explore and use mechanisms in their product</li> <li>Design purposeful, functional, appealing products for themselves and other users based on design criteria</li> <li>Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and technology</li> </ul>
2	<p><b>Main Topic: Mechanisms (Wheels and axles)</b></p> <p><b>Technical knowledge</b></p> <ul style="list-style-type: none"> <li>Build structures, exploring how they can be made stronger, stiffer and more stable</li> </ul> <p><b>Make</b></p> <ul style="list-style-type: none"> <li>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</li> </ul> <p><b>Design</b></p> <ul style="list-style-type: none"> <li>Design purposeful, functional, appealing products for themselves and other users based on design criteria</li> <li>Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</li> </ul> <p><b>Evaluate</b></p> <ul style="list-style-type: none"> <li>Explore and evaluate a range of existing products</li> <li>Evaluate their ideas and products against design criteria</li> </ul>	<p><b>Main Topic: Food (preparing fruit and vegetables)</b></p> <p><u>Cooking and Nutrition</u></p> <ul style="list-style-type: none"> <li>Understand where food comes from and that food has to be farmed, caught, or grown</li> </ul> <p>Use the basic principles of a healthy and varied diet to prepare dishes</p>	<p><b>Main Topic: Textiles (Templates and joining techniques)</b></p> <p><u>Design and Technology</u></p> <ul style="list-style-type: none"> <li>Explore and evaluate a range of existing products</li> <li>Generate, develop and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</li> <li>Explore and use mechanisms in their products Design purposeful, functional, appealing products for themselves and other users based on design criteria</li> <li>Explore and use mechanisms in their products</li> <li>Evaluate their own ideas and products against a design criteria</li> <li>Build structures exploring how they can be made stronger, stiffer, and more stable</li> <li>Explore and use mechanisms in their products</li> <li>Select from and use a range of tools and equipment to perform practical tasks</li> </ul>

3	<p><b>Main Topic: Structures (Shell structures)</b></p> <ul style="list-style-type: none"> <li>● Investigate and analyse a range of existing products</li> <li>● Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</li> <li>● Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups</li> <li>● Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li> <li>● Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</li> <li>● Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</li> <li>● Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</li> </ul>	<p><b>Main Topic: Food (Healthy and varied diet)</b></p> <ul style="list-style-type: none"> <li>● Understand and apply the basic principles of a healthy and varied diet</li> <li>● Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</li> <li>● Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</li> </ul>	<p><b>Main Topic: Textiles (2D shape to 3D shape)</b></p> <ul style="list-style-type: none"> <li>● Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups</li> <li>● Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li> <li>● Investigate and analyse a range of existing products</li> <li>● Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</li> <li>● Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups</li> <li>● Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</li> <li>● Apply their understanding of computing to program, monitor and control their products Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups</li> <li>● Select from and use a wider range of tools and equipment to perform practical tasks</li> <li>● Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.</li> </ul>

			<ul style="list-style-type: none"> <li>• Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</li> <li>• Understand how key events and individuals in design and technology have helped shape the world</li> </ul>
4	<p><b>Main Topic: Food (Healthy and varied diet)</b></p> <p><u>Cooking and nutrition</u></p> <ul style="list-style-type: none"> <li>• Understand and apply the principles of a healthy and varied diet</li> <li>• Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</li> <li>• Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed</li> </ul>	<p><b>Main Topic: Electrical Systems (simple circuits and switches)</b></p> <ul style="list-style-type: none"> <li>• Explore and evaluate a range of existing products</li> <li>• Evaluate their ideas and products against a design criteria</li> <li>• Build structures, exploring how they can be made stronger, stiffer or more stable</li> <li>• Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</li> </ul>	<p><b>Main Topic: Mechanical systems (Leavers and linkages)</b></p> <p><b>Make</b></p> <ul style="list-style-type: none"> <li>• Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</li> <li>• Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</li> </ul> <p><b>Evaluate</b></p> <ul style="list-style-type: none"> <li>• Investigate and analyse a range of existing products</li> <li>• Understand how key events and individuals in design and technology have helped shape the world</li> </ul> <p><b>Technical knowledge</b></p> <ul style="list-style-type: none"> <li>• Apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> <li>• Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</li> </ul> <p><b>Design</b></p> <ul style="list-style-type: none"> <li>• Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups f</li> <li>• Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li> </ul> <p><b>Evaluate</b></p> <ul style="list-style-type: none"> <li>• Investigate and analyse a range of existing products</li> </ul>

			<ul style="list-style-type: none"> <li>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</li> </ul> <p><b>Design</b></p> <ul style="list-style-type: none"> <li>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li> </ul>
5	<p><b>Main Topic :Structures (Frame structures)</b></p> <ul style="list-style-type: none"> <li>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li> </ul> <p>Design</p> <ul style="list-style-type: none"> <li>use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups</li> <li>generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li> <li>Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</li> <li>Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</li> </ul> <p>Evaluate</p> <ul style="list-style-type: none"> <li>investigate and analyse a range of existing products</li> <li>evaluate their ideas and products against their own design criteria and consider the views of others to improve their work <i>f</i></li> </ul> <p>Technical knowledge</p>	<p><b>Main Topic: Food (celebrating culture and seasonality)</b></p> <p><u>Cooking and nutrition</u></p> <ul style="list-style-type: none"> <li>Understand and apply the principles of a healthy and varied diet</li> <li>Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</li> <li>Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed</li> </ul>	<p><b>Main Topic: Electrical Systems (more complex switches and circuits)</b></p> <ul style="list-style-type: none"> <li>Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose aimed at particular individuals or groups</li> <li>Generate, develop, model and communicate their ideas through discussion and prototypes</li> <li>Select from and use a wider range of tools and equipment to perform practical tasks</li> <li>Select from and use a wider range of materials, components and construction materials according to their functional properties and aesthetics</li> <li>Investigate and analyse a range of existing products</li> <li>Evaluate their ideas and products against design criteria and consider the views of others to improve their work</li> <li>Apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> <li>Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose aimed at particular individuals or groups</li> <li>Generate, develop, model and communicate their ideas through discussion and prototypes select from and use a wider range of tools and equipment to perform practical tasks</li> <li>Select from and use a wider range of materials, components and construction materials according to their functional properties and aesthetics</li> </ul>

	<ul style="list-style-type: none"> <li>● apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> <li>● understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</li> </ul>		<ul style="list-style-type: none"> <li>● Apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> </ul>
6	<p><b>Main Topic: Textiles (Combining different fabric shapes)</b></p> <p><b>Make</b></p> <ul style="list-style-type: none"> <li>● Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</li> <li>● Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</li> </ul> <p><b>Evaluate</b></p> <ul style="list-style-type: none"> <li>● Investigate and analyse a range of existing products</li> <li>● Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</li> </ul> <p><b>Technical knowledge</b></p>	<p><b>Main Topic: Mechanical Systems (Pulleys and gears)</b></p> <ul style="list-style-type: none"> <li>● Use research to develop and inform the design of innovative, functional and appealing products that are fit for purpose and aimed at particular groups</li> <li>● Generate, develop, model and communicate ideas through discussion and annotated sketches</li> <li>● Investigate and analyse a range of existing products</li> <li>● Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</li> <li>● Select from and use a wide range of tools and equipment to perform practical tasks</li> <li>● Select from and use a wider range of materials and components including construction materials, according to their functional properties and aesthetic qualities</li> <li>● Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</li> </ul>	<p><b>Main Topic: Food (Celebrating culture and seasonality)</b></p> <p><u>Cooking and nutrition</u></p> <ul style="list-style-type: none"> <li>● Understand and apply the principles of a healthy and varied diet</li> <li>● Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</li> <li>● Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed</li> </ul>

	<ul style="list-style-type: none"><li>● Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</li></ul> <p><b>Design</b></p> <ul style="list-style-type: none"><li>● Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups</li><li>● Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li></ul>	<ul style="list-style-type: none"><li>● Apply understanding of how to strengthen, stiffen and reinforce complex structures</li></ul>	