

**Design Technology Long Term Plan Overview LKS2**

<b>Cycle A 2023/2024</b>	<b>Autumn</b>			<b>Spring</b>			<b>Summer</b>		
<b>Theme Title</b>	<b>Lights, Camera, Action</b>			<b>Poles Apart</b>			<b>The Olympics</b>		
<b>Design Technology Study Title</b>	<b>Light Up Signs</b>			<b>Helping Hand (Science links)</b>			<b>Olympic Merchandise</b>		
<b>Overview / Outcome</b> Teachers can change the product to fit the needs of their students	<b>Product</b> A light up sign made from wood and including an electric circuit	<b>Purpose</b> Use as a highlight in a bedroom	<b>User</b> a KS2 child	<b>Product</b> Arthritic gloves with polymorph	<b>Purpose</b> To use equipment	<b>User</b> People with arthritis	<b>Product</b> Fabric merchandise for the Olympics	<b>Purpose</b> To use simple sewing techniques	<b>User</b> Olympic fans
<b>Area of Focus</b>	<b>Workshop – Structures Mechanisms Electrical</b>			<b>Workshop – Structure</b>			<b>Textiles</b>		
<b>Key Learning Objectives</b>	- 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 - select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately - 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 - investigate and analyse a range of existing products - evaluate their ideas and products against their own design criteria and consider the views of others to improve their work - apply their understanding of how to strengthen, stiffen and reinforce			- 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 - generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design - select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately properties and aesthetic qualities - investigate and analyse a range of existing products - apply their understanding of how to strengthen, stiffen and reinforce more complex structures			- use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at individuals or groups - select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining, and finishing], accurately - 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 - evaluate their ideas and products against their own design criteria and consider the views of others to improve their work		

	<p>more complex structures</p> <ul style="list-style-type: none"><li>- understand and use electrical systems in their products</li><li>- apply their understanding of computing to program, monitor and control their products</li></ul>		
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Cycle B 2024/2025	Autumn			Spring			Summer		
Theme Title	Life on Earth			Material Ages (Stone Age)			Invaders (Saxons and Vikings)		
Design Technology Study Title	Forces Game			Make a bread roll			Making a Mini Greenhouse (Science links)		
Suggested Product Teachers can change the product to fit the needs of their students	Product A game using magnets/ Marbel run	Purpose To show knowledge of magnetic forces	User A child	Product Bread	Purpose Create a bread roll using simple baking techniques	User Create a bread roll using simple baking techniques	Product Bread	Purpose Create a bread roll using simple baking techniques	User A Viking bakery
Area of Focus	Workshop – Structures			Food and Nutrition			Workshop – Structures		
Key Learning Objectives	<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>- evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</li> <li>- Develop vocabulary related to the project.</li> <li>- Use mechanical systems such as gears, pulleys, levers and linkages. &amp; Incorporate a circuit into a model.</li> <li>- Use lolly sticks/card to make levers and linkages.</li> <li>- Use linkages to make movement larger or more varied</li> </ul>			<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>- 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> <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>- 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> </ul>			<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 properties and aesthetic qualities</li> <li>- investigate and analyse a range of existing products</li> <li>- apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> </ul>		

Cycle C 2021/2022	Autumn			Spring			Summer		
<b>Theme Title</b>	<b>War and Remembrance</b>			<b>The Americas (Rainforests)</b>			<b>Health through Time / The Romans</b>		
<b>Design Technology Study Title</b>	<b>Night Light</b>			<b>Amazon Meals</b>			<b>Creating a Roman Trebuchet</b>		
<b>Overview / Outcome</b> Teachers can change the product to fit the needs of their students	<b>Product</b> A night light	<b>Purpose</b> To use in a bunker	<b>User</b> A child	<b>Product</b> A meal celebrating the rainforest	<b>Purpose</b> To survive in the rainforest	<b>User</b> An explorer	<b>Product</b> A Roman Trebuchet	<b>Purpose</b> To knock down enemy walls	<b>User</b> The roman army
<b>Area of Focus</b>	<b>Workshop – Structures</b>			<b>Food and Nutrition</b>			<b>Workshop – Mechanics</b>		
<b>Key Learning Objectives</b>	<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 properties and aesthetic qualities</li> <li>- investigate and analyse a range of existing products</li> <li>- apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> </ul>			<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>- evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</li> </ul>			<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>- evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</li> <li>- Develop vocabulary related to the project.</li> <li>- Use mechanical systems such as gears, pulleys, levers and linkages. &amp; Incorporate a circuit into a model.</li> <li>- Use lolly sticks/card to make levers and linkages.</li> <li>- Use linkages to make movement larger or more varied</li> </ul>		

Cycle D 2022/2023	Autumn			Spring			Summer		
Theme Title	The Ancients (Egypt)			Canals			British History		
Design Technology Study Title	Passport Holder			Structures			British Inventors		
Overview / Outcome	Product	Purpose	User	Product	Purpose	User	Product	Purpose	User
Teachers can change the product to fit the needs of their students	A passport cover	To stop the passport from getting damaged	A child	A water wheel	To harness energy	People living near a river	Product of choice		
Area of Focus	<b>Textiles</b>			<b>Workshop – Structures</b>			<b>Workshop - Mechanics</b>		
Key Learning Objectives	<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>- 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> <li>- evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</li> </ul>			<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 properties and aesthetic qualities</li> <li>- investigate and analyse a range of existing products</li> <li>- apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> </ul>			<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>- understand how key events and individuals in design and technology have helped shape the world</li> <li>- apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> </ul>		



