



WPS Design and Technology Long Term Plan

Aspects of Design and Technology National Curriculum for Key Stage 1 and Key Stage 2, including 'Cooking and Nutrition':

- Design
- Make
- Evaluate
- Technical Knowledge
- Cooking and Nutrition

Key Stage 1			
	Autumn Term	Spring Term	Summer Term
Year 1	<p>Food - Preparing Fruit & Vegetables Fruit Christmas Bark – cutting/knife skills</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"> • Select and use a range of equipment to perform practical tasks • Select from and use a wide range of ingredients • Explore and evaluate existing products/recipes • Use the basic principles of a healthy diet • Understand where food comes from 	<p>Structures - Freestanding Structures Traditional tales/fairy tales bridge, can you build a bridge to help your character cross the troll's river safely?</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"> • Design purposeful products for themselves and others to use • Generate, develop and communicate their ideas through talking and drawing • Select and use a range of tools and equipment for cutting, shaping and joining • Select and use a wide range of construction materials and components • Explore and evaluate a range of existing products • Evaluate their ideas and products against their design criteria • Build structures, exploring how they can be made stronger, stiffer and more stable 	<p>Mechanisms – Sliders & Levers Moving story picture relating to Pirate topic</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"> • Design functional and appealing products for themselves and others to use • Generate, develop and communicate their ideas through talking, drawing, templates and mock-ups • Select and use a range of tools to perform practical tasks such as cutting and joining • Select and use a range of materials and components • Explore and evaluate a range of existing products • Evaluate their ideas and products against design criteria • Explore and use mechanisms [for example, levers and sliders] in their product
Year 2	<p>Textiles – Templates & Joining Techniques Hand puppets, Christmas characters</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"> • Design purposeful, functional and appealing products for themselves and others to use • Generate, develop, model and communicate their ideas through talking, drawing, templates and mock ups and, where appropriate, ICT • Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] • Select and use a wide range of materials and components, including textiles • Explore and evaluate a range of existing products • Evaluate their ideas and products against the design criteria 	<p>Food – Preparing Fruit & Vegetables Dips and Dippers</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"> • Select and use a range of equipment to perform practical tasks • Select and use from a wide range of ingredients • Explore and evaluate a range of existing products/recipes • Use the basic principles of healthy and varied diet to prepare dishes • Understand where food comes from 	<p>Mechanisms - Wheels and axels Moving cars using recycled materials, wheels and dowel rods</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"> • Design purposeful, functional and appealing products for themselves and others to use • Generate, develop, model and communicate their ideas through talking, drawing and templates and, where appropriate, ICT • Select and use a range of tools and equipment to perform practical tasks [for example, cutting and joining] • Select and use a wide range of materials for construction • Explore and evaluate a range of existing products • Evaluate their ideas and products against design criteria • Build structures, exploring how they can be made stronger and more stable • Explore and use mechanisms [for example, wheels and axles], in their products

Key Stage 2			
	Autumn Term	Spring Term	Summer Term
Year 3	<p>Structures – Shell Structures 3D nets – Desk tidy/Pencil pot</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"> • Generate, develop, model and communicate ideas through discussion and annotated sketches • Select and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping and joining], accurately • Select and use a wider range of materials and components • Investigate and analyse a range of existing products • Evaluate their ideas and products against design criteria and consider the views of others to improve their work • Apply their understanding of how to strengthen, stiffen and reinforce structures 	<p>Food – Healthy & Varied Diet Bread/Pizza – Kneading dough</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"> • Generate, develop and communicate their ideas through discussion and annotated sketches • Select and use a wider range of tools and equipment to perform practical tasks • Select and use a wider range of materials, including ingredients • Investigate and analyse a range of existing products • Understand and apply the principles of a healthy and varied diet • Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques • Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed 	<p>Textiles - 2D shape to 3D shape Drawstring Bag for toys, clothes or accessories</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"> • Use research and develop design criteria to inform the design of innovative, functional and appealing products that are fit for purpose, aimed at particular individuals or groups • Generate, develop, model and communicate their ideas through discussion, annotated sketches, prototypes, pattern pieces and computer-aided design • Select and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately • Select and use a wider range of materials and components, including textiles, 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 and consider the views of others to improve their work





Year 4	<p>Mechanical Systems – Lever & linkages 3D Information Poster relating to Autumn topic Moving Christmas Card</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"> Generate, develop, model and communicate their ideas through discussion, annotated sketches and computer-aided design Select and use a wider range of tools and equipment to perform practical tasks [for example, cutting and joining], accurately Select and use a wider range of materials and components according to their functional properties 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 Understand and use mechanical systems in their products [for example, levers and linkages] 	<p>Food – Healthy & Varied Diet Coconut Vegetable Curry – Wider variety of food/seasoning</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"> Generate, develop and communicate their ideas through discussion and annotated sketches Select and use a wider range of tools and equipment to perform practical tasks Select and use a wider range of ingredients Investigate and analyse a range of existing products Understand and apply the principles of a healthy and varied diet Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed 	<p>Electrical Systems - Simple Circuits & Switches Torch/Reading light</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"> Use research and develop design criteria to inform the design of innovative, functional and appealing products that are fit for purpose, aimed at particular individuals or groups Generate, develop and communicate their ideas through discussion, annotated sketches, exploded diagrams and computer-aided design Select and use a wider range of tools and equipment to perform practical tasks Select and use a wider range of materials and components according to their functional properties 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 Understand how key events and individuals in design and technology have helped shape the world Apply their understanding of how to strengthen and reinforce their products Understand and use electrical systems in their products [for example, series circuits, incorporating switches and bulbs]
Year 5	<p>Structures – Frame Structures Photo frame</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"> 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 and prototypes Select and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately Select and use a wider range of materials and components 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 and reinforce more complex structures 	<p>Food – Celebrating Culture & Seasonality Savoury Muffins – fillings, creating pastry, cutting skills</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"> Generate, develop and communicate their ideas through discussion, annotated sketches and cross-sectional Select and use a wider range of tools and equipment to perform practical tasks accurately Select and use a wider range of ingredients Investigate and analyse a range of existing products Understand and apply the principles of a healthy and varied diet Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed 	<p>Mechanical Systems – Pulleys & Gears Moving toys for a race CAMS</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"> Use research and develop design criteria to inform the design of innovative, functional and 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 and computer-aided design Select and use a wider range of tools and equipment to perform practical tasks Select and use a wider range of materials and components according to their functional properties 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 Understand how key events and individuals in design and technology have helped shape the world Apply their understanding of how to strengthen, stiffen and reinforce more complex structures Understand and use mechanical systems in their products [for example, gears, pulleys and cams] Apply their understanding of computing to program, monitor and control their products
Year 6	<p>Textiles – Combining Different Fabric Shapes Make do and mend Repurpose/Recycle – t-shirt into a bag Bring in clothes to fix</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"> Use research and develop design criteria to inform the design of functional and appealing products that are fit for purpose Generate, develop and communicate their ideas through discussion, annotated sketches, pattern pieces and computer-aided design Select and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately Select and use wider range of materials and components, including textiles, 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 Understand how key events and individuals in design and technology have helped shape the world 	<p>Food – Celebrating Culture & Seasonality Stew & Bread – seasonality, kneading, savory</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"> Generate, develop and communicate their ideas through discussion and annotated sketches Select and use a wider range of tools and equipment to perform practical tasks Select and use a wider range of ingredients Investigate and analyse a range of existing products Understand and apply the principles of a healthy and varied diet Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed 	<p>Electrical Systems Fairground topic Link to electrical/mechanical/structures</p> <p>Children should be taught to:</p> <ul style="list-style-type: none"> 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 and computer-aided design Select and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately Select and use a wider range of materials and components, including construction materials, 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 Understand how key events and individuals in design and technology have helped shape the world Apply their understanding of how to strengthen, stiffen and reinforce more complex structures Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] Understand and use electrical systems in their products [for example, series circuits, incorporating switches, bulbs, buzzers and motors] Apply their understanding of computing to program, monitor and control their products