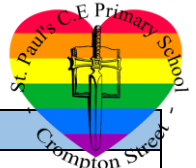


St. Paul's Long-Term Plan



Design and Technology - National Curriculum Overview

EYFS: Children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials.

KS1: Through a variety of creative and practical activities, pupils are taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment].

KS2: Through a variety of creative and practical activities, pupils are taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].

EYFS Expressive Arts and Design	KS1 D&T	KS2 D&T
<p>ELG: Creating with Materials</p> <p>Development Matters: Expressive Art and Design</p>	<p>Design</p> <p>Make</p> <p>Evaluate</p> <p>Technical Knowledge</p> <p>Cooking and Nutrition</p>	<p>Design</p> <p>Make</p> <p>Evaluate</p> <p>Technical Knowledge</p> <p>Cooking and Nutrition</p>

Green objectives are newly introduced, Black are being mastered

Intent

Design and Technology at St. Paul's will be inspiring, rigorous and practical. Using creativity and imagination, pupils will design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. Children will develop a critical understanding of the impact of Design and Technology on daily life and the wider world.

St. Paul's Design and Technology curriculum supports our Whole School Golden Threads: Reading, Emotional Well-being and Caring for all Creation. Carefully selected texts are shared during Design and Technology lessons to support the learning of reading. During the design and research stage, children are encouraged to connect with their environment, appreciate and understand products and structures in the world around them. Children will understand the physical and mental benefits of spending time outdoors.

Across our curriculum, children study the key concepts of: structures, mechanisms, textiles, electrical systems and cooking and nutrition.

From the Early Years Foundation Stage, pupils are equipped with a secure understanding of design and are encouraged to select materials based on their properties. Through textiles and cookery units, children develop their fine motor skills with sewing and cutting with different utensils and equipment. Children throughout school are encouraged to discuss and evaluate their ideas and products, considering their impact on the world around them.

As pupils progress, their growing knowledge of Design and Technology enables them to approach more challenging concepts such as mechanisms and electrical systems. The use of gears, levers and circuits link to Science curriculum, building on the prior knowledge of the pupils.

	Autumn	Spring	Summer
Nursery	<p>Structures: Rocket Ships</p> <p>ELG: Creating with Materials</p> <p>Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p> <p>Development Matters</p>	<p>Cooking- Gingerbread Men</p> <p>ELG: Creating with Materials</p> <p>Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p>	<p>Textiles- The Lighthouse Keeper's Blanket</p> <p>ELG: Creating with Materials</p> <p>Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p> <p>ELG: Fine Motor Skills</p> <p>Begin to show accuracy and care when drawing.</p>

	<p>Explore different materials freely, to develop their ideas about how to use them and what to make. Develop their own ideas and then decide which materials to use to express them. Join different materials and explore different textures.</p>		<p>Development Matters Explore different materials freely, to develop their ideas about how to use them and what to make. Develop their own ideas and then decide which materials to use to express them. Join different materials and explore different textures. Use a comfortable grip with good control when holding pens and pencils.</p>
Reception	<p>Cooking- Christmas Cookies ELG: Creating with Materials Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p> <p>Development Matters Return to and build on their previous learning, refining ideas and developing their ability to represent them. Create collaboratively, sharing ideas, resources and skills.</p>	<p>Textiles- Mother's Day cards (Weaving) ELG: Creating with Materials Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p> <p>Development Matters Return to and build on their previous learning, refining ideas and developing their ability to represent them. Create collaboratively, sharing ideas, resources and skills. Develop their small motor skills so that they can use a range of tools competently, safely and confidently. Suggested tools: pencils for drawing and writing, paintbrushes, scissors, knives, forks and spoons</p>	<p>Structures- 3D Dinosaur land ELG: Creating with Materials Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p> <p>Development Matters Return to and build on their previous learning, refining ideas and developing their ability to represent them. Create collaboratively, sharing ideas, resources and skills. Develop their small motor skills so that they can use a range of tools competently, safely and confidently. Suggested tools: pencils for drawing and writing, paintbrushes, scissors, knives, forks and spoons</p>
Year 1	<p>Cooking- Fruit Kebabs</p> <p>Design Design purposeful, functional, appealing products for themselves and other users based on design criteria.</p> <p>Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</p> <p>Make Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</p> <p>Evaluate Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria.</p>	<p>Mechanisms- Rocket Cards</p> <p>Design Design purposeful, functional, appealing products for themselves and other users based on design criteria.</p> <p>Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.</p> <p>Make Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</p> <p>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</p>	<p>Structures- Callum's House</p> <p>Design Design purposeful, functional, appealing products for themselves and other users based on design criteria.</p> <p>Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.</p> <p>Make Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</p> <p>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</p>

	<p>Cooking and Nutrition</p> <p>Understand where food comes from.</p>	<p>Evaluate</p> <p>Explore and evaluate a range of existing products.</p> <p>Evaluate their ideas and products against design criteria.</p> <p>Technical Knowledge</p> <p>Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</p>	<p>Evaluate</p> <p>Explore and evaluate a range of existing products.</p> <p>Evaluate their ideas and products against design criteria.</p> <p>Technical Knowledge</p> <p>Build structures, exploring how they can be made stronger, stiffer and more stable.</p>
Year 2	<p>Textiles- Flags</p> <p>Design Design purposeful, functional, appealing products for themselves and other users based on design criteria.</p> <p>Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.</p> <p>Make Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</p> <p>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</p> <p>Evaluate</p> <p>Explore and evaluate a range of existing products.</p> <p>Evaluate their ideas and products against design criteria.</p>	<p>Mechanisms- Dinosaur Wheels and Axels</p> <p>Design Design purposeful, functional, appealing products for themselves and other users based on design criteria.</p> <p>Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.</p> <p>Make Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</p> <p>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</p> <p>Evaluate</p> <p>Explore and evaluate a range of existing products.</p> <p>Evaluate their ideas and products against design criteria.</p> <p>Technical Knowledge</p> <p>Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</p>	<p>Cooking- Sandwiches</p> <p>Design Design purposeful, functional, appealing products for themselves and other users based on design criteria.</p> <p>Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.</p> <p>Make Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</p> <p>Evaluate</p> <p>Explore and evaluate a range of existing products.</p> <p>Evaluate their ideas and products against design criteria.</p> <p>Cooking and Nutrition</p> <p>Use the basic principles of a healthy and varied diet to prepare dishes.</p>
Year 3	<p>Mechanisms- Moving Pictures</p> <p>Design</p>	<p>Cooking- Pizzas</p> <p>Design</p>	<p>Structures- Gift Boxes</p> <p>Design</p>

	<p>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</p> <p>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p> <p>Make Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</p> <p>Evaluate Investigate and analyse a range of existing products</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p> <p>Technical Knowledge Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</p>	<p>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</p> <p>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p> <p>Make 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</p> <p>Evaluate Investigate and analyse a range of existing products</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p> <p>Cooking and Nutrition 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</p>	<p>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</p> <p>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p> <p>Make Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.</p> <p>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.</p> <p>Evaluate Investigate and analyse a range of existing products</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p>
Year 4	<p>Textiles- Juggling Balls</p> <p>Design 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</p> <p>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p> <p>Make Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.</p> <p>Select from and use a wider range of materials and components, including construction materials, textiles and</p>	<p>Cooking- Pretzels</p> <p>Design 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</p> <p>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p> <p>Make 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.</p> <p>Evaluate Investigate and analyse a range of existing products</p>	<p>Electrical Systems- Lamps</p> <p>Design 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</p> <p>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p> <p>Make 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.</p> <p>Evaluate Investigate and analyse a range of existing products</p>

	<p>ingredients, according to their functional properties and aesthetic qualities.</p> <p>Evaluate Investigate and analyse a range of existing products</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p> <p>Understand how key events and individuals in design and technology have helped shape the world.</p>	<p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p> <p>Cooking and Nutrition 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>	<p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p> <p>Technical Knowledge Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].</p>
Year 5	<p>Mechanical Systems- Fairground Rides</p> <p>Design 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</p> <p>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p> <p>Make 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.</p> <p>Evaluate Investigate and analyse a range of existing products</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p> <p>Technical Knowledge Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].</p>	<p>Cooking- Salads</p> <p>Design 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</p> <p>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p> <p>Make 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.</p> <p>Evaluate Investigate and analyse a range of existing products</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p> <p>Cooking and Nutrition 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>	<p>Frame Structures- Bird Hides</p> <p>Design 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</p> <p>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p> <p>Make Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.</p> <p>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.</p> <p>Evaluate Investigate and analyse a range of existing products</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p> <p>Technical Knowledge Apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p>
Year 6	Cooking- WW2 Rationing	Electrical Systems- Alarmed Boxes	Textiles- Patchwork Quilt

	<p>Design 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</p> <p>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p> <p>Make 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.</p> <p>Evaluate Investigate and analyse a range of existing products</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p> <p>Understand how key events and individuals in design and technology have helped shape the world.</p> <p>Cooking and Nutrition Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.</p>	<p>Design 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</p> <p>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p> <p>Make 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.</p> <p>Evaluate Investigate and analyse a range of existing products</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p> <p>Technical Knowledge Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].</p> <p>Apply their understanding of computing to program, monitor and control their products.</p>	<p>Design 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</p> <p>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p> <p>Make 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.</p> <p>Evaluate Investigate and analyse a range of existing products</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p>
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