



Friars Primary School and Nursery
Design and Technology - National Curriculum Coverage by Year Group

Design and Technology

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nursery (EYFS: Expressive Arts & Design: Being Imaginative and Expressive, Creating with Materials)	Design & Technology is taught through interactions in continuous provision: child initiated and adult initiated through large and small scale activities inside and out. There are also opportunities for children to develop fine motor control skills through threading beads, using scissors etc. Throughout their time in nursery, children will be supported and encouraged to: • Use 3D and 2D structures to explore materials and/or to express ideas • Use various construction materials, e.g. joining pieces, stacking vertically and horizontally, balancing, making enclosures and creating spaces • Use tools for a purpose • Use everyday materials to explore, understand and represent their world – ideas, interests and fascinations • Use available resources to create props or creates imaginary ones to support play					



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	<i>Children access a well-stocked creative area as well as a wide range of construction toys inside and out alongside small and large loose parts. They use these to construct in line with their current interests and fascinations supported by adults in the setting during their time in provision</i>					
Reception (EYFS: Expressive Arts & Design: Being Imaginative and Expressive, Creating with Materials)	Uses various construction materials, e.g. joining pieces, stacking vertically and horizontally, balancing, making enclosures and creating spaces Uses tools for a purpose Uses available resources to create props or creates imaginary ones to support play		Uses their increasing knowledge and understanding of tools and materials to explore their interests and enquiries and develop their thinking Develops their own ideas through experimentation with diverse materials, e.g. loose parts to express and communicate their discoveries and understanding. Uses available resources to create props or creates imaginary ones to support play Responds imaginatively to art works and objects, e.g. <i>this music sounds likes dinosaurs, that sculpture is squishy like this [child physically demonstrates], that peg looks like a mouth</i> Uses combinations of art forms, making and constructing.		Uses their increasing knowledge and understanding of tools and materials to explore their interests and enquiries and develop their thinking Develops their own ideas through experimentation with diverse materials, e.g. loose parts to express and communicate their discoveries and understanding. Uses available resources to create props or creates imaginary ones to support play Responds imaginatively to art works and objects, e.g. <i>this music sounds likes dinosaurs, that sculpture is squishy like this [child physically demonstrates], that peg looks like a mouth</i> Uses combinations of art forms, making and constructing.	



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Year 1 POR = Power of Reading	Making free standing structures – Animal Enclosure <i>Design - design purposeful, functional, appealing products for themselves and other users based on design criteria</i> <i>Make - select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</i> <i>Evaluate - explore and evaluate a range of existing products evaluate their ideas and products against design criteria Technical knowledge- build structures, exploring how they can be made stronger, stiffer and more stable</i>		Sliders and Leavers <i>Design - design purposeful, functional, appealing products for themselves and other users based on design criteria</i> <i>Make - select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics Evaluate - explore and evaluate a range of existing products</i>		Food DT - Fruit salad <i>select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</i> <i>use the basic principles of healthy and varied diet to prepare dishes</i> <i>understand where food comes from.</i>	



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Year 2	Textiles – Designing a puppet <i>Design - design purposeful, functional, appealing products for themselves and other users based on design criteria</i> <i>generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</i> <i>Make - select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</i>		Mechanisms - Design, create & evaluate model cars <i>Design - generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</i> <i>Make - select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</i> <i>select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</i> <i>Evaluate - evaluate their ideas and products against design criteria</i> <i>Technical knowledge - explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</i>		Create a healthy snack/meal – salad wraps <i>Design - design purposeful, functional, appealing products for themselves and other users based on design criteria</i> <i>Cooking and nutrition - use the basic principles of a healthy and varied diet to prepare dishes</i> <i>understand where food comes from.</i>	



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Year 3		Design and make a medicine box for a particular purpose <i>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</i> <i>generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</i> <i>Make - select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</i> <i>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</i> <i>Evaluate - investigate and analyse a range of existing products</i> <i>evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</i>	Design and make a mechanism – Lego Spike <i>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</i> <i>generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</i> <i>Make - select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</i> <i>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</i> <i>Evaluate - investigate and analyse a range of existing products</i> <i>evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</i>		Making Pizza (Roman Taste Testing) Make products applying knowledge of nutrition and health and safety practices whilst working with food. <i>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</i> <i>generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</i> <i>Make - select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</i> <i>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</i> <i>Evaluate - investigate and analyse a range of existing products</i> <i>evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</i>	



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Year 4	Autumn 1	Autumn 2	Spring 1 & 2	Summer 1	Summer 2
	Cooking and nutrition – Viking Blood Bread Preparation olives, cheese, design bread, plait fold, roll etc		Make do and mend - Toys <i>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</i> <i>generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</i> <i>Make - 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</i> <i>Evaluate - investigate and analyse a range of existing products</i> <i>evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</i> <i>understand how key events and individuals in design and technology have helped shape the world</i>	Electrical Circuits-alarms Designing • Gather information about needs and wants, and develop design criteria to inform the design of products that are fit for purpose, aimed at particular individuals or groups. Generate, develop, model and communicate realistic ideas through discussion and, as appropriate, annotated sketches, cross-sectional and exploded diagrams. Making • Order the main stages of making. • Select from and use tools and equipment to cut, shape, join and finish with some accuracy. • Select from and use materials and components, including construction materials and electrical components according to their functional properties and aesthetic qualities. Evaluating • Investigate and analyse a range of existing battery-powered products. Evaluate their ideas and products against their own design criteria and identify the strengths and areas for improvement in their work. Technical knowledge and understanding • Understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs and buzzers. Apply their understanding of computing to program and control their products. • Know and use technical vocabulary relevant to the project.	



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Year 5	Autumn 1 & 2	Spring 1	Spring 2	Summer 1 & 2
	Shadufs 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 generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design Make - 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 - 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 Technical knowledge - 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]	Cooking – Seasonal Soup Designing • Generate innovative ideas through research and discussion with peers and adults to develop a design brief and criteria for a design specification. • Explore a range of initial ideas, and make design decisions to develop a final product linked to user and purpose. • Use words, annotated sketches and information and communication technology as appropriate to develop and communicate ideas. Making • Write a step-by-step recipe, including a list of ingredients, equipment and utensils • Select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients. • Make, decorate and present the food product appropriately for the intended user and purpose. Evaluating • Carry out sensory evaluations of a range of relevant products and ingredients. Record the evaluations using e.g. tables/graphs/charts such as star diagrams. • Evaluate the final product with reference back to the design brief and design specification, taking into account the views of others when identifying improvements. • Understand how key chefs have influenced eating habits to promote varied and healthy diets.		Greek Temples Designing • Carry out research into user needs and existing products, using surveys, interviews, questionnaires and web-based resources. • Develop a simple design specification to guide the development of their ideas and products, taking account of constraints including time, resources and cost. • Generate, develop and model innovative ideas, through discussion, prototypes and annotated sketches. Making • Formulate a clear plan, including a step-by-step list of what needs to be done and lists of resources to be used. • Competently select from and use appropriate tools to accurately measure, mark out, cut, shape and join construction materials to make frameworks. • Use finishing and decorative techniques suitable for the product they are designing and making. Evaluating • Investigate and evaluate a range of existing frame structures. • Critically evaluate their products against their design specification, intended user and purpose, identifying strengths and areas for development, and carrying out appropriate tests. • Research key events and individuals relevant to frame structures.



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Year 6	Autumn 1 & 2	Spring 1& 2	Summer 1 & 2
	Victorian Cushions - Textiles 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 generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design Make - 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 - 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 Technical knowledge - apply their understanding of how to strengthen, stiffen and reinforce more complex structures apply their understanding of computing to program, monitor and control their products.	Electrical Board Games 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 generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design Make - 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 - 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 Technical knowledge - apply their understanding of how to strengthen, stiffen and reinforce more complex structures apply their understanding of computing to program, monitor and control their products.	Cooking – Bake Off (healthy snacks) 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