Design Technology

Curriculum Overview

2019-2020

Our Lady's Catholic Primary School

Year 1		
	National Curriculum	Knowledge, Skills and Understanding
Food	<u>Design</u> - Design purposeful, functional, appealing products for themselves and other users based on design criteria - Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology. <u>Make</u> - 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. <u>Evaluate</u> - 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. - Explore and use mechanisms, for example, levers, sliders, wheels and axles, in their products. <u>Cooking & Nutrition</u> - Use the basic principles of a healthy and varied diet to prepare dishes - Understand where food comes from.	Preparing fruit and vegetables. Design and create a dish to serve, e.g. creating a face with the ingredients.
Textiles		Understanding the use of weaving and using simple joining techniques to create their 2D design, e.g. – using felt to make a bag, puppet, purse, etc.
Structures		Design and create a freestanding structure, e.g. tower, building, etc.

Year 2		
	National Curriculum	Knowledge, Skills and Understanding
Structures	<u>Design</u> - Design purposeful, functional, appealing products for themselves and other users based on design criteria - Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology. <u>Make</u> - 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. <u>Evaluate</u> - 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. - Explore and use mechanisms, for example, levers, sliders, wheels and axles, in their products. <u>Cooking & Nutrition</u> - Use the basic principles of a healthy and varied diet to prepare dishes - Understand where food comes from.	Design and create a freestanding structure, e.g. building, statue, etc.
Food		Preparing fruit and vegetables. Design and create a dish to serve, e.g. creating a picture, pattern or flower design with the ingredients.
Mechanisms		Design and create a mechanism using wheels and axels, e.g. car, bus etc.

Year 3		
	National Curriculum	Knowledge, Skills and Understanding
Food	<u>Design</u> - 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.	Prepare and cook a savoury dish using a range of cooking techniques, e.g. biscuits, bread, cakes etc.
Textiles	<u>Make</u> - 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. <u>Evaluate</u> - 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. <u>Technical Knowledge</u> - 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.	Use joining techniques to create a 3D product, e.g. using felt to make a teddy bear, 3D pencil case, football, etc.
Structures		Create and design a frame structure, e.g. picture frame etc.

	- 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. <u>Cooking and Nutrition</u> - 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.	

Year 4		
	National Curriculum	Knowledge, Skills and Understanding
Structures	<u>Design</u> - 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.	Create and design a shell structure, e.g. a memory box, storage box, travel box for your pet, etc.
Food	<u>Make</u> - Select from and use a wider range of tools and equipment to perform practical tasks, for example, cutting, shaping, joining and finishing, accurately.	Prepare and cook a savoury dish using a range of cooking techniques, e.g. pizza, sausage/vegetable rolls etc.

	- 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. <u>Evaluate</u> - 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. <u>Technical Knowledge</u> - 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. <u>Cooking and Nutrition</u> - 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.	
Mechanisms		Design and create a mechanism using sliders and levers, e.g. moving picture book, etc.

Year 5		
	National Curriculum	Knowledge, Skills and Understanding
Food	<u>Design</u> - 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. <u>Make</u> - 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. <u>Evaluate</u> - 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. <u>Technical Knowledge</u> - 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.	Celebrating cultures – Design and prepare a dish from around the world, e.g. Chinese spring rolls, etc.
Textiles		Design to combine different fabric shapes (using computer aided design if possible), e.g. patchwork quilt etc.
Electrical Systems		Using simple circuits and switches, e.g. for a light bulb.

	- 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. <u>Cooking and Nutrition</u> - 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.	

Year 6		
	National Curriculum	Knowledge, Skills and Understanding
Mechanisms	<u>Design</u> - 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. <u>Make</u> - Select from and use a wider range of tools and equipment to perform practical tasks, for example, cutting, shaping, joining and finishing, accurately.	Design and create a mechanism using levers and linkages, e.g. a moving toy, fairground ride, etc.
Electrical Systems		Using more complex circuits and switches, e.g. light up signs, etc.

	- 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.	
Food	<u>Evaluate</u> - 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. <u>Technical Knowledge</u> - 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. <u>Cooking and Nutrition</u> - 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.	Celebrating cultures – Design and prepare a dish from around the world, e.g. Indian vegetable samosas, etc.