Design and Technology Curriculum 2022/23

	Autumn	Spring	Summer
Year 1	Mechanisms: Wheels & axels Textiles: 2D shape to 3D product, combining different fabric shapes	Mechanisms: Wheels & axels	Cooking and nutrition
Year 2	Mechanisms: Sliders & Leavers	Cooking and nutrition	Structures
Year 3	Structures	Mechanisms: cams	Cooking and nutrition
Year 4	Electrical systems: simple circuits & switches	Mechanical systems: Levers & linkages, Pulleys	Cooking and nutrition
Year 5	Cooking and nutrition	Structures	Mechanical systems: pneumatic
Year 6	Electrical systems: simple circuits & switches	Textiles: 2D shape to 3D product, combining different fabric shapes	Cooking and nutrition

Curriculum Map

Design and technology	Autumn		Spring		Summer	
	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 1	**Moon zoom (Mechanisms)** 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, stiffer and more stable. Explore and use mechanisms (wheels and axles), in their products. **Funny faces and fabulous features (Textiles)** Select from and use a range of tools and equipment to perform practical tasks Select from and use a wide range of materials and components (textiles) according to their characteristics.		**Bright lights, big city** Build structures, exploring how they can be made stronger, stiffer and more stable. **Taxi (Mechanisms)** 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. Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria. Explore and use mechanisms (wheels and axles), in their products.		**Paws, claws and whiskers** 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. Select from and use a wide range of materials and components, according to their characteristics. **Chop, slice and mash (Cooking and nutrition)** Use the basic principles of a healthy and varied diet to prepare dishes. Understand where food comes from	
Year 2	**Push and Pull (Mechanisms)** Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.		**Wiggle and crawl** **The scented garden** **Remarkable recipes (Cooking and nutrition)** Select from and use a range of tools and equipment to perform practical tasks.		**Beach hut (Structures)** 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-	

	Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria. Explore and use mechanisms (levers, sliders), in their products.	Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics. Use the basic principles of a healthy and varied diet to prepare dishes. Understand where food comes from.	ups and, where appropriate, information and communication technology. Select from and use a range of tools and equipment to perform practical tasks. Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics. 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, stiffer and more stable.
Year 3	**Greenhouse (Structures)** 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 accurately. Select from 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.	**Making it move (Mechanisms)** 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 accurately. Select from 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. Understand and use mechanical systems in their products (cams).	**Cook well, eat well (Cooking and nutrition)** 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. 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. Understand and apply the principles of a healthy and varied diet.

	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.		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. Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world.
Year 4	**Misty mountain, winding river** 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. **Electrical circuits and conductors** 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. 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.	**Tomb builders (Mechanisms)** 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. Understand and use mechanical systems in their products (pulleys, levers).	**Fresh food, good food (Cooking and nutrition)** 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 materials including 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. 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 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.		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. Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world.
Year 5	**Eat the seasons (Cooking and nutrition)** **Sow, grow and farm** **Allotment** 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.	**Architecture (Structures)** 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 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. 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.	**Moving mechanisms (Pneumatic systems)** 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 more complex structures. Understand and use mechanical systems in their products (pneumatic systems). Critique, evaluate and test their ideas and products and the work of others.

Year 6	**Electrical circuits and components** 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. Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. 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. Critique, evaluate and test their ideas and products and the work of others.	**Make do and mend (Textiles)** 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 (textiles), according to their functional properties and aesthetic qualities. Investigate and analyse a range of existing products.	**Food for life (Cooking and nutrition)** 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 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.