Design and Technology Curriculum Overview 2023-24

2022-23	Nursery	Reception	Year 1	Year 2	Year 3	Year4	Year 5	Year 6
Autumn 1	**Understanding of the World**	**Expressive Arts & Design and Understanding of the World**	**Moving Pictures**	**Balloon Car**	**Slingshot Car**	**Rubber band boat/Viking**	**Pulley system**	**Food from Around the World/Mayan Bean Chilli**
Concepts and Skills	Children to be given chances to observe and begin to explore technology within their environment. This could be using scissors and glue to create an animal mask, or characters linked to book of week.	Children to explore and play with different materials and observe the world around them. To bring these together, the children could create a 3D model of a house, *recycling materials*	Pop-up books and mechanisms to make pictures move– sliders, levers, pop-ups, spinners, flaps	Generate, develop, model and communicate their ideas through talking and drawing Build structures, exploring how they can be made stronger, stiffer and more stable Evaluate effectiveness of a product through testing its functionality understand how key events and individuals in design and technology have helped shape the world	use research and develop design criteria to inform the design of a functional model select from and use a wider range of materials and components, fit for purpose apply their understanding of how to strengthen, stiffen and reinforce more complex structures	Properties of materials – floating Consider the forces – how can we make the boat move? Mechanisms – making a propeller apply their understanding of how to strengthen, stiffen and reinforce more complex structures	select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]	Food groups Celebrating cultures Understanding seasonality Understanding where and how a variety of key ingredients are grown, reared, caught and processed
Themes			**Mechanism**	**Mechanism**	**Mechanism**	**Mechanism**	**Mechanism**	**Cooking & Nutrition**
Autumn 2	**Understanding of the World**	**Expressive Arts & Design and Understanding of the World**	**Pop up Christmas Card**	**Sandwiches**	**UK Landmark**	**Musical Instrument**	**Fair Ground Ride**	**Food from Around the World/Mediterranean Greek Salad**
Concepts and Skills	Children to be given chances to observe and begin to explore technology within their environment. This could be using scissors and glue to create an animal	Children to explore and play with different materials and observe the world around them.	Pop-up books and mechanisms to make pictures move– sliders, levers, pop-ups, spinners, flaps	use the basic principles of a healthy and varied diet to prepare dishes	use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at	Investigating different materials Consider how the instrument works and will make sounds	understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]	Food groups Celebrating cultures Understanding seasonality

	mask, or characters linked to book of week.	To bring these together, the children could create a 3D model of a house, *recycling materials*	design purposeful, functional, appealing products for themselves and other users based on design criteria	understand where food comes from.	particular individuals or groups investigate and analyse a range of existing products	investigate and analyse a range of existing products	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.	Understanding where and how a variety of key ingredients are grown, reared, caught and processed
Themes			**Mechanism**	**Cooking & Nutrition**	**Structure**	**Structure**	**Structure**	**Cooking & Nutrition**

2021-22	Nursery	Reception	Year 1	Year 2	Year 3	Year4	Year 5	Year 6
Spring 1	**Expressive Arts & Design**	**Expressive Arts & Design and Understanding of the World**	**Wind Chimes**	**Cereal Packets**	**Roman Coin Purse**	**Hindu Mandir** (Linked to our local neighbourhood)	**Greek Temple**	**Building a Shelter**
Concepts and Skills	Children can explore and play with different materials. This could be for example, creating a rice shaker instrument or rubbing materials together to make a sound.	Children can explore and play with different materials. Children could create water bottle bird feeders. Recycled materials Create/discuss	Investigating materials – consider their properties Recycled materials design purposeful, functional, appealing products for themselves and other users based on design criteria	Investigating packaging 3D shape nets design purposeful, functional, appealing products for themselves and other users based on design criteria select from and use a range of tools and equipment to perform practical tasks	generate, develop, model and communicate their ideas through discussion, annotated sketches select from and use a wider range of materials and components (textiles)	investigate and analyse a range of existing buildings apply their understanding of how to strengthen, stiffen and reinforce more complex structures	investigate and analyse a range of existing buildings apply their understanding of how to strengthen, stiffen and reinforce more complex structures select from and use a wider range of materials and components, including construction materials,	Investigating different types of shelter select from and use a wider range of materials and components, including construction materials, Consider how structures can fail Consider requirements for making a good shelter Consider how to strengthen structures
Themes			**Structure**	**Structure**	**Textiles**	**Structure**	**Structure**	**Structure**
Spring 2	**Expressive Arts & Design**	**Expressive Arts & Design**	**Insect Hotel**	**Weaving Board**	**Origami Plants/Flowers**	**Torches**	**Cushion**	**Shock Proof Building**

		and Understanding of the World						
Concepts and Skills	Children to explore and play with different materials. This could be for example, creating a rice shaker instrument or rubbing materials together to make a sound.	Children to explore and play with different materials. Children could create water bottle bird feeders. Recycled materials Create/discuss	design purposeful, functional, appealing products for themselves and other users based on design criteria 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) generate, develop, model and communicate their ideas through talking, drawing,	Measure, cut and shape materials use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose	use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs	select from and use a wide range of materials and components (textiles) evaluate their ideas and products against their own design criteria and consider the views of others to improve their work	investigate and analyse a range of existing products 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
Themes			**Structure**	**Textiles**	**Structure**	**Electrical System**	**Cooking & Nutrition**	**Structure**

2021-22	Nursery	Reception	Year 1	Year 2	Year 3	Year4	Year 5	Year 6

Summer 1	Expressive Arts & Design and Understanding of the World	Expressive Arts & Design and Understanding of the World	Kaleidoscope	Puppets	Anglo-Saxon Dish (Vegetable Soup)	Bridges	Chinese lanterns	Steady Hand Buzz/Games
Concepts and Skills	Children to explore and play with different materials and observe the world around them. To bring these together, the children could create a collage of a house.	Looking at roof garden or plants growing around playgrounds. Children can design a miniature class garden. Each child can grow cress or seed that grows similarly quickly. Activity could be extended by placing mini gardens outside for creepy crawly wildlife.	design purposeful, functional, appealing products for themselves and other users based on design criteria select from and use a range of tools and equipment to perform practical tasks	Investigating different types of puppets Using templates Joining techniques - sewing	understand and apply the principles of a healthy and varied diet to an Anglo-Saxon style dish prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques	Bridge types Structure tests Consider how to make structures stronger/sturdier	Design and create a Chinese lantern select from and use a wider range of tools and equipment to perform practical tasks	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 understand and use electrical systems in their products [buzzers]
Themes			**Structure**	**Textiles**	**Cooking & Nutrition**	**Structure**	**Structure**	**Electrical System**

Summer 2	Expressive Arts & Design and Understanding of the World	Expressive Arts & Design and Understanding of the World	Summer Fruit Salad	Bird Feeder	Indonesian Dish	Bread	Pizza	Moving Vehicles
Concepts and Skills	Children to explore and play with different materials and observe the world around them. To bring these together, the children could create a collage of a house.	Looking at roof garden or plants growing around playgrounds. Children can design a miniature class garden. Each child can grow cress or seed that grows similarly quickly. Activity could be extended by placing mini gardens outside for creepy crawly wildlife.	Healthy eating Preparing fruit – peeling, chopping, grating, juicing Health and safety – using equipment safely	explore and evaluate a range of existing products design purposeful, functional, appealing products generate, develop, model and communicate their ideas through talking & drawing	Healthy eating/living Flavours Where food comes from Food preparation understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.	Balanced diet Where food comes from Food preparation Dietary requirements Comparing different types of bread 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	Looking at pizzas from around the world Looking at different types of bases Investigate and evaluate bread according to its characteristics Processes involved with making bread prepare and cook a variety of predominantly savoury	Mechanisms – wheels and axels Creating moving models - use of circuits and motors apply their understanding of computing to program, monitor and control their products.

							dishes using a range of cooking techniques	
Themes			**Cooking & Nutrition**	**Structure**	**Cooking & Nutrition**	**Cooking & Nutrition**	**Cooking & Nutrition**	**Electrical System/Mechanisms**