Design and Technology Curriculum Overview

DT	Autumn	Spring	Summer
Nursery	**Modelling** **Hibernation Boxes** Fine Motor Skills> Use a range of small tools, including scissors, paint brushes and cutlery Creating with materials> Share their creations, explaining the process they have used. Creating with materials> Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.	**Structure** **Easter Egg decoration** Fine Motor Skills> Use a range of small tools, including scissors, paint brushes and cutlery Creating with materials> Share their creations, explaining the process they have used. Creating with materials> Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.	**Food Technology** **Rainbow salad** The Natural World>Explore the natural world around them, making observations and drawing pictures of animals and plants. Speaking> Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary Managing self> Manage their own basic hygiene and personal needs, including… understanding the importance of healthy food choices.
EYFS	**Modelling** **Junk Modelling** Fine Motor Skills> Use a range of small tools, including scissors, paint brushes and cutlery Creating with materials> Share their creations, explaining the process they have used. Creating with materials> Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.	**Structures** **Boats** Speaking> Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary. Speaking> Offer explanations for why things might happen. Creating with materials> Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Creating with materials> Share their creations, explaining the process they have used.	**Textiles** **Bookmarks** Fine Motor Skills> Use a range of small tools, including scissors, paint brushes and cutlery. Creating with materials> Share their creations, explaining the process they have used. Creating with materials> Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.

Year 1	**Food technology** **Smoothies** 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 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 their ideas and products against design criteria.	**Textiles** **Making a toy puppet** 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 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 their ideas and products against design criteria.	**Mechanisms** **Wheels and axels** Design purposeful, functional, appealing products for themselves a Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology and other users based on design criteria. 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 their ideas and products against design criteria. Explore and evaluate a range of existing products. Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.
Year 2	**Mechanisms** **Ferris wheels** 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.	**Structures** **Baby bears chair** 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.	**Food technology** **Balance diet** 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 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. 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.	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 their ideas and products against design criteria. Build structures, exploring how they can be made stronger, stiffer and more stable.	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. Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria. Use basic principles of a healthy and varied diet to prepare dishes. Understand where food comes from.
Year 3	**Mechanisms** **Pneumatic toys** 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 [for example, cutting, shaping, joining and finishing], accurately. Select from and use a wide range of materials and components, including construction	**Textiles** **Cross stitch and applique** **Egyptian collars** 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 [for example, cutting, shaping, joining and finishing], accurately. Select from and use a wide range of materials and components, including construction	**Structures** **Castles** 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 [for example, cutting, shaping, joining and finishing], accurately. Select from and use a wide range of materials and components, including construction

	materials, textiles and ingredients, according to their characteristics. Investigate and analyse a range of exis ting 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.	materials, textiles and ingredients, according to their characteristics. Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.	materials, textiles and ingredients, according to their characteristics. 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.
Year 4	**Food technology** **Eating seasonally** 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 [for example, cutting, shaping, joining and finishing], accurately. Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics. Investigate and analyse a range of existing	**Textiles** **Pencil Cases- fastening** 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 [for example, cutting, shaping, joining and finishing], accurately Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics. Investigate and analyse a range of existing	**Electrical systems** **Torches- Design an illuminated product to advertise** 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 [for example, cutting, shaping, joining and finishing], accurately Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics. 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. Prepare and cook variety of predominantly savoury dishes using a range of cooking techniques.	products. Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.	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. Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].
Year 5	**Structures** **Bridges** 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 [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.	**Mechanical systems-** **Slingshot cars** 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 [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	**Digital world** **Monitoring devices** 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 [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

	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.	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 [for example, gears, pulleys, cams, levers and linkages].	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. Apply their understanding of computing to program, monitor and control their products.
Year 6	**Food Technology** **Come dine with me** 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 [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.	**Textiles** **Waistcoats** 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 [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.	**Electrical systems** **Steady hand games** 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 [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. Understand and apply principles of a healthy and varied diet. Prepare and cook 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.	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.	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.
Food Technology Structures Textiles Electrical Systems Digital world Mechanisms			