

Design & Technology 8 Year Overview

Intent: To use creativity and imagination to design and make products that solve real and relevant problems in a variety of contexts. Acquiring a broad range of subject knowledge and drawing on disciplines such as mathematics, science, engineering, computing and art. Learning the crucial life skill of cooking, including food hygiene, the principles of nutrition and a healthy eating.

Processes		
D Designing	M Making	E Evaluating
TK Technical knowledge		

Principles		
User	Purpose	Functionality
Design Decisions	Innovation	Authenticity

	Autumn	Spring	Summer
EYFS: By the end of EYFS children should be able to explore different materials, develop their ideas about how to use them and what to make. Children should make healthy choices about food and drink.			
Pre-School	Use of Construction Area, Malleable Area, Creative Area. Making Christmas Card. Cooking – Chocolate apples (bonfire night) Xmas biscuits EAD: Exploring Media and Materials. We develop the following skills in continuous provision: <ul style="list-style-type: none"> Explore different materials freely, to develop their ideas about how to use them and what to make. Develop their own ideas and then decided which materials to use to express them. Join different materials and explore different textures. 	Use of Construction Area, Malleable Area, Creative Area. Cooking – gingerbread men EAD: Exploring Media and Materials. We develop the following skills in continuous provision: <ul style="list-style-type: none"> Explore different materials freely, to develop their ideas about how to use them and what to make. Develop their own ideas and then decided which materials to use to express them. Join different materials and explore different textures. 	Use of Construction Area, Malleable Area, Creative Area. Cooking – fruit kebabs EAD: Exploring Media and Materials. We develop the following skills in continuous provision: <ul style="list-style-type: none"> Explore different materials freely, to develop their ideas about how to use them and what to make. Develop their own ideas and then decided which materials to use to express them. Join different materials and explore different textures.
Rec	Decorations and Cards (Christmas) Key Processes: Design, Make and Evaluate Tool manipulation, Use varied materials. Return to and build upon their previous learning, refining ideas and developing their ability to represent them. ELG: Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. <p style="text-align: right;">D M E</p>	Baking (Porridge for 3 Bears- Traditional Tales) Key Processes: Make & Evaluate Food hygiene, preparation and cookery Prepare healthy and varied dishes. Understand where food comes from <p style="text-align: right;">M E</p>	Structure (Bog Babies Habitat) Key Processes: Design & Evaluate Tool manipulation, use varied materials. Return to and build upon their previous learning, refining ideas and developing their ability to represent them. Create collaboratively, sharing resources and skills. ELG: Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. <p style="text-align: right;">D E</p>
Key Stage 1: By the end of KS1, children should be able to design, make, evaluate and use technical knowledge. They should understand how to cook and apply the principles of nutrition and healthy eating.			
Year 1	Clothing Design (Coat for Star) Key Processes: Design & Technical knowledge (Linking to Properties of Materials in Science) design purposeful, functional, appealing products for themselves and other users based on design criteria. <p style="text-align: right;">D TK</p>	Food preparation (Soup) Key Processes: Design, Make and Evaluate Food hygiene, preparation and cookery. Prepare healthy and varied dishes. Understand where food comes from. Key skill: Cutting <p style="text-align: right;">D M E</p>	Structures (Moon Buggies) Key Processes: Design, Make and Evaluate Use a range of tools and equipment to perform practical tasks. Use a wide range of materials and components, including construction materials and textiles. <p style="text-align: right;">D M E</p>
Year 2	Christmas Decoration (Forest School – Star) Key Processes: Make and Evaluate Use varied materials. Use a range of tools and equipment to perform practical tasks. Use a wide range of materials and components, including construction materials and textiles. <p style="text-align: right;">M E</p>	Structures (Houses in London) Key Processes: Design, Evaluate and Technical knowledge Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups exploring how they can be made stronger, stiffer and more stable. <p style="text-align: right;">D E TK</p>	Food Preparation: (Pizza) Key Processes: Design, Make and Evaluate Food hygiene, preparation and cookery: Prepare healthy and varied dishes. Understand where food comes from. <p style="text-align: right;">D M E</p>

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Key Stage 2: By the end of KS2: children should be able to design, make, evaluate and use technical knowledge. They should understand how to cook and apply the principles of nutrition and healthy eating.			
Year 3	<p>Structures (Roman Chariots) Key Processes: Design & Technical knowledge</p> <p>Use research and develop design criteria to inform the design. Generate, develop, model and communicate ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</p> <p>Understand and use mechanical systems in their products</p> <p style="text-align: right;">D TK</p>	<p>Mechanical Systems (Moving character) Key Processes: Make and Evaluate</p> <p>Understand and use mechanical systems in their products. Use a wide range of materials and components, including construction materials and textiles, according to their functional properties and aesthetic qualities.</p> <p style="text-align: right;">M E</p>	<p>Food Preparation: (Cheese Straws) Key Processes: Design, Make and Evaluate</p> <p>Food hygiene, preparation and cookery: Prepare healthy and varied dishes using a range of cooking techniques. Understand seasonality and where food comes from – how a variety of ingredients are grown.</p> <p>Key Skill: Rubbing</p> <p style="text-align: right;">D M E</p>
Year 4	<p>Food Preparation: (Tudor bread) Key Processes: Design, Make and Evaluate</p> <p>Food hygiene, preparation and cookery: Prepare healthy and varied dishes using a range of cooking techniques. Understand seasonality and where food comes from – how a variety of ingredients are grown.</p> <p>Key Skill: kneading</p> <p style="text-align: right;">D M E</p>	<p>Mechanical Systems (Pop-up books) Key Processes: Make and Evaluate</p> <p>Use a wide range of materials and components according to their functional properties</p> <p style="text-align: right;">M E</p>	<p>Electricity Circuit (House) Key Processes: Design, Evaluate and Technical knowledge</p> <p>Understand and use electrical systems in their products, including circuits, bulbs and buzzers</p> <p style="text-align: right;">D E TK</p>
Year 5	<p>Structures (Titanic boats) Key Processes: Design and Technical knowledge</p> <p>Use research and develop design criteria to inform the design. Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.</p> <p>Understand how key events and individuals in design and technology have helped shape the world</p> <p style="text-align: right;">D TK</p>	<p>Food Preparation: (Tudor Bread TBC) Key Processes: Design, Make and Evaluate</p> <p>Food hygiene, preparation and cookery: Prepare healthy and varied dishes using a range of cooking techniques. Understand seasonality and where food comes from – how a variety of ingredients are grown.</p> <p>Key Skill: Adapting flavours</p> <p style="text-align: right;">D M E</p>	<p>Weaving (TBC) Key Processes: Make and Evaluate</p> <p>Use a wider range of tools and equipment to perform practical tasks. Use a wide range of materials and components, including construction materials and textiles.</p> <p style="text-align: right;">M E</p>
Year 6	<p>Computer Programming (Sphero maze) Key Processes: Design and Technical knowledge</p> <p>Apply their understanding of computing to program, monitor and control their products.</p> <p style="text-align: right;">D TK</p>	<p>Food Preparation: (War Biscuits TBC) Key Processes: Design, Make and Evaluate</p> <p>Food hygiene, preparation and cookery: Prepare healthy and varied dishes using a range of cooking techniques. Understand seasonality and where food comes from – how a variety of ingredients are grown.</p> <p>Key Skill: Safety with melting</p> <p style="text-align: right;">D M E</p>	<p>Mechanical Systems (TBC) Key Concept / Theme:</p> <p>Key Skill:</p>