



EYFS – Nursery and Reception

Within the EYFS Design Technology is taught within the *Understanding the world* and *Expressive Arts and Design* areas of learning.

- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function
- Use what they have learnt about media and materials in original ways, thinking about uses and purposes
- Represent their own ideas, thoughts and feelings through design and technology
- Experiment creating and using different textures.
- Assemble and join materials using glue and tape



Year 1 Milestones and Curriculum Coverage

YEAR 1 To master practical skills	To design, make, evaluate and improve	To take inspiration from design throughout history	Curriculum Content
<p>Food- Measure or weigh using measuring cups</p> <ul style="list-style-type: none"> • Assemble or cook ingredients. <p>Materials- Cut materials safely using tools provided.</p> <ul style="list-style-type: none"> • Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling). <p>Textiles- Colour and decorate textiles using a number of techniques (such as dyeing, adding sequins or printing).</p> <p>Electricals and electronics- Diagnose faults in battery operated devices</p> <p>Construction- Use materials to practise gluing, make and strengthen products.</p> <p>Mechanics- Create products using levers</p>	<ul style="list-style-type: none"> • Make products, refining the design as work progresses. 	<ul style="list-style-type: none"> • Explore objects and designs to identify likes and dislikes of the designs. 	<p>Design-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</p> <p>Make-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</p> <p>Evaluate-explore and evaluate a range of existing products ♣ evaluate their ideas and products against design criteria</p> <p>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.</p> <p>Use the basic principles of a healthy and varied diet to prepare dishes ♣ understand where food comes from.</p>



Year 2 Milestones and Curriculum Coverage

Y2 To master practical skills	To design, make, evaluate and improve	To take inspiration from design throughout history	Curriculum Content
<p>Food-Cut, peel or grate ingredients safely and hygienically. use electronic scales.</p> <p>Materials-Measure and mark out to the nearest centimetre. Demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen).</p> <p>Textiles-Shape textiles using templates. Join textiles using running stitch.</p> <p>Electricals and electronics- Diagnose faults in battery operated devices (such as low battery, water damage or battery terminal damage).</p> <p>Computing-Model designs using software. (Computing Unit- creating Pictures)</p> <p>Construction- Use materials to practise drilling, screwing, and nailing materials</p> <p>Mechanics-Create products using levers, wheels and winding mechanisms.</p>	<ul style="list-style-type: none"> • Design products that have a clear purpose and an intended user. • Use software to design. 	<ul style="list-style-type: none"> • Suggest improvements to existing designs. • Explore how products have been created. 	<p>Design-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</p> <p>Make-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</p> <p>Evaluate-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 [for example, levers, sliders, wheels and axles], in their products. Use the basic principles of a healthy and varied diet to prepare dishes ♣ understand where food comes from.</p>



Year 3 Milestones and Curriculum Coverage

Y3 To master practical skills	To design, make, evaluate and improve	To take inspiration from design throughout history	Curriculum Content
<p>Food- Prepare ingredients hygienically using appropriate utensils.</p> <ul style="list-style-type: none"> • Follow a recipe. <p>Materials- Cut materials accurately and safely by selecting appropriate tools.</p> <ul style="list-style-type: none"> • Measure and mark out to the nearest millimetre. • Select appropriate joining techniques. <p>Textiles-Join textiles with appropriate stitching.</p> <ul style="list-style-type: none"> • Select the most appropriate techniques to decorate textiles. <p>Computing-Control and monitor models using software designed for this purpose. (Computing Unit-Basic Coding)</p> <p>Construction-Strengthen materials using suitable techniques.</p>	<ul style="list-style-type: none"> • Design with purpose by identifying opportunities to design. • Make products by working efficiently (such as by carefully selecting materials). 	<ul style="list-style-type: none"> • Identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for designs. 	<p>Design: 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</p> <ul style="list-style-type: none"> ♣ generate, develop, model and communicate their ideas through discussion, annotated sketches, prototypes, pattern pieces <p>Make: 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</p> <p>Evaluate: 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</p> <p>Apply their understanding of how to strengthen, stiffen and reinforce more complex structures ♣ understand and use mechanical systems in their products [for example, levers and linkages]</p> <p>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.</p>



Year 4 Milestones and Curriculum Coverage

Y4 To master practical skills	To design, make, evaluate and improve	To take inspiration from design throughout history	Curriculum Content
<p>Food- Measure ingredients to the nearest gram accurately.</p> <ul style="list-style-type: none"> Assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking). <p>Materials-Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs).</p> <p>Textiles-Understand the need for a seam allowance.</p> <p>Electricals and electronics- create series and parallel circuits</p> <p>Construction-choose suitable techniques to construct products or to repair items.</p> <p>Mechanics-use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears).</p>	<ul style="list-style-type: none"> Refine work and techniques as work progresses, continually evaluating the product design. Use software to design and represent product designs. 	<ul style="list-style-type: none"> Improve upon existing designs, giving reasons for choices. Disassemble products to understand how they work. 	<p>Design: 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</p> <ul style="list-style-type: none"> generate, develop, model and communicate their ideas through discussion, annotated sketches, prototypes, pattern pieces <p>Make: select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</p> <ul style="list-style-type: none"> 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 <p>Evaluate: investigate and analyse a range of existing products</p> <ul style="list-style-type: none"> 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 <p>Apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p> <ul style="list-style-type: none"> understand and use mechanical systems in their products [for example, gears] <p>Understand and apply the principles of a healthy and varied diet</p> <ul style="list-style-type: none"> 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 5 Milestones and Curriculum Coverage

Y5 To master practical skills	To design, make, evaluate and improve	To take inspiration from design throughout history	Curriculum Content
<p>Food-Understand the importance of correct storage and handling of ingredients (using knowledge of micro-organisms). • Measure accurately and calculate ratios of ingredients to scale up or down from a recipe. • Demonstrate a range of baking and cooking techniques.</p> <p>Materials-Cut materials with precision and refine the finish with appropriate tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape).</p> <p>Textiles-Create objects (such as a cushion) that employ a seam allowance. • Join textiles with a combination of stitching techniques (such as back stitch for seams and running stitch to attach decoration).</p> <p>Computing-Write code to control and monitor models or products. Computing- Coding Unit</p> <p>Construction- Develop a range of practical skills to create products (such as cutting, drilling and screwing, nailing, gluing, filling and sanding).</p> <p>Mechanics-Convert rotary motion to linear using cams.</p>	<ul style="list-style-type: none"> • Design with the user in mind, motivated by the service a product will offer (rather than simply for profit). • Make products through stages of prototypes, making continual refinements. 	<ul style="list-style-type: none"> • Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices. • Create innovative designs that improve upon existing products. 	<p>Design: 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</p> <p>Make: 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</p> <p>Evaluate: 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</p> <p>Apply their understanding of how to strengthen, stiffen and reinforce more complex structures • understand and use mechanical systems in their products [for example, pulleys]</p> <p>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.</p>



Year 6 Milestones and Curriculum Coverage

Y6 To master practical skills	To design, make, evaluate and improve	To take inspiration from design throughout history	Curriculum Content
<p>Food-Create and refine recipes, including ingredients, methods, cooking times and temperatures.</p> <p>Materials-Show an understanding of the qualities of materials to choose appropriate tools to cut and shape (such as the nature of fabric may require sharper scissors than would be used to cut paper).</p> <p>Textiles-Use the qualities of materials to create suitable visual and tactile effects in the decoration of textiles (such as a soft decoration for comfort on a cushion).</p> <p>Electricals and electronics- Create circuits using electronics kits that employ a number of components (such as LEDs, resistors, transistors and chips).</p> <p>Mechanics- Use innovative combinations of electronics (or computing) and mechanics in product designs.</p>	<ul style="list-style-type: none"> • Ensure products have a high quality finish, using art skills where appropriate. • Use prototypes, cross-sectional diagrams and computer aided designs to represent designs. 	<ul style="list-style-type: none"> • Evaluate the design of products so as to suggest improvements to the user experience. 	<p>Design: 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, prototypes, pattern pieces and computer-aided design</p> <p>Make: 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</p> <p>Evaluate: investigate and analyse a range of existing products ♣ Apply their understanding of how to strengthen, stiffen and reinforce more complex structures ♣ understand and use mechanical systems in their products [for example, cams.</p> <p>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.</p> <p>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.</p>