

## Design and Technology Progression of Skills 2023-24

Community					Compassion					Courage					Curiosity					Culture					Celebration				
	<b>Design</b> Developing, planning (research) and communicating ideas.					<b>Make</b> Working with tools, equipment, materials and components to make quality products (inc- food)					<b>Evaluate</b> Evaluating processes and products					<b>Technical Knowledge</b>													
Year R	<ul style="list-style-type: none"> <li>Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary (ELG: Speaking)</li> <li>Begin to show accuracy and care when drawing (ELG: FMS)</li> </ul>					<ul style="list-style-type: none"> <li>Use a range of small tools, including scissors, paint brushes and cutlery (ELG: FMS)</li> <li>Be confident to try new activities and show independence, resilience and perseverance in the face of challenge (ELG: Managing Self)</li> <li>Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function (ELG: Creating with Materials)</li> </ul>					<ul style="list-style-type: none"> <li>Express their ideas and feelings about their experiences using full sentences, including use of past, present and future tenses and making use of conjunctions, with modelling and support from their teacher. (ELG: Speaking)</li> <li>Share their creations, explaining the process they have used (ELG: Creating with Materials)</li> </ul>					<p><u>Structures</u> Self-select appropriate tools and materials, based on anticipated outcomes. Begin to experiment with joins and making for a purpose.</p> <p><u>Food &amp; Nutrition</u> Begin to understand some food preparation tools, techniques and processes. Practise stirring, mixing, pouring, blending. Discuss how to make an activity safe and hygienic. Discuss use of senses. Understand need for variety in food.</p>													
<p><u>End of Early Years Foundation Stage Expectations - <b>Design</b></u> Have and communicate their own ideas, making links with prior knowledge.</p> <p><u>End of Early Years Foundation Stage Expectations - <b>Make</b></u> Work with their ideas to explore resources, being willing to 'have a go' and try different approaches to a task. Be involved and maintain concentration on a process, showing resilience.</p> <p><u>End of Early Years Foundation Stage Expectations - <b>Evaluate</b></u> Share a sense of enjoyment in achieving a task they have set out to do. Communicate what went well and what could be improved.</p>																													

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Year 1	<ul style="list-style-type: none"> <li>• Draw on their own experience to help generate ideas</li> <li>• Suggest ideas and explain what they are going to do</li> <li>• Identify a target group for what they intend to design and make</li> <li>• Model their ideas in card and paper</li> <li>• Develop their design ideas applying findings from their earlier research</li> </ul>	<ul style="list-style-type: none"> <li>• Make their design using appropriate techniques</li> <li>• With help measure, mark out, cut and shape a range of materials</li> <li>• Use tools eg scissors and a hole punch safely</li> <li>• Assemble, join and combine materials and components together using a variety of temporary methods e.g. glues or masking tape</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluate their product by discussing how well it works in relation to the purpose</li> <li>• Evaluate their products as they are developed, identifying strengths and possible changes they might make</li> <li>• Evaluate their product by asking questions about what they have made and how they have gone about it</li> </ul>	<p><u>Structures</u> Build structures, understanding how they can be made stronger, stiffer and more stable. Know the names of tools, techniques and elements that he/she uses.</p> <p><u>Mechanisms</u> Recall facts and understand why certain engineers and inventors are significant. Ask simple questions about existing products and those that he/she has made.</p> <p><u>Food &amp; Nutrition</u> To understand significant individuals within the food industry. Understand where food comes from. Use the basic principles of a healthy and varied diet to prepare dishes.</p>
Year 2	<ul style="list-style-type: none"> <li>• Generate ideas by drawing on their own and other people's experiences</li> <li>• Develop their design ideas through discussion, observation, drawing and modelling</li> <li>• Identify a purpose for what they intend to design and make</li> <li>• Identify simple design criteria</li> <li>• Make simple drawings and label parts</li> </ul>	<ul style="list-style-type: none"> <li>• Begin to select tools and materials; use vocab' to name and describe them</li> <li>• Measure, cut and score with some accuracy</li> <li>• Use hand tools safely and appropriately</li> <li>• Assemble, join and combine materials in order to make a product</li> <li>• Cut, shape and join fabric to make a simple garment. Use basic sewing techniques</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluate against their design criteria</li> <li>• Evaluate their products as they are developed, identifying strengths and possible changes they might make</li> <li>• Talk about their ideas, saying what they like and dislike about them</li> </ul>	<p><u>Mechanisms</u> Recall facts and understand why certain engineers and inventors are significant. Build a mechanism, exploring how they can be made stronger, stiffer and more stable. Understand how products can move in different ways by using levers, sliders, wheels and axels.</p> <p><u>Textiles</u> Understand that a 3D textile can be made from two identical fabric shapes.</p> <p><u>Food &amp; Nutrition</u> Use the basic principles of a healthy and varied diet to prepare dishes. Understand where food comes from.</p>

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<p style="text-align: center;"><u>End of Key Stage 1 Expectations - <b>Design</b></u> Design purposeful, functional, appealing products for themselves and other users based on design criteria. Generate, develop, model and communicate his/her ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.</p> <p style="text-align: center;"><u>End of Key Stage 1 Expectations - <b>Make</b></u> Select from and use a wider range of materials and components, including construction materials according to their functional properties and aesthetic qualities.</p> <p style="text-align: center;"><u>End of Key Stage 1 Expectations - <b>Evaluate</b></u> Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria.</p>				
	<b>Design</b> Developing, planning (research) and communicating ideas.	<b>Make</b> Working with tools, equipment, materials and components to make quality products (inc- food)	<b>Evaluate</b> Evaluating processes and products	<b>Technical Knowledge</b>
Year 3	<ul style="list-style-type: none"> <li>• Generate ideas for an item, considering its purpose and the user/s</li> <li>• Identify a purpose and establish criteria for a successful product.</li> <li>• Plan the order of their work before starting</li> <li>• Explore, develop and communicate design proposals by modelling ideas</li> <li>• Make drawings with labels when designing</li> </ul>	<ul style="list-style-type: none"> <li>• Select tools and techniques for making their product</li> <li>• Measure, mark out, cut, score and assemble components with more accuracy</li> <li>• Work safely and accurately with a range of simple tools</li> <li>• Think about their ideas as they make progress and be willing change things if this helps them improve their work</li> <li>• Sew using a range of different stitches, weave and knit</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluate their product against original design criteria e.g. how well it meets its intended purpose</li> <li>• Disassemble and evaluate familiar products</li> </ul>	<p><u>Mechanisms</u> Understand how mechanical systems such as levers and linkages or pneumatic systems create movement.</p> <p><u>Textiles</u> Recall facts and understand significant people within the textiles industry. 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> <p><u>Structures</u> Recall facts and understand why certain engineers and inventors are significant. Use his/her knowledge of techniques and the functional and aesthetic qualities of a wide range of materials to plan how to use them. Understand that structures can be strengthened by using different techniques.</p>
	<b>Design</b> Developing, planning (research) and communicating ideas.	<b>Make</b> Working with tools, equipment, materials and components to make quality products (inc- food)	<b>Evaluate</b> Evaluating processes and products	<b>Technical Knowledge</b>

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Year 4	<ul style="list-style-type: none"> <li>• Generate ideas, considering the purposes for which they are designing</li> <li>• Make labelled drawings from different views showing specific features</li> <li>• Develop a clear idea of what must be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making, if the first attempts fail</li> <li>• Evaluate products and identify criteria that can be used for their own designs</li> </ul>	<ul style="list-style-type: none"> <li>• Select appropriate tools and techniques for making their product</li> <li>• Measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques</li> <li>• Join and combine materials and components accurately in temporary and permanent ways</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluate their work both during and at the end of the assignment</li> <li>• Evaluate their products carrying out appropriate tests</li> </ul>	<p><u>Food and Nutrition</u> Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed. Understand and apply the principles of a healthy and varied diet.</p> <p><u>Mechanisms</u> Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] (pneumatics)</p> <p><u>Electrical systems</u> Recall facts and understand why certain engineers and inventors are significant. Understand why we use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].</p>
Year 5	<ul style="list-style-type: none"> <li>• Generate ideas through brainstorming and identify a purpose for their product</li> <li>• Draw up a specification for their design</li> <li>• Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making if the first attempts fail</li> <li>• Use results of investigations, information sources, including ICT when developing design ideas</li> </ul>	<ul style="list-style-type: none"> <li>• Select appropriate materials, tools and techniques</li> <li>• Measure and mark out accurately</li> <li>• Use skills in using different tools and equipment safely and accurately</li> <li>• Weigh and measure accurately (time, dry ingredients, liquids)</li> <li>• Apply the rules for basic food hygiene and other safe practices</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluate a product against the original design specification</li> <li>• Evaluate it personally and seek evaluation from others</li> </ul>	<p><u>Structure</u> Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.</p> <p><u>Textiles</u> Apply their understanding of computing to program, monitor and control their products. Understand how key events and individuals in design and technology have helped shape the world.</p> <p><u>Food &amp; Nutrition</u> To recall facts and understand why certain engineers and inventors are significant. To understand different tools serve a different purpose and different equipment is used to perform different tasks. Understand and apply the principles of a healthy and varied diet.</p>

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				Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.
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Year 6	<ul style="list-style-type: none"> <li>Communicate their ideas through detailed labelled drawings</li> <li>Develop a design specification</li> <li>Explore, develop and communicate aspects of their design proposals by modelling their ideas in a variety of ways</li> <li>Plan the order of their work, choosing appropriate materials, tools and techniques</li> </ul>	<ul style="list-style-type: none"> <li>Select appropriate tools, materials, components and techniques</li> <li>Assemble components make working models</li> <li>Use tools safely and accurately</li> <li>Construct products using permanent joining techniques</li> <li>Make modifications as they go along</li> </ul>	<ul style="list-style-type: none"> <li>Evaluate their products, identifying strengths and areas for development, and carrying out appropriate tests</li> <li>Record their evaluations using drawings with labels</li> <li>Evaluate against their original criteria and suggest ways that their product could be improved</li> </ul>	<p><u>Mechanisms</u> Recall facts and understand why certain engineers and inventors are significant. Understand how to use mechanical and electrical systems.</p> <p><u>Electrical systems</u> Recall facts and understand why certain engineers and inventors are significant. Understand why we use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].</p> <p><u>Textiles</u> Apply their understanding of computing to program, monitor and control their products. Understand how key events and individuals in design and technology have helped shape the world.</p>

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### End of Key Stage 2 Expectations - **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 and computer-aided design.

### End of Key Stage 2 Expectations - **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.

### End of Key Stage 2 Expectations - **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 have helped shape the world.