

Design & Technology Expectations

| | Design | Make | Evaluate | Technical Knowledge |
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| Year 1 Fruit salad Playgrounds | Generate ideas by drawing on their own experiences. Describe what their products are for. Develop and communicate ideas by talking and drawing. Model ideas by exploring materials. | Use practical skills and techniques follow procedures for safety and hygiene. Use a range of materials and components. Measure, mark out, assemble, join, combine, cut and shape materials and components. | Talk about their design ideas and what they are making. Make simple judgments about their products and suggest improvements. Explore and evaluate a range of existing products. Describe what they like and dislike about products. | Describe the simple working characteristics of materials and components. Explore the movement of simple mechanisms. Explore how freestanding structures can be made stronger, stiffer and more stable. Know that food ingredients should be combined. |
| Year 2 Bread Puppets | Describe what products they are designing and making. Describe what their products are for. Use simple design criteria to help develop their ideas. Model ideas by exploring materials. | Select from a range of tools and equipment, explaining their choices. Use a range of materials and components. Measure, mark out, assemble, join, combine, cut and shape materials and components. Use finishing techniques. | Talk about their design ideas and what they are making. Make simple judgments about their products and suggest improvements. Explore and evaluate a range of existing products. Describe what they like and dislike about products. | Describe the simple working characteristics of materials and components. Explore how a 3-D textiles product can be assembled Know that food ingredients should be combined. Use the correct technical vocabulary. |
| Year 3 Mechanical Toys Shelters | Describe the purpose of their products. Indicate the design features of their products. Explain how particular parts of their products work. Model ideas using prototypes, pattern pieces. | Explain their choice of tools and equipment. Follow procedures for safety and hygiene. Use a wider range of materials and components. Apply a range of finishing techniques, including those from art and design, with some accuracy. | Identify the strengths and areas for development in their ideas. Consider the views of others Investigate and analyse a range of existing products. Understand how other products and ideas have shaped the world. | Understand materials have both functional properties and aesthetic qualities. Understand that materials can be combined. Understand how mechanical systems work. Understand how a single fabric shape can be used. |

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| <p>Year 4</p> <p>Caribbean Food</p> <p>Torches</p> | <p>Work confidently within a range of contexts.</p> <p>Describe the purpose of their products.</p> <p>Indicate the design features of their products.</p> <p>Explain how particular parts of their products work.</p> | <p>Explain their choice of tools and equipment.</p> <p>Explain their choice of materials and components.</p> <p>Use a wider range of materials and components.</p> <p>Apply a range of finishing techniques, including those from art and design, with some accuracy.</p> | <p>Identify the strengths and areas for development in their ideas Consider the views of others, including intended users, to improve their work.</p> <p>Investigate and analyse a range of existing products.</p> <p>Understand how inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products and shaped the world.</p> | <p>Apply their understanding from science and maths to help design and make products that work.</p> <p>Understand that materials can be combined.</p> <p>Use the correct technical vocabulary.</p> <p>Use simple electrical circuits and components to create functional products.</p> <p>Know electrical systems have an input, process and output.</p> <p>Apply their knowledge how to make strong, stiff shell structures Know that food ingredients can be fresh, pre-cooked and processed.</p> |
| <p>Year 5</p> <p>Bridges</p> | <p>Describe the purpose of their products and explain how particular parts of their products work.</p> <p>Indicate the design features of their products.</p> <p>Generate innovative ideas and carry out research.</p> <p>Use annotated sketches, cross-sectional drawings, exploded diagrams and computer-aided design to develop and communicate their ideas.</p> | <p>Produce appropriate lists of tools, equipment and materials that they need and explain their choice.</p> <p>Explain their choice of materials and components.</p> <p>Accurately measure, mark out, cut shape, assemble, join and combine materials and components.</p> <p>Use techniques that involve a number of steps demonstrate resourcefulness when tackling practical problems.</p> | <p>Critically evaluate the quality of the design, manufacture and fitness for purpose of their products.</p> <p>Consider the views of others, Investigate and analyse a range of existing products.</p> <p>Understand how inventors, designers and engineers who have developed ground-breaking products and how they have helped shape the world.</p> | <p>Apply learning from science and maths to help design and make products that work.</p> <p>Understand that materials can be combined and mixed.</p> <p>Understand that mechanical systems have an input, process and output.</p> <p>Use the correct technical vocabulary.</p> <p>Understand how mechanical systems.</p> |

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| <p>Year 6</p> | <p>Work confidently within a range of contexts.</p> <p>Indicate the design features of their products that will appeal to intended users.</p> <p>Explain how particular parts of their products work.</p> <p>Generate innovative ideas, carry out research, using a range of sources.</p> <p>Develop a simple design specification to guide their thinking.</p> <p>Use annotated sketches, cross-sectional drawings, exploded diagrams and computer-aided design to develop and communicate their ideas.</p> <p>Make design decisions.</p> | <p>Explain their choice of tools, materials and components.</p> <p>Use a wider range of materials and components.</p> <p>Accurately apply a range of finishing techniques.</p> <p>Use techniques that involve a number of steps.</p> | <p>Consider the views of others, including intended users, to improve their work.</p> <p>Critically evaluate the quality of the design, manufacture and fitness for purpose of their products.</p> <p>Investigate and analyse a range of existing products.</p> <p>Understand how inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products and how they helped shape the world.</p> | <p>Apply learning from science and mathematics to help design and make products that work.</p> <p>Understand that materials have both functional properties and aesthetic qualities.</p> <p>Use and apply the correct technical vocabulary.</p> |
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