



Design & Technology Knowledge and Skills Progression

Year 1	Knowledge	Skills
Design	<p>Design purposeful, functional, appealing products for themselves and other users based on design criteria.</p> <p>Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</p>	<ul style="list-style-type: none"> • Design products that have a clear purpose and intended use. • Make products, refining the design as work progresses. • Use computing software to design. • Name the tools they are using. • Describe what they need to do next.
Make	<p>Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</p> <p>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</p>	<ul style="list-style-type: none"> • Create 3D structures using different materials. (home for fairy-tale character/Castle) • Continue to join different materials using glue and tape. • Mark out materials to be cut using a template. • Cut strip wood/dowel using a hacksaw and bench hook with full support. • Roll paper to create tubes. (creating castle) • Cut materials safely using scissors. (moving characters) • Tear paper. • Curl paper. • Use a hole punch. (creating castle) • Insert paper fasteners for card linkages. (moving characters) • Create hinges. (creating castle drawbridge)
Evaluate	<p>Explore and evaluate a range of existing products</p> <p>Evaluate their ideas and products against design criteria</p>	<ul style="list-style-type: none"> • Evaluate by discussing how well it works in relation to the purpose. • Identify strengths and weaknesses of their own product. • Answer questions about what they have made and how they created it.
Cooking and Nutrition.	<p>Use the basic principles of a healthy and varied diet to prepare dishes</p> <p>Understand where food comes from.</p>	<ul style="list-style-type: none"> • Group familiar food products. • Cut, peel, grate and chop a range of ingredients. • Work safely and hygienically. • Understand the need for a variety of foods in a diet. • Begin to assemble or cook ingredients.



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Year 2	Knowledge	Skills
<p>Design</p>	<p>Design purposeful, functional, appealing products for themselves and other users based on design criteria.</p> <p>Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</p>	<ul style="list-style-type: none"> • Design products that have a clear purpose and intended use. • Make products, refining the design as work progresses. • Use computing software to design. • Name the tools they are using. • Describe what they need to do next. • Develop their design ideas through discussion. • Identify a purpose for what they intend to design and make. • Generated ideas by drawing on their own and other people's experiences.
<p>Make</p>	<p>Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</p> <p>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</p>	<ul style="list-style-type: none"> • Join different materials competently .e.g. glue, tape. • Cut strip wood/dowel using hacksaw and bench hook. • Use a range of materials to create models with wheels and axels. E.g. tubes, dowel, cotton reels. • Continue to explore the uses of hinges and card linkages when model making and product designing. • Use simple pop ups. • Investigate strengthening sheet materials. • Measure and mark out to the nearest centimetre. • Create products using levers, wheels and winding mechanisms.
<p>Evaluate</p>	<p>Explore and evaluate a range of existing products</p> <p>Evaluate their ideas and products against design criteria</p>	<ul style="list-style-type: none"> • Explore objects and designs to identify likes and dislikes of the designs. • Suggest improvements to existing designs. • Explore how products have been created. • Identify some of the great designers throughout history and use these to generate ideas and designs.
<p>Cooking and Nutrition.</p>	<p>Use the basic principles of a healthy and varied diet to prepare dishes</p> <p>Understand where food comes from.</p>	<ul style="list-style-type: none"> • Work safely and hygienically. • Understand the need for a variety of foods in a diet. • Cut, peel, grate and chop a range of ingredients. • Measure and weigh food items using spoons, cups etc. • Measure and weigh using electronic scales • Assemble or cook ingredients.



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Year 3	Knowledge	Skills
<p>Design</p>	<p>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>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</p>	<ul style="list-style-type: none"> • Generate ideas for an item, considering its purpose and the user/users. • Identify a purpose and establish criteria for a successful product. • Plan the order of their work before starting. • Explore, develop and communicate design proposals by modelling ideas. • Make drawings with labels when designing.
<p>Make</p>	<p>Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.</p> <p>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>	<ul style="list-style-type: none"> • Create a puppet using a range of materials and tools. • Cutting materials correctly using appropriate tools. • Create a range of 3D models using different materials
<p>Evaluate</p>	<p>Investigate and analyse a range of existing products.</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p> <p>Understand how key events and individuals in design and technology have helped shape the world</p>	<ul style="list-style-type: none"> • Identify strengths and weaknesses of their design ideas • Talk about how closely their finished product meets their design criteria and meets the needs of the user. • Improve on existing designs, giving reasons for choices. • Identify some of their great designers in different areas of study to generate ideas from their designs.
<p>Cooking and Nutrition.</p>	<p>Understand and apply the principles of a healthy and varied diet.</p> <p>Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.</p> <p>Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</p>	<ul style="list-style-type: none"> • Cook dishes linked to the stone age. • Healthy food making- Food group types and healthy dishes. • Cooking dishes linked to the Greeks. • With moderate supervision begin to use the claw grip to cut harder foods using a serrated vegetable knife. E.g. carrot • With moderate supervision begin to use both the bridge hold and claw grip to cut the same food using a serrated vegetable knife. E.g. onion • With moderate supervision use a masher to mash hot food to a fairly smooth texture. • Crush garlic using a garlic press. • Grate harder foods using a grater e.g. apples, carrots. • Arrange and assemble ingredients for simple dishes.



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Year 4	Knowledge	Skills
Design	<p>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>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</p>	<ul style="list-style-type: none"> •Generate ideas, considering the purposes for which they are designing. •Make labelled drawings from different views showing specific features. •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. •Evaluate products and identify criteria that can be used for their own designs.
Make	<p>Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.</p> <p>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>	<ul style="list-style-type: none"> •Select appropriate tools and techniques for making their product. •Measure, mark out, cut and shape a range of materials using appropriate tools, equipment and techniques. •Join and combine materials and components accurately in temporary and permanent ways. •Use simple graphical communication techniques. •3D products with a join
Evaluate	<p>Investigate and analyse a range of existing products.</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p> <p>Understand how key events and individuals in design and technology have helped shape the world</p>	<ul style="list-style-type: none"> •Evaluate their work both during and at the end of the assignment. •Evaluate their products carrying out appropriate tests.
Cooking and Nutrition.	<p>Understand and apply the principles of a healthy and varied diet.</p> <p>Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.</p> <p>Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</p>	<ul style="list-style-type: none"> •Use the claw grip to cut harder foods using a serrated vegetable knife •Use both the bridge hold and claw grip to cut the same food using a serrated vegetable knife (eg onion) •Use a masher to mash hot food to a fairly smooth texture •Cut foods into evenly sized strips or cubes (eg peppers, cheese) •Peel harder food (eg apple, potato) •Crush garlic using a garlic press •Grate harder food using a grater (eg apples, carrots) •Mix, stir and combine wet and dry ingredients uniformly (eg dough) •Cream fat and sugar together using a mixing spoon •Knead and shape dough in to evenly sized shapes •Assemble and arrange ingredients for simple dishes (eg apple crumble, scrambled egg on toast)



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Year 5	Knowledge	Skills
Design	<p>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>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</p>	<ul style="list-style-type: none"> • Generate ideas through written plans and identify a purpose for their product. • Draw up a specification for their design. • 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. • Use results of investigations, information sources, including ICT when developing design ideas.
Make	<p>Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.</p> <p>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>	<ul style="list-style-type: none"> • Select appropriate materials, tools and techniques. • Measure and mark out accurately. • Use skills in using different tools and equipment safely and accurately. • Create working mechanism for solar system project.
Evaluate	<p>Investigate and analyse a range of existing products.</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p> <p>Understand how key events and individuals in design and technology have helped shape the world</p>	<ul style="list-style-type: none"> • Evaluate a product against the original design specification. • Evaluate it personally and seek evaluation from others.
Cooking and Nutrition.	<p>Understand and apply the principles of a healthy and varied diet.</p> <p>Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.</p> <p>Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</p>	<ul style="list-style-type: none"> • Finely grate hard foods (eg zesting, parmesan cheese) • With support, use a can opener and open ring-pull tin • Dice foods and cut them into evenly sized, fine pieces (eg garlic, vegetable batons, herbs) • Confidently use the claw grip to cut harder foods using a serrated vegetable knife • Confidently use both the bridge hold and claw grip to cut the same food using a serrated vegetable knife (eg onion) • Confidently peel harder food using a peeler (eg apple, potato) • With close supervision use a food processor or electric hand blender to mash, blend or puree hard ingredients or hot food (eg chickpeas for hummus or vegetables for soup) • With moderate supervision begin to separate eggs • Whisk using an electric hand mixer (eg eggs) • Cream fat and sugar together using an electric hand mixer • Use a rolling pin to roll out dough to a specific thickness (eg pizza) • Use biscuit cutters accurately to assemble, arrange and layer more advanced dishes (eg apple sponge pudding, shepherd's pie) • With close supervision begin to use the hob or electric saucepan (wok or stock pot) to cook simple dishes (eg burgers, soup) • Handle hot food safely, using oven gloves to carefully remove cooked food with a fish slice from a baking tray on to a cooling rack.



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Year 6	Knowledge	Skills
Design	<p>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>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</p>	<ul style="list-style-type: none"> • Communicate their ideas through detailed labelled drawings. • Develop a design specification. • Explore, develop and communicate aspects of their design proposals by modelling their ideas in a variety of ways. • Plan the order of their work. Choosing appropriate materials, tools and techniques.
Make	<p>Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.</p> <p>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>	<ul style="list-style-type: none"> • Select appropriate tools, materials, components and techniques. • Assemble components make working models. • Use tools safely and accurately. • Construct products using permanent joining techniques. • Make modifications as they go along. • Achieve a quality product.
Evaluate	<p>Investigate and analyse a range of existing products.</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p> <p>Understand how key events and individuals in design and technology have helped shape the world</p>	<ul style="list-style-type: none"> • Evaluate their products, identifying strengths and areas for development, and carrying out appropriate tests. • Record their evaluations using drawings with labels. • Evaluate against their original criteria and suggest ways that their product could be improved.
Cooking and Nutrition.	<p>Understand and apply the principles of a healthy and varied diet.</p> <p>Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.</p> <p>Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</p>	<ul style="list-style-type: none"> • With moderate supervision begin to use a can opener and open ring-pull tin. • Dice foods and cut them into evenly sized, fine pieces • Independently finely grate hard foods • Confidently use the claw grip to cut harder foods using a serrated vegetable knife. • Confidently use both the bridge hold and claw grip to cut the same food using a serrated vegetable knife. • Confidently peel harder food using a peeler. E.tg. apple, potato • With close supervision use a food processor or electric hand blender to mash, blend or puree hard or hot ingredients. • With moderate supervision whisk eggs using an electric hand mixer. • With close supervision use the hob or electric saucepan to cook simple dishes. • Handle hot food correctly, using oven gloves to carefully remove cooked food with a fish slice from a baking tray onto a cooling rack.



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