Design and Technology - Key Stage One
Progressive statements

Year Group	Design	Make	Evaluate	Technical Knowledge	Cooking and Nutrition
	• 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	• 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	• 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.
Year 1	• I can model designs using software with support • I can design products that have a clear purpose and an intended user	• I can make products • I can cut materials safely using tools provided • I can demonstrate a range of cutting and shaping techniques (*such as tearing, cutting, folding and curling*)	• I can say what I like and dislike about my existing designs • I can refine my design as my work progresses • I can explore objects and designs to identify likes and dislikes • I can explore how products have been created in the past	• I can measure and mark out to the nearest centimetre • I demonstrate a range of joining techniques (such as gluing, hinges, or combining materials to strengthen) • I can create products using levers, wheels and winding mechanisms	• I can cut, peel or grate ingredients safely and hygienically with support • I can measure or weigh using measuring cups or electronic scales • I can assemble or cook ingredients
Year 2	• I can model designs using software showing increasing independence • I can design products that have a clear purpose and meet the needs of the intended user	• I can shape textiles using templates • I can join textiles using running stitch • I can colour and decorate textiles using a number of techniques *(such as dyeing, adding sequins or printing)* • I can use materials to practise drilling, screwing, gluing and nailing to make and strengthen products	• I can suggest improvements to my work and the work of others • I can refine my design as my work progresses and explain my reasons for changes • I can explain why I like and dislike aspects of designs and objects • I can explore how products have been created throughout history	• I can diagnose faults in battery operated devices *(such as low battery, water damage or battery terminal damage)*	

Design and Technology - Key Stage Two

Progressive statements					
Year Group	**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	**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	**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 D+T have helped shape the world	**Technical Knowledge** • apply their understanding of how to strengthen, stiffen and reinforce more complex structures • understand and use mechanical systems in their products *[for example, gears, pulleys, cams, levers and linkages]* • 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.	**Cooking and Nutrition** • 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.
Year 3	• I can design with purpose by identifying opportunities to design • I can use software to design and represent product designs	• I can cut materials accurately and safely by selecting appropriate tools • I can measure and mark out to the nearest millilitre • I can apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (*such as slots or cut outs)* • I can select appropriate joining techniques • I can make products by working efficiently (*e.g. by carefully selecting materials)*	• I can refine work and techniques as work progresses, continually evaluating the product design	• I can control and monitor models using software designed for this purpose • I can use scientific knowledge about forces to chose appropriate mechanisms for a product *(such as levers, winding mechanisms, pulleys and gears)*	• I can prepare ingredients hygienically using appropriate utensils • I can measure ingredients to the nearest gram accurately • I can assemble or cook ingredients (controlling the temperature of the oven or hob if cooking) • I can follow a recipe

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	• 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	• 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	• 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 D+T have helped shape the world	• apply their understanding of how to strengthen, stiffen and reinforce more complex structures • understand and use mechanical systems in their products *[for example, gears, pulleys, cams, levers and linkages]* • 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.	• 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.
Year 4	• I can design with purpose by identifying opportunities to design • I choose appropriate software to design and represent product designs • I can identify some of the great designers in all of the areas of study (*including pioneers and horticultural techniques)* to generate ideas for designs	• I can make a range of products by working efficiently and independently (*e.g. by carefully selecting materials)* • I understand the need for a seam allowance • I can join textiles with appropriate stitching • I can select the most appropriate techniques to decorate textiles • I can choose suitable techniques to construct products or to repair items	• I can refine work and techniques as work progresses, continually evaluating the product design • I can disassemble products to understand how they work • I can improve upon existing designs giving detailed reasons for choices	• I can control and monitor models using software designed for this purpose • I can create series and parallel circuits • I can strengthen materials using suitable techniques	

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	• 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	• 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	• 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 D+T have helped shape the world	• apply their understanding of how to strengthen, stiffen and reinforce more complex structures • understand and use mechanical systems in their products *[for example, gears, pulleys, cams, levers and linkages]* • 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.	• 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.
Year 5	• I can design with the user in mind, motivated by the service a product will offer (rather than for profit). • I can use innovative combinations of electronics (*or computing*) and mechanics in product design. • I can combine elements of design from a range of inspirational designers throughout history, giving reasons for choices. • I can creative innovative designs that improve upon existing products. • I can use prototypes, cross-sectional diagrams and computer aided designs to represent designs	• I can create objects (*e.g. a cushion)* that employ a seam allowance • I can join textiles with a combinations of stitching techniques (*such as backstitch for seams, running stitch to attach decoration)* • I can use the qualities of materials to create suitable visual and tactile effects in the decoration of textiles (*such as soft decoration for comfort on a cushion)* • I can develop a range of practical skills to create products *(such as cutting, drilling and screwing, nailing, gluing, filing and sanding)* • I can ensure products have a high quality finish using art skills where appropriate.	• Evaluate the design of products so as to suggest improvements to the user experience • I can make products through stages of prototypes making continual refinements.	• I can write code to control and monitor models and products. • I can convert rotary motion to linear motion using cams.	

Progressive statements

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	• 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	• 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	• 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 D+T have helped shape the world	• apply their understanding of how to strengthen, stiffen and reinforce more complex structures • understand and use mechanical systems in their products *[for example, gears, pulleys, cams, levers and linkages]* • 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.	• 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.
Year 6	• I can design with the user in mind, motivated by the service a product will offer (rather than for profit). • I can use prototypes, cross-sectional diagrams and computer aided designs to represent designs with increasing complexity	• I can 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)* • I can ensure products have a high quality finish using art skills where appropriate.	• I can make products through stages of prototypes making continual refinements.	• I can independently write code to control and monitor models and products. • I can 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)* • I can create circuits using electronics kits that employ a number of components (such as LEDs, resistors, transistors and chips)	• I can understand the importance of correct storage and handling of ingredients *(using knowledge of micro-organisms)* • I can measure accurately and calculate ratios and ingredients to scale up or down from a recipe • I can demonstrate a range of baking and cooking techniques • I can create and refine recipes including ingredients, methods, cooking times and temperatures