Design Technology Progression of Skills

	Practical Skills							Designing, Making, Evaluating, Improving
	Food	Materials	Textiles	Electronics	Computing	Construction	Mechanics	
EYFS Statements from Development Matters and the Early Learning Goals	Handles tools safely and with increasing control (M+H 40-60) To handle tools and equipment effectively (M+H ELG) To use everyday language to talk about weight and capacity to compare quantities and objects and to solve problems (SSM ELG) To estimate, measure, weigh and compare and order objects and talk about properties (SSM ELG+)	Constructs with a purpose in mind using a variety of resources (EUMM 40-60) Manipulates materials to achieve a planned effect (EUMM 40-60) Selects tools and techniques needed to shape, assemble and join materials they are using (EUMM 40-60) To safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function (EUMM ELG)	Experiments to create different textures (EUMM 40-60) To safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function (EUMM ELG)	Uses ICT hardware to interact with age-appropriate computer software (Tech 40-60) Completes a simple program on a computer (Tech 40-60) To select and use technology for particular purposes (Tech ELG) To select appropriate applications that support an identified need (Tech ELG+)		Understands that different media can be combined to create different effects (EUMM 40-60) Manipulates materials to achieve a planned effect (EUMM 40-60) Constructs with a purpose in mind using a variety of resources (EUMM 40-60) To safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function (EUMM ELG)	Uses simple tools and techniques competently and appropriately (EUMM 40-60) To safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function (EUMM ELG)	Selects appropriate resources and adapts work where necessary (EUMM 40-60) Children develop their own ideas through selecting and using materials and working on processes that interest them. Through their explorations they find out and make decisions about how media and materials can be combined and changed (EUMM ELG+)
KS1	• Cut, peel or grate ingredients safely and hygienically. • Measure or weigh using measuring cups or electronic scales. • Assemble or cook healthy ingredients. • Understand where food comes from.	• Cut materials safely using tools provided. • Measure and mark out to the nearest centimetre. • Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling). • Demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen).	• Shape textiles using templates. • Join textiles using running stitch. • Colour and decorate textiles using a number of techniques (such as dyeing, adding sequins or printing).	.	• If appropriate, Model designs using software	· Use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen products.	· Create products using levers, wheels and winding mechanisms.	• Design products that have a clear purpose and an intended user. • Make products, refining the design as work progresses. • If appropriate, use software to design. • Begin to evaluate their ideas and products against design criteria.

Lower KS2	• Prepare ingredients hygienically using appropriate utensils. • Measure ingredients to the nearest gram accurately. • Follow a recipe. • Assemble or cook healthy ingredients (controlling the temperature of the oven or hob, if cooking). • Begin to understand how a variety of ingredients are grown, reared, caught and processed. • Develop understanding of a healthy and varied diet.	• Cut materials accurately and safely by selecting appropriate tools. • Measure and mark out to the nearest millimetre. • Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs). • Select appropriate joining techniques/ resources.	• Understand the need for a seam allowance. • Join textiles with appropriate stitching. • Select the most appropriate techniques to decorate textiles.	• Create series and parallel circuits.	• Begin to apply their understanding of computing to program, monitor and control their products.	• Choose suitable techniques to construct products or to repair items. • Strengthen materials using suitable techniques.	• Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as pneumatics, levers, winding mechanisms, pulleys and gears.)	• Design with purpose by identifying opportunities to design. • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, continually evaluating the product design. • Use software to design and represent product designs.
Upper KS2	• Understand the importance of correct storage and handling of ingredients (using knowledge of microorganisms). • Measure accurately and calculate ratios of ingredients to scale up or down from a recipe. • Demonstrate a range of baking and cooking techniques. • Create and refine recipes, including healthy seasonal ingredients, methods, cooking times and temperatures. • Understand how a variety of ingredients are grown, reared, caught and processed. •Understand and apply principles of a healthy and varied diet.	• 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). • 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).	• 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). • 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).	• Create circuits using electronics kits that employ a number of components (such as LEDs, resistors, transistors and chips.)	• Apply their understanding of computing to program, monitor and control their products.	• Develop a range of practical skills to create products (such as cutting, drilling and screwing, nailing, gluing, filling and sanding).	• Convert rotary motion to linear using cams. • Use innovative combinations of electronics (or computing) and mechanics in product designs.	• 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. • Ensure products have a high quality finish, using art skills where appropriate. • Use prototypes, cross sectional diagrams and computer aided designs to represent designs.