

Design and Technology Progression of Skills

	<i>KS1</i>	<i>LKS2</i>	<i>USK2</i>
<i>Design</i>	<i>Talk about their ideas making realistic suggestions, drawing on previous experience.</i> <i>Identify a target group for what they intend to design and make.</i> <i>Develop their design ideas from research</i> <i>Draw labelled pictures to show what they intend to make.</i> <i>Offer simple verbal and written explanations</i>	<i>Plan a simple sequence of actions.</i> <i>Recognise that their designs have to meet the needs of their intended audience.</i> <i>Consider purpose and appearance.</i> <i>Communicate ideas in different ways e.g. annotated sketches, discussions and lists.</i> <i>Shape, assemble and rearrange a range of materials and components to model ideas.</i>	<i>Plan a simple sequence of actions</i> <i>Recognise that their designs have to meet the needs of their intended audience.</i> <i>Consider purpose and appearance</i> <i>Communicate ideas in different ways e.g. annotated sketches, discussions, lists, computer software.</i> <i>Shape, assemble and rearrange a range of materials and components to model ideas.</i> <i>Select and use appropriate hand tools safely e.g. hole punch, needles, sharper scissors with close supervision.</i>

<i>Make</i>	Measure and mark out with help. Select and use appropriate tools e.g. scissors, hole punch, ruler. Demonstrate/apply a range of cutting and shaping techniques eg tearing, folding, cutting and curling. Demonstrate a range of joining techniques eg gluing, sticky tape, blu-tac, treasury tags, split-pins or combining materials to strengthen. Select from a variety of construction material eg boxes, pipe cleaners, card, string. Offer simple written explanations	Mark out and accurately cut materials using standard measures. Select and use appropriate hand tools safely e.g. hole punch, needles, sharper scissors with close supervision. Select and use with close supervision a wider range of tools with greater accuracy eg hacksaws, hand-drills, Gents saws, clamps, glue guns. Apply appropriate cutting and shaping techniques eg Jinks joints. Join textiles with an appropriate stitch e.g. running stitch. Use a wider variety of materials and textiles e.g. binka, felt, wool, cotton, yarn, buttons.	Mark out and cut materials with precision using standard measures. Select from and accurately use a wider range of tools hacksaws, hand-drills, Gents saws, clamps, cold melt, glue guns. Join textiles with an appropriate stitch e.g. running stitch and back stitch. Paper, cardboard, corrugated cardboard, hardboard, balsa, square sectioned wood. Use the qualities of materials to create subtle visual and tactile effects in the decoration of textiles (such as a soft decoration for comfort on a cushion). Consider the work of others to improve their own work. Use computer software for finishing. Use materials with awareness of conservation, cost and availability.
--------------------	---	---	--

<i>Evaluate</i>	Suggest improvements and next steps Start to evaluate own products as they are developed identifying strengths and possible changes they might make.	Consider the work of others to improve their own work.	Show an understanding of the qualities of materials to choose appropriate tools to cut and shape (such as the nature of the fabric may require sharper scissors than would be used to cut paper). Evaluate their ideas, plans and products against the design criteria (purpose, appearance, safety, reliability, cost, availability). Test and evaluate their work as it develops, making adjustments when necessary.
<i>Technical knowledge</i>	Make simple levers and sliders Investigate the use of hinges Investigate stable structures and find ways to strengthen them eg by combining materials to reinforce them. Investigate stable structures and find ways to strengthen them eg by combining materials to reinforce them.	Measure and accurately construct axles and making choices about wheel size. Develop scientific knowledge of forces e.g. friction. Understand how to identify, reinforce/ strengthen areas upon which force is exerted e.g. handles. Construct a simple series circuit using batteries, wires and bulbs.	Use scientific knowledge about forces eg gravity, pushes and pulls. Understand how a pulley or gear system works. Understand that the decision about where to make joins will affect the strength of the joint. eg butt joint v edge to edge joint). Understand how to strengthen and reinforce structures eg trusses/buttresses. Construct series and parallel circuits to incorporate a buzzer or switch).

<i>Cooking and nutrition</i>	To start to be able to use the bridge hold and the claw grip. With close supervision, peel soft vegetables using a peeler (eg cucumber). With close supervision, cut food into evenly sized largish pieces (eg potatoes). With close supervision, grate soft food, using a grater (eg cheese). With physical guidance and supervision, use a small table knife for spreading soft spreads on to bread. To begin to use simple finishing techniques to improve the appearance of their product, such as adding simple decorations.	Follow a recipe by preparing ingredients hygienically using appropriate utensils. To use a jug to measure liquids and weighing scales. With supervision, use the claw grip and bridge hold to cut harder foods using a serrated vegetable knife. Assemble and arrange ingredients for simple dishes (eg apple crumble, scrambled egg on toast). To begin to select and use different and appropriate finishing techniques to improve the appearance of a product such as hemming, tie-dye, fabric paints and digital graphics.	Accurately use a jug to measure liquids Accurately use weighing scales Calculate ratios of ingredients Confidently use the bridge hold and the claw grip on harder vegetables. Knead and shape dough in to a variety of shapes Use hands to shape mixtures in to evenly sized pieces. Use a rolling pin to roll out dough to a specific thickness. Dice foods and cut them into evenly sized, fine pieces. With supervision, finely grate hard foods. With support, use a can opener and open ring-pull tins. Refine the finish using techniques to improve the appearance of their product, such as sanding or a more precise scissor cut after roughly cutting out a shape.
-------------------------------------	---	---	--