

## KA Skills Progression in Design & Technology

EYFS		ELG: Creating with Materials			ELG: Fine Motor Skills		
Design		<p>Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Share their creations, explaining the process they have used. Make use of props and materials when role-playing characters in narratives and stories.</p> <p>Select tools &amp; techniques to shape, assemble and join. Discuss how to make an activity safe.</p>			<p>-Use a range of small tools, including scissors, paint brushes and cutlery - Begin to show accuracy and care when drawing.</p>		
		Y1	Y2	Y3	Y4	Y5	Y6
		<p>Have own ideas based on set design criteria Draw on own experiences to help generate ideas Explain what they want to do through talking, drawing and making models with card or paper Make suggestions as to how to proceed Use the appropriate vocabulary for naming and describing the materials and components Talk about who the product is for Use vocabulary – choose, investigate, taste, arrange, experiment, popular, sort, block graph, pictogram, idea, discuss, choose, draw, label, user, model, plan, list,</p>	<p>Have own ideas based on set design criteria and plan what to do next Use knowledge of existing products to produce ideas Explain purpose of product, how it will work and how it will be suitable for the user Explain what I want to do through talking, drawing, making templates and mock-ups (including use of ICT) Use vocabulary – explore, decide, purpose, ideas, predict, guess, survey, table, venn diagram, most/least common, mock-up, evaluate, try out, adapt</p>	<p>Begin to research others’ needs using pre-prepared questionnaires to begin to create design criteria Show design meets a range of requirements: appealing &amp; functional Consider who the product is being designed for Generate and communicate ideas through discussion and annotated sketches including use of ICT Adapt designs based on different factors: materials available, time, size etc Select the best design based on design criteria Describe design using an accurately labelled sketch and words Explain how product will work Create a plan which shows order, equipment and tools Make a prototype Use vocabulary – texture, taste, appearance, healthy, preference, criteria, data, frequency diagram, graphic, decision, fit for purpose, suggestion, constraints, appropriate, graph, data, sort, order, probable, possible, impossible, user, choice, decoration, quality, component, parts, purpose</p>	<p>Research others’ needs using own questionnaires to begin to create design criteria Show design meets a range of requirements: appealing, functional &amp; innovative and is fit for purpose Generate, develop and communicate ideas through discussion, annotated sketches, cross-sectional and exploded diagrams Select the best design based on design criteria and explain why it is the best design Suggest improvements for the design Produce a plan and explain it to others Say how realistic plan is. Make and explain design decisions considering availability of resources Check the safety of the product Begin to recognise the aesthetic qualities of a design Use vocabulary –model, labelled drawings, stiffening, reinforcing, notes, mock-up, specific, plan, decide, classify, prototype, communicate, specification</p>	<p>Use internet and questionnaires for research and design ideas Take a user’s views into account when designing and creating own design criteria fit for purpose and aimed at a specific group/individual Begin to consider needs/wants of individuals/groups when designing and ensure product is fit for purpose Generate, develop, model and communicate ideas through discussion, annotated sketches, cross-sectional diagrams, prototypes and pattern pieces Comment on the aesthetic qualities of a design Evaluate design based on design criteria Plan sequentially each stage of the making process including any health &amp; safety requirements Suggest alternative methods for making if first attempts fail Make design decisions considering time and resources. Clearly explain how parts of product will work. Model and refine design ideas by making prototypes and using pattern pieces. Use computer-aided designs with support Use vocabulary – sequence, annotated diagram, sketch, decision, choice, investigate, survey, research, intention, structure, outcome, evaluate, preferences, profile, costing, consumer, quality</p>	<p>Draw on a range of market research to inform design Create design criteria fit for purpose and aimed at a specific group/individual that is appealing, functional &amp; innovative Generate, develop, model and communicate ideas through discussion, annotated sketches, cross-sectional diagrams, prototypes, pattern pieces and computer-aided design Independently model and refine design ideas by making prototypes and using pattern pieces Make design decisions, considering, resources and cost Make modifications on the go Follow and refine a logical plan choosing appropriate tools materials and techniques. Clearly explain how parts of design will work, and how they are fit for purpose Design and make as part of a team Use computer-aided designs with support Use vocabulary –scale fair test, specification, flow chart, accurate, fabric swatches, working drawing, select, modify, improvements, design proposal</p>
		<p><b>SEND PROVISION:</b>  <b>Support pupils with vocabulary to plan designs</b>  <b>Provide example plans &amp; scaffolds to support</b>  <b>Word bank to support with technical vocabulary</b>  <b>Support pupils with less contexts – not so much choice</b>  <b>Checklist to support design criteria</b>  <b>Sound mats to support with labelling</b></p>					

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Make	All units	<p>Explain what I'm making Consider what I need to do next Measure, mark out, cut and shape, with support Choose suitable materials and explain choices Work in a safe and hygienic manner Begin to measure and join materials, with some support</p>	<p>Explain what I am making and why Make suggestions as to what I need to do next. Measure, mark out, cut and shape materials and components, with support. Describe which tools I'm using and why Choose suitable materials and explain choices depending on characteristics. Measure materials using standard units (to the nearest cm) with support</p>	<p>Explain what I am making and why it fits the purpose Select suitable tools/equipment, explain choices; begin to use them accurately Select appropriate materials, fit for purpose. Work through plan in order Consider how good product will be Begin to measure, mark out, cut and shape materials/components with some accuracy Begin to assemble, join and combine materials and components with some accuracy, using screws Select from and use a wider range of tools and equipment to perform practical tasks: KS1 tools independently + hot glue gun with support</p>	<p>Select suitable tools and equipment, explain choices in relation to required techniques and use accurately Select appropriate materials, fit for purpose; explain choices Work through plan in order. Realise if product is going to be good quality Measure, mark out, cut and shape materials/components with some accuracy Assemble, join and combine materials and components with some accuracy, using nails Apply a range of finishing techniques with some accuracy using varnish, sanding Select from and use a wider range of tools and equipment to perform practical tasks: KS1/Y3 tools independently + oven hob, masher, connecting electrical circuits, sharp needles for sewing, pin, measuring tape, drilling tool</p>	<p>Use selected tools/equipment with good level of precision Produce suitable lists of tools, equipment/materials needed Select appropriate materials, fit for purpose; explain choices, considering functionality Create and follow detailed step-by-step plan Explain how product will appeal to an audience Mainly accurately measure, mark out, cut and shape materials/components Mainly accurately assemble, join and combine materials/components, using nuts and bolts Use techniques that involve a small number of steps Begin to be resourceful with practical problems Select from and use a wider range of tools and equipment to perform practical tasks: KS1/Y4 tools independently + oven, grater, different sewing methods/thread materials, file, sand paper</p>	<p>Use selected tools and equipment precisely Produce suitable lists of tools, equipment, materials needed, considering constraints Select appropriate materials, fit for purpose; explain choices, considering functionality and aesthetics Create, follow, and adapt detailed step-by-step plans Explain how product will appeal to audience; make changes to improve quality Mainly accurately assemble, join and combine materials/components, using nuts and bolts Accurately measure, mark out, cut and shape materials/components Accurately assemble, join and combine materials/components Use electrical systems to control an output Accurately apply a range of finishing techniques Use techniques that involve a number of steps Be resourceful with practical problems Select from and use a wider range of tools and equipment to perform practical tasks: KS1/Y5 tools independently + computer programming, different knives and their uses, CAD design</p>
	Materials/structures	<p>Use joining techniques of glue, split pins, paper clips, sellotape Select tools/equipment to cut, shape, join, finish and explain choices: scissors Select from and use tools and equipment with support: scissors, glue, Sellotape, string, Try to use finishing techniques to make product look good, using paint Make model stronger if needed</p>	<p>Join materials/ using glue, Sellotape, masking tape, wood glue, staples Join components together in different ways, using frame joints Use finishing techniques to make product look good, using paint accurately Work safely Select from and use a range of tools and equipment to perform practical tasks: Y1 tools independently + handsaw with support</p>	<p>Use joining techniques to make a wooden box with a hinge Use finishing techniques: varnish</p>		<p>Make an Egyptian toy out of wood Mainly accurately apply a range of finishing techniques, using staining, drilling, sanding</p>	<p>Make a Fairground using a CAD Understand how to strengthen, stiffen and reinforce 3-D frameworks. Understand that mechanical and electrical systems have an input, process and an output. Understand how gears and pulleys can be used to speed up, slow down or change the direction of movement</p>
	Mechanisms	<p>Make a simple lever for a moving picture Select from and use tools and equipment with support: scissors, glue, Sellotape, string, hole punch Try to use finishing techniques to make product look good, using paint Begin to use levers or slides</p>	<p>Join materials/ using glue, Sellotape, masking tape, wood glue, staples Use finishing techniques to make product look good, using paint accurately Work safely Select from and use a range of tools and equipment to perform practical tasks: Y1 tools independently + handsaw with support</p>	<p>Make a range of mechanical poster toys using more complex levers &amp; linkages Select from and use a wider range of materials and components according to their functional properties and aesthetic qualities Select materials to produce a high-quality finish on a moving poster.</p>	<p>Make an electrical night light, using switches and bulbs Select suitable tools and equipment, explain choices in relation to required techniques and use accurately Begin to use electrical systems to control an output</p>	<p>Make an Egyptian toy including a moving part through levers, gears, cams, pulleys and linkages Assemble, join and combine materials/components, using nuts and bolts</p>	<p>Make a toy with moving parts and an electrical system Select from and use a wide range of materials and components according to their functional properties and aesthetic qualities Use electrical systems to control an output</p>
	Textiles	<p>Use joining techniques of glue and threading, split pins, paper clips Select tools/equipment to cut, shape, join, finish and explain choices: child safe needle and thread Select from and use tools and equipment with support: scissors, glue, child-safe plastic needle for sewing Join fabric using a running stitch, glue and tape Use basic sewing techniques. Measure, cut and join textiles to make a product, with some support Choose suitable textiles</p>			<p>Make an insulated money container Select appropriate materials, fit for purpose; explain choices Realise if product is going to be good quality Measure, mark out, cut and shape materials with some accuracy Apply a range of finishing techniques with some accuracy</p>	<p>Make a Tudor waistcoat Select appropriate materials, fit for purpose; explain choices Realise if product is going to be good quality Measure, mark out, cut and shape materials with some accuracy, including a number of different stitches to produce different patterns and textures Apply a range of finishing techniques, including an end piece Change and modify threads and fabrics to suit purpose</p>	

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<b>Food</b>	Describe textures Wash hands & clean surfaces Decorate/present food to make it appealing Cut, peel and grate safely, with support Select from and use tools and equipment with support: knife, peeler, grater	Keep a hygienic kitchen Create a healthy pizza Use ingredients and say where they've come from Cut, peel and slice with increasing confidence, kneading and baking Work safely and hygienically Select from and use a range of tools and equipment to perform practical tasks: Y1 tools independently + scales, different spoons, different knives	Select and use a range of tools and equipment for cutting, slicing, chopping, mixing Prepare and cook a variety of savoury dishes (a mezze) using a range of cooking techniques	Select and use a range of tools and equipment for dicing, combining, whisking, rolling & shaping Prepare and cook a variety of savoury dishes (pasta & sauce) using a range of cooking techniques	Select and use a range of tools and equipment for dicing, combining, whisking, cutting, rolling & shaping Weigh and measure ingredients accurately Prepare and cook a variety of savoury dishes (Spanish omelette) using a range of cooking and preparation techniques	* Select and use a range of tools and equipment for dicing, combining, whisking, cutting, rolling & shaping, heating and garnishing *Weigh and measure ingredients precisely *Measure and combine a range of ingredients * Prepare and cook a variety of sweet and savoury dishes using a range of cooking techniques, to create a 3-course meal
	<p><b>SEND PROVISION:</b>                  Support pupils to explore tools before use                  Scaffolds for descriptive language                  Consider measurement tools to support                  Fine motor support for use of tools                  Explore different textiles before use                  Provide word bank for technical vocabulary                  Visual STS to support with making                  Fine motor skills development to support with cutting – consider the tools used to be safe</p>					
<b>Evaluate</b>	Talk about my work, linking it to what I was asked to do Talk about existing products considering: use, materials, how they work, audience, where they might be used Talk about existing products, and say what is and isn't good Talk about things that other people have made Begin to talk about what could make a product better	Describe what went well, thinking about design criteria Express own opinions about existing products considering: use, materials, how they work, audience, where they might be used Evaluate how good existing products are Explain what I would do differently if I were to do it again and why	Look at design criteria while designing and making Use design criteria to evaluate finished product Say what I would change to make design better Begin to evaluate existing products, considering: how well they have been made, suitability of materials, whether they work, how they have been made	Refer to design criteria while designing and making Use criteria to evaluate product Begin to explain how the original design could be improved Evaluate existing products, considering: how well they've been made, effectiveness of materials, how they have been made, whether they are fit for purpose Begin to discuss when and where products were designed and by whom Research whether products can be recycled or reused Begin to learn about some inventors/designers/ engineers/chefs/manufacturers of ground-breaking products	Evaluate quality of design while designing and making Evaluate ideas and finished product against specification, considering purpose and appearance. Test and evaluate final product Evaluate and discuss existing products, considering: how well they've been made, materials, whether they work, how they have been made, fit for purpose Begin to evaluate how much products cost to make and how innovative they are Research how sustainable materials are Learn about some key inventors/designers/engineers/chefs/manufacturers of ground-breaking products	Evaluate quality of design while designing and making; is it fit for purpose? Evaluate ideas and finished product against specification, stating if it's fit for purpose Test and evaluate final product; explain what would improve it and the effect different resources may have had Evaluate thoroughly existing products considering: how well they've been made, materials, whether they work, how they've been made, fit for purpose Evaluate how much products cost to make and how innovative they are Research and compare sustainability of materials are Consider the impact of products beyond their intended purpose Discuss some key inventors/designers/engineers/ chefs/manufacturers of ground-breaking products
	<p><b>SEND PROVISION:</b>                  Scaffolds for evaluative language                  Support evaluations with comparisons 2 stars and a wish template                  Checklist to evaluate effectively                  Consider the use of IT based word banks which read back to support evaluation</p>					