

Design Technology Progression

	EYFS	Year One	Year Two	End of KS1 expectations	Year Three	Year Four	End of LKS2 expectations	Middle School Progression
Design	<ul style="list-style-type: none"> *Select appropriate resources *Use gestures, talking and arrangements of materials and components to show design * Use contexts set by the teacher and myself *Use language of designing and making (join, build, shape, longer, shorter, heavier etc.) 	<ul style="list-style-type: none"> * have own ideas * explain what I want to do *explain what my product is for, and how it will work * use pictures and words to plan, begin to use models * design a product for myself following design criteria *research similar existing products 	<ul style="list-style-type: none"> * have own ideas and plan what to do next * explain what I want to do and describe how I may do it * explain purpose of product, how it will work and how it will be suitable for the user * describe design using pictures, words, models, diagrams, begin to use ICT * design products for myself and others following design criteria * choose best tools and materials, and explain choices * use knowledge of existing products to produce ideas 	<ul style="list-style-type: none"> *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 	<ul style="list-style-type: none"> *begin to research others' needs show design meets a range of requirements *describe purpose of product *follow a given design criteria *have at least one idea about how to create product *create a plan which shows order, equipment and tools *describe design using an accurately labelled sketch and words *make design decisions *explain how product will work *make a prototype *begin to use computers to show design 	<ul style="list-style-type: none"> * use research for design ideas * show design meets a range of requirements and is fit for purpose *begin to create own design criteria *have at least one idea about how to create product and suggest improvements for design. * produce a plan and explain it to others *say how realistic plan is. *include an annotated sketch *make and explain design decisions considering availability of resources *explain how product will work * make a prototype *begin to use computers to show design. 	<ul style="list-style-type: none"> <i>*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</i> <i>*Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</i> 	<ul style="list-style-type: none"> <i>*use internet and questionnaires for research and design ideas</i> <i>*take a user's view into account when designing</i> <i>* begin to consider needs/wants of individuals/groups when designing and ensure product is fit for purpose</i> <i>*create own design criteria</i> <i>* have a range of ideas</i> <i>*produce a logical, realistic plan and explain it to others.</i> <i>*use cross-sectional planning and annotated sketches</i> <i>* make design decisions considering time and resources.</i> <i>*clearly explain how parts of product will work.</i> <i>*model and refine design ideas by making prototypes and using pattern pieces.</i> <i>*use computer-aided designs</i>
Make	<ul style="list-style-type: none"> *Construct with a purpose, using a variety of resources *Use simple tools and techniques *Build / construct with a wide range of objects *Select tools & techniques to shape, assemble and join *Replicate structures with materials / components *Discuss how to make an activity safe and hygienic *Record experiences by drawing, writing, voice recording *Understand different media can be combined for a purpose 	<ul style="list-style-type: none"> *explain what I'm making and why *consider what I need to do next *select tools/equipment to cut, shape, join, finish and explain choices *measure, mark out, cut and shape, with support *choose suitable materials and explain choices *try to use finishing techniques to make product look good *work in a safe and hygienic manner 	<ul style="list-style-type: none"> *explain what I am making and why it fits the purpose *make suggestions as to what I need to do next. *join materials/components together in different ways *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. *use finishing techniques to make product look good *work safely and hygienically 	<ul style="list-style-type: none"> *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 	<ul style="list-style-type: none"> *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 * begin to apply a range of finishing techniques with some accuracy 	<ul style="list-style-type: none"> * 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 *apply a range of finishing techniques with some accuracy 	<ul style="list-style-type: none"> <i>*Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</i> <i>*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</i> 	<ul style="list-style-type: none"> <i>* use selected tools/equipment with good level of precision</i> <i>* produce suitable lists of tools, equipment/materials needed</i> <i>*select appropriate materials, fit for purpose; explain choices, considering functionality</i> <i>* create and follow detailed step-by-step plan</i> <i>* explain how product will appeal to an audience</i> <i>* mainly accurately measure, mark out, cut and shape materials/components</i> <i>*mainly accurately assemble, join and combine materials/components</i> <i>* mainly accurately apply a range of finishing techniques</i> <i>* use techniques that involve a small number of steps</i> <i>* begin to be resourceful with practical problems</i>

Evaluate	<ul style="list-style-type: none">*Adapt work if necessary*Dismantle, examine, talk about existing objects/structures*Consider and manage some risks*Practise some appropriate safety measures independently*Talk about how things work*Look at similarities and differences between existing objects / materials / tools*Show an interest in technological toys*Describe textures	<ul style="list-style-type: none">*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 product better	<ul style="list-style-type: none">* describe what went well, thinking about design criteria* talk about existing products considering: use, materials, how they work, audience, where they might be used; express personal opinion*evaluate how good existing products are*talk about what I would do differently if I were to do it again and why	<ul style="list-style-type: none">*Explore and evaluate a range of existing products*Evaluate their ideas and products against design criteria	<ul style="list-style-type: none">* 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, materials, whether they work, how they have been made, fit for purpose* begin to understand by whom, when and where products were designed* learn about some inventors/designers/ engineers/chefs/ manufacturers of ground-breaking products	<ul style="list-style-type: none">*refer to design criteria while designing and making*use criteria to evaluate product* begin to explain how I could improve original design*evaluate existing products, considering: how well they've been made, materials, whether they work, how they have been made, fit for purpose* discuss by whom, when and where products were designed* research whether products can be recycled or reused* know about some inventors/designers/ engineers/chefs/manufacturers of ground-breaking products	<ul style="list-style-type: none"><i>*evaluate quality of design while designing and making</i><i>*evaluate ideas and finished product against specification, considering purpose and appearance.</i><i>*test and evaluate final product</i><i>* evaluate and discuss existing products, considering: how well they've been made, materials, whether they work, how they have been made, fit for purpose</i><i>* begin to evaluate how much products cost to make and how innovative they are</i><i>*research how sustainable materials are</i><i>*talk about some key inventors/designers/ engineers/ chefs/manufacturers of ground-breaking products</i>	<ul style="list-style-type: none"><i>*Investigate and analyse a range of existing products.</i><i>*Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</i><i>*Understand how key events and individuals in design and technology have helped shape the world</i>
Materials/structures		<ul style="list-style-type: none">*begin to measure and join materials, with some support*suggest ways to make material/product stronger*describe some different characteristics of materials*use joining, rolling or folding to make it stronger*use own ideas to try to make product stronger	<ul style="list-style-type: none">Cut materials safely using tools provided.Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling).	<ul style="list-style-type: none">*use appropriate materials*work accurately to make cuts and holes* join materials*measure carefully to avoid mistakes*continue working on product even if original didn't work*make a strong, stiff structure		<ul style="list-style-type: none">Cut materials accurately and safely by selecting appropriate tools.Apply appropriate cutting and shaping techniquesSelect appropriate joining techniques.	<ul style="list-style-type: none">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).	
Mechanisms		<ul style="list-style-type: none">*use levers or slides*begin to understand how to use wheels and axles	<ul style="list-style-type: none">* Create products using levers, wheels and winding mechanisms.	<ul style="list-style-type: none">*select appropriate tools / techniques*alter product after checking, to make it better*begin to try new/different ideas*select most appropriate tools / techniques*explain alterations to product after checking it*grow in confidence about trying new / different ideas.*use levers and linkages to create movement		<ul style="list-style-type: none">Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears).	<ul style="list-style-type: none">Convert rotary motion to linear using cams.Use innovative combinations of electronics (or computing) and mechanics in product designs.	
Textiles		<ul style="list-style-type: none">*choose suitable textiles*measure textiles*join textiles together to make a product, and explain how I did it*carefully cut textiles to produce accurate pieces*explain choices of textile*understand that a 3D textile structure can be made from two identical fabric shapes.	<ul style="list-style-type: none">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).	<ul style="list-style-type: none">*join different textiles in different ways*choose textiles considering appearance and functionality*think about user when choosing textiles*think about how to make product strong* begin to devise a template*explain how to join things in a different way*understand that a simple fabric shape can be used to make a 3D textiles project		<ul style="list-style-type: none">Understand the need for a seam allowance.Join textiles with appropriate stitching.Select the most appropriate techniques to decorate textiles.	<ul style="list-style-type: none">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).	

Food and Nutrition	<p>*Begin to understand some food preparation tools, techniques and processes</p> <p>*Practise stirring, mixing, pouring, blending</p> <p>*Discuss how to make an activity safe and hygienic</p> <p>*Discuss use of senses</p> <p>*Understand need for variety in food</p> <p>*Begin to understand that eating well contributes to good health</p>	<p>*describe textures</p> <p>*say where some foods come from, (i.e. plant or animal)</p> <p>*describe differences between some food groups (i.e. sweet, vegetable etc.)</p> <p>*discuss how fruit and vegetables are healthy</p> <p>*explain hygiene and keep a hygienic kitchen</p> <p>*describe properties of ingredients and importance of varied diet</p> <p>*describe how food is farmed, home-grown, caught</p> <p>*draw eat well plate; explain there are groups of food</p> <p>*describe “five a day”</p> <p>*cut, peel and grate with increasing confidence</p>	<ul style="list-style-type: none"> Cut, peel or grate ingredients safely and hygienically. Assemble or cook ingredients. 	<p>*carefully select ingredients</p> <p>*use equipment safely</p> <p>*make product look attractive</p> <p>*begin to understand food comes from UK and wider world</p> <p>*describe how healthy diet= variety/balance of food/drinks</p> <p>*prepare and cook some dishes safely and hygienically</p> <p>*grow in confidence using some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking</p> <p>*explain how to be safe/hygienic</p> <p>*understand ingredients can be fresh, pre-cooked or processed</p> <p>*begin to understand about food being grown, reared or caught in the UK or wider world</p> <p>*explain importance of food and drink for active, healthy bodies</p>	<p>Prepare ingredients hygienically using appropriate utensils. Measure ingredients to the nearest gram accurately. Follow a recipe.</p> <p>Assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking).</p>	<p>Understand the importance of correct storage and handling of ingredients (using knowledge of micro-organisms). 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 ingredients, methods, cooking times and temperatures.</p>
Electrical systems				<p>*develop from simple circuits into a higher number of components</p> <p>*program a computer to control product</p>	Create series and parallel circuits	Create circuits using electronics kits that employ a number of components (such as LEDs, resistors, transistors and chips).