



Bramingham Primary School

Design and Technology

Progression of Skills

	Design	Make	Evaluate	Technical knowledge – materials/ structures	Technical knowledge – Mechanisms	Technical knowledge – Textiles	Technical knowledge – Food and nutrition	Technical knowledge – Electrical systems
EYFS	<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"> *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"> *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"> *Begin to understand some food preparation tools, techniques and processes *Practise stirring, mixing, pouring, blending *Discuss how to make an activity safe and hygienic *Discuss use of senses *Understand need for variety in food *Begin to understand that eating well contributes to good health 	

<p>Year 1</p>	<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"> *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"> *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"> *Begin to measure and join materials, with some support *Describe differences in materials *Suggest ways to make material/product stronger 	<ul style="list-style-type: none"> *Begin to use levers or slides 	<ul style="list-style-type: none"> *Measure, cut and join textiles to make a product, with some support *Choose suitable textiles 	<ul style="list-style-type: none"> *Describe textures *Wash hands & clean surfaces *Think of interesting ways to decorate food *Say where some foods come from, (i.e. plant or animal) *Describe differences between some food groups (i.e. sweet, vegetable etc.) *Discuss how fruit and vegetables are healthy *Cut, peel and grate safely, with support 	
<p>Year 2</p>	<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 	<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 	<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"> *Measure materials *Describe some different characteristics of materials *Join materials in different ways *Use joining, rolling or folding to make it stronger 	<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"> *Measure textiles *Join textiles together to make a product, and explain how I did it *Carefully cut textiles to produce accurate pieces 	<ul style="list-style-type: none"> *Describe textures *Wash hands & clean surfaces *Think of interesting ways to decorate food *Say where some foods come from, (i.e. plant or animal) *Describe 	

	<ul style="list-style-type: none"> * 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"> 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"> *Use own ideas to try to make product stronger 		<ul style="list-style-type: none"> *Explain choices of textile *Understand that a 3D textile structure can be made from two identical fabric shapes. 	<ul style="list-style-type: none"> differences between some food groups (i.e. sweet, vegetable etc.) *Discuss how fruit and vegetables are healthy *Cut, peel and grate safely, with support 	
End of KS 1	<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, mockups and, where appropriate, information and communication technology 	<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"> *Explore and evaluate a range of existing products *Evaluate their ideas and products against design criteria 	<ul style="list-style-type: none"> *Build structures, exploring how they can be made stronger, stiffer and more stable 	<ul style="list-style-type: none"> *Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. 		<ul style="list-style-type: none"> *Use the basic principles of a healthy and varied diet to prepare dishes *Understand where food comes from. 	

<p>Year 3</p>	<p>*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</p>	<p>*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</p>	<p>* 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 groundbreaking products</p>	<p>*use appropriate materials *work accurately to make cuts and holes * join materials *begin to make strong structures</p>	<p>*select appropriate tools / techniques *alter product after checking, to make it better *begin to try new/different ideas *use simple lever and linkages to create movement</p>	<p>*join different textiles in different ways *choose textiles considering appearance and functionality *begin to understand that a simple fabric shape can be used to make a 3D textiles project</p>	<p>*carefully select ingredients *use equipment safely *make product look attractive *think about how to grow plants to use in cooking *begin to understand food comes from UK and wider world *describe how healthy diet= variety/balance of food/drinks *explain how food and drink are needed for active/healthy bodies. *prepare and cook some dishes safely and hygienically *grow in confidence using some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading,</p>	<p>*use simple circuit in product *learn about how to program a computer to control product.</p>
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							kneading and baking	
Year 4	<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"> * 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"> *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"> *measure carefully to avoid mistakes *attempt to make product strong *continue working on product even if original didn't work *make a strong, stiff structure 	<ul style="list-style-type: none"> *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 *use pneumatics to create movement 	<ul style="list-style-type: none"> *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"> *explain how to be safe/hygienic *think about presenting product in interesting/ attractive ways *understand ingredients can be fresh, pre-cooked or processed *begin to understand about food being grown, reared or caught in the UK or wider world *describe eat well plate and how a healthy diet=variety / balance of food and drinks *explain importance of food and drink for active, healthy bodies *prepare and cook some dishes safely 	<ul style="list-style-type: none"> *use number of components in circuit *program a computer to control product

							and hygienically *use some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking	
Year 5	<ul style="list-style-type: none"> *use internet and questionnaires for research and design ideas *take a user's view into account when designing * begin to consider needs/wants of individuals/groups when designing and ensure product is fit for purpose *create own design criteria * have a range of ideas *produce a logical, realistic plan and explain it to others. *use cross-sectional planning and annotated sketches 	<ul style="list-style-type: none"> * 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 stepby-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 * mainly accurately 	<ul style="list-style-type: none"> *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 *talk about some key inventors/designers/ engineers/ chefs/manufacturers of groundbreaking products 	<ul style="list-style-type: none"> *select materials carefully, considering intended use of product and appearance *explain how product meets design criteria *measure accurately enough to ensure precision *ensure product is strong and fit for purpose *begin to reinforce and strengthen a 3D frame 	<ul style="list-style-type: none"> *refine product after testing *grow in confidence about trying new / different ideas *begin to use cams, pulleys or gears to create movement 	<ul style="list-style-type: none"> *think about user and aesthetics when choosing textiles *use own template * think about how to make product strong and look better *think of a range of ways to join things *begin to understand that a single 3D textiles project can be made from a combination of fabric shapes. 	<ul style="list-style-type: none"> *explain how to be safe / hygienic and follow own guidelines *present product well - interesting, attractive, fit for purpose *begin to understand seasonality of foods *understand food can be grown, reared or caught in the UK and the wider world *describe how recipes can be adapted to change appearance, taste, texture, aroma 	<ul style="list-style-type: none"> *incorporate switch into product *confidently use number of components in circuit *begin to be able to program a computer to monitor changes in environment and control product

	<ul style="list-style-type: none"> * 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 	<ul style="list-style-type: none"> apply a range of finishing techniques * use techniques that involve a small number of steps * begin to be resourceful with practical problems 					<ul style="list-style-type: none"> *explain how there are different substances in food / drink needed for health *prepare and cook some savoury dishes safely and hygienically including, where appropriate, use of heat source * use range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. 	
Year 6	<ul style="list-style-type: none"> * draw on market research to inform design * use research of user's individual needs, wants, requirements for design * identify features of design that will appeal to the intended user 	<ul style="list-style-type: none"> * 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 	<ul style="list-style-type: none"> *evaluate quality of design while designing and making; is it fit for purpose? * keep checking design is best it can be. *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 	<ul style="list-style-type: none"> *select materials carefully, considering intended use of the product, the aesthetics and functionality. *explain how product meets design criteria * reinforce and strengthen a 3D frame 	<ul style="list-style-type: none"> *refine product after testing, considering aesthetics, functionality and purpose *incorporate hydraulics and pneumatics *be confident to try new / different ideas *use cams, 	<ul style="list-style-type: none"> *think about user's wants/needs and aesthetics when choosing textiles *make product attractive and strong 	<ul style="list-style-type: none"> *understand a recipe can be adapted by adding / substituting ingredients *explain seasonality of foods *learn about food processing methods 	<ul style="list-style-type: none"> *use different types of circuit in product * think of ways in which adding a circuit would improve product * program a computer to

	<ul style="list-style-type: none"> * create own design criteria and specification * come up with innovative design ideas *follow and refine a logical plan. *use annotated sketches, crosssectional planning and exploded diagrams * make design decisions, considering, resources and cost * clearly explain how parts of design will work, and how they are fit for purpose * independently model and refine design ideas by making prototypes and using pattern pieces * use computer-aided designs 	<ul style="list-style-type: none"> * create, follow, and adapt detailed step-by-step plans *explain how product will appeal to audience; make changes to improve quality * accurately measure, mark out, cut and shape materials/components * accurately assemble, join and combine materials/components * accurately apply a range of finishing techniques * use techniques that involve a number of steps * be resourceful with practical problems 	<ul style="list-style-type: none"> *do thorough evaluations of 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 discuss how sustainable materials are *consider the impact of products beyond their intended purpose *discuss some key inventors/designers/engineers/chefs/manufacturers of groundbreaking products 		<p>pulleys and gears to create movement</p>	<ul style="list-style-type: none"> *make a prototype *use a range of joining techniques *think about how product might be sold *think carefully about what would improve product *understand that a single 3D textiles project can be made from a combination of fabric shapes. 	<ul style="list-style-type: none"> *name some types of food that are grown, reared or caught in the UK or wider world *adapt recipes to change appearance, taste, texture or aroma. *describe some of the different substances in food and drink, and how they can affect health *prepare and cook a variety of savoury dishes safely and hygienically including, where appropriate, the use of heat source. *use a range of techniques confidently such as peeling, chopping, slicing, grating, mixing, spreading, 	<p>monitor changes in environment and control product</p>
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							kneading and baking.	
End of KS 2	<p>*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</p> <p>*Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross sectional and exploded diagrams, prototypes, pattern pieces and computer aided design</p>	<p>*Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</p> <p>*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</p>	<p>*Investigate and analyse a range of existing products.</p> <p>*Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p> <p>*Understand how key events and individuals in design and technology have helped shape the world</p>	<p>*Apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p>	<p>*Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</p>		<p>*Understand and apply the principles of a healthy and varied diet</p> <p>*Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</p> <p>*Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</p>	<p>*Understand and use electrical systems in their products [for example, series circuits]</p>