



	EYFS	Y1	Y2	End of KS expectations	Y3	Y4	Y5	Y6	End of KS expectations
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 *include an annotated sketch * make design decisions *explain how product will work * make a prototype 	<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 *describe design using an accurately labelled sketch and words *say how realistic plan is. *make and explain design decisions considering availability of resources *explain how product will work * make a prototype 	<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 * 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. *begin to use computers to show designs. 	<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 * create own design criteria and specification * come up with innovative design ideas *follow and refine a logical plan. *use annotated sketches, cross-sectional 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"> *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 *Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer aided design
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"> * 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 a 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 * accurately 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"> * 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 *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"> *Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately *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>Evaluate</p>	<p>*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</p>	<p>*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</p>	<p>* 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</p>	<p>*Explore and evaluate a range of existing products *Evaluate their ideas and products against design criteria</p>	<p>* look at design criteria while designing and making *use design criteria to evaluate finished product *begin to explain how I could improve original design *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</p>	<p>*refer to design criteria while designing and making *use criteria to evaluate product * say what I would change to make design better *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</p>	<p>*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 ground breaking products</p>	<p>*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 *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 ground breaking products</p>	<p>*Investigate and analyse a range of existing products. *Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. *Understand how key events and individuals in design and technology have helped shape the world</p>
<p>Technical Knowledge & Understanding Materials/ Structures</p>		<p>*begin to measure and join materials, with some support *describe differences in materials *suggest ways to make material/product stronger</p>	<p>*measure materials *describe some different characteristics of materials *join materials in different ways *use joining, rolling or folding to make it stronger *use own ideas to try to make product stronger</p>	<p>*Build structures, exploring how they can be made stronger, stiffer and more stable</p>	<p>*use appropriate materials *work accurately to make cuts and holes * join materials *begin to make strong structures</p>	<p>*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</p>	<p>*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</p>	<p>*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</p>	<p>*Apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p>
<p>Technical Knowledge & Understanding Mechanisms</p>		<p>*begin to use levers or slides</p>	<p>*use levers or slides *begin to understand how to use wheels and axles</p>		<p>*select appropriate tools / techniques *alter product after checking, to make it better *begin to try new/different ideas *use pneumatics to create movement</p>	<p>*select most appropriate tools / techniques *explain alterations to product after checking it *grow in confidence about trying new / different ideas. *use levers, slides and linkages to create movement</p>	<p>*refine product after testing *grow in confidence about trying new / different ideas *begin to use cams to create movement</p>	<p>*refine product after testing, considering aesthetics, functionality and purpose *be confident to try new / different ideas *use pulleys and gears to create movement</p>	<p>*Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</p>

<p>Technical Knowledge & Understanding Textiles</p>			<p>*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.</p>				<p>*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.</p>		
<p>Technical Knowledge & Understanding Electrical systems</p>						<p>*use number of components in circuit *program a computer to control product</p>		<p>*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</p>	<p>*Understand and use electrical systems in their products [for example, series circuits</p>
<p>Food & nutrition</p>	<p>*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>	<p>*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>	<p>*explain hygiene and keep a hygienic kitchen *describe properties of ingredients and importance of varied diet *say where food comes from (animal, underground etc.) *describe how food is farmed, home-grown, caught *draw eat well plate; explain there are groups of food *describe "five a day" *cut, peel and grate with increasing confidence</p>	<p>*Use the basic principles of a healthy and varied diet to prepare dishes *Understand where food comes from.</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>*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 and hygienically *use some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking</p>	<p>*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 *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.</p>	<p>*understand a recipe can be adapted by adding / substituting ingredients *explain seasonality of foods *learn about food processing methods *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, kneading and baking</p>	<p>*Understand and apply the principles of a healthy and varied diet *Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques *Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</p>