



Progression in Design and technology at Rockcliffe School

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design	<ul style="list-style-type: none"> <li>*Select appropriate resources</li> <li>*Use gestures, talking and arrangements of materials and components to show design</li> <li>* Use contexts set by the teacher and myself</li> <li>*Use language of designing and making (join, build, shape, longer, shorter, heavier etc.)</li> </ul>	<ul style="list-style-type: none"> <li>*have own ideas</li> <li>* explain what I want to do</li> <li>*explain what my product is for, and how it will work</li> <li>* use pictures and words to plan, begin to use models</li> <li>* design a product for myself following design criteria</li> <li>*research similar existing products</li> </ul>	<ul style="list-style-type: none"> <li>*have own ideas and plan what to do next</li> <li>* explain what I want to do and describe how I may do it</li> <li>* explain purpose of product, how it will work and how it will be suitable for the user</li> <li>* describe design using pictures, words, models, diagrams, begin to use ICT</li> <li>* design products for myself and others following design criteria</li> <li>* choose best tools and materials, and explain choices</li> <li>* use knowledge of existing products to produce ideas</li> </ul>	<ul style="list-style-type: none"> <li>*begin to research others' needs</li> <li>* show design meets a range of requirements</li> <li>* describe purpose of product</li> <li>* follow a given design criteria</li> <li>* have at least one idea about how to create product</li> <li>* create a plan which shows order, equipment and tools</li> <li>*describe design using an accurately labelled sketch and words</li> <li>* make design decisions</li> <li>*explain how product will work</li> <li>* make a prototype</li> <li>* begin to use computers to show design</li> </ul>	<ul style="list-style-type: none"> <li>*use research for design ideas</li> <li>* show design meets a range of requirements and is fit for purpose</li> <li>*begin to create own design criteria</li> <li>*have at least one idea about how to create product and suggest improvements for design.</li> <li>* produce a plan and explain it to others</li> <li>*say how realistic plan is.</li> <li>*include an annotated sketch</li> <li>*make and explain design decisions considering availability of resources</li> <li>*explain how product will work</li> <li>* make a prototype</li> <li>*begin to use computers to show design.</li> </ul>	<ul style="list-style-type: none"> <li>*use internet and questionnaires for research and design ideas</li> <li>*take a user's view into account when designing</li> <li>* begin to consider needs/wants of individuals/groups when designing and ensure product is fit for purpose</li> <li>*create own design criteria</li> <li>* have a range of ideas</li> <li>*produce a logical, realistic plan and explain it to others.</li> <li>*use cross-sectional planning and annotated sketches</li> <li>* make design decisions considering time and resources.</li> <li>*clearly explain how parts of product will work.</li> <li>*model and refine design ideas by</li> </ul>	<ul style="list-style-type: none"> <li>*draw on market research to inform design</li> <li>* use research of user's individual needs, wants, requirements for design</li> <li>* identify features of design that will appeal to the intended user</li> <li>* create own design criteria and specification</li> <li>* come up with innovative design ideas</li> <li>*follow and refine a logical plan.</li> <li>*use annotated sketches, cross sectional planning and exploded diagrams</li> <li>* make design decisions, considering, resources and cost</li> <li>* clearly explain how parts of design will work, and how</li> </ul>

						<p>making prototypes and using pattern pieces. *use computer-aided designs</p>	<p>they are fit for purpose * independently model and refine design ideas by making prototypes and using pattern pieces * use computer-aided designs</p>
Make	<p>*Construct with a purpose, using a variety of resources *Use simple tools and techniques *Build / construct with a wide range of objects *Select tools &amp; techniques to shape, assemble and join</p>	<p>*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,</p>	<p>*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</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</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,</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 *</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</p>

	<ul style="list-style-type: none"> <li>*Replicate structures with materials / components</li> <li>*Discuss how to make an activity safe and hygienic</li> <li>*Record experiences by drawing, writing, voice recording</li> <li>*Understand different media can be combined for a purpose</li> </ul>	<ul style="list-style-type: none"> <li>with support</li> <li>*choose suitable materials and explain choices</li> <li>*try to use finishing techniques to make product look good</li> <li>*work in a safe and hygienic manner</li> </ul>	<ul style="list-style-type: none"> <li>which tools I'm using and why</li> <li>*choose suitable materials and explain choices depending on characteristics.</li> <li>*use finishing techniques to make product look good</li> <li>*work safely and hygienically</li> </ul>	<ul style="list-style-type: none"> <li>materials/components with some accuracy</li> <li>* begin to assemble, join and combine materials and components with some accuracy</li> <li>* begin to apply a range of finishing techniques with some accuracy</li> </ul>	<ul style="list-style-type: none"> <li>join and combine materials and components with some accuracy</li> <li>*apply a range of finishing techniques with some accuracy</li> </ul>	<ul style="list-style-type: none"> <li>create and follow detailed step-by-step plan</li> <li>* explain how product will appeal to an audience</li> <li>* mainly accurately measure, mark out, cut and shape materials/components</li> <li>*mainly accurately assemble, join and combine materials/components</li> <li>* mainly accurately apply a range of finishing techniques</li> <li>* use techniques that involve a small number of steps</li> <li>* begin to be resourceful with practical problems</li> </ul>	<ul style="list-style-type: none"> <li>aesthetics</li> <li>* create, follow, and adapt detailed step-by-step plans</li> <li>*explain how product will appeal to audience; make changes to improve quality</li> <li>* accurately measure, mark out, cut and shape materials/components</li> <li>* accurately assemble, join and combine materials/components</li> <li>* accurately apply a range of finishing techniques</li> <li>* use techniques that involve a number of steps</li> <li>* be resourceful with practical problems</li> </ul>
Evaluate	<ul style="list-style-type: none"> <li>*Adapt work if necessary</li> <li>*Dismantle, examine, talk about existing objects/structures</li> <li>*Consider and manage some risks</li> </ul>	<ul style="list-style-type: none"> <li>*talk about my work, linking it to what I was asked to do</li> <li>* talk about existing products considering: use, materials, how they</li> </ul>	<ul style="list-style-type: none"> <li>*describe what went well, thinking about design criteria</li> <li>* talk about existing products considering: use, materials, how they work, audience, where they might</li> </ul>	<ul style="list-style-type: none"> <li>*look at design criteria while designing and making</li> <li>*use design criteria to evaluate finished product</li> </ul>	<ul style="list-style-type: none"> <li>*refer to design criteria while designing and making</li> <li>*use criteria to evaluate product</li> <li>* begin to explain how I could improve original design</li> <li>*evaluate existing products, considering: how well they've been made,</li> </ul>	<ul style="list-style-type: none"> <li>*evaluate quality of design while designing and making</li> <li>*evaluate ideas and finished product against specification, considering</li> </ul>	<ul style="list-style-type: none"> <li>*evaluate quality of design while designing and making; is it fit for purpose?</li> <li>* keep checking design is best it can be.</li> </ul>

<p>*Practise some appropriate safety measures independently</p> <p>*Talk about how things work</p> <p>*Look at similarities and differences between existing objects / materials / tools</p> <p>*Show an interest in technological toys</p> <p>*Describe textures</p>	<p>work, audience, where they might be used</p> <p>*talk about existing products, and say what is and isn't good</p> <p>* talk about things that other people have made</p> <p>*begin to talk about what could make product better</p>	<p>be used; express personal opinion</p> <p>*evaluate how good existing products are</p> <p>*talk about what I would do differently if I were to do it again and why</p>	<p>* say what I would change to make design better</p> <p>*begin to evaluate existing products, considering: how well they have been made, materials, whether they work, how they have been made, fit for purpose</p> <p>* begin to understand by whom, when and where products were designed</p> <p>* learn about some inventors/designers / engineers/chefs/manufacturers of ground breaking products</p>	<p>materials, whether they work, how they have been made, fit for purpose</p> <p>* discuss by whom, when and where products were designed</p> <p>* research whether products can be recycled or reused</p> <p>* know about some inventors/designers/engineers/chefs/manufacturers of ground-breaking products</p>	<p>purpose and appearance.</p> <p>*test and evaluate final product</p> <p>* evaluate and discuss existing products, considering: how well they've been made, materials, whether they work, how they have been made, fit for purpose</p> <p>* begin to evaluate how much products cost to make and how innovative they are</p> <p>*research how sustainable materials are</p> <p>*talk about some key inventors/designers / engineers/chefs/manufacturers of ground breaking products</p>	<p>*evaluate ideas and finished product against specification, stating if it's fit for purpose</p> <p>*test and evaluate final product; explain what would improve it and the effect different resources may have had</p> <p>*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</p> <p>*evaluate how much products cost to make and how innovative they are</p> <p>*research and discuss how sustainable materials are</p>	
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Technical knowledge - Structure		<p>*begin to measure and join materials, with some support</p> <p>*describe differences in materials</p> <p>*suggest ways to make material/product stronger</p>	<p>*measure materials</p> <p>*describe some different characteristics of materials</p> <p>*join materials in different ways</p> <p>*use joining, rolling or folding to make it stronger</p> <p>*use own ideas to try to make product stronger</p>	<p>*use appropriate materials</p> <p>*work accurately to make cuts and holes</p> <p>* join materials</p> <p>*begin to make strong structures</p>	<p>*measure carefully to avoid mistakes</p> <p>*attempt to make product strong</p> <p>*continue working on product even if original didn't work</p> <p>*make a strong, stiff structure</p>	<p>*select materials carefully, considering intended use of product and appearance</p> <p>*explain how product meets design criteria</p> <p>*measure accurately enough to ensure precision</p> <p>*ensure product is strong and fit for purpose</p> <p>*begin to reinforce and strengthen a 3D frame</p>	<p>*select materials carefully, considering intended use of the product, the aesthetics and functionality.</p> <p>*explain how product meets design criteria</p> <p>*reinforce and strengthen a 3D frame</p>
Technical knowledge -		<p>*begin to use levers or slides</p>	<p>*use levers or slides</p>	<p>*select appropriate tools / techniques</p>	<p>*select most appropriate tools / techniques</p>	<p>*refine product after testing</p>	<p>*refine product after testing, considering</p>

Mechanisms			<ul style="list-style-type: none"> <li>*begin to understand how to use wheels and axles</li> </ul>	<ul style="list-style-type: none"> <li>*alter product after checking, to make it better</li> <li>*begin to try new/different ideas</li> <li>*use simple lever and linkages to create movement</li> </ul>	<ul style="list-style-type: none"> <li>*explain alterations to product after checking it</li> <li>*grow in confidence about trying new / different ideas.</li> <li>*use levers and linkages to create movement</li> <li>*use pneumatics to create movement</li> </ul>	<ul style="list-style-type: none"> <li>*grow in confidence about trying new / different ideas</li> <li>*begin to use cams, pulleys or gears to create movement</li> </ul>	<ul style="list-style-type: none"> <li>aesthetics, functionality and purpose</li> <li>*incorporate hydraulics and pneumatics</li> <li>*be confident to try new / different ideas</li> <li>*use cams, pulleys and gears to create movement</li> </ul>
Technical knowledge - Textiles		<ul style="list-style-type: none"> <li>*measure, cut and join textiles to make a product, with some support</li> <li>*choose suitable textiles</li> </ul>	<ul style="list-style-type: none"> <li>*measure textiles</li> <li>*join textiles together to make a product, and explain how I did it</li> <li>*carefully cut textiles to produce accurate pieces</li> <li>*explain choices of textile</li> <li>*understand that a 3D textile structure can be made from two identical fabric shapes.</li> </ul>	<ul style="list-style-type: none"> <li>*join different textiles in different ways</li> <li>*choose textiles considering appearance and functionality</li> <li>*begin to understand that a simple fabric shape can be used to make a 3D textiles project</li> </ul>	<ul style="list-style-type: none"> <li>*think about user when choosing textiles</li> <li>*think about how to make product strong</li> <li>*begin to devise a template</li> <li>*explain how to join things in a different way</li> <li>*understand that a simple fabric shape can be used to make a 3D textiles project</li> </ul>	<ul style="list-style-type: none"> <li>*think about user and aesthetics when choosing textiles</li> <li>*use own template</li> <li>*think about how to make product strong and look better</li> <li>*think of a range of ways to join things</li> <li>*begin to understand that a single 3D textiles project can be made from a</li> </ul>	<ul style="list-style-type: none"> <li>*think about user's wants/needs and aesthetics when choosing textiles</li> <li>*make product attractive and strong</li> <li>*make a prototype</li> <li>*use a range of joining techniques</li> <li>*think about how product might be sold</li> </ul>

						combination of fabric shapes.	<p>*think carefully about what would improve product</p> <p>*understand that a single 3D textiles project can be made from a combination of fabric shapes.</p>
Technical knowledge -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>*wash hands &amp; clean surfaces</p> <p>*think of interesting ways to decorate food</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>*explain hygiene and keep a hygienic kitchen</p> <p>*describe properties of ingredients and importance of varied diet</p> <p>*say where food comes from (animal, underground etc.)</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>*carefully select ingredients</p> <p>*use equipment safely</p> <p>*make product look attractive</p> <p>*think about how to grow plants to use in cooking</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>*explain how food and drink are needed for</p>	<p>*explain how to be safe/hygienic</p> <p>*think about presenting product in interesting/ attractive ways</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>*describe eat well plate and how a healthy diet=variety / balance of food and drinks</p> <p>*explain importance of food and drink for active, healthy bodies</p>	<p>*explain how to be safe / hygienic and follow own guidelines</p> <p>*present product well - interesting, attractive, fit for purpose</p> <p>*begin to understand seasonality of foods</p> <p>*understand food can be grown, reared or caught in the UK and the wider world</p> <p>*describe how recipes can be adapted to change appearance, taste, texture, aroma</p>	<p>*understand a recipe can be adapted by adding / substituting ingredients</p> <p>*explain seasonality of foods</p> <p>*learn about food processing methods</p> <p>*name some types of food that are grown, reared or caught in the UK or wider world</p> <p>*adapt recipes to change appearance, taste, texture or aroma.</p> <p>*describe some of the different substances in food</p>

		<p>*discuss how fruit and vegetables are healthy</p> <p>*cut, peel and grate safely, with support</p>	<p>*cut, peel and grate with increasing confidence</p>	<p>active/healthy bodies.</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>*prepare and cook some dishes safely and hygienically</p> <p>*use some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking</p>	<p>*explain how there are different substances in food / drink needed for health</p> <p>*prepare and cook some savoury dishes safely and hygienically including, where appropriate, use of heat source</p> <p>* use range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</p>	<p>and drink, and how they can affect health</p> <p>*prepare and cook a variety of savoury dishes safely and hygienically including, where appropriate, the use of heat source.</p> <p>*use a range of techniques confidently such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking</p>
Technical knowledge -Electrical systems				<p>*use simple circuit in product</p> <p>*learn about how to program a computer to control product.</p>	<p>*use number of components in circuit</p> <p>*program a computer to control product</p>	<p>*incorporate switch into product</p> <p>*confidently use number of components in circuit</p> <p>*begin to be able to program a computer to monitor changes in environment and control product</p>	<p>*use different types of circuit in product</p> <p>* think of ways in which adding a circuit would improve product</p> <p>* program a computer to monitor changes in environment and control product</p>