

TEAM Multi Academy Trust - Design Technology. Progression of Knowledge, skills and vocabulary

	EYFS	Year One	Year Two	End of KS expectations	Year Three	Year Four	Year Five	Year Six	End of KS expectations
SKILLS									
<b>D e s i g n</b>	<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> </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>*Design purposeful, functional, appealing products for themselves and other users based on design criteria</li> <li>*Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</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 making prototypes and using pattern pieces.</li> <li>*use computer-aided designs</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 they are fit for purpose</li> <li>* independently model and refine design ideas by making prototypes and using pattern pieces</li> <li>* use computer-aided designs</li> </ul>	<ul style="list-style-type: none"> <li>*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</li> <li>*Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li> </ul>

TEAM Multi Academy Trust - Design Technology. Progression of Knowledge, skills and vocabulary

	EYFS	Year One	Year Two	End of KS expectations	Year Three	Year Four	Year Five	Year Six	End of KS expectations
<b>E v a l u a t e</b>	<p>*Adapt work if necessary</p> <p>*Dismantle, examine, talk about existing objects/structures</p> <p>*Consider and manage some risks</p> <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>*talk about my work, linking it to what I was asked to do</p> <p>* talk about existing products considering: use, materials, how they 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>* describe what went well, thinking about design criteria</p> <p>* talk about existing products considering: use, materials, how they work, audience, where they might 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>*Explore and evaluate a range of existing products</p> <p>*Evaluate their ideas and products against design criteria</p>	<p>* look at design criteria while designing and making</p> <p>*use design criteria to evaluate finished product</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>*refer to design criteria while designing and making</p> <p>*use criteria to evaluate product</p> <p>* begin to explain how I could improve original design</p> <p>*evaluate existing products, considering: how well they've been made, 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>*evaluate quality of design while designing and making</p> <p>*evaluate ideas and finished product against specification, considering 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 quality of design while designing and making; is it fit for purpose?</p> <p>* keep checking design is best it can be.</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> <p>*consider the impact of products beyond their intended purpose</p> <p>*discuss some key inventors/designers/ engineers/chefs/manufacturers of ground-breaking products</p>	<p><i>*Investigate and analyse a range of existing products.</i></p> <p><i>*Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</i></p> <p><i>*Understand how key events and individuals in design and technology have helped shape the world</i></p>
<b>V o c a b u l a r y</b>	<p>join, build, shape, longer, shorter, heavier</p> <p>*Describe textures</p> <p>*Discuss how to make an activity safe and hygienic</p>	<p>planning, investigating design, evaluate, make, user, purpose, ideas, product,</p>	<p>investigating, planning, design, make, evaluate, user, purpose, ideas, design criteria, product, function</p>		<p>user, purpose, design, model, evaluate, prototype, annotated sketch, functional, innovative, investigate, label, drawing, function, planning, design criteria, annotated sketch, appealing</p>	<p>evaluating, design brief design criteria, innovative, prototype, user, purpose, function, prototype, design criteria, innovative, appealing, design brief, planning, annotated sketch, sensory evaluations</p>	<p>design decisions, functionality, authentic, user, purpose, design specification, design brief, innovative, research, evaluate, design criteria, annotate, evaluate, mock-up, prototype</p>	<p>function, innovative, design specification, design brief, user, purpose design brief, design specification, prototype, annotated sketch, purpose, user, innovation, research, functional, mock-up, prototype</p>	

TEAM Multi Academy Trust - Design Technology. Progression of Knowledge, skills and vocabulary

KNOWLEDGE									
	EYFS	Year One	Year Two	End of KS expectations	Year Three	Year Four	Year Five	Year Six	End of KS expectations
<b>M</b> <b>a</b> <b>t</b> <b>e</b> <b>r</b> <b>i</b> <b>a</b> <b>l</b> <b>s</b> <b>/</b> <b>s</b> <b>t</b> <b>r</b> <b>u</b> <b>c</b> <b>t</b> <b>u</b> <b>r</b> <b>e</b> <b>s</b>		*begin to measure and join materials, with some support *describe differences in materials *suggest ways to make material/product stronger	*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	*Build structures, exploring how they can be made stronger, stiffer and more stable	*use appropriate materials *work accurately to make cuts and holes * join materials *begin to make strong structures	*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	*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	*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	*Apply their understanding of how to strengthen, stiffen and reinforce more <i>complex structures</i>
<b>V</b> <b>o</b> <b>c</b> <b>a</b> <b>b</b> <b>u</b> <b>l</b> <b>a</b> <b>r</b> <b>y</b>		cut, fold, join, fix structure, wall, tower, framework, weak, strong, base, top, underneath, side, edge, surface, thinner, thicker, corner, point, straight, curved, metal, wood, plastic circle, triangle, square, rectangle, cuboid, cube, cylinder			shell structure, three-dimensional (3-D) shape, net, cube, cuboid, prism, vertex, edge, face, length, width, breadth, capacity, marking out, scoring, shaping, tabs, adhesives, joining, assemble, accuracy, material, stiff, strong, reduce, reuse, recycle, corrugating, ribbing, laminating, font, lettering, text, graphics, decision,		frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent		
<b>M</b> <b>e</b> <b>c</b> <b>h</b> <b>a</b> <b>n</b> <b>i</b> <b>s</b> <b>m</b> <b>s</b>		*begin to use levers or slides	*use levers or slides *begin to understand how to use wheels and axles	*Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.	*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	*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	*refine product after testing *grow in confidence about trying new / different ideas *begin to use cams, pulleys or gears to create movement	*refine product after testing, considering aesthetics, functionality and purpose *incorporate hydraulics and pneumatics *be confident to try new / different ideas *use cams, pulleys and gears to create movement	*Understand and use mechanical systems in their products [for example, <i>gears, pulleys, cams, levers and linkages</i> ]
<b>V</b> <b>o</b> <b>c</b> <b>a</b> <b>b</b> <b>u</b> <b>l</b> <b>a</b> <b>r</b> <b>y</b>		slider, lever, pivot, slot, bridge/guide, card, masking tape, paper fastener, join, pull, push, up, down, straight, curve, forwards, backwards	vehicle, wheel, axle, axle holder, chassis, body, cab assembling, cutting, joining, shaping, finishing, fixed, free, moving, mechanism names of tools,		mechanism, lever, linkage, pivot, slot, bridge, guide system, input, process, output linear, rotary, oscillating, reciprocating		pulley, drive belt, gear, rotation, spindle, driver, follower, ratio, transmit, axle, motor, circuit, switch, circuit diagram, annotated drawings, exploded diagrams, mechanical system, electrical system, input, process, output		

TEAM Multi Academy Trust - Design Technology. Progression of Knowledge, skills and vocabulary

			equipment and materials used						
	EYFS	Year One	Year Two	End of KS expectations	Year Three	Year Four	Year Five	Year Six	End of KS expectations
<b>Textiles</b>		*measure, cut and join textiles to make a product, with some support *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.		*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	*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	*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.	*think about user's wants/needs and aesthetics when choosing textiles *make product attractive and strong *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.	
<b>Vocabulary</b>		joining and finishing techniques, tools, fabrics and components, template, pattern pieces, mark out, join, decorate, finish			fabric, names of fabrics, fastening, compartment, zip, button, structure, finishing technique, strength, weakness, stiffening, templates, stitch, seam, seam allowance		seam, seam allowance, wadding, reinforce, right side, wrong side, hem, template, pattern pieces, name of textiles and fastenings used, pins, needles, thread, pinking shears, fastenings,		
<b>Electrical systems Computer control and monitoring</b>					*use simple circuit in product *learn about how to program a computer to control product.	*use number of components in circuit *program a computer to control product	*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	*use different types of circuit in product *think of ways in which adding a circuit would improve product *program a computer to monitor changes in environment and control product	<i>*Understand and use electrical systems in their products [for example, series circuits</i>
<b>Vocabulary</b>					series circuit, fault, connection, toggle switch, push-to-make switch, push-to-break switch, battery, battery holder, bulb, bulb holder, wire, insulator, conductor, crocodile clip, control, program, system, input device, output device	reed switch, toggle switch, push-to-make switch, push-to-break switch, light dependent resistor (LDR), tilt switch, light emitting diode (LED), bulb, bulb holder, battery, battery holder, USB cable, wire, insulator, conductor, crocodile clip control, program, system, input device,			

TEAM Multi Academy Trust - Design Technology. Progression of Knowledge, skills and vocabulary

	EYFS	Year One	Year Two	End of KS expectations	Year Three	Year Four	Year Five	Year Six	End of KS expectations
							output device, series circuit, parallel circuit		
<b>Food and nutrition</b>	<ul style="list-style-type: none"> <li>*Begin to understand some food preparation tools, techniques and processes</li> <li>*Practise stirring, mixing, pouring, blending</li> <li>*Discuss how to make an activity safe and hygienic</li> <li>*Discuss use of senses</li> <li>*Understand need for variety in food</li> <li>*Begin to understand that eating well contributes to good health</li> </ul>	<ul style="list-style-type: none"> <li>*describe textures</li> <li>*wash hands &amp; clean surfaces</li> <li>*think of interesting ways to decorate food</li> <li>*say where some foods come from, (i.e. plant or animal)</li> <li>*describe differences between some food groups (i.e. sweet, vegetable etc.)</li> <li>*discuss how fruit and vegetables are healthy</li> <li>*cut, peel and grate safely, with support</li> </ul>	<ul style="list-style-type: none"> <li>*explain hygiene and keep a hygienic kitchen</li> <li>*describe properties of ingredients and importance of varied diet</li> <li>*say where food comes from (animal, underground etc.)</li> <li>*describe how food is farmed, home-grown, caught</li> <li>*draw eat well plate; explain there are groups of food</li> <li>*describe "five a day"</li> <li>*cut, peel and grate with increasing confidence</li> </ul>	<ul style="list-style-type: none"> <li>*Use the basic principles of a healthy and varied diet to prepare dishes</li> <li>*Understand where food comes from.</li> </ul>	<ul style="list-style-type: none"> <li>*carefully select ingredients</li> <li>*use equipment safely</li> <li>*make product look attractive</li> <li>*think about how to grow plants to use in cooking</li> <li>*begin to understand food comes from UK and wider world</li> <li>*describe how healthy diet= variety/balance of food/drinks</li> <li>*explain how food and drink are needed for active/healthy bodies.</li> <li>*prepare and cook some dishes safely and hygienically</li> <li>*grow in confidence using some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking</li> </ul>	<ul style="list-style-type: none"> <li>*explain how to be safe/hygienic</li> <li>*think about presenting product in interesting/attractive ways</li> <li>*understand ingredients can be fresh, pre-cooked or processed</li> <li>*begin to understand about food being grown, reared or caught in the UK or wider world</li> <li>*describe eat well plate and how a healthy diet=variety / balance of food and drinks</li> <li>*explain importance of food and drink for active, healthy bodies</li> <li>*prepare and cook some dishes safely and hygienically</li> <li>*use some of the following techniques: peeling, chopping, slicing, grating, mixing,</li> </ul>			

TEAM Multi Academy Trust - Design Technology. Progression of Knowledge, skills and vocabulary

	EYFS	Year One	Year Two	End of KS expectations	Year Three	Year Four	Year Five	Year Six	End of KS expectations
<b>V o c a b u l a r y</b>	fruit and vegetable names, names of equipment and utensils sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients,	fruit and vegetable names, names of equipment and utensils sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients	name of products, names of equipment, utensils, techniques and ingredients texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, moist, cook, fresh, savoury, hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy/varied diet	name of products, names of equipment, utensils, techniques and ingredients texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, moist, cook, fresh, savoury, hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy/varied diet	ingredients, yeast, dough, bran, flour, wholemeal, unleavened, baking soda, spice, herbs fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy, intolerance, savoury, source, seasonality utensils, combine, fold, knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble				spreading, kneading and baking

TEAM Multi Academy Trust - Design Technology. Progression of Knowledge, skills and vocabulary

--	--	--	--	--	--	--

TEAM Multi Academy Trust - Design Technology. Progression of Knowledge, skills and vocabulary

--	--	--	--	--	--	--

TEAM Multi Academy Trust - Design Technology. Progression of Knowledge, skills and vocabulary

--	--	--	--	--	--	--

TEAM Multi Academy Trust - Design Technology. Progression of Knowledge, skills and vocabulary

--	--	--	--	--	--	--



