

DT progression skills and vocabulary



To be viewed in conjunction with the Mordiford Design and Technology Objectives Progression document. This document details skills and vocabulary progression within project specific areas.

EYFS	Characteristics of effective learning	Early Learning Goals
	<p>Show curiosity about objects, events and people Questions why things happen Engage in open-ended activity Thinking of ideas Find ways to solve problems / find new ways to do things / test their ideas Use senses to explore the world around them Create simple representations of events, people and objects Planning, making decisions about how to approach a task, solve a problem and reach a goal Checking how well their activities are going Changing strategy as needed Reviewing how well the approach worked</p>	<p>Choose the resources they need for their chosen activities Handle equipment and tools effectively Children know the importance for good health of a healthy diet They safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Children use what they have learnt about media and materials in original ways, thinking about uses and purposes. They represent their own ideas, thoughts and feelings through design and technology</p>

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Generating ideas - designing						
	<ul style="list-style-type: none"> Design appealing products for a particular user based on simple design criteria. Generate initial ideas and design criteria through own experiences. Develop and communicate these ideas through talk and drawings and mock ups where relevant. 	<ul style="list-style-type: none"> Generate ideas based on simple design criteria and their own experiences, explaining what they could make. Develop, model and communicate their ideas through talking, mock-ups and drawings. 	<ul style="list-style-type: none"> Generate realistic ideas through discussion and design criteria for an appealing, functional product fit for purpose and specific user/s. Use annotated sketches, prototypes, final product sketches and pattern pieces; communication technology, such as web-based recipes, to develop and communicate ideas. 	<ul style="list-style-type: none"> Generate and clarify ideas through discussion with peers to develop design criteria to inform the design of products that are fit for purpose, aimed at particular individuals or groups. Use annotated sketches and appropriate information and communication technology, such as web-based recipes, to develop and communicate ideas. Generate, develop, model and communicate realistic ideas through discussion and, as appropriate, annotated sketches, cross-sectional and exploded diagrams. 	<ul style="list-style-type: none"> Generate innovative ideas through research including surveys, interviews and questionnaires and discussion with peers to develop a design brief and criteria for a design specification. Design purposeful, functional, appealing products for the intended user that are fit for purpose based on a simple design specification. Develop and communicate ideas through discussion, annotated drawings, exploded drawings and drawings from different views. and, where appropriate, computer-aided design 	<ul style="list-style-type: none"> Use research using surveys, interviews, questionnaires and web-based resources, to develop a design specification for a range of functional products. Develop a simple design specification to guide the development of their ideas and products, taking account of constraints including time, resources and cost. Generate and develop innovative ideas and share and clarify these through discussion. Communicate ideas through annotated sketches, pictorial representations of electrical circuits or circuit diagrams.

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Making						
	<ul style="list-style-type: none"> Select from a range of ingredients and materials according to their characteristics to create a chosen product. Select and use simple utensils, tools and equipment to perform a job e.g. peel, cut, slice, squeeze, grate and chop safely; marking out, cutting, joining and finishing; cut, shape and join paper and card. 	<ul style="list-style-type: none"> Plan by suggesting what to do next. Select and use tools, equipment, skills and techniques to perform practical tasks, explaining their choices. Select new and materials, components, reclaimed materials and construction kits to build and create their products. Use simple finishing techniques suitable for the products they are creating. 	<ul style="list-style-type: none"> Plan the main stages of making. Select from and use a range of appropriate utensils, tools and equipment with some accuracy related to their product. Select from and use finishing techniques suitable for the product they are creating. 	<ul style="list-style-type: none"> Order the main stages of making. Select and use appropriate tools to measure, mark out, cut, score, shape and combine with some accuracy related to their products. Explain their choice of materials according to functional properties and aesthetic qualities. Select from and use materials and components, including ingredients, construction and electrical components according to their function and properties. 	<ul style="list-style-type: none"> Produce detailed lists of equipment and fabrics relevant to their tasks Write a step-by-step plan, including a list of resources required. Select from and use, a range of appropriate utensils, tools and equipment accurately to measure and combine appropriate ingredients, materials and resources. 	<ul style="list-style-type: none"> Formulate a step-by-step plan to guide making, listing tools, equipment, materials and components. Competently select from and use appropriate tools to accurately measure, mark, cut and assemble materials, and securely connect electrical components to produce reliable, functional products. Use finishing and decorative techniques suitable for the product they are designing and making.
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Evaluating						
	<ul style="list-style-type: none"> Taste, explore and evaluate a range of products to determine the intended user's preferences for the product Evaluate their ideas throughout and finished products against design criteria, including intended user and purpose. 	<ul style="list-style-type: none"> Explore a range of existing products related to their design criteria. Evaluate their product by discussing how well it works in relation to the purpose, the user and whether it meets the original design criteria. 	<ul style="list-style-type: none"> Investigate a range of 3-D textile products, ingredients and lever and linkage products relevant to their project. Test their product against the original design criteria and with the intended user. Evaluate the ongoing work and the final product with reference to the design criteria and the views of others. 	<ul style="list-style-type: none"> Investigate and evaluate a range of products including the ingredients, materials, components and techniques that are used. Test and evaluate their own products against design criteria and the intended user and purpose. Evaluate their ideas and products against their own design criteria and identify the strengths and areas for improvement in their work. 	<ul style="list-style-type: none"> Investigate and analyse products linked to their final product. Compare the final product to the original design specification and record the evaluations. Test products with intended user and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose. Consider the views of others to improve their work 	<ul style="list-style-type: none"> Continually evaluate and modify the working features of the product to match the initial design specification. Critically evaluate their products against their design specification, intended user and purpose, identifying strengths and areas for development, and carrying out appropriate tests. Test the system to demonstrate its effectiveness for the intended user and purpose.
Related Vocabulary						
	planning, investigating design, evaluate, make, user, purpose, ideas, product,	investigating, planning, design, make, evaluate, user, purpose, ideas, design criteria, product, function	user, purpose, design, model, evaluate, prototype, annotated sketch, functional, innovative, investigate, label, drawing, function, planning, design criteria, annotated sketch, appealing	evaluating, design brief design criteria, innovative, prototype, user, purpose, function, prototype, design criteria, innovative, appealing, design brief, planning, annotated sketch, sensory evaluations	design decisions, functionality, authentic, user, purpose, design specification, design brief, innovative, research, evaluate, design criteria, annotate, evaluate, mock-up, prototype	function, innovative, design specification, design brief, user, purpose design brief, design specification, prototype, annotated sketch, purpose, user, innovation, research, functional, mock-up, prototype

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
•Food						
<ul style="list-style-type: none"> • Know the importance for good health and a healthy, varied diet. • Begin to use tools safely and effectively to prepare fresh food with support. • Evaluate by saying if they like or dislike something and begin to say why. • Begin to show understanding with regard to good hygiene. 	<ul style="list-style-type: none"> • Understand where a range of fruit and vegetables come from e.g. farmed or grown at home. • Understand and use basic principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of <i>The eatwell plate</i>. • Know and use technical and sensory vocabulary relevant to the project. • Use tools safely and effectively to prepare fresh food. • Know about basic hygiene and safety 	<ul style="list-style-type: none"> • Understand where a range of fruit and vegetables come from e.g. farmed or grown at home. • Understand and use basic principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of <i>The eatwell plate</i>. • Know and use technical and sensory vocabulary relevant to the project. • Chop fruits and vegetables safely using the bridge grip. • Use basic food handling, hygiene practices and personal safety. 	<ul style="list-style-type: none"> • Know how to use appropriate equipment and utensils to prepare and combine food. • Know and use relevant technical and sensory vocabulary appropriately. • Measure and weigh in grams. • Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. • Understand how changing ingredients can alter flavours and tastes. • Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. • Select their own ingredients from a given selection. • Begin to evaluate food by taste, texture and flavour. • Use basic food handling, hygiene practices and personal hygiene. 	<ul style="list-style-type: none"> • Know how to use utensils and equipment including heat sources to prepare and cook food. • Understand about seasonality in relation to food products and the source of different food products. Know and use relevant technical and sensory vocabulary. • Know how to use utensils and equipment including heat sources to prepare and cook food. • Understand about seasonality in relation to food products and the source of different food products. • Know and use relevant technical and sensory vocabulary. • Understand and apply the principles of a healthy and varied diet. • Prepare and cook a predominantly savoury dish using a range of cooking techniques. • Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. • Recognise that ingredients out of season can be imported from other countries. • Use proportions when cooking by doubling and halving recipes. • Measure accurately a range of cooking units. • Work in a safe and hygienic way. 		
Related Vocabulary						
fruit and vegetable names, names of equipment and utensils sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard chop, slice, like, dislike	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 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	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	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
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Structures						
<ul style="list-style-type: none"> • Manipulate materials to achieve a planned effect. • Construct with a purpose in mind. • Use simple tools and techniques competently and appropriately. • Select appropriate resources and adapt their work where necessary. 	<ul style="list-style-type: none"> • Know how to make freestanding structures stronger, stiffer and more stable. • Know and use technical vocabulary relevant to the project. • Begin to explore how to make structures stronger. • Investigate different techniques for stiffening a variety of materials. • Test different methods of enabling structures to remain stable. • Join appropriately for different materials and situations eg glue and tape. • Mark out materials to be cut using a template 	<ul style="list-style-type: none"> • Develop and use knowledge of how to strengthen, stiffen and reinforce more complex structures Develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes. • Know and use technical vocabulary relevant to the project. • Develop vocabulary related to the project. • Create shell or frame structures. • Make structures more stable by giving them a wide base. 	<ul style="list-style-type: none"> • Build functional structures that are fit for purpose. • Build frameworks to support mechanisms. • Evidence how product can be made stronger and more stable. • Use finishing techniques to strengthen and improve the appearance of their models. 	<ul style="list-style-type: none"> • Understand how to strengthen, stiffen and reinforce 3-D frameworks. • Stiffen and reinforce complex structures. • Join materials using appropriate methods. • Use the correct technical vocabulary for tools, materials and processes. 		
Related Vocabulary						

Build, join, fix, on top, underneath, next to, left, right, above, below	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
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EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
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Textiles

<ul style="list-style-type: none"> • Begin to understand what a texture is and name different types of textiles. • Begin to describe how different materials feel. • Begin to explore using textiles in their models. • Begin to explore joining techniques. 	<ul style="list-style-type: none"> • Understand how simple 3-D textile products are made, using a template to cut and create two identical shapes. • Understand how to join fabrics using different techniques e.g. running stitch, glue, over stitch, stapling. • Explore different finishing techniques. Decorate fabrics with attached items eg buttons, beads, sequins, braids and ribbons. • Know and use technical vocabulary relevant to the project. 	<ul style="list-style-type: none"> • Know how to strengthen, stiffen and reinforce existing fabrics. • Understand how to securely join two pieces of fabric together. • Understand the need for patterns and seam allowances. • Know and use technical vocabulary relevant to the project. • Measure, mark out, cut and shape materials with some accuracy. 	<ul style="list-style-type: none"> • Know how to strengthen, stiffen and reinforce existing fabrics. • Understand how to securely join two pieces of fabric together. • Understand the need for patterns and seam allowances. • Know and use technical vocabulary relevant to the project. • Measure, mark out, cut and shape materials with some accuracy. • Use a prototype to make a pattern. • Assemble and join materials with some accuracy. 	<ul style="list-style-type: none"> • Produce a 3-D textile product from a combination of accurately made pattern pieces, fabric shapes and different fabrics. • Understand pattern layout. • Decorate textiles appropriately often before joining components. • Pin and tack fabric pieces together. • Join fabrics using oversewing, back stitch and blanket stitch. • Understand how fabrics can be strengthened, stiffened and reinforced where appropriate. • Know and use technical vocabulary relevant to the project.
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Related Vocabulary

Soft, prickly, smooth, shiny, stripy, spotty, sparkly, patterned, rough	joining and finishing techniques, tools, fabrics and components, template, pattern pieces, mark out, join, decorate, finish	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	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,	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,
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EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
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Mechanisms and Mechanical Systems

<ul style="list-style-type: none"> • Insert paper fasteners. • Cut along lines straight and curved. • Fold, tear and cut paper and card. 	<ul style="list-style-type: none"> • Explore and use sliders and levers. • Understand that different mechanisms produce different types of movement. • Know and use technical vocabulary relevant to the project. 	<ul style="list-style-type: none"> • Explore and use wheels, axles and axle holders. • Distinguish between fixed and freely moving axles. • Know and use technical vocabulary relevant to the project. 	<ul style="list-style-type: none"> • Understand and use lever and linkage mechanisms. • Distinguish between fixed and loose pivots. • Know and use technical vocabulary relevant to the project. • Use a range of materials to create models with moving parts. • Safely measure, mark out and cut with some accuracy 	<ul style="list-style-type: none"> • Use electrical systems in their products such as series circuits incorporating switches, bulbs and buzzers. • Incorporate a circuit into a model. 	<ul style="list-style-type: none"> • Understand that mechanical and electrical systems have an input, process and an output. • Understand how gears and pulleys can be used to speed up, slow down or change the direction of movement. • Know and use technical vocabulary relevant to the project. • Make careful and precise measurements so that joins, holes and openings are in the right place. • Use electrical systems such as motors. • Produce step by step plans to guide their making demonstrating that they can apply their knowledge of different materials, tools and techniques. • To produce annotated sketches and exploded diagrams,
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					beginning to draw to scale • To research the functional properties and aesthetic qualities of a moving vehicle.
Related Vocabulary					
Move, turn, fold,tear,cut	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, equipment and materials used	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	
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5 Year 6
Electrical Systems					
			<ul style="list-style-type: none"> Understand and use electrical systems in their products linked to science coverage. Apply their understanding of computing to program and control their products. Know and use technical vocabulary relevant to the project. 	<ul style="list-style-type: none"> Understand and use electrical systems in their products linked to science coverage. Apply their understanding of computing to program, monitor and control their products. Know and use technical vocabulary relevant to the project. 	
Related Vocabulary					
			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 transmit, motor, circuit, switch, circuit diagram, annotated drawings, exploded diagrams, mechanical system, electrical system, input, process, output, assembling	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, output device, series circuit, parallel circuit Action, alert, algorithm, bug, code design, command, control, debug/debugging, event, function, get input, if, if/else, input, output, object, repeat, sequence, selection, simulation, tabs, timer, variable	

