

Design and Technology Skills, Knowledge and Vocabulary Progression Document

	EY	Y1	Y2	Y3	Y4	Y5	Y6
Design, Make, Evaluate and Improve	Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.	<ul style="list-style-type: none"> Explain what they are making and which materials they are using. Design products that have a clear purpose and an intended user. Use pictures and words to convey what they want to make. Make products, using a range of tools to cut, shape, join and finish. Say what they like and don't like about their product and explain why. Talk about how closely their finished product meets their design criteria. Begin to use software to represent 2D designs 		<ul style="list-style-type: none"> Investigate existing products, including drawing them to analyse and understand how they are made. Gather info about the needs & wants of particular groups. Plan a sequence of actions to make a product. Develop more than one design. Develop prototypes. Generate designs with annotated sketches Refine work and techniques as work progresses, continually evaluating the product design. Identify strengths and weaknesses of their design ideas. Talk about how closely their finished product meets their design criteria and meets the need of the user. 		<ul style="list-style-type: none"> Undertake research to inform design process. This may include surveys and interviews. Use prototypes, cross-sectional diagrams, exploded diagrams and CAD software to represent designs? - Google Sketchup? Consider the views of others when evaluating their own work. Ensure products have a high quality finish, using art skills where appropriate. Justify their decisions about materials and methods of construction. Make suggestions on how their design/product could be improved. Analyse cost of a product. Analyse how innovative a product is. 	
	Vocabulary	Vocabulary: materials, design, purpose, user, tools, cut, shape, join, finish, criteria, like/dislike		Vocabulary: products, analyse, needs/wants, sequence, prototype, annotate, refine, evaluate, strengths/weaknesses, criteria, user		Vocabulary: research, prototype, opinion, quality, justify, suggestion, improvement, analyse, innovate	
	Context	Y1 DT Project – Make your own boat that floats	Y2 DT project – Make your own bridge		Y4 DT project Make your own motorised car (Rolls Royce/Bloodhound)	Y5 DT project – make your own moving Viking model with cams	
Cooking and nutrition	<ul style="list-style-type: none"> Understand where food comes from Group foods into the five groups in The Eatwell Plate. Cut, grate or peel ingredients safely. Prepare simple dishes-safely and hygienically - without using a heat source. Measure or weigh using cups or electronic scales. 	<ul style="list-style-type: none"> Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs). Measure ingredients using scales. Prepare ingredients hygienically and using the appropriate utensils by following a recipe. Follow procedures for safety & hygiene. 		<ul style="list-style-type: none"> Combine ingredients appropriately e.g. beating or rubbing. Measure ingredients to the nearest gram and millilitre and calculate ratios of ingredients to scale up or down from a recipe. Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed Create and refine recipes, including ingredients, methods, cooking times and temperatures. Follow procedures for safety & hygiene. 			
	Vocabulary	Vocabulary: group, cut, grate, peel, hygiene, measure, weigh		Vocabulary: cut, shape, measure, hygiene, utensils, procedure		Vocabulary: Combine, measure, ratio, seasonality, variety, refine, hygiene, procedure	
	Context	Y1 DT Project – Make your own healthy meal for a super hero		Y3 DT project – Make and refine your own Stone Age stewed fruit/salad	Year 4 Project – Make your own chocolate	Y5 DT Project – innovate your own Ancient Greek flatbread/dip.	Y6 DT Project – Make your own WW2 inspired meal

Construction - Mechanics		<ul style="list-style-type: none"> Use a range of materials to create models with wheels and axles e.g. tubes, dowel and cotton reels. Use materials to practise drilling, screwing, nailing and gluing to strengthen products. <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"> Investigate how to make structures more stable e.g by widening the base Understand and use mechanical systems in their products e.g. gears, pulleys, cams, levers and linkages. 	<ul style="list-style-type: none"> Understand and use mechanical systems in their products e.g. gears, pulleys, cams, levers and linkages. 	
	Vocabulary	Vocabulary: materials, wheels, axel, drill, screw, nail, glue, strengthen	Vocabulary: investigate, structures, stable, widening, mechanical, system, products, gear, pulley, lever.	Vocabulary: mechanical, structure, product, gear, pulley, lever, gears, cams	
	Context		Y2 Project – Make your own moving car/Victorian bath house (Rolls Royce)	Year 4 Project – Make your own motorised car (Rolls Royce/Bloodhound)	Y5 DT Project – Make your own pop up or moving Earth/space display using mechanical systems (different materials)
Construction - Electronics			<ul style="list-style-type: none"> Create series and parallel circuits. Strengthen frames using diagonal struts. 	<ul style="list-style-type: none"> Control a model using an ICT control model. Use a glue gun with close supervision. Join materials using appropriate methods. Use a hand drill to drill tight and loose fit holes 	
	Vocabulary		Vocabulary: series, parallel, circuit, strengthen, diagonal, strut	Vocabulary: control model, glue gun, join, material, appropriate, drill, tight/loose	
	Context		Y3 Project – Make your own electronic/magnetic game		Year 6 Project – Make your own fairground ride
Materials		<ul style="list-style-type: none"> Fold, roll, tear and cut paper or card. Investigate strengthening sheet materials. Demonstrate a range of joining techniques such as gluing, taping or creating hinges. Measure and mark out lines. Cut materials safely using tools provided Demonstrate a range of cutting and shaping techniques such as tearing, cutting, folding and curling. Use simple pop-ups. 	<ul style="list-style-type: none"> Cut materials accurately and safely by selecting appropriate tools. Measure and mark out to the nearest mm. Use and explore complex popups Cut slots and internal shapes. Create nets. 	<ul style="list-style-type: none"> Cut materials with precision. Cut accurately and safely to a marked line. Join/combine materials with temporary, fixed or moving joints. 	
	Vocabulary	Vocabulary: fold, tear, cut, curl, strengthen, joining, materials, measure, tools, safely, pop-up	Vocabulary: cut, accurately, safely, appropriate, tools, measure, mark, complex popups, slots, internal shapes.	Vocabulary: cut, material, precision, accurate, safely, marked, join/combine, temporary/fixed/moving joints.	
	Context Card/paper	Y2 DT Project – Make your own pop-up book for African facts	Y3 DT Project – Make your own pop-up rainforest		Y5 DT Project – Make your own pop up or moving Earth/space display using mechanical systems (different materials)
	Context Textiles	Y1 DT Project– Make your own puppets (textiles)	Y4 – Roman stitching (Roman purse)		Y6 WW2 – embroidery make do and mend

Take inspiration from design throughout history		<ul style="list-style-type: none"> • Explore objects and designs to identify likes and dislikes. • Explore how products have been created. 	<ul style="list-style-type: none"> • Disassemble products to understand how they work. • Improve on existing designs, giving reasons for choices. • Identify some of the great designers in different areas of study to generate ideas from their designs. 	<ul style="list-style-type: none"> • Use knowledge of inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products to create their own innovative designs.
		Vocabulary: objects, design, identify, likes/dislikes, products, created	Vocabulary: disassemble, products, improve, existing, reason, identify, designers, generate, ideas	Vocabulary: knowledge, developed, ground-breaking, products, create, innovative, design