DT Curriculum Progression

EYFS 3-4	EYFS Reception			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Explore different materials freely in order to develop their ideas about how to use them and what to make. Develop their own ideas and decide which materials to use to express them. Join different materials and explore different textures. Choose the right resources to carry out their plan. Use one-handed tools and equipment, for example, making snips in paper with scissors. Explore how things work.	Return to and build on their previous learning, refining ideas and developing their ability to represent them. Create collaboratively, sharing ideas, resources and skills. Develop their small motor skills so that they can use a range of tools competently, safely and confidently. ELG: -Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Share their creations, explaining the process they have used. Use a range of small tools	Design		Pupils should be taught to: • 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		Pupils should be taught to: • 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			
			Design Brief Contexts, uses and purposes **(DB)**	1. To discuss and understand the purpose of the design and the intended user	1. Identify the purpose of the design and the intended user	1. Gather information about the needs and wants of particular individuals and groups in order to identify the purpose	1. Through research gather information about the needs and wants of particular individuals and groups in order to fit the purpose	1. To begin to use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose.	1. To confidently use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose.
			Ideas **(DI)**	1. Generate own ideas for design by drawing on own experiences or existing products.	1. Generate own ideas for designs by drawing on own and others experiences through observations and discussions.	1. With growing confidence, generate, clarify and explain ideas through discussion. 2. - Establish criteria for a successful/realistic product.	1. To develop a clear idea of what has to be done. 2. Use annotated sketches, cross-sectional drawings and diagrams 3. Model their ideas using prototypes and pattern piece	1. To start to generate innovative ideas that are fit for purpose, drawing on research through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes and pattern pieces	1. To confidently generate innovative ideas that are fit for purpose, drawing on research through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes and pattern pieces
		Make		Pupils should be taught to: • select from and use a range of tools and equipment to perform practical tasks [e.g. cutting, shaping, joining and finishing] • select from and use a wide range of materials and components, including construction materials, textiles and ingredients,		Pupils should be taught to: • select from and use a wider range of tools and equipment to perform practical tasks [e.g. 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			
			Planning **(MPI)**	1. Through discussion select from a range of tools, equipment, materials and components. 2. To begin to explain what they're making and the tools that they will be using.	1. To independently select from a range of tools, equipment, materials and components 2. To use the correct vocabulary to explain what they're making and the tools/materials that they will be using.	1. Select a wider range of tools and techniques suitable for their product 2. To explain their choice of tools and equipment in relation to the skills and techniques they will be using	1. To show a good level of expertise when selecting a wider range of tools and techniques suitable for their product, explaining their reasons.	1. To show a good level of expertise when selecting a wider range of tools and techniques suitable for their product according to their functional properties 2. To order the main stages of making	1. To demonstrate confidence when selecting a wider range of tools and techniques suitable for their product according to their functional properties, refining details as necessary 2. To produce detailed lists of tools, equipment and materials that they need and order the main stages of making.

	including scissors, paintbrushes and cutlery.								
			Practical skills and technique **(MPS&T)**	1. Follow safety procedures 2. With support begin to make their design using appropriate techniques 3. Use simple fixing materials e.g. paper clips, glue, staples and tape 4. Begin to use simple finishing techniques to improve the appearance	1. Follow safety procedures 2. With increasing independence make their design using appropriate techniques 3. Measure, mark out, cut out and shape materials and components 4. To start to choose and use appropriate finishing techniques based on their own ideas	1. Follow safety procedures 2. Start to think about their ideas as they make progress and be willing to change things if this helps them to improve their work 3. To begin to measure, mark out, cut out and shape materials with some accuracy	1. Follow safety procedures 2. With some accuracy measure, mark and cut out, shape, assemble, join and combine materials and components. 3. To strengthen and improve finishing techniques using a range of equipment	1. Follow safety procedures 2. Accurately measure to the nearest mm, mark out, cut and shape materials and components. 3. Accurately assemble, join and combine materials/components 4. Ensure projects have a quality finish	5. Follow safety procedures 6. Accurately measure to the nearest mm, mark out, cut and shape materials and components. 7. Accurately assemble, join and combine materials/components 8. Use techniques that involve a number of steps 9. Demonstrate resourcefulness e.g. make refinements 10. Ensure projects have a quality finish
		Evaluate	Pupils should be taught to: • explore and evaluate a range of existing products • evaluate their ideas and products against design criteria			Pupils should be taught to: • 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			
			Own ideas and products **(EI)**	1. To begin to evaluate their product through discussion 2. Make simple judgements about their products and ideas against design 3. To talk about their ideas saying what they like and dislike about them	1. Evaluate their work against their design criteria and purpose 2. To discuss strengths and how they might improve in the future	1. Evaluate and record their product against original design criteria e.g. how it meets its intended purpose 2. Identify strengths and possible changes they may take 3. To begin to use constructive comments from others to improve their work	1. To evaluate both during and at the end of the project, identifying strengths and possible changes they might make 2. Evaluate their products carry out appropriate tests against the design criteria 3. To use constructive comments from others to improve their work	1. To continue to evaluate the product design as work progresses, refining work and techniques 2. To evaluate their product and seek evaluation from others 3. To use constructive comments from others to improve their work	1. To evaluate their products both during and at the end, identifying strengths and areas for development, carrying out appropriate tests 2. To record their evaluations using drawings and labels 3. To evaluate against their original criteria and suggest ways that their product can be improved 4. To use constructive comments from others to improve their work
			Existing products **(EP)**	1. Discuss what products are, who they are for, how they are made and what materials are used 2. Discuss whether they like or dislike the products	1. Investigate and discuss what products are, who they are for, how they are made and what materials are used 2. Discuss whether they like or dislike the products and why	1. Begin to dissemble and evaluate familiar products and consider the views of others to improve them	1. To be able to dissemble and evaluate familiar products and consider the views of others to improve them and give reasons for choices made	1. To create innovative designs that improve upon existing products 2. To begin to think about how much products cost to make	1. To investigate how much products cost to make, how innovative products are and how sustainable the materials of the products are 2. Suggest improvements that can be made to enhance user experience

			Key events and individuals **(EE&I)**	N/A		1. Identify great designers and their work and use research of designers to influence work (such as Brunel, Mackintosh, Philip Treacy, Marcel Breuer)				
		Technical knowledge		Pupils should be taught to: • build structures, exploring how they can be made stronger, stiffer and more stable • explore and use mechanisms [e.g. levers, sliders, wheels and axles], in their products		Pupils should be taught to: • apply their understanding of how to strengthen, stiffen and reinforce more complex structures • understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] • understand and use electrical systems in their products [e.g. series circuits incorporating switches, bulbs, buzzers and motors] • apply their understanding of computing to program, monitor and control their products				
			Making products work **(TK)**	1. Understand about the simple working characteristics of materials and components 2. Understand about the movement of simple mechanisms including wheels and axles	1. Understand about the simple working characteristics of materials and components 2. Understand about the movement of simple mechanisms including wheels and axles 3. Know the correct technical vocabulary for the projects they are undertaking 4. Understand how freestanding structures can be made stronger, stiffer and more stable	1. Understand how levers and linkages or pneumatic systems create movement 2. Understand how simple electrical circuits and components can be used to create functional products	1. Understand how to program a computer to control their products 2. Know how to make strong, stiff shell structures 3. Know that a single fabric shape can be used to make a 3D textiles product	1. Understand how cams, pulleys and gears create movement 2. Understand how more complex electrical circuits and components can be used to create functional products 3. Understand how to program a computer to monitor changes in the environment / control their products	1. Know how to reinforce/strengthen a 3D framework 2. Know that a 3D textiles product can be made from a combination of fabric shapes
		Cooking and nutrition		Pupils should be taught to: • use the basic principles of a healthy and varied diet to prepare dishes • understand where food comes from		Pupils should be taught to: • 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				
			Where food comes from **(CW)**	1. Understand that all food comes from plants or animals. 2. To understand that food has to be farmed, grown elsewhere (e.g. home) or caught.	1. Know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world	1. Know that seasons may affect the food available 2. Understand how food is processed into ingredients that can be eaten or used in cooking				
			Food preparation, cooking and nutrition **(CF)**	1. Prepare simple dishes safely and hygienically, without using a heat source 2. Know how to cut, peel,	1. Prepare ingredients hygienically using appropriate utensils. Begin to measure in grams 2. Follow a simple recipe. 3. Assemble or cook healthy ingredients, 4. Control the temperature of the oven or hob, if cooking with supervision 5. How to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading kneading and baking	1. How to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking Know that recipes can be adapted to change the appearance, taste, texture and aroma 2. Know that different foods contain different substances - nutrients, water and fibre - that are needed for health 3. Understand that seasons may affect the food available, and refine recipes from this 4. Understand how food is processed into ingredients that can be eaten or used in cooking. 5. Understand the need for correct storage 6. Measure accurately			

				grate, mix and mould foods 3. Measure or weigh using measuring cups or electronic scales. 4. Assemble or cook healthy ingredients. 5. Understand how to name and sort foods into the five groups in 'The Eat well plate' 6. Know that everyone should eat at least five portions of fruit and vegetables every day. 7. Understand that food ingredients should be combined according to their sensory characteristics	6. Begin to use toasters and microwaves 7. Know that a healthy diet is made up from a variety and balance of different foods and drinks, as depicted in the 'eat well' plate	

		Technical Vocabulary (oracy)	**Year 1/ 2** **Textiles** **Templates & Joining:** names of existing products, joining and finishing techniques, tools, fabrics and components, template, pattern pieces, mark out, join, decorate, finish, features, suitable, quality mock-up, design brief, design criteria, make, evaluate, user, purpose, function **Structures** **Freestanding Structures:** 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, design, make, evaluate, user, purpose, ideas, design criteria, product, function **Food and Nutrition** **Preparing Fruit & Vegetables:** fruit and vegetable names, names of equipment and utensils, sensory vocabulary e.g. soft, juicy, crunchy, sweet,	**Year 3/4** **Textiles** **2D shape and 3D products:** fabric, names of fabrics, fastening, compartment, zip, button, structure, finishing technique, strength, weakness, stiffening, templates, stitch, seam, seam allowance, user, purpose, design, model, evaluate, prototype, annotated sketch, functional, innovative, investigate, label, drawing, aesthetics, function, pattern pieces **Electrical Systems** **Simple Circuits & Switches:** 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, user, purpose, function, prototype, design criteria, innovative, appealing, design brief **Mechanisms** **Leavers & Linkages:** mechanism, lever, linkage, pivot, slot, bridge, guide, system, input, process, output, linear, rotary, oscillating, reciprocating, user, purpose, function, prototype, design criteria, innovative, appealing, design brief **Structures** **Shell Structures:** 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, evaluating, design brief design criteria, innovative, prototype **Food and Nutrition** **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, planning, design criteria, purpose, user, annotated sketch, sensory	**Year 5/6** **Textiles** **Combining different fabric shapes:** 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, iron, transfer paper, design criteria, annotate, design decisions, functionality, innovation, authentic, user, purpose, evaluate, mock-up, prototype **Electrical Systems** **More complex switches & circuits:** series circuit, parallel circuit, names of switches and components, input device, output device, system, monitor, control, program, flowchart, function, innovative, design specification, design brief, user, purpose **Mechanisms** **Pulley or Gears:** 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, design decisions, functionality, innovation, authentic, user, purpose, design specification, design brief **Food and Nutrition** **Celebrating Culture & Seasonality:** Ingredients, yeast, dough, bran, flour, whole meal, 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, design specification, innovative, research, evaluate, design brief **Structures** **Frame Structures:** frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent, design brief, design specification, prototype, annotated sketch, purpose, user, innovation, research, functional

			sticky, smooth, sharp, crisp, sour, hard, flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients, planning, investigating tasting, arranging, popular, design, evaluate, criteria			
			Mechanisms			
			Wheels & Axles: vehicle, wheel, axle, axle holder, chassis, body, cab, assembling, cutting, joining, shaping, finishing, fixed, free, moving, mechanism, names of tools, equipment and materials used, design, make, evaluate, purpose, user, criteria, functional	**Slider & Leavers:** slider, lever, pivot, slot, bridge/guide, card, masking tape, paper fastener, join, pull, push, up, down, straight, curve, forwards, backwards, design, make, evaluate, user, purpose, ideas, design criteria, product, function		