Design & Technology Skills Progression

EYFS	Characteristics of effective learning	Early Learning Goals	Vocabulary
	Show curiosity about objects, events and people Engage in open-ended activity Being creative and innovative through exploration Find ways to solve problems / find new ways to do things / test their ideas Use senses to explore the world around them Assemble and disassemble products Planning, making decisions about how to approach a task, solve a problem and reach a goal Observing and asking questions Reviewing how well the approach worked	Express my imagination and creativity through my DT work Make use of props and materials when role playing characters in narratives and stories Solve problems on my own being persistent and not giving up Control and manipulate different tools to create my models, including scissors, knives, forks and spoons Design, plan and follow the plan that I make Create a strong structure and describe the processes I used Fix and join materials together effectively Evaluate my creations and say what I would do to improve them. Understand the importance of a healthy lifestyle	Plan, tower, evaluate, circle, fruit names, design, base, improve, triangle, vegetable names, make, modify, square, utensil names, materials, underneath, rearrange, rectangle, ingredients, purpose, side, cuboid, edge, step by step, cube, equipment, surface, adapt, cylinder, cutting, invent, corner, tools, pull, grating, build, point, measure, push, mixing, ideas straight cut strong, squeezing, construct, curved, fold, healthy, test, vertically, hinge, join, diet, structure, horizontally, stick, fix, tasting, combine, metal, glue, framework, arranging, stable, wood, string, assemble, recipe, balance, plastic, sellotape, original, equipment, masking tape, unique, build, treasury tags, weak, model, elastic bands, shape, clothes pegs

Skills	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Generating ideas - designing	• 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.	• 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.	• 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.	• 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 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.	• 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	• 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.

Making	• 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. • Select from a range of ingredients and materials according to their characteristics to create a chosen product.	• 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. – running stitch	• 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 - running stitch and back stitch	• 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 – running, back stitch and fastenings	• 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 – blanket stitch	• 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 – cross stitch
Evaluating	• 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.	• 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.	• 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.	• 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.	• 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.	• 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.
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

Design & Technology Knowledge Progression

Knowledge	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Food Technology	• understand where a range of fruit and vegetables come from e.g. farmed or grown at home •understand the basic principles of healthy and varied died to prepare dishes, including how fruit and vegetables are part of the eat well plate •Know and use technical vocabulary relevant to create healthy wraps.	• understand where a range of fruit and vegetables come from e.g. farmed or grown at home •understand the basic principles of healthy and varied died to prepare dishes, including how fruit and vegetables are part of the eat well plate • Know and use technical vocabulary relevant to create smoothies	• know how to use appropriate equipment and utensils to prepare and combine food • know about a range of fresh and processed ingredients appropriate for their product •Know and use technical vocabulary appropriately	• know how to use appropriate equipment and utensils to prepare and combine food • know about a range of fresh and processed ingredients appropriate for their product •Know and use technical vocabulary appropriately	• know how to use appropriate equipment and utensils to prepare and cook food •understand about seasonality in relation to food products and the source of different food products •Know and use technical vocabulary know how to use appropriate equipment and utensils to prepare and cook food	• know how to use appropriate equipment and utensils to prepare and cook food •understand about seasonality in relation to food products and the source of different food products •Know and use technical vocabulary know how to use appropriate equipment and utensils to prepare and cook food
Vocabulary	fruit and vegetable names, names of equipment and utensils vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard, knife, chopping board, flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients	fruit and vegetable names, names of equipment and utensils vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard, knife, chopping board, 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	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
Structures	• Know how to make freestanding structures stronger, stiffer and more stable. • Know and use technical vocabulary and scientific understanding of materials relevant to the project.	• Know how to make freestanding structures stronger, stiffer and more stable. • Know and use technical vocabulary and historical context relevant to the project.	• Develop and use knowledge of how to construct strong, stiff shell 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 and use knowledge of how to construct strong, stiff shell structures to resist force being applied • Develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes. • Know and use technical vocabulary and geographical research relevant to the project.	• Understand how to strengthen, stiffen and reinforce 3-D frameworks. • Know and use technical vocabulary relevant to the project.	• Understand how to strengthen, stiffen and reinforce 3-D frameworks. • Know and use technical vocabulary relevant to the project.

Vocabulary	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	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,	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	frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent
Textiles	• Understand how weaving is the motion linked to sewing • Understand that weaving makes products stronger • Understand the process of weaving through history	• Understand how simple 3-D textile products are made, using a template to create two identical shapes. • Understand how to join fabrics using different techniques e.g. running stitch, glue, over stitch, stapling. • Explore different finishing techniques • Know and use technical vocabulary relevant to the project.	• 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.	• 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.	• Produce a 3-D textile product from a combination of accurately made pattern pieces, fabric shapes and different fabrics. • Understand how fabrics can be strengthened, stiffened, and reinforced where appropriate. • Know and use technical vocabulary relevant to the project.	• Produce a 3-D textile product from a combination of accurately made pattern pieces, fabric shapes and different fabrics. • Understand how fabrics can be strengthened, stiffened, and reinforced where appropriate. • Know and use technical vocabulary relevant to the project.
Vocabulary	joining and strengthening techniques, 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	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, 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,
Mechanisms	• Explore and use sliders and levers. • Understand that different mechanisms produce different types of movement. • Know and use technical vocabulary relevant to the project.	• Explore and use wheels, axles and axle holders. • Distinguish between fixed and freely moving axles. • Know and use technical vocabulary relevant to the project.	• Understand and use lever and linkage mechanisms. • Understand how air pressure can be used to produce and control movement. • Know how simple pneumatic (air/gas pressure) systems work. • Know and use technical vocabulary relevant to the project.		• Understand and use lever and linkage mechanisms. • Distinguish between fixed and loose pivots. • Know and use technical vocabulary relevant to the project.	
Vocabulary	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	mechanism, lever, linkage, pivot, slot, bridge, guide system, input, process, output		mechanism, lever, linkage, pivot, slot, bridge, guide system, input, process, output, linear, rotary, oscillating, reciprocating, annotated drawings,	

		names of tools, equipment and materials used	linear, rotary, oscillating, reciprocating			
Electrical Systems				• 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.		• 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.
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		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