Long Term Plan

	Autumn	Spring	Summer
EYFS	Textiles - paper	Cooking and nutrition	Structures
Year 1	Textiles	Mechanisms	Cooking and Nutrition
Year 2	Mechanism	Structures	Cooking and Nutrition
Year 3	Structures	Cooking and Nutrition	Mechanical Systems
Year 4	Textiles	Electrical systems	Cooking and Nutrition
Year 5	Textiles	Cooking and Nutrition	Mechanical Systems
Year 6	Structures	Cooking and Nutrition	Electrical systems

Coverage

Textiles:	Structures:	Mechanical Systems:	Cooking and nutrition:	Electrical systems:
EYFS- Autumn Year 1 – Autumn Year 2 – Year 3 – Year 4 – Autumn Year 5 – Autumn Year 6 –	EYFS – Summer Year 1 – Year 2 – Spring Year 3 – Autumn Year 4 - Year 5 – Year 6 – Autumn	EYFS – Year 1 – Spring Year 2 – Autumn Year 3 – Summer Year 4 - Year 5 – Summer Year 6 –	EYFS – Spring Year 1 – Summer Year 2 – Summer Year 3 – Spring Year 4 – Summer Year 5 – Spring Year 6- Spring	EYFS – Year 1 – Year 2 – Year 3 – Year 4 - Spring Year 5 – Year 6 – Summer

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Additional DT opportunities

Year	D&T missing	D&T Day Focus
1	Structures	Structures – using large containers, material and resources can they create a stable den with access in and out.
2	Textiles	Textiles – making puppets with wooden spoons and fabric
3	Textiles	Textiles – making kites, wooden beams, fabric and string (practice threading the sting – pre learning for needles in year 4)
4	Structures	Structure – design and create a marble run
5	Electrical systems + Structure	Electrical systems + structure – build a free-standing box light (using circuits to consolidate learning from previous year).
6	Textiles	Textiles – make a 'leaving flag' (memento) using all the different stiches taught in year 4 and 5 and fold it round a beam to hang.

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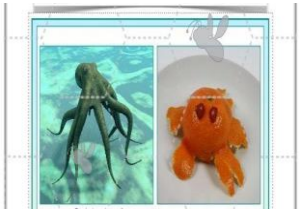
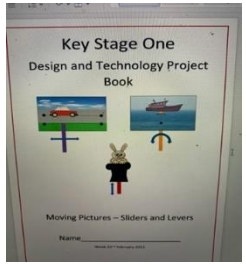
Year Group	Autumn	Spring	Summer
EYFS	**Textiles - Paper**	**Cooking and nutrition**	**Structures**
Year 1	**Textiles** Card, cutting, recyclable materials Task – Design and make a recyclable card 	**Mechanisms** Wheels and Axels Task – Design and make Cars 	**Cooking and Nutrition** Preparing fruit and vegetables Task – Design and make a healthy seaside picnic 
Year 2	**Mechanism** Sliders and Levers Task -Design and make a picture with a pop up slider 	**Structures** Freestanding Structures Task- Design and make Home with Hinges 	**Cooking and Nutrition** Preparing fruit and vegetables Task – Design and make Healthy Pizza 

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Year Group	Autumn	Spring	Summer
Year 3	**Structures** Structures – joining and strengthen Task – Design and make a photo frame 	**Cooking and Nutrition** Healthy and varied diet Task – Design and make healthy Sandwiches 	**Mechanical Systems** Levers and Linkages Task – Design and make a monster with a moving part 
Year 4	**Textiles** 2D shapes to 3D products Task – Design and make Seasonal Stockings 	**Electrical Systems** Simple Circuits & Switches Task- Design and make a Nightlight torches 	**Cooking and Nutrition** Healthy and varied diet Task – Design and make Biscuits 

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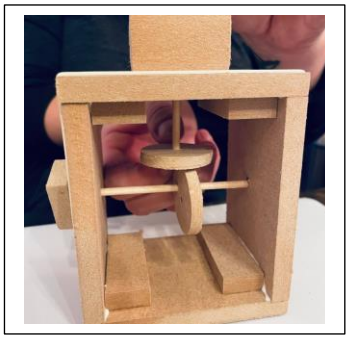
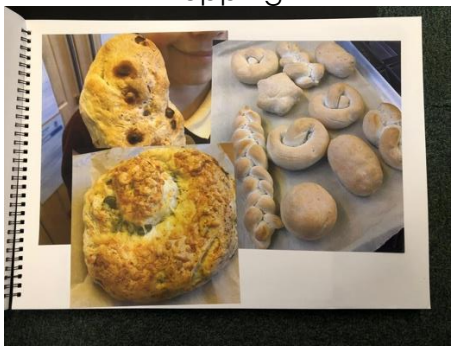
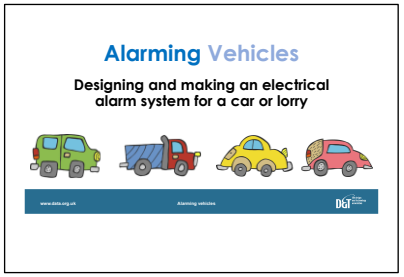
Year Group	Autumn	Spring	Summer
Year 5	**Textiles** Combining different fabric shapes Task – Design and make Funky Cushions 	**Cooking and Nutrition** Celebrating culture and seasonality Task – Design and make Plain Bread 	**Mechanical systems** Task – Design and make a toy with a moving CAM part 
Year 6	**Structures** Frame structures Task – Design and make a Bridges 	**Cooking and Nutrition Celebrating** Culture and Seasonality Task – Design and make Bread with topping 	**Electrical Systems** More Complex switches Task – Design and make a Car with an alarm 

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Learning Sequence

Lessons	Expectations	Evidence
Lesson 1 **Start of unit Research main skill**	• Retrieval from previous D&T units. • Share New learning and Knowledge Mat • 'Brain Buzz' sheet to share what they already know about unit. • Share new vocabulary. • Research lesson about the specific learning focus of the D&T unit.	• Brain Buzz Sheet • Evidence work using task sheets.
Lesson 2 **Explore and design**	• Retrieval from previous lesson. • Add to class Brain Buzz sheet • Explore the product, dissemble a WAGOLL (taste the food, explore the materials etc) • Complete the top half of the design and making sheet. • Using this experience create 3 or 4 designs of their final product. • Designs are detailed and are labelled. •	• Design and making sheet sections: • What are you making? • What is it used for? • Materials and equipment needed
Lessons 3 & 4 **Make**	• Retrieval from previous lesson. • Add to class Brain Buzz sheet • Pick final design and draw it on the design and making sheet. • Complete the steps on how you are going to create the final product on the design and making sheet. • Begin to make. •	• Design and making sheet sections: • Final design – detailed and labelled • Steps of how you're going to make it
Lesson 5 **End of unit evaluation**	• Retrieval from previous lesson. • Add to class Brain Buzz sheet • End of unit evaluation.	• Design and making sheet sections: • Evaluation

Progression of Knowledge and Skills from EYFS to Y6

EYFS	Characteristics of effective learning	Early Learning Goals
	playing and exploring - children investigate and experience things, and 'have a go' **active learning** - children concentrate and keep on trying if they encounter difficulties, and enjoy achievements **creating and thinking critically** - children have and develop their own ideas, make links between ideas, and develop strategies for doing things	**ELG: Fine Motor Skills:** - Hold a pencil effectively in preparation for fluent writing – using the tripod grip in almost all cases; - Use a range of small tools, including scissors, paint brushes and cutlery; - Begin to show accuracy and care when drawing. **ELG: Creating with Materials** - 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; - Make use of props and materials when role playing characters in narratives and stories.

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Progression

Skills	EYFS	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 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.	• 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.

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Skills	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
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.	• 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.	• 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.	• 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.	• 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.
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	• 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.

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Skills	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Food	•	• 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 *The eatwell plate*. • Know and use technical andsensory vocabulary relevant to the project.	• Understand where a range offruit 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 *The eatwell plate*. • Know and use technical and sensory vocabulary relevant to the project.	• Know how to use appropriate equipment and utensils to prepare and combine food. • Know about a range of fresh and processed ingredients appropriate fortheir product, and whetherthey are grown, reared or caught. • Know and use relevant technical and sensory vocabulary appropriately.	• Know how to use appropriate equipment and utensils to prepare and combine food. • Know about a range of freshand processed ingredients appropriate for their product,and whether they are grown, reared or caught. • Know and use relevant technical and sensory vocabulary appropriately.	• Know how to use utensils and equipment including heatsources to prepare and cook food. • Understand about seasonality in relation to foodproducts and the source of different food products. • Know and use relevanttechnical and sensory vocabulary.	• Know how to use utensils and equipment including heatsources to prepare and cook food. • Understand about seasonality in relation to foodproducts and the source of different food products. • Know and use relevanttechnical and sensory vocabulary.
Structures	•		• Know how to make freestanding structuresstronger, stiffer and more stable. • Know and use technical vocabulary 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.			• Understand how to strengthen, stiffen and reinforce 3-D frameworks. • Know and use technical vocabulary relevantto the project.

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Skills	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Textiles	•	• 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.	• 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 reinforcedwhere appropriate. • Know and use technical vocabulary • relevant to the project.	
Mechanisms/mechanical systems		• Explore and use sliders and levers. • Understand that different mechanisms produce different types of movement. • Know and use technical vocabulary relevant to theproject.	• 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. • Distinguish between fixed and loose pivots. • Know and use technical vocabulary relevant to theproject.		• Understand that mechanical and electrical systems have an input, processand 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.	

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Skills	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Electrical systems	•				• Understand and use electrical systems in their products linked to science coverage. • Apply their understanding of computing toprogram 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.

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Progression of vocabulary for your from EYFS to Y6

		EYFS		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		FS1	FS2						
Designing, Making and Evaluating				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
Food				fruit and vegetable names, names of equipment and utensils sensory vocabulary e.g. soft, juicy, runchy, 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	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

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		EYFS		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		FS1	FS2						
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	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
Textiles				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,	

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		EYFS		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		FS1	FS2						
Mechanisms/mechanical systems				vehicle, wheel, axle, axle holder, chassis, body, cab assembling, cutting, joining, shaping, finishing, fixed, free, moving, mechanism names of tools, equipment and materials used	slider, lever, pivot, slot, bridge/guide, card, masking tape, paper fastener, join, pull, push, up, down, straight, curve, forwards, backwards	mechanism, lever, linkage, pivot, slot, bridge, guide system, input, process, output linear, rotary, oscillating, reciprocating, Hydraulic		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	
Electrical systems							series circuit, fault, connection, toggle switch, push-to-make switch, push-to-breakswitch, battery, battery holder, bulb, bulb holder, wire, insulator, conductor, crocodile clip, control, program, system, input device, output device		reed switch, toggle switch, push-to-makeswitch, 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