Progression in Design Technology	
Teaching Sequence in Design Technology	Placing the DT being studied in the context of similar past learning in the subject
	Brief review of learning covered in previous lesson/s
	Teacher delivers a design brief, posing a problem to be solved in a context the children understand
	Children research existing products and possible construction materials/ingredients/tools.
	Children create their own design, in response to the brief and their research.
	Children make their product.
	Children critically evaluate their work

Strand	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Research	• Children 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. • Children represent their own ideas, thoughts and feelings through design and technology	• Explore a range of existing products, discussing how they are made and how they work. • Discuss how these products could help them with their own design		• Learn about how key events and individuals in design and technology have helped shape the world. • Investigate and analyse a range of existing products, discussing their features, construction, purpose and intended users.			

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Design	Represent and communicate their own ideas and thoughts through design Begin to use the language of designing and making, e.g. join, build and shape. Learning about planning and adapting initial ideas to make them better.	• Select pictures to help develop ideas and explain what they are making and which materials they are using • Discuss their work as it progresses • say whether their products are for themselves or other users • describe what their products are for • generate ideas by drawing on their own experiences	• Use pictures and words to convey what they want to make • Use drawings to record ideas as they are developed • Add notes to drawings to help explanations • say how their products will work • say how they will make their products suitable for their intended users • use knowledge of existing products to help come up with ideas	• Investigate products to the one being made to give a starting point for design • Draw/sketch product to help understand how they are made • Think ahead about the order of their work • describe the purpose of their products	• investigate and analyse a range of existing functional survival products and draw/sketch products to help understand how and why they are made • develop more than one design or adaptation of an initial design • indicate the design features of their products that will appeal to intended users • explain how particular parts of their products work	• make well-chosen decisions on how to prepare food products taking into account the properties of ingredients and sensory characteristics • select dishes for a particular purpose based on their knowledge of seasonality and typical South American ingredients. • sketch and model alternative ideas and record ideas using annotated diagrams with increasing detail • generate innovative ideas, drawing on research • carry out research, using surveys, interviews, questionnaires and web-based resources	• make design decisions, taking account of constraints such as time, resources and cost • identify the needs, wants, preferences and values of particular individuals and groups

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Make **Construction**	To learn to construct with a purpose in mind. -Selects tools and techniques needed to shape, assemble and join materials. Safely use tools and materials	**Materials** • Measure and mark out card to be cut using a template • Join the card to make a 3D container using glue and tape • Cut materials safely using tools provided. • Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling).	**Construction** • Cut wood using a hacksaw • Glue wood to strengthening corners • Measure and mark out to the nearest centimetre. • Demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen). • Use wood to practise drilling, screwing, gluing and nailing materials to make products	**Construction** • Use the coiling technique with clay to build a pot • Join coils accurately using tools selected. • Understand how a wide base of a 3D object makes it more stable			

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Make **Textiles**	To learn to construct with a purpose in mind. -Selects tools and techniques needed to shape, assemble and join materials. Safely use tools and materials	• Join their fabrics with glue or by using running stitch, staples or over-sewing • Decorate their puppet with buttons, beads, sequins, braids and ribbons			• join textiles neatly using basic stitch techniques (running, back and oversewing) • Decorate using cross stitch • explore fastening and recreate some e.g. sew on buttons and create loops		• Join fabrics by pinning and tacking pieces together • Stitch using a range of stitches including blanket stitch • Create objects that employ a seam allowance. • Join textiles with a combination of stitching techniques (such as back stitch for seams and running stitch to attach decoration). • Use the qualities of materials to create suitable visual and tactile effects in the decoration of textiles (such as a soft decoration for comfort on a cushion).

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Make **Mechanisms**			• Create a mechanism using a lever • Use the lever to move an object/picture		• build on their scientific knowledge of the transference of forces in year 3 to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears). • draw on their knowledge of pulley systems to solve a problem to demonstrate how the Egyptians made it easier to lift rocks using pulleys • build a wooden frame and strengthen this with diagonal struts • measure, mark and cut the wood to 1cm • Attach and construct the pulley system.	• Build frameworks using a range of material to support mechanisms • Know how mechanical systems such as cams or pulleys or gears create movement • Convert rotary motion to linear using cams	

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Make **Electronics**					• Understand and create an electrical circuit • Create series and parallel circuits • Know how simple electric circuits and components can be used to create functional products • How to program a computer to control products		• Draw on their knowledge of year 6 computing and science work on electrical circuits to design and create circuits using electronic kits that employ a number of components (such as resistor, LED's, transistors and chips) • Know how more complex electric circuits and components can be used to create functional products • Know how to program a computer to monitor changes in the environment and control their product

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Make **Food**			• Understanding the basic principles of a healthy diet • that all food comes from plants or animals • that food has to be farmed, grown elsewhere (e.g. home) or caught • how to name and sort foods into the five groups in The eatwell plate • that everyone should eat at least five portions of fruit and vegetables every day • Developing a food vocabulary using taste, smell, touch and texture • Grate and chop a range of ingredients • Measure and weigh food items using non-statutory measures such as cups • Demonstrate how to work safely and hygienically • Assemble or cook ingredients.	• Build on their food vocabulary acquired in key stage 1 by increasing their sensory vocabulary and knowledge around how foods feel, smell and taste • Make healthy eating choices from an understanding of a balanced diet when designing their product. Know that to be active and healthy, food and drink are needed to provide energy for the body • Say how and why they need to work safely and hygienically by providing examples they have used when preparing the food using utensils • use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking • Understand seasonality and		• Use scales to measure accurately • Cut and shape ingredients using appropriate tools and equipment • Decorate dishes based on knowledge of simple ingredients used to decorate dishes • Understand the importance of correct storage and handling of ingredients (using knowledge of micro-organisms). • Measure accurately and calculate ratios of ingredients to scale up or down from a recipe. • Create and refine recipes, including ingredients, methods • that seasons may affect the food available • how food is processed into ingredients that can be eaten or used in cooking	

				which products can be grown locally and which can't. 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 • Measure ingredients to the nearest gram accurately. • Follow a recipe. • Assemble or cook ingredients		• how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking • that recipes can be adapted to change the appearance, taste, texture and aroma • that different food and drink contain different substances – nutrients, water and fibre – that are needed for health	

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Evaluate	Begin to talk about changes made during the making process, e.g. making a decision to use a different joining method.	Evaluate Existing Products: • what products are • who products are for • what products are for • Say what they like and do not like about the product they have made and why • Talk about their design and identify good and bad points	Evaluate Existing Products: • what products are • who products are for • what products are for • how products work • how products are used • where products might be used • what materials products are made from • what they like and dislike about products • Describe the purpose of the product • Evaluate how well it does its job (shows movement) • Discuss how closely their finished product meets their design criteria	Evaluate existing products • where products were designed and made • when products were designed and made • whether products can be recycled or reused • Discuss how well the product meets the design criteria and how well it meets the needs of the user • Evaluate their product and consider and explain how it could be improved.	Evaluate existing products • where products were designed and made • when products were designed and made • whether products can be recycled or reused • evaluate against own design criteria • consider the strengths and weaknesses of their work in relation to its function • Understand how key events and individuals in design and technology have helped shape the world	Evaluate existing Products • how much products cost to make how innovative products are • how sustainable the materials in products are • what impact products have beyond their intended purpose • Consider the viewpoints of other when evaluating their work • Evaluate the process of design and making the product	• Critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make • Justify decisions about materials and methods of construction.
Subject Specific Vocabulary	**Design:** 1. plan to do something with a specific purpose in mind 2. do a drawing of something before making it **Designer:** 1. a person who creates a plan for something they want to make 2. KS2 – also focus on 'designer' as a job title/career, e.g. 'fashion designer' **Technology:** using what we know about Science to help us make useful things **Product:** an outcome piece with a function/that does something - not necessarily a thing which can be sold **Brief:** the initial instructions that tell us what we need to do in our project **User:** the person who we are designing our product for, whose needs/wants must be taken into account						

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Topic Specific Vocabulary	materials tools construct make cut join strong ingredients healthy cook taste	brief product evaluate problem-solving textiles needle thread pin running stitch cut join construct structure stable	label technology ingredients healthy chopping board hygiene chef balanced nutritious appealing cut join moving picture mechanism lever slider pivot strengthen	intended user annotated sketch component hygiene utensils slice dice recipe street food texture oven temperature salad coil	design criteria pattern piece running stitch cross stitch applique embroidery textile designer battery circuit switch bulb electrical engineer mechanical system pulley driver follower load transport mechanical engineer	computer-aided design hygiene cross contamination local produce seasonality bake fry spices frame structure triangulation strengthen reinforce greenhouse agricultural engineer	battery circuit switch monitor control program electrical engineer pattern pieces back stitch tension seam allowance turn out fastener fashion designer ethical product corporate social responsibility