

Design & Technology Progression Document

Domain	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Knowledge, Skills and Understanding							
Developing, planning and communicating ideas	<p><i>Begin to draw plans of what they want to create</i></p> <p><i>To talk about what they are creating, its purpose and who will use it</i></p>	<p>Develop, model and communicate their ideas through drawings and mock-ups with card and paper.</p>	<p>Generate initial ideas and simple design criteria through talking and using own experiences Develop and communicate ideas through drawings and mock-ups</p>	<p>Generate realistic ideas and design criteria collaboratively through discussion, focusing on the needs of the user and purpose of the product. Develop ideas through the analysis of existing products and use annotated sketches and prototypes to model and communicate ideas.</p>	<p>Generate realistic ideas through discussion and design criteria for an appealing, functional product fit for purpose and specific users Produce annotated sketches, prototypes, final product and sketches</p>	<p>Generate innovative ideas through research and discussion with peers and adults to develop a design brief and criteria for a design specification. Explore a range of initial ideas, and make design decisions to develop a final product linked to user and purpose. Use words, annotated sketches and information and communication technology as appropriate to develop and</p>	<p>Generate innovative ideas through research and discussion with peers and adults to develop a design brief and criteria for a design specification. Explore a range of initial ideas and make design decisions to develop a final product linked to the user and purpose Use words, annotated sketches and computing to communicate ideas.</p>

						communicate ideas.	
Working with tools, equipment, materials and components to make quality products.	<p><i>Experience of simple cutting, shaping and joining skills using scissors, glue, tape, string and staples.</i></p> <p><i>To learn to use safety knives correctly.</i></p> <p><i>To begin to use screwdrivers for funky fingers activities</i></p> <p><i>To begin to use ingredients to bake and cook eg cakes, soup</i></p>	Experience of simple cutting, shaping and joining skills using scissors, glue, paper fasteners and masking tape.	<p>Gained some experience of designing, making and evaluating products for a specified user and purpose.</p> <p>Developed some cutting, joining and finishing skills with card and fabric.</p>	Experience of using different joining, cutting and finishing techniques with paper and card.	Select and use a range of appropriate tools with some accuracy eg cutting, joining and finishing.	Experience of using measuring, marking out, cutting, joining, shaping and finishing techniques with construction materials.	Experience of using measuring, marking out, cutting, joining, shaping and finishing techniques. *Use of pattern pieces (textiles)
Evaluating processes and products.	<i>To talk about what works well, what didn't work and how it might be changed next time</i>	Evaluate their product by discussion how well it works in relation to the purpose and the user and whether it meets the design criteria.	Evaluate their idea throughout and their products against original criteria.	Test and evaluate their own products against design criteria and the intended user and purpose.	Test their product against the original design criteria and with the intended user.	Evaluate the final product with reference back to the design brief and design specification, taking into account the views of others when identifying improvements.	Evaluate the final product with reference back to the design brief and design specifications, taking into account the views of others when identifying improvements. Record

						Record evaluation and improvements/modifications as part of the iterative design process.	evaluations, improvements/modifications as part of the iterative design process.
Breadth Of Study							
Mechanisms	<p><i>>select and use tools, to cut, shape, join paper, card and other materials.</i></p>	<p>Sliders and Levers</p> <p>*Select and use tools, explaining their choices, to cut, shape and join paper and card.</p> <p>*Use simple finishing techniques suitable for the product they are creating.</p> <p>* Explore and use sliders and levers</p> <p>* Understand that different mechanisms produce different types of movement.</p> <p>*Know and use technical vocabulary relevant to the project.</p>	<p>Wheels and Axles</p> <p>* Explore and use wheels, axles and axle holders</p> <p>*Distinguish between fixed and freely moving axles</p> <p>8Select from and use a range of tools and equipment to perform practical tasks such as cutting and joining to allow movement and finishing.</p> <p>*Select from and use a range of materials and components such as paper, card, plastic and wood</p>				

			<p>according to their characteristics.</p> <p>*Know and use technical vocabulary relevant to the project.</p>				
Structures	<p>Freestanding structures</p> <p><i>>to create with various construction kits Eg mobilo, duplo, lego, magnetico, sticklebricks</i></p> <p><i>>to create on a large scale in outdoor continuous provision to build with large hollow wooden blocks, planks, crates, pipes, tarpaulins</i></p> <p><i>> to evaluate and test their products for functionality</i></p> <p><i>>to begin to use technical vocabulary – strong, weak, balance, build</i></p>	<p>Freestanding Structures</p> <p>*Select new and reclaimed materials and construction kits/toys to build their structure.</p> <p>*Use simple finishing techniques suitable for the structure they are creating. Explore a range of existing freestanding structures in the school and local environment eg everyday products and buildings.</p> <p>*Know how to make freestanding structures</p>		<p>Shell Structures</p> <p>* Develop and use knowledge of how to construct strong, stiff shell structures.</p> <p>*Develop and use knowledge of a range of nets eg cube, cylinder etc.</p> <p>*Investigate and evaluate a range of existing shell structures including the materials, components and techniques that have been used.</p> <p>* Test and evaluate their own products against design criteria and the intended user and purpose.</p> <p>*Know and use technical</p>		<p>Frame Structures</p> <p>*Experience of using measuring, marking out, cutting, joining, shaping and finishing techniques with construction materials now with greater accuracy.</p> <p>*Basic understanding of what structures are and how they can be made stronger, stiffer and more stable.</p> <p>*Understand how to strengthen, stiffen and reinforce 3D frameworks.</p> <p>*Competently select from and use appropriate tools to</p>	

		<p>stronger, stiffer and more stable. *Know and use technical vocabulary relevant to the project.</p>		<p>vocabulary relevant to the project.</p>		<p>accurately measure, mark out, cut, shape and join construction materials to make frameworks. *Use finishing and decorative techniques suitable for the product they are designing and making. *Know and use technical vocabulary relevant to the project.</p>	
Food	<p><i>Investigating fruit and vegetables</i> <i>>Use simple safety knives to slice, peel, cut fruit, vegetables and foliage</i> <i>>use simple utensils to stir, whisk, mix</i> <i>>to be introduced to fruits and vegetables they may not have seen at home</i></p>	<p>Preparing fruit and vegetables *Use simple utensils and equipment to peel, cut, slice, squeeze, grate and chop safely. *Select from a range of fruit and vegetables according to their characteristics eg taste/flavour/colour, texture to create a chosen product.</p>	<p>Fruit and Vegetables * Use simple utensils and equipment to peel, cut, slice, squeeze, grate and chop safely. *Select from a range of fruit and veg according to their characteristics, eg taste, smell, flavour, colour and texture.</p>	<p>Healthy and Varied Diet * Plan the main stages of a recipe, listing ingredients, utensils and equipment. *Select and use appropriate utensils and equipment to prepare and combine ingredients. *Select from a range of</p>	<p>Healthy and Varied Diet * Plan the main stages of a recipe, listing ingredients, utensils and equipment. *Select and use appropriate utensils and equipment to prepare and combine ingredients. *Select from a range of</p>	<p>Culture and Seasonality *Write a step by step recipe, including a list of ingredients, equipment and utensils. *Select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients.</p>	<p>Culture and Seasonality *Write a step by step recipe, including a list of ingredients, equipment and utensils. *Select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients.</p>

	<p><i>>to talk about taste, smell, flavour, colour of foods</i></p> <p><i>>to begin to understand concept of healthy and unhealthy food linked to diet</i></p>	<p>* Taste and evaluate a range of fruit and vegetables to determine the intended user's preferences.</p> <p>*Understand where a range of fruit and veg come from.</p> <p>*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.</p> <p>*Know and use technical and sensory vocabulary relevant to the project.</p>	<p>*Taste and evaluate a range of fruit and vegetables to determine the intended user's preferences</p> <p>*Understand where a range of fruit and vegetables come from eg farm/allotment/grown at home</p> <p>*Understand and use the basic principles of a healthy and varied diet to prepare dishes.</p> <p>*Understand how fruit and vegetables are an important part of the eatwell plate.</p> <p>*Be able to identify familiar and unfamiliar fruit and vegetables</p> <p>*Distinguish between a fruit and a vegetable.</p>	<p>ingredients to make appropriate food products, thinking about sensory characteristics.</p> <p>*Know how to use appropriate equipment and utensils to prepare and combine food.</p> <p>*Know about a range of fresh and processed ingredients appropriate for their product and whether they are grown, reared or caught.</p> <p>*Know and use technical vocabulary</p>	<p>ingredients to make appropriate food products, thinking about sensory characteristics.</p> <p>*Know how to use appropriate equipment and utensils to prepare and combine food.</p> <p>*Know about a range of fresh and processed ingredients appropriate for their product and whether they are grown, reared or caught.</p> <p>*Know and use technical vocabulary</p> <p>*Be able to identify parts of the meal – starter, main, dessert and understand eatwell plate and balanced diet.</p>	<p>Make, decorate and present the food product appropriately for the intended user and purpose.</p> <p>*Carry out sensory evaluations of a range of relevant products and ingredients.</p> <p>*Know and use relevant technical and sensory vocabulary</p> <p>*Understand about seasonality in relation to food products and the source of different food products.</p>	<p>Make, decorate and present the food product appropriately for the intended user and purpose.</p> <p>*Carry out sensory evaluations of a range of relevant products and ingredients.</p> <p>*Know and use relevant technical and sensory vocabulary</p> <p>*Understand about hospitality and serve a three course meal to the user.</p> <p>*Understand about seasonality in relation to food products and the source of different food products.</p>
Textiles			Templates and Joining				Textiles – with CAD

			<ul style="list-style-type: none"> *Understand how simple 3D textile products are made, using a template to create two identical shapes. *Understand how to join fabrics using difference techniques eg Velcro, heat spray, safety pins, running stitch, glue and stapling. *Explore different finishing techniques eg using paint, fabric crayons/pens, stitching, buttons, sequins, ribbons. *Select from and use textiles according to their characteristics. *Know and use technical vocabulary relevant to the project. 				<ul style="list-style-type: none"> *Understand how templates and pattern pieces form 3D products *Understand how using a computer programme can assist with drawing patterns. *Select from and use textiles according to their characteristics. *Understand how to join fabrics using a range of sewing stitches, making work neat/with accuracy. *Explore finishing techniques – sequins, buttons, ribbons etc. *Know and use technical vocabulary relevant to the project.
Mechanical Systems –				<p>Pneumatics</p> <ul style="list-style-type: none"> *Order the main stages of the making 	<p>Levers and Linkages</p> <ul style="list-style-type: none"> *Select and use appropriate tools 	<p>Cams</p> <ul style="list-style-type: none"> * Select from and use appropriately, with greater 	

				<p>*Select from and use appropriate tools with some accuracy to cut, shape and join paper and card.</p> <p>*Select from and use finishing techniques suitable for the product they are creating.</p> <p>*Understand and use a pneumatic system</p> <p>* Distinguish between hydraulics and pneumatics</p> <p>*Know and use technical vocabulary relevant to the project</p>	<p>and materials with increasing accuracy to cut, shape and join.</p> <p>* Understand and use more complex lever and linkages mechanisms</p> <p>*Understand fixed and loose pivots.</p> <p>*Understand input and output</p> <p>*Use key vocabulary relevant to the project</p>	<p>accuracy, to cut, shape and join paper, card and wood.</p> <p>*Select from and use finishing techniques suitable for the product they are creating.</p> <p>*Understand and use cam mechanisms.</p> <p>*Understand real life contexts for cam mechanisms.</p> <p>*Distinguish between different types of cam – egg, off-centred etc.</p> <p>*Know and use technical vocabulary relevant to the project.</p>	
Electrical Systems					<p>Simple Circuits and Switches</p> <p>*Understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs and buzzers</p>		<p>Electrical Systems with Monitoring and Control – More complex circuits and switches.</p> <p>* Understand and use electrical systems in their products, such as</p>

					<p>*Apply their understanding of computing to program and control their products</p> <p>*Know and use technical vocabulary relevant to the project.</p>		<p>series circuits, incorporating switches, bulbs and buzzers.</p> <p>*Apply their understanding of computing to program and control their product.</p> <p>*Use a micro-controller eg Crumble to understand computer control software</p> <p>*Know and use technical vocabulary relevant to the project</p>
--	--	--	--	--	---	--	---