

Progression Document for Design and Technology

	0-3 Years - N1 (Jan Nursery Starters)	3-4 Years – N1 (Jan Nursery Starters) & N2 (Sep Nursery Starters)	Reception
<b>Disciplinary Knowledge</b> <ul style="list-style-type: none"> <li>• Exploration</li> <li>• Play</li> <li>• Small world opportunities</li> <li>• Box modelling</li> <li>• Joining and fastenings</li> <li>• Discussions / talk</li> <li>• Draw simple representations</li> <li>• Use design templates</li> </ul>	<b>Key Vocabulary:</b> Picture, drawing, painting, build, make.	<b>Key Vocabulary:</b> Build, make, join, shape, longer, shorter, heavier.	<b>Key Vocabulary:</b> Develop, explore, skills, teamwork, fastenings, design, change, adapt.
	<b>Substantive Knowledge:</b> <u>Expressive Art and Design</u> <ul style="list-style-type: none"> <li>• Explore different materials, using all their senses to investigate them. Manipulate and play with different materials.</li> <li>• Use their imagination as they consider what they can do with different materials.</li> <li>• Make simple models which express their ideas.</li> </ul>	<b>Substantive Knowledge:</b> <u>Expressive Art and Design</u> <ul style="list-style-type: none"> <li>• Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park.</li> <li>• Explore different materials freely, to develop their ideas about how to use them and what to make.</li> <li>• Develop their own ideas and then decide which materials to use to express them.</li> <li>• Join different materials and explore different textures.</li> </ul>	<b>Substantive Knowledge:</b> <u>Expressive Art and Design</u> <ul style="list-style-type: none"> <li>• Return to and build on their previous learning, refining ideas and developing their ability to represent them.</li> <li>• Create collaboratively, sharing ideas, resources and skills.</li> </ul>

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	Year 1	Year 2	Year 3
<b>Disciplinary Knowledge</b> <ul style="list-style-type: none"> <li>• Use a design template</li> <li>• Discussion</li> <li>• Evaluation and reflection</li> <li>• Measure and weigh</li> <li>• Assemble, join and combining</li> <li>• Name and sort</li> <li>• Identification and classification</li> <li>• Decoration and finishing</li> <li>• Researching using first-hand experiences</li> </ul>	<b>Key Vocabulary:</b> Purpose, planning, ideas, investigating, designing, making, improving, healthy, fruit, vegetables, nutrients.	<b>Key Vocabulary:</b> Research, design, build, stable, evaluate, improve. Recipe, diet, healthy.	<b>Key Vocabulary:</b> Research, design, make, attach, weigh, measure, sew, evaluate, Recipe, ingredients, healthy, flavour, texture.
	<b>Substantive Knowledge:</b> <u>Research / Design / Planning stage</u> <ul style="list-style-type: none"> <li>• Design purposeful, functional and appealing products based on design criteria.</li> <li>• Explain what their design is and what they would use it for.</li> </ul> <u>Making the product</u> <ul style="list-style-type: none"> <li>• Select from and use a range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing).</li> <li>• Attempt to cut different materials safely.</li> <li>• Begin to demonstrate a range of cutting and shaping techniques.</li> <li>• Attempt to join materials by gluing, hinges or combining materials to strengthen.</li> <li>• Begin to use templates to shape textiles.</li> <li>• With adult support begin to join textiles using running stitch.</li> <li>• Begin to decorate as well as colour textiles to create different effects (such as dyeing, adding sequins or printing).</li> <li>• Begin use a range of materials to attempt drilling, screwing, gluing and nailing materials to make and strengthen products with support.</li> </ul> <u>Evaluate</u> <ul style="list-style-type: none"> <li>• Begin to make suggestions about how they could improve theirs or others work.</li> <li>• Explain how products may have been created.</li> </ul> <u>Cooking and nutrition</u> <ul style="list-style-type: none"> <li>• Consider hygiene and begin to cut, peel or grate ingredients safely.</li> <li>• Measure or weigh using non-standard measurements.</li> <li>• Select appropriate ingredients and follow guidance to cook them.</li> <li>• Name and sort the foods on the eat well plate.</li> </ul>	<b>Substantive Knowledge:</b> <u>Research / Design / Planning stage</u> <ul style="list-style-type: none"> <li>• Design products that have a clear purpose and an intended user.</li> <li>• Research similar existing products to produce ideas.</li> </ul> <u>Making the product</u> <ul style="list-style-type: none"> <li>• select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].</li> <li>• Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</li> <li>• Build structures, exploring how they can be made stronger, stiffer and more stable.</li> <li>• Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</li> </ul> <u>Evaluate</u> <ul style="list-style-type: none"> <li>• Explore and evaluate a range of existing products.</li> <li>• Evaluate their ideas and products against design criteria.</li> <li>• Make simple judgements about their products and designs and suggest how their products could be improved.</li> </ul> <u>Cooking and nutrition:</u> <ul style="list-style-type: none"> <li>• Use the basic principles of a healthy and varied diet to prepare dishes.</li> <li>• Understand where their food comes from.</li> </ul>	<b>Substantive Knowledge:</b> <u>Research / Design / Planning stage:</u> <ul style="list-style-type: none"> <li>• 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</li> <li>• Use annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design to communicate their ideas.</li> </ul> <u>Making the product:</u> <ul style="list-style-type: none"> <li>• Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.</li> <li>• Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties.</li> <li>• Experiment with different mechanisms with products (levers, gears, pulleys etc.)</li> <li>• Select different joining techniques.</li> <li>• Decorate their product using different techniques.</li> <li>• Measure and cut products as close as possible to the nearest centimetre.</li> </ul> <u>Evaluate:</u> <ul style="list-style-type: none"> <li>• Investigate and analyse a range of existing products.</li> <li>• Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</li> <li>• Understand how key events and individuals in design and technology have helped shape the world.</li> </ul> <u>Cooking and nutrition:</u> <ul style="list-style-type: none"> <li>• Understand and apply the principles of a healthy and varied diet.</li> <li>• Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.</li> </ul>

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	Year 4	Year 5	Year 6
<b>Disciplinary Knowledge</b> <ul style="list-style-type: none"> <li>• Discussion</li> <li>• Measure and weigh accurately</li> <li>• Decoration and finishing</li> <li>• Researching using primary and secondary sources</li> <li>• Analyse</li> <li>• Evaluation and reflection</li> </ul>	<b>Key Vocabulary:</b> Research, design, appealing, annotate, drawings, evaluate. Measure, weigh, join, strengthen. Equipment, utensils, ingredients, hygiene.	<b>Key Vocabulary:</b> Research, design criteria, annotate, sketch, accuracy, decoration, strengthen, evaluate. Levers, gears, pulleys, mechanisms, circuit. Cross-contamination, diet, recipe, nutrients, utensils, Celsius.	<b>Key Vocabulary:</b> Research, design criteria, annotate, accuracy, decoration, strengthen, sustainability, evaluate, refine. Levers, gears, pulleys, mechanisms, circuit. Cross-contamination, diet, recipe, nutrients, utensils, Celsius, seasonality.
	<b>Substantive Knowledge:</b> <u>Research / Design / Planning stage:</u> <ul style="list-style-type: none"> <li>• 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</li> <li>• Confidently use annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design to communicate their ideas.</li> </ul> <u>Making the product:</u> <ul style="list-style-type: none"> <li>• Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.</li> <li>• Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties.</li> <li>• Cut materials accurately and safely.</li> <li>• Select appropriate joining techniques.</li> <li>• Select the most appropriate techniques to decorate textiles.</li> </ul> <u>Evaluate:</u> <ul style="list-style-type: none"> <li>• Investigate and analyse a range of existing products.</li> <li>• Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</li> <li>• Understand how key events and individuals in design and technology have helped shape the world.</li> <li>• Choose suitable techniques to repair items.</li> <li>• Strengthen materials using suitable techniques.</li> </ul> <u>Cooking and nutrition:</u> <ul style="list-style-type: none"> <li>• Understand and apply the principles of a healthy and varied diet.</li> <li>• Hygienically prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.</li> <li>• Measure ingredients accurately (to the nearest gram).</li> </ul>	<b>Substantive Knowledge:</b> <u>Research / Design / Planning stage:</u> <ul style="list-style-type: none"> <li>• Use the internet to research and then develop own design ideas.</li> <li>• Take a 'user's view' into account when designing – considering the needs and wants of the individuals.</li> <li>• Produce a logical and realistic plan and explain it to others.</li> <li>• Confidently use annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design to communicate their ideas.</li> </ul> <u>Making the product:</u> <ul style="list-style-type: none"> <li>• Cut and shape materials with precision, choosing the appropriate tools.</li> <li>• Join textiles with a variety of stitching techniques.</li> <li>• Create series and parallel circuits which include more than the battery and bulb.</li> <li>• Complete products to a high quality.</li> <li>• Mainly accurately apply a range of finishing techniques.</li> <li>• Begin to use levers, pulleys and gears to create movement.</li> </ul> <u>Evaluate:</u> <ul style="list-style-type: none"> <li>• Evaluate the quality of products and design both throughout and after.</li> <li>• Evaluate the key designs of individuals in design and technology and consider how they have shaped the world.</li> </ul> <u>Cooking and nutrition:</u> <ul style="list-style-type: none"> <li>• Understand the importance of hygiene when preparing ingredients and storing them correctly.</li> <li>• Measure ingredients accurately and look at how to adapt a recipe to make more or less than the stated amount.</li> <li>• Using prior knowledge of cooking and baking to create own recipe (including ingredients and method).</li> </ul>	<b>Substantive Knowledge:</b> <u>Research / Design / Planning stage:</u> <ul style="list-style-type: none"> <li>• Draw on own research to inform their design process.</li> <li>• Identify features of design that will appeal to the intended user.</li> <li>• Come up with innovative design ideas.</li> <li>• Use annotated sketches, cross-sectional planning, exploded diagrams and computer-aided programs to represent their ideas.</li> <li>• Make design decisions, considering resources, cost and how to make them sustainable.</li> <li>• Clearly explain how parts of their design will work and how they are fit for purpose.</li> <li>• Formulate their own step-by-step plan to guide them with making their product, including tools, equipment needed, materials and components.</li> </ul> <u>Making the product:</u> <ul style="list-style-type: none"> <li>• Cut materials with precision and refine the finish with appropriate tools.</li> <li>• Show an understanding of the qualities of materials to choose the appropriate tools to cut and shape.</li> <li>• Create objects that use a seam allowance.</li> <li>• Join textiles with a combination of stitching techniques.</li> <li>• Create circuits using electronic kits that employ a number of components.</li> </ul> <u>Evaluate:</u> <ul style="list-style-type: none"> <li>• Ensure that products have a high-quality finish, using art skills where appropriate.</li> <li>• Record evaluations with drawings.</li> <li>• Evaluate against their own criteria.</li> <li>• Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices.</li> </ul> <u>Cooking and nutrition:</u> <ul style="list-style-type: none"> <li>• Understand the importance of correct storage and handling ingredients.</li> <li>• Measure accurately and calculate the ratios of ingredients to scale up or down from a recipe.</li> <li>• Demonstrate a range of baking and cooking techniques.</li> <li>• Create and refine own recipes, including ingredients, methods, cooking times and temperatures.</li> </ul>