



Progression Map

Subject: Design & Technology

Nursery	Reception
<p>3 and 4-year-olds will be learning to:</p> <p>Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park.</p> <p>Explore different materials freely, to develop their ideas about how to use them and what to make.</p> <p>Develop their own ideas and then decide which materials to use to express them.</p> <p>Join different materials and explore different textures.</p>	<p>Children in reception will be learning to:</p> <p>Explore, use and refine a variety of artistic effects to express their ideas and feelings.</p> <p>Return to and build on their previous learning, refining ideas and developing their ability to represent them.</p> <p>Create collaboratively, sharing ideas, resources and skills.</p> <p>ELG: Creating with Materials</p> <p>Children at the expected level of development will:</p> <ul style="list-style-type: none">- 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



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Design					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Create simple designs for a product</p> <p>Use pictures and words to describe what he/she wants to do</p> <p>Work in a range of relevant contexts, for example: imaginary, story based and school.</p>	<p>Use their knowledge of existing products, and their own experiences, to help generate ideas.</p> <p>Design purposeful, functional, appealing products for himself/herself and other users based on design criteria</p> <p>Generate, develop, model and communicate his/her ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</p> <p>Work in a range of relevant contexts, for example: imaginary, storybased, home, school & the wider environment</p>	<p>Use knowledge of existing products to design his/her own functional product</p> <p>Create designs using annotated sketches, cross-sectional diagrams and simple computer programmes</p> <p>Work in a broader range of relevant contexts than KS1, for example: leisure, the food industry and the wider environment</p>	<p>Use knowledge of existing products to design a functional and appealing product for a particular purpose and audience</p> <p>Create designs using exploded diagrams</p> <p>Design innovative and appealing products that have a clear purpose and are aimed at a specific user.</p> <p>Explain how particular parts of their product work.</p> <p>Work in a broader range of relevant contexts, for example: entertainment, the home, school, leisure, the food industry and the wider environment.</p>	<p>Use his/her research into existing products and his/her market research to inform the design of his/her own innovative product</p> <p>Create prototypes to show his/her ideas</p> <p>Test ideas out by creating prototypes.</p> <p>Explain how a larger proportion of the parts in their products work.</p>	<p>Use research to inform and develop detailed design criteria, and the design of innovative, functional and appealing products that are fit for purpose and aimed at a target audience.</p> <p>With increasing independence, confidence and routine, design products that have a clear purpose, and explain how design features of their products will appeal to its target audience.</p> <p>Generate, develop, model and communicate his/her ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p> <p>Work in a broad range of relevant contexts, for example: (all those identified so far, along with) conservation, culture, enterprise and industry.</p>



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Make					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Select from and use a range of tools and equipment to perform practical tasks e.g. cutting, shaping, joining and finishing</p> <p>With guidance, use a range of simple tools to cut, join and combine materials and components safely</p>	<p>Choose appropriate tools, equipment, techniques and materials from a wide range</p> <p>Safely measure, mark out, cut and shape materials and components using a range of tools</p> <p>Investigate different techniques for stiffening a variety of materials and explore different methods of enabling structures to remain stable</p>	<p>Make suitable choices from a wider range of tools and unfamiliar materials and plan out the main stages of using them</p> <p>Safely measure, mark out, cut, assemble and join with some accuracy</p> <p>Learn to use a range of tools and equipment safely, appropriately and accurately, and follow hygiene procedures more habitually</p>	<p>Develop their skills and understanding of using a range of tools and equipment safely and accurately, and explain the importance of following hygiene procedures.</p> <p>Use a wider range of materials and components, including construction materials and kits, textiles and mechanical and electrical components</p> <p>Use techniques which require more accuracy to cut, shape, join and finish his/her work e.g. Cutting internal shapes, slots in frameworks</p> <p>Use his/her knowledge of techniques and the functional and aesthetic qualities of a wide range of materials to plan how to use them</p>	<p>Make careful and precise measurements so that joints, holes and openings are in exactly the right place</p> <p>Produce step by step plans to guide his/her making, demonstrating that he/she can apply his/her knowledge of different materials, tools and techniques</p> <p>Build more complex 3D structures and apply his/her knowledge of strengthening techniques to make them stronger or more stable</p>	<p>Use technical knowledge accurate skills to problem solve during the making process</p> <p>Use a wide range of methods to strengthen, stiffen and reinforce complex structures and can use them accurately and appropriately</p> <p>Use a full range of materials and components, including construction materials and kits, textiles, and mechanical and electrical components – including computer programs.</p>



Progression Map

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Evaluate					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Ask simple questions about existing products and those that he/she has made</p> <p>Evaluate existing products through discussions and comparisons.</p> <p>Explain positives of, and things to improve for, existing products.</p> <p>Explore different types of materials & their qualities.</p> <p>Talk about what they are making.</p> <p>Start to identify strengths and possible changes they might make to their own work.</p> <p>Evaluate their products against their simple design criteria.</p>	<p>Evaluate and assess existing products and those that he/she has made using a design criteria</p> <p>Explain positives of, and things to improve for, existing products; linking their physical properties.</p> <p>Explore what materials products are made from; naming some examples and their qualities.</p> <p>Talk about their design ideas and what they are making.</p> <p>As they work, start to identify strengths and possible changes they might make to refine their existing design.</p>	<p>Investigate and analyse existing products and those he/she has made, considering a wide range of factors</p> <p>Consider their design criteria and be willing to alter their plans; sometimes considering the views of others, if this helps them to improve their product.</p> <p>Begin to produce written evaluations of their products against their original design criteria</p>	<p>Consider how existing products and his/her own finished products might be improved and how well they meet the needs of the intended user</p> <p>Consider their design criteria, as they make progress, and be increasingly willing to change their plans.</p> <p>Begin to use the views of others to help in the planning and evaluation of their products.</p>	<p>Make detailed evaluations about existing products and his/her own considering the views of others to improve his/her work</p> <p>Evaluate their ideas and products against the original design criteria, making changes as needed.</p> <p>Produce detailed, written evaluations of the quality of design, manufacture and fitness for purpose of products they have made.</p>	<p>Use his/her knowledge of famous designs to further explain the effectiveness of existing products and products he/she have made</p> <p>Begin to conduct evaluations throughout the making process, with the intention to recognise faults in design before making.</p> <p>Produce written, critical evaluations of the quality of design, manufacture and fitness for purpose of products; beginning to compare similarities and differences between their own and other products on the market.</p>



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Technical Knowledge					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Build structures, exploring how they can be made stronger, stiffer and more stable</p> <p>Use wheels and axles in a product</p>	<p>Explore and use mechanisms e.g. levers, sliders, wheels and axles, in his/her products</p>	<p>Strengthen frames using diagonal struts</p> <p>Understand how mechanical systems such as levers and linkages or pneumatic systems create movement</p> <p>Understand that materials have both functional properties and aesthetic qualities.</p> <p>Apply their understanding of how to strengthen, stiffen and reinforce structures in order to create more resilient products.</p>	<p>Understand and use electrical systems in products</p> <p>Apply techniques he/she has learnt to strengthen structures and explore his/her own ideas</p> <p>Understand, and begin to explain, that materials have both functional properties and aesthetic qualities - discussing how these can enhance or hinder a product's ability to fulfil its purpose.</p> <p>Apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful and resilient products.</p>	<p>Build more complex 3D structures and apply his/her knowledge of strengthening techniques to make them stronger or more stable</p> <p>Understand how to use more complex mechanical and electrical systems</p> <p>Independently apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful and resilient products.</p>	<p>Use a wide range of methods to strengthen, stiffen and reinforce complex structures and can use them accurately and appropriately</p> <p>Apply his/her understanding of computing to program, monitor and control his/her product</p> <p>Independently apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful and resilient products.</p> <p>Demonstrate their technical knowledge by including relevant vocabulary and explanations in their written evaluations.</p>



Progression Map

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Food and Nutrition					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Talk about what he/she eats at home and begin to discuss what healthy foods are</p> <p>Say where some food comes from and give examples of food that is grown</p> <p>Use simple tools with help to prepare food safely</p>	<p>Understand the need for a variety of food in a diet</p> <p>Understand that all food has to be farmed, grown or caught</p> <p>Use a wider range of cookery techniques to prepare food safely</p>	<p>Talk about the different food groups and name food from each group</p> <p>Understand that food has to be grown, farmed or caught in Europe and the wider world</p> <p>Use a wider variety of ingredients and techniques to prepare and combine ingredients safely</p>	<p>Understand what makes a healthy and balanced diet, and that different foods and drinks provide different substances the body needs to be healthy and active</p> <p>Understand seasonality and the advantages of eating seasonal and locally produced food</p> <p>Read and follow recipes which involve several processes, skills and techniques</p>	<p>Understand the main food groups and the different nutrients that are important for health</p> <p>Understand how a variety of ingredients are grown, reared, caught and processed to make them safe and palatable / tasty to eat</p> <p>Select appropriate ingredients and use a wide range of techniques to combine them</p>	<p>Confidently plan a series of healthy meals based on the principles of a healthy and varied diet</p> <p>Use information on food labels to inform choices</p> <p>Research, plan and prepare and cook a savoury dish, applying his/her knowledge of ingredients and his/her technical skills</p>