

Early Years	Key Stage One		Key Stage Two		
Reception	Year 1/2		Year 3/4	Year 5/6	
<p>In their reception year children will be introduced to different materials, tools and skills that are required to use them. They are encouraged to access resources independently, talk about what they have made, explain the processes used and begin to evaluate their creations. This is done during their child-initiated time in the class or as part of whole class learning.</p> <p>In reception class we use Development Matters to guide our curriculum. The most relevant statements for DT are taken from the following areas of learning:</p> <p><b>Physical Development:</b></p> <ul style="list-style-type: none"> <li>Children will develop their small motor skills so that they can use a range of tools competently, safely and confidently. For example; scissors, pencils and pens, hole punches, staplers and tape dispensers.</li> </ul> <p><b>Expressive Arts and Design:</b></p> <ul style="list-style-type: none"> <li>Explore, use and refine a variety of artistic effects to express their ideas and feelings.</li> <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> <p><b>Early Learning Goals</b> are the end of year expectations for reception aged children:</p> <p><b>Physical Development:</b></p> <p>Fine Motor Skills: Use a range of small tools, including scissors, paintbrushes and cutlery,</p>	<b>Designing: Understanding contexts, users and purposes.</b>				
	<p>Across KS1 pupils should:</p> <ul style="list-style-type: none"> <li>work confidently within a range of contexts, such as imaginary, story-based, home, school, gardens, playgrounds, local community, industry and the wider environment</li> <li>state what products they are designing and making</li> <li>say whether their products are for themselves or other users</li> <li>describe what their products are for</li> <li>say how their products will work</li> <li>say how they will make their products suitable for their intended users</li> <li>use simple design criteria to help develop their ideas</li> </ul>	<p>Across KS2 pupils should:</p> <ul style="list-style-type: none"> <li>work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment</li> <li>describe the purpose of their products</li> <li>indicate the design features of their products that will appeal to intended users</li> <li>explain how particular parts of their products work.</li> </ul>			
		<p>In early KS2 pupils should also:</p> <ul style="list-style-type: none"> <li>gather information about the needs and wants of particular individuals and groups</li> <li>develop their own design criteria and use these to inform their ideas</li> </ul>	<p>In late KS2 pupils should also:</p> <ul style="list-style-type: none"> <li>carry out research, using surveys, interviews, questionnaires and web-based resources</li> <li>identify the needs, wants, preferences and values of particular individuals and groups</li> <li>develop a simple design specification to guide their thinking</li> </ul>		
	<b>Designing: Generating, developing, modelling and communicating ideas.</b>				
	<p>Across KS1 pupils should:</p> <ul style="list-style-type: none"> <li>generate ideas by drawing on their own experiences</li> <li>use knowledge of existing products to help come up with ideas</li> <li>develop and communicate ideas by talking and drawing</li> <li>model ideas by exploring materials, components and construction kits and by making templates and mock-ups</li> <li>use information and communication technology, where appropriate, to develop and communicate their ideas</li> </ul>	<p>Across KS2 pupils should:</p> <ul style="list-style-type: none"> <li>share and clarify ideas through discussion</li> <li>model their ideas using prototypes and pattern pieces</li> <li>use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas</li> <li>use computer-aided design to develop and communicate their ideas.</li> </ul>			
		<p>In early KS2 pupils should also:</p> <ul style="list-style-type: none"> <li>generate realistic ideas, focusing on the needs of the user</li> <li>make design decisions that take account of the availability of resources.</li> </ul>	<p>In late KS2 pupils should also:</p> <ul style="list-style-type: none"> <li>generate innovative ideas, drawing on research</li> <li>make design decisions, taking account of constraints such as time, resources and cost</li> </ul>		
<b>Making: Planning</b>					
<p>Across KS1 pupils should:</p> <ul style="list-style-type: none"> <li>plan by suggesting what to do next</li> <li>select from a range of tools and equipment, explaining their choices</li> <li>select from a range of materials and components according to their characteristics</li> </ul>	<p>Across KS2 pupils should:</p> <ul style="list-style-type: none"> <li>select tools and equipment suitable for the task</li> <li>explain their choice of tools and equipment in relation to the skills and techniques they will be using</li> <li>select materials and components suitable for the task</li> <li>explain their choice of materials and components according to functional properties and aesthetic qualities</li> </ul>				
	<p>In early KS2 pupils should also:</p>	<p>In late KS2 pupils should also:</p>			

<p><b>Expressive Arts and Design:</b>                  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.</p>		<ul style="list-style-type: none"> <li>• order the main stages of making</li> </ul>	<ul style="list-style-type: none"> <li>• produce appropriate lists of tools, equipment and materials that they need</li> <li>• formulate step-by-step plans as a guide to making</li> </ul>
	<b>Making: Practical skills and techniques.</b>		
	<p>Across KSI pupils should:</p> <ul style="list-style-type: none"> <li>• follow procedures for safety and hygiene</li> <li>• use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components</li> <li>• measure, mark out, cut and shape materials and components</li> <li>• assemble, join and combine materials and components</li> <li>• use finishing techniques, including those from art and design</li> </ul>	<p>Across KS2 pupils should:</p> <ul style="list-style-type: none"> <li>• follow procedures for safety and hygiene</li> <li>• use a wider range of materials and components than KSI, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components</li> </ul>	
		<p>In early KS2 pupils should also:</p> <ul style="list-style-type: none"> <li>• measure, mark out, cut and shape materials and components with some accuracy</li> <li>• assemble, join and combine materials and components with some accuracy</li> <li>• apply a range of finishing techniques, including those from art and design, with some accuracy</li> </ul>	<p>In late KS2 pupils should also:</p> <ul style="list-style-type: none"> <li>• accurately measure, mark out, cut and shape materials and components</li> <li>• accurately assemble, join and combine materials and components</li> <li>• accurately apply a range of finishing techniques, including those from art and design</li> <li>• use techniques that involve a number of steps</li> <li>• demonstrate resourcefulness when tackling practical problems</li> </ul>
	<b>Evaluating: Own ideas and products.</b>		
	<p>Across KSI pupils should:</p> <ul style="list-style-type: none"> <li>• talk about their design ideas and what they are making</li> <li>• make simple judgements about their products and ideas against design criteria</li> <li>• suggest how their products could be improved</li> </ul>	<p>Across KS2 pupils should:</p> <ul style="list-style-type: none"> <li>• identify the strengths and areas for development in their ideas and products</li> <li>• consider the views of others, including intended users, to improve their work</li> </ul>	
		<p>In early KS2 pupils should also:</p> <ul style="list-style-type: none"> <li>• refer to their design criteria as they design and make</li> <li>• use their design criteria to evaluate their completed products</li> </ul>	<p>In late KS2 pupils should also:</p> <ul style="list-style-type: none"> <li>• critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make</li> <li>• evaluate their ideas and products against their original design specification</li> </ul>
	<b>Evaluating: Existing products.</b>		
	<p>Across KSI pupils should explore:</p> <ul style="list-style-type: none"> <li>• what products are</li> <li>• who products are for</li> <li>• what products are for</li> <li>• how products work</li> <li>• how products are used</li> <li>• where products might be used</li> <li>• what materials products are made from</li> </ul>	<p>Across KS2 pupils should investigate and analyse:</p> <ul style="list-style-type: none"> <li>• how well products have been designed</li> <li>• how well products have been made</li> <li>• why materials have been chosen</li> <li>• what methods of construction have been used</li> <li>• how well products work</li> <li>• how well products achieve their purposes</li> <li>• how well products meet user needs and wants.</li> </ul>	

	<ul style="list-style-type: none"> <li>• what they like and dislike about products</li> </ul>	<p>In early KS2 pupils should also investigate and analyse:</p> <ul style="list-style-type: none"> <li>• who designed and made the products</li> <li>• where products were designed and made</li> <li>• when products were designed and made</li> <li>• whether products can be recycled or reused</li> </ul>	<p>In late KS2 pupils should also investigate and analyse:</p> <ul style="list-style-type: none"> <li>• how much products cost to make</li> <li>• how innovative products are</li> <li>• how sustainable the materials in products are</li> <li>• what impact products have beyond their intended purpose.</li> </ul>
<b>Evaluating: Key events and individuals.</b>			
	<p>Not a requirement in KSI</p>	<p>Across KS2 pupils should know:</p> <ul style="list-style-type: none"> <li>• about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products.</li> </ul>	
<b>Technical Knowledge: Making products work.</b>			
	<p>Across KSI pupils should know:</p> <ul style="list-style-type: none"> <li>• about the simple working characteristics of materials and components</li> <li>• about the movement of simple mechanisms such as levers, sliders, wheels and axles</li> <li>• how freestanding structures can be made stronger, stiffer and more stable</li> <li>• that a 3-D textiles product can be assembled from two identical fabric shapes</li> <li>• that food ingredients should be combined according to their sensory characteristics</li> <li>• the correct technical vocabulary for the projects they are undertaking</li> </ul>		
	<p>Across KSI pupils should know:</p> <ul style="list-style-type: none"> <li>• that all food comes from plants or animals</li> <li>• that food has to be farmed, grown elsewhere (e.g. home) or caught</li> </ul>	<p>Across KS2 pupils should know:</p> <ul style="list-style-type: none"> <li>• that a recipe can be adapted a by adding or substituting one or more ingredients</li> <li>• 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.</li> </ul>	<p>Across KS2 pupils should know:</p> <ul style="list-style-type: none"> <li>• how to use learning from science to help design and make products that work</li> <li>• how to use learning from mathematics to help design and make products that work</li> <li>• that materials have both functional properties and aesthetic qualities</li> <li>• that materials can be combined and mixed to create more useful characteristics</li> <li>• that mechanical and electrical systems have an input, process and output</li> <li>• the correct technical vocabulary for the projects they are undertaking</li> </ul>
<b>Cooking and Nutrition: Where food comes from.</b>			

			<p>In late KS2 pupils should also know:</p> <ul style="list-style-type: none"> <li>• that seasons may affect the food available</li> <li>• how food is processed into ingredients that can be eaten or used in cooking</li> </ul>
<b>Cooking and Nutrition: Food preparation, cooking and nutrition.</b>			
	<p>Across KS1 pupils should know:</p> <ul style="list-style-type: none"> <li>• how to name and sort foods into the five groups in the Eatwell Guide</li> <li>• that everyone should eat at least five portions of fruit and vegetables every day</li> <li>• how to prepare simple dishes safely and hygienically, without using a heat source</li> <li>• how to use techniques such as cutting, peeling and grating</li> </ul>	<p>Across KS2 pupils should know:</p> <ul style="list-style-type: none"> <li>• how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source</li> <li>• how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking</li> </ul>	
		<p>In early KS2 pupils should also know:</p> <ul style="list-style-type: none"> <li>• that a healthy diet is made up from a variety and balance of different food and drink, as depicted in the Eatwell Guide</li> <li>• that to be active and healthy, food and drink are needed to provide energy for the body</li> </ul>	<p>In late KS2 pupils should also know:</p> <ul style="list-style-type: none"> <li>• that recipes can be adapted to change the appearance, taste, texture and aroma</li> <li>• that different food and drink contain different substances – nutrients, water and fibre – that are needed for health</li> </ul>

## Use of the Progression Framework

This Progression Framework provides a series of developmental steps intended to help schools with curriculum planning. It may also help schools to assess whether children are on track to meet end of key stage expectations in the National Curriculum. The Framework comprises age-related expectations across KS1 and KS2, with specific expectations for early KS2 (Y3/4) and late KS2 (Y5/6). Importantly, the framework also includes elements of D&T which are not included in the programmes of study which are considered by the Design and Technology Association to be fundamental to children’s learning in KS1 and 2. The Framework works most effectively if a cumulative approach to progression is adopted. This means that, where appropriate, children’s learning from KS1 is revisited in early KS2 and their learning from KS1 and early KS2 is revisited in late KS2, each time using the knowledge, understanding or skills in a more sophisticated way. This is particularly relevant for aspects of learning that are only mentioned once but would need to be re-visited e.g. using mock-ups only appears in KS1 but should also feature in children’s learning in KS2

## Assessment

The Project Planners enable a picture of to be built of what the children know, understand and can do in each D&T project. This is essential for moving their learning forward. Each planner lists the 'key learning' in designing, making, evaluating and technical knowledge and understanding that most children should develop as they undertake the project. This addresses and extends National Curriculum requirements at KS1 and 2 and is consistent with the Progression Framework. The knowledge, understanding and skills specified in key learning form the basis of learning objectives for each D&T session and are used to help focus discussions with children and inform observations. The information gathered during projects about the performance of individual children and groups enables the teacher to provide carefully tailored feedback, questioning, explanation and support, according to their needs. When each project has been completed, it is important to think about those children whose progress is markedly different from the expectations in the Project Planner. These children may need additional support or challenge, as required, in the next project they carry out.