

## Progression of Skills – Design & Technology



	Birth to three – babies, toddlers and young children will be learning to:	3 & 4 year-olds will be learning to:	Children in reception will be learning to:
<b>Expressive arts and design: creating with materials, being imaginative and expressive</b>	<ul style="list-style-type: none"> <li>• Explore different materials, using all their senses to investigate them.</li> <li>• Explore materials with different properties.</li> <li>• Explore natural materials, indoors and outside.</li> <li>• Explore and respond to different natural phenomena in their setting and on trips</li> <li>• Notice patterns with strong contrasts and be attracted by patterns resembling the human face.</li> <li>• <i>Shows interest in toys with buttons, flaps and simple mechanisms and begins to learn to operate them</i></li> <li>• Feel confident when taken out around the local neighbourhood, and enjoy exploring new places with their key person.</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park.</i></li> <li>• Explore different materials freely, in order 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> <li>• Explore how things work</li> <li>• Talk about the differences between materials and changes they notice.</li> <li>• <i>Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park.</i></li> <li>• Use drawing to represent ideas like movement or loud noises</li> <li>• Use all their senses in hands on exploration of natural materials</li> <li>• Explore collections of materials with similar and/or different properties. Talk about what they see, using a wide vocabulary</li> <li>• <i>Operates mechanical toys, e.g. turns the knob on a wind-up toy or pulls back on a friction car</i></li> <li>• <i>Shows an interest in technological toys with knobs or pulleys, real objects such as cameras, and touchscreen devices such as mobile phones and tablets</i></li> <li>• <i>Shows skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images</i></li> <li>• <i>Plays with a range of materials to learn cause and effect, for example, makes a string puppet using dowels and string to suspend the puppet</i></li> <li>• Select and use activities and resources, with help when needed. This helps them to achieve a goal they have chosen, or one which is suggested to them.</li> <li>• <i>Begins to recognise familiar logos from children's popular culture, commercial print or icons for apps</i></li> <li>• Use one-handed tools and equipment, for example, making snips in paper with scissors.</li> <li>• Make healthy choices about food, drink, activity and toothbrushing</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Return to and build on their previous learning, refining ideas and developing their ability to represent them.</i></li> <li>• <i>Create collaboratively, sharing ideas, resources and skills.</i></li> <li>• <i>Return to and build on their previous learning, refining ideas and developing their ability to represent them.</i></li> <li>• <i>Create collaboratively, sharing ideas, resources and skills.</i></li> <li>• Explore the natural world around them.</li> <li>• Describe what they see, hear and feel whilst outside.</li> <li>• <i>Enjoys tackling problems involving prediction and discussion of comparisons of length, weight or capacity, paying attention to fairness and accuracy</i></li> <li>• <i>Becomes familiar with measuring tools in everyday experiences and play</i></li> <li>• <i>Develop their small motor skills so that they can use a range of tools competently, safely and confidently. Suggested tools: pencils for drawing and writing, paintbrushes, scissors, knives, forks and spoons</i></li> </ul>

	<b>Key Stage 1 – Year 1 &amp; 2</b>	<b>Key Stage 2 – Year 3, 4, 5 &amp; 6</b>
<b>Design</b>	<ul style="list-style-type: none"> <li>design purposeful, functional, appealing products for themselves and other users based on design criteria</li> <li>generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</li> </ul>	<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>generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li> </ul>
<b>Make</b>	<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> </ul>	<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 and aesthetic qualities</li> </ul>
<b>Evaluate</b>	<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> </ul>	<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>
<b>Cooking</b>	<ul style="list-style-type: none"> <li>use the basic principles of a healthy and varied diet to prepare dishes</li> <li>understand where food comes from.</li> </ul>	<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> <li>understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</li> </ul>
<b>Technical Knowledge</b>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> <li>understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</li> <li>understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</li> <li>apply their understanding of computing to program, monitor and control their products.</li> </ul>