



# Design and Technology - Skills Progression

AUTUMN/SPRING/SUMMER				
Reception	Year 1	Year 2	LKS2	UKS2
<u>Generating ideas</u>				
<ul style="list-style-type: none"> <li>Constructs with a purpose in mind, using a variety of resources.</li> <li>Uses simple tools and techniques competently and appropriately.</li> <li>Selects appropriate resources and adapts work where necessary.</li> <li>Selects tools and techniques needed to shape, assemble and join materials they are using.</li> <li>They use and explore a variety of materials.</li> </ul>	<ul style="list-style-type: none"> <li>Think of own ideas for design.</li> <li>Use pictures and words to plan.</li> <li>Design a product for myself following design criteria.</li> <li>Work in a range of contexts (imaginary, home, school, wider community, story based).</li> </ul>	<ul style="list-style-type: none"> <li>Think of own ideas and plan what to do next.</li> <li>Describe designs using pictures, diagrams, models, mock-ups, words and ICT.</li> <li>Design a product for myself and others, following design criteria.</li> <li>Work confidently in a range of contexts (imaginary, home, school, wider community, story-based etc).</li> </ul>	<ul style="list-style-type: none"> <li>Generate more than one idea for how to create a product.</li> <li>Gather information to help design a successful product (i.e. by asking others' views).</li> <li>Produce a detailed plan with labelled diagrams, a written explanation and step-by-step guide.</li> <li>Suggest improvements to develop and refine a planned idea.</li> </ul>	<ul style="list-style-type: none"> <li>Use a range of information to inform a design (i.e. market research using surveys, interviews, questionnaires or web based resources).</li> <li>Produce a detailed plan, with cross-sectional diagrams and computer-generated designs).</li> <li>Work within constraints, refining and justifying plans as necessary.</li> </ul>
<u>Making</u>				
<ul style="list-style-type: none"> <li>Begin to create their design using basic techniques.</li> <li>Start to build structures, joining components together.</li> <li>Look at simple hinges, wheels and axles.</li> <li>Use technical vocabulary when appropriate.</li> <li>Begin to use scissors to cut straight and curved edges and hole punches to punch holes.</li> <li>Explore using/ holding basic tools such as a saw or hammer.</li> <li>Use adhesives to join material.</li> </ul>	<ul style="list-style-type: none"> <li>Explain what is being made and why.</li> <li>Select appropriate tools and equipment for the purpose.</li> </ul>	<ul style="list-style-type: none"> <li>Explain what is being made and why the audience will like it.</li> <li>Choose appropriate tools and equipment, describing and explaining why they are being used.</li> </ul>	<ul style="list-style-type: none"> <li>Use a range of tools and equipment with accuracy.</li> <li>Measure, mark out, join, assemble materials and components with accuracy.</li> </ul>	<ul style="list-style-type: none"> <li>Use a range of tools and equipment precisely.</li> <li>Consider the aesthetic qualities and functionality of my product as making it, refining details as necessary.</li> </ul>
<u>Evaluating</u>				
<ul style="list-style-type: none"> <li>Say what they like and do not like about items they have made and attempt to say why.</li> <li>Begin to talk about their designs as they develop and identify good and bad points.</li> <li>Start to talk about changes made during the making process.</li> <li>Discuss how closely their finished products meet their design criteria.</li> </ul>	<ul style="list-style-type: none"> <li>Talk about own and pre-existing products, saying what is good or bad about them.</li> <li>Say whether their product does what it is meant to (fits the design brief) and how it could be improved.</li> </ul>	<ul style="list-style-type: none"> <li>Describe how their own and pre-existing products work, evaluating what went well and what could be done differently.</li> <li>Suggest what went well and what would be done differently when evaluating their own product.</li> </ul>	<ul style="list-style-type: none"> <li>Evaluate the appearance and usability of own and pre-existing products.</li> <li>Explain how the original design could be improved, considering the appearance and usability and linking this to the design brief.</li> </ul>	<ul style="list-style-type: none"> <li>Evaluate the appearance and test the function of a product (own and pre-existing) against the original criteria, saying whether it is fit for purpose.</li> <li>Suggest improvements that could be made, considering materials, methods, sustainability of the product and how much a product costs to make.</li> </ul>
<u>Food and nutrition</u>				
<ul style="list-style-type: none"> <li>Begin to develop a food vocabulary using taste, smell, texture and feel. Explore familiar food products e.g. fruit and vegetables. Stir, spread, knead and shape a range of food and ingredients. Begin to work safely and hygienically. Start to think about the need for a variety of foods in a diet. Measure and weigh food items, non-statutory measures e.g. spoons, cups.</li> </ul>	<ul style="list-style-type: none"> <li>Know how to peel, cut, grate, mix and mould foods (with close supervision).</li> <li>Knows and follows some healthy practises e.g. washing their hands before handling food, washing their food.</li> </ul>	<ul style="list-style-type: none"> <li>Know how to peel, cut, grate, mix and mould foods (with close supervision).</li> <li>Knows and follows healthy practises e.g. washing their hands before handling food, washing their food.</li> <li>Measure or weigh using measuring cups or electronic scales.</li> <li>Assemble or cook healthy ingredients</li> <li>Understand where food comes from.</li> </ul>	<ul style="list-style-type: none"> <li>Know how to peel, cut, grate, mix, mould and begin to cook foods (using toasters and microwaves with supervision).</li> <li>Prepare ingredients hygienically using appropriate utensils.</li> <li>Measure ingredients to the nearest gram accurately.</li> <li>Follow a recipe.</li> <li>Assemble or cook healthy ingredients (controlling the temperature of the oven or hob, if cooking)</li> </ul>	<ul style="list-style-type: none"> <li>Cut, mix, mould and use hobs to heat food, developing independence with this as appropriate.</li> <li>Understand the importance of correct storage and handling of ingredients (using knowledge of microorganisms).</li> <li>Measure accurately and calculate 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 recipes, including healthy seasonal ingredients, methods, cooking times and temperatures.</li> <li>Understand how a variety of ingredients are grown, reared, caught and processed.</li> <li>Understand and apply</li> </ul>
<u>Practical skills: mechanisms, textiles and structures</u>				

<ul style="list-style-type: none"> <li>• Begin to know about movement of simple mechanisms such as levers, sliders, wheels and axels.</li> <li>• With support cut, then join textiles using glue.</li> <li>• With support decorate using a range of items (buttons, sequins, beads, ribbons etc).</li> <li>• Begin to use sheet materials and construction tools with support and appropriate supervision.</li> </ul>	<ul style="list-style-type: none"> <li>• Know about movement of simple mechanisms such as levers, sliders, wheels and axels.</li> <li>• Cut, then join textiles using a running stitch, over sewing or glue.</li> <li>• Decorate using a range of items (buttons, sequins, beads, ribbons etc).</li> <li>• Use sheet materials and construction tools with appropriate supervision.</li> </ul>	<ul style="list-style-type: none"> <li>• Create products using levers, wheels and winding mechanisms.</li> <li>• Shape textiles using templates.</li> <li>• Join textiles using running stitch.</li> <li>• Colour and decorate textiles using a number of techniques (such as dyeing, adding sequins or printing).</li> <li>• Use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen products.</li> </ul>	<ul style="list-style-type: none"> <li>• Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears.)</li> <li>• Understand the need for a seam allowance.</li> <li>• Join textiles with appropriate stitching.</li> <li>• Select the most appropriate techniques to decorate textiles.</li> <li>• Choose suitable techniques to construct products or to repair items.</li> <li>• Strengthen materials using suitable techniques.</li> </ul>	<ul style="list-style-type: none"> <li>• Convert rotary motion to linear using cams.</li> <li>• Use innovative combinations of electronics (or computing) and mechanics in product designs.</li> <li>• Create objects (such as a cushion) that employ a seam allowance.</li> <li>• Join textiles with a combination of stitching techniques (such as back stitch for seams and running stitch to attach decoration).</li> <li>• Use the qualities of materials to create suitable visual and tactile effects in the decoration of textiles (such as a soft decoration for comfort on a cushion).</li> <li>• Develop a range of practical skills to create products (such as cutting, drilling and screwing, nailing, gluing, filling and sanding).</li> </ul>
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