

Progression of DT Skills through the Phases



	KS1	LKS2	UKS2
Developing, planning and communicating ideas	<p>Begin to understand the development of existing products: What they are for, how they work, materials used. Start to suggest ideas and explain what they are going to do.</p> <p>Start to generate ideas by drawing on their own and other people's experiences.</p> <p>Begin to develop their design ideas through discussion, observation, drawing and modelling. Make templates and mock ups of their ideas in card and paper or using ICT.</p> <p>Identify a purpose for what they intend to design and make.</p> <p>Understand how to identify a target group for what they intend to design and make based on the design criteria.</p>	<p>Start to generate ideas for an item, considering its purpose and the user/s.</p> <p>Start to order the main stages of making a product. Identify a purpose and establish criteria for a successful product.</p> <p>Understand how well products have been designed, made, what materials have been used and the construction technique.</p> <p>Learn about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products.</p> <p>When planning considers the views of others, including intended users, to improve their work</p> <p>Start to understand whether products can be recycled or reused.</p> <p>Know to make drawings with labels when designing.</p> <p>When planning explains their choice of materials and components including function and aesthetics.</p> <p>Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making, if the first attempts fail. Identify the strengths and areas for development in their ideas and products.</p>	<p>Continue to develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces.</p> <p>Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose.</p> <p>With growing confidence apply a range of finishing techniques, including those from art and design.</p> <p>Draw up a specification for their design- link with Mathematics and Science.</p> <p>Use results of investigations, information sources, including ICT when developing design ideas.</p> <p>Plan the order of their work, choosing appropriate materials, tools and techniques.</p> <p>Start to understand/ know how much products cost to make, how sustainable and innovative they are and the impact products have beyond their intended purpose.</p> <p>Suggest alternative methods of making if the first attempts fail.</p> <p>Identify the strengths and areas for development in their ideas and products.</p>

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<p>Working with tools, equipment, materials and components to make quality products</p>	<p>Begin to make their design using appropriate techniques.</p> <p>Begin to select tools and materials; use correct vocabulary to name and describe them.</p> <p>Begin to build structures, exploring how they can be made stronger, stiffer and more stable.</p> <p>Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</p> <p>With help measure, mark out, cut and shape a range of materials. Explore using tools e.g. scissors and a hole punch safely. Learning to use hand tools safely and appropriately.</p> <p>Begin to assemble, join and combine materials and components together using a variety of temporary methods e.g. glues or masking tape.</p> <p>Demonstrate how to cut, shape and join fabric to make a simple product. Use basic sewing techniques.</p> <p>Begin to use simple finishing techniques to improve the appearance of their product. Using examples to support and own ideas.</p>	<p>Select a wider range of tools and techniques for making their product i.e. construction materials and kits, textiles, food ingredients, mechanical components and electrical components.</p> <p>Explain their choice of tools and equipment in relation to the skills and techniques they will be using.</p> <p>Start to join and combine materials and components accurately in temporary and permanent ways.</p> <p>Start to understand that mechanical and electrical systems have an input, process and output. Start to understand how mechanical systems such as levers and linkages or pneumatic systems create movement.</p> <p>Understand how simple electrical circuits and components can be used to create functional products.</p> <p>Know how to measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques.</p> <p>Measure, mark out, cut, score and assemble components with more accuracy.</p> <p>Start to work safely and accurately with a range of simple tools.</p> <p>Start to think about their ideas as they make progress and be willing to change things if this helps them to improve their work.</p> <p>Start to measure, tape or pin, cut and join fabric with some accuracy.</p>	<p>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.</p> <p>Select appropriate tools, materials, components and techniques and use them. e.g. cutting, shaping, joining and finishing, accurately</p> <p>Use tools safely and accurately.</p> <p>Understand how mechanical systems such as cams or pulleys or gears create movement.</p> <p>Understand that mechanical and electrical systems have an input, process and output.</p> <p>Know how more complex electrical circuits and components can be used to create functional products and how to program a computer to monitor changes in the environment and control their products</p> <p>Construct products using permanent joining techniques.</p> <p>Begin to measure and mark out more accurately.</p> <p>Demonstrate how to use skills in using different tools and equipment safely and accurately with growing confidence cut and join with accuracy to ensure a good-quality finish to the product. Weigh and measure accurately (time, dry ingredients, liquids).</p>

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		<p>Begin to use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT.</p> <p>Continue to learn how to program a computer to monitor changes in the environment and control their products.</p> <p>Understand how to reinforce and strengthen a 3D framework. Now sew using a range of different stitches, to weave and knit.</p>	<p>Use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT.</p> <p>Know how to reinforce and strengthen a 3D framework.</p> <p>Assemble components to make working models.</p> <p>Aim to make and to achieve a quality product.</p> <p>With confidence pin, sew and stitch materials together to create a product.</p> <p>Demonstrate making modifications as they go along.</p>
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	KS1	LKS2	UKS2
Evaluating processes and products	<p>Start to their product by discussing how well it works in relation to the purpose (design criteria).</p> <p>Look at a range of existing products explain what they like and dislike about products and why.</p> <p>Start to evaluate their products as they are developed, identifying strengths and possible changes they might make.</p> <p>Begin to talk about their ideas, saying what they like and dislike about them.</p>	<p>Begin to disassemble and evaluate familiar products and consider the views of others to improve them.</p> <p>Start to evaluate their product against original design criteria e.g. how well it meets its intended purpose e.g. carrying out appropriate tests. Start to evaluate their work both during and at the end of the assignment.</p> <p>Evaluate the key designs of individuals in design and technology has helped shape the world.</p> <p>Begin to disassemble and evaluate familiar products and consider the views of others to improve them.</p> <p>Evaluate the key designs of individuals in design and technology has helped shape the world.</p>	<p>Evaluate a product against the original design specification and by carrying out tests.</p> <p>Evaluate their products, identifying strengths and areas for development, and carrying out appropriate tests.</p> <p>Evaluate their work both during and at the end of the assignment.</p> <p>Record their evaluations using drawings with labels.</p> <p>Begin to evaluate it personally and seek evaluation from others.</p> <p>Evaluate the key designs of individuals in design and technology has helped shape the world.</p>

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Food and Nutrition	<p>Understand that all food comes from plants or animals.</p> <p>Know that food has to be farmed, grown elsewhere (e.g. home) or caught.</p> <p>Understand how to name and sort foods into the five groups in 'The Eat well plate'</p> <p>Begin to understand that everyone should eat at least five portions of fruit and vegetables every day</p> <p>Know how to prepare simple dishes safely and hygienically, without using a heat source.</p> <p>Demonstrate how to use techniques such as cutting, peeling and grating.</p>	<p>Understand 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.</p> <p>Continue to develop knowledge that a healthy diet is made up from a variety and balance of different food and drink, as depicted in 'The Eat well plate'</p> <p>Understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source.</p> <p>Continue to improve how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</p>	<p>Know 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.</p> <p>Understand that seasons may affect the food available.</p> <p>Understand how food is processed into ingredients that can be eaten or used in cooking.</p> <p>Know how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source.</p> <p>Understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</p> <p>Know different food and drink contain different substances – nutrients, water and fibre – that are needed for health.</p>