



INTENT - Developing Progression in D & T – by the end of KS2

Designing:	KS2: Across KS2 pupils should:
Understanding contexts, users and purposes	<ul style="list-style-type: none"> Work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment.
	<ul style="list-style-type: none"> Describe the purpose of their products.
	<ul style="list-style-type: none"> Indicate the design features of their products that will appeal to intended users.
	<ul style="list-style-type: none"> Explain how particular parts of their products work.
	<i>In Lower KS2 pupils should also:</i>
	<ul style="list-style-type: none"> Gather information about the needs and wants of particular individuals and groups.
	<ul style="list-style-type: none"> Develop their own design criteria and use these to inform their ideas.
	<i>In Upper KS2 pupils should also:</i>
<ul style="list-style-type: none"> Carry out research, using surveys, interviews, questionnaires and web-based resources. 	
<ul style="list-style-type: none"> Identify the needs, wants, preferences and values of particular individuals and groups. 	
<ul style="list-style-type: none"> <i>Develop a simple design specification to guide their thinking.</i> 	
Generating, developing, modelling and communicating ideas:	<ul style="list-style-type: none"> Share and clarify ideas through discussion.
	<ul style="list-style-type: none"> Model their ideas using prototypes and pattern pieces.
	<ul style="list-style-type: none"> Use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas.
	<ul style="list-style-type: none"> Use computer-aided design to develop and communicate their ideas.
	<i>In Lower KS2 pupils should also:</i>
	<ul style="list-style-type: none"> Generate realistic ideas, focusing on the needs of the user.
	<ul style="list-style-type: none"> <i>Make design decisions that take account of the availability of resources.</i>
	<i>In Upper KS2 pupils should also:</i>
<ul style="list-style-type: none"> Generate innovative ideas, drawing on research. 	
<ul style="list-style-type: none"> <i>Make design decisions, taking account of the constraints such as time, resources and cost.</i> 	

Making:	KS2: Across KS2 pupils should:
Planning	<ul style="list-style-type: none"> • Select tools and equipment suitable for the task.
	<ul style="list-style-type: none"> • <i>Explain their choice of tools and equipment in relation to the skills and techniques they will be using.</i>
	<ul style="list-style-type: none"> • Select materials and components suitable for the task.
	<ul style="list-style-type: none"> • Explain their choice of materials and components according to functional properties and aesthetic qualities.
	<p><i>In Lower KS2 pupils should also:</i></p>
	<ul style="list-style-type: none"> • <i>Order the main stages of making.</i>
	<p><i>In Upper KS2 pupils should also:</i></p>
	<ul style="list-style-type: none"> • <i>Produce appropriate lists of tools, equipment and materials that they need.</i>
<ul style="list-style-type: none"> • <i>Formulate step-by-step plans as a guide to making.</i> 	
Practical skills and techniques	<ul style="list-style-type: none"> • Follow procedures for safety and hygiene.
	<ul style="list-style-type: none"> • Use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components.
	<p><i>In Lower KS2 pupils should also:</i></p>
	<ul style="list-style-type: none"> • Measure, mark out, cut and shape materials and components with some accuracy.
	<ul style="list-style-type: none"> • Assemble, join and combine materials and components with some accuracy.
	<ul style="list-style-type: none"> • Apply a range of finishing techniques, including those from art and design, with some accuracy.
	<p><i>In Upper KS2 pupils should also:</i></p>
	<ul style="list-style-type: none"> • Accurately measure, mark out, cut and shape materials and components.
	<ul style="list-style-type: none"> • Accurately assemble, join and combine materials and components.
	<ul style="list-style-type: none"> • <i>Accurately apply a range of finishing techniques, including those from art and design.</i>
	<ul style="list-style-type: none"> • <i>Use techniques that involve a number of steps.</i>
<ul style="list-style-type: none"> • Demonstrate resourcefulness when tackling practical problems. 	

Evaluating:	KS2: Across KS2 pupils should:
Own ideas and products	<ul style="list-style-type: none"> Identify strengths and areas for development in their ideas and products.
	<ul style="list-style-type: none"> Consider the views of others, including intended users, to improve their work.
	<i>In Lower KS2 pupils should also:</i>
	<ul style="list-style-type: none"> Refer to their design criteria as they design and make.
	<ul style="list-style-type: none"> Use their design criteria to evaluate their completed products.
	<i>In Upper KS2 pupils should also:</i>
	<ul style="list-style-type: none"> Critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make.
Existing products – Investigate and analyse	<ul style="list-style-type: none"> <i>Evaluate their ideas and products against their original design specification.</i>
	<ul style="list-style-type: none"> How well products have been designed.
	<ul style="list-style-type: none"> How well products have been made.
	<ul style="list-style-type: none"> Why materials have been chosen.
	<ul style="list-style-type: none"> What methods of construction have been used.
	<ul style="list-style-type: none"> How well products work.
	<ul style="list-style-type: none"> How well products achieve their purposes.
	<ul style="list-style-type: none"> How well products meet user needs and wants.
	<i>In Lower KS2 pupils should also investigate and analyse:</i>
	<ul style="list-style-type: none"> Who designed and made the products.
	<ul style="list-style-type: none"> Where products were designed and made.
	<ul style="list-style-type: none"> When products were designed and made.
	<ul style="list-style-type: none"> Whether products can be recycled or reused.
<i>In Upper KS2 pupils should also investigate and analyse:</i>	
<ul style="list-style-type: none"> How much products cost to make. 	
<ul style="list-style-type: none"> How innovative products are. 	
<ul style="list-style-type: none"> How sustainable the materials in products are. 	
<ul style="list-style-type: none"> What impact products have beyond their intended purpose. 	
Key events and individuals	<ul style="list-style-type: none"> About inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products.

Technical Knowledge:	KS2: Across KS2 pupils should know:
Making products work	<ul style="list-style-type: none"> • How to use learning from science to help design and make products that work.
	<ul style="list-style-type: none"> • How to use learning from mathematics to help design and make products that work.
	<ul style="list-style-type: none"> • That materials have both functional and aesthetic qualities.
	<ul style="list-style-type: none"> • <i>That materials can be combined and mixed to create more useful characteristics.</i>
	<ul style="list-style-type: none"> • That mechanical and electrical systems have an input, process and output.
	<ul style="list-style-type: none"> • <i>The correct technical vocabulary for the projects they are undertaking.</i>
	<p><i>In Lower KS2 pupils should also know:</i></p>
	<ul style="list-style-type: none"> • How mechanical systems such as levers and linkages or pneumatic systems create movement.
	<ul style="list-style-type: none"> • How simple electrical circuits and components can be used to create functional products.
	<ul style="list-style-type: none"> • How to make strong, stiff shell structures.
	<ul style="list-style-type: none"> • <i>That a single fabric shape can be used to make a 3D textiles product.</i>
	<ul style="list-style-type: none"> • <i>That food ingredients can be fresh, pre-cooked and processed.</i>
	<p><i>In Upper KS2 pupils should also know:</i></p>
	<ul style="list-style-type: none"> • How mechanical systems such as cams, pulleys or gears create movement.
	<ul style="list-style-type: none"> • How more complex electrical circuits and components can be used to create functional products.
<ul style="list-style-type: none"> • How to program a computer to monitor changes in the environment and control their products. 	
<ul style="list-style-type: none"> • How to reinforce and strengthen a 3D framework. 	
<ul style="list-style-type: none"> • <i>That a 3D textiles product can be made from a combination of fabric shapes.</i> 	
<ul style="list-style-type: none"> • <i>That a recipe can be adapted by adding or substituting one or more ingredients.</i> 	

Cooking and Nutrition:	KS2: Across KS2 pupils should know:
Where food comes from	<ul style="list-style-type: none"> 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.
	<i>In Upper KS2 pupils should also know:</i>
	<ul style="list-style-type: none"> That seasons may affect the food available.
	<ul style="list-style-type: none"> How food is processed into ingredients that can be eaten and used in cooking.
Food preparation, cooking and nutrition	<ul style="list-style-type: none"> How to prepare and cook a variety of predominantly savoury dishes safely and hygienically, including, where appropriate, the use of a heat source.
	<ul style="list-style-type: none"> How to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.
	<i>In Lower KS2 pupils should also know:</i>
	<ul style="list-style-type: none"> That a healthy diet is made up from a variety and balance of different food and drink, as depicted in The Eatwell Plate.
	<ul style="list-style-type: none"> That to be active and healthy, food and drink are needed to provide energy for the body.
	<i>In Upper KS2 pupils should also know:</i>
	<ul style="list-style-type: none"> <i>That recipes can be adapted to change the appearance, taste, texture and aroma.</i>
	<ul style="list-style-type: none"> That different food and drink contain substances – nutrients, water and fibre – that are needed for health.

KS1 and 2 National Curriculum 2014 – statements which are either derived directly from the programmes of study for D & T or provide an age-related interpretation of the requirements are shown in regular font.

School Curriculum – statements which are additional to the programmes of study for D & T are show in italic font.