



**D&T Progression of Skills KS1**

**KS1 National Curriculum Objectives: *In this unit, children will be taught to...***

<p><b>Explore</b> <b><u>Investigate and analyse existing products</u></b></p> <p>Explore what products are and who or what they are for. Explore how products work and how or where they might be used. Explore what materials products are made from Explore what pupils like and dislike about products</p> <p>Explore the simple characteristics of materials and components Discuss the movement of simple mechanisms such as levers, sliders, wheels and axles Explore how freestanding structures can be made stronger, stiffer and more stable Explore how a textiles product can be assembled from two identical fabric shape To explore the correct technical vocabulary for the projects they are undertaking</p>	<p><b>Experiment – Understanding contexts, users and purposes</b> <b><u>Designing - Generating, developing and communicating ideas</u></b></p> <p>Generate ideas by drawing on their own experiences Work confidently within a range of contexts, such as imaginary, story-based, home, school, playgrounds, local community, industry and the wider environment State what products they are making Are their products for themselves or other users Describe what their products are for Explore how their products will work Discuss how they will make their products suitable for their intended users Use a simple design criteria to help develop their ideas Use knowledge of existing products to help come up with ideas Develop and communicate ideas by talking and drawing Model ideas by exploring materials, components and construction kits and by making templates Use ICT, where appropriate, to develop and communicate their ideas</p>
<p><b><u>Create - Planning</u></b></p> <p>Plan by suggesting what to do next Select from a range of tools and equipment, explaining their choices Select from a range of materials and components according to their characteristics Explore practical skills and techniques Follow procedures for safety and hygiene Use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components Measure, mark out, cut and shape materials and components Assemble, join and combine materials and components Use finishing techniques, including those from art and design</p>	<p><b><u>Share and Evaluate – Products and own ideas</u></b></p> <p>Talk about their design ideas and what they made Make simple judgements about their products and ideas against design criteria Suggest how their products could be improved</p> <p><b><u>Cooking and nutrition – Where food comes from</u></b></p> <p>That all food comes from plants or animals That food has to be farmed, grown elsewhere (e.g. home) or caught Cooking and nutrition – Food preparation, cooking and nutrition How to name and sort foods into the five groups in The Eatwell Plate That everyone should eat at least five portions of fruit and vegetables every day How to prepare simple dishes safely and hygienically, without using a heat source How to use techniques such as cutting, peeling and grating</p>



**D&T Progression of Skills KS1 Lower KS2**

**Lower KS2 National Curriculum Objectives: *In this unit, children will be taught to...***

<p><b>Explore</b>  <b>Investigate and analyse existing products</b>  Explore how well products have been designed and made  Explore why certain materials have been chosen  Discuss what methods of construction have been used</p> <p>Make links with science and maths to help design and make products that work  Explore how materials have both functional properties and aesthetic qualities  Explore how materials can be combined and mixed to create more useful characteristics  Explore how mechanical and electrical systems have an input, process and output  Use the correct technical vocabulary for the projects they are undertaking  Explore how mechanical systems such as levers and linkages create movement  Explore simple electrical circuits and components and how they can be used to create functional products  Discover how to program a computer to control their products  Understand how to make strong, stiff shell structures  Understand that a single fabric shape can be used to make a 3D textiles product</p>	<p><b>Experiment – Understanding contexts, users and purposes</b>  Work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment  Describe the purpose of their products  Indicate the design features of their products that will appeal to intended users  Explain how particular parts of their products work  Gather information about needs and wants of particular individuals and groups  Develop their own design criteria and use these to inform their ideas  Designing - Generating, developing, modelling and communicating ideas  Share and clarify ideas through discussion  Model their ideas using prototypes and pattern pieces  Use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas  Use computer-aided design to develop and communicate their ideas  Generate realistic ideas, focusing on the needs of the user  Make design decisions that take account of the availability of resources</p>
<p><b>Create – Planning</b>  Practical skills and techniques  Select tools and equipment suitable for the task  Explain their choice of tools and equipment in relation to the skills and techniques they will be using  Select materials and components suitable for the task  Explain their choice of materials and components according to functional properties and aesthetic qualities  Order the main stages of making  Follow procedures for safety and hygiene  Use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components  Measure, mark out, cut and shape materials and components with some accuracy  Assemble, join and combine materials and components with some accuracy  Apply a range of finishing techniques, including those from art and design, with some accuracy</p>	<p><b>Share and Evaluate – Products and own ideas</b>  Identify the strengths and areas for development in their ideas and products  Consider the views of others, including intended users, to improve their work  Use their design criteria to evaluate their completed products</p>



**D&T Progression of Skills Upper KS2**

**Upper KS2 National Curriculum Objectives: *In this unit, children will be taught to...***

<p><b>Explore</b>  <u><b>Investigate and analyse existing products</b></u>          Explore why materials have been chosen          What methods of construction have been used          Explore how well products work to achieve their purposes          Explore how well products meet user needs and wants          Explore how much products cost to make          Explore how innovative products are          Explore how sustainable the materials in products are          Explore what impact products have beyond their intended purpose          Explore how to use learning from science and maths to help design and make products that work          Identify that materials have both functional properties and aesthetic qualities          Identify that materials can be combined and mixed to create more useful characteristics          Explore how mechanical and electrical systems have an input, process and output          Use the correct technical vocabulary for the projects they are undertaking          Explore how mechanical systems such as cams or pulleys or gears create movement          Explore how more complex electrical circuits and components can be used to create functional products          Explore how to program a computer to monitor changes in the environment and control their products          Explore how to reinforce and strengthen a 3D framework          Identify that a 3D textiles product can be made from a combination of fabric shapes          Discuss how a recipe can be adapted by adding or substituting one or more ingredients</p>	<p><b>Experiment – Understanding contexts, users and purposes</b>          Work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment          Describe the purpose of their products          Indicate the design features of their products that will appeal to intended users          Explain how particular parts of their products work          Gather information about needs and wants of particular individuals and groups          Develop their own design criteria and use these to inform their ideas          Designing - Generating, developing, modelling and communicating ideas          Share and clarify ideas through discussion          Model their ideas using prototypes and pattern pieces          Use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas          Use computer-aided design to develop and communicate their ideas          Generate realistic ideas, focusing on the needs of the user          Make design decisions that take account of the availability of resources</p>
<p><b>Create – Planning</b>          Select tools and equipment suitable for the task          Explain their choice of tools and equipment in relation to the skills and techniques they will be using          Select materials and components suitable for the task          Explain their choice of materials and components according to functional properties and aesthetic qualities          Order the main stages of making          Making – Practical skills and techniques          Follow procedures for safety and hygiene          Use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components</p>	<p>Share and Evaluate – Products and own ideas          Identify the strengths and areas for development in their ideas and products          Consider the views of others, including intended users, to improve their work          Refer to their design criteria as they design and make          Use their design criteria to evaluate their completed products          Evaluating – Existing products          Pupils will be taught to investigate and analyse:          How well products have been designed and made          Why materials have been chosen          What methods of construction have been used</p>



<p>Measure, mark out, cut and shape materials and components with some accuracy Assemble, join and combine materials and components with some accuracy Apply a range of finishing techniques, including those from art and design, with some accuracy</p>	<p>Developed ground-breaking products how well products work to achieve their purposes How well products meet user needs and wants Who designed and made the products Where and when products were designed and made Whether products can be recycled or reused</p>