



# Slater Primary School Design Technology Progression Plan

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| <p><b>EYFS</b></p> <p><b>ELG</b></p> <p><b>Understanding<br/>The World</b></p> | Physical development       | <ul style="list-style-type: none"> <li>• Progress towards a more fluent style of moving, with developing control and grace.</li> <li>• Develop their small motor skills so that they can use a range of tools competently, safely and confidently.</li> <li>• Use their core muscle strength to achieve a good posture when sitting at a table or sitting on the floor.</li> <li>• Use a range of small tools, including scissors, paintbrushes and cutlery.</li> </ul>  |
|  | Expressive Arts and Design | <ul style="list-style-type: none"> <li>• Explore, use and refine a variety of artistic effects to express their ideas and feelings.</li> <li>• Return to and build on their previous learning, refining ideas and developing their ability to represent them.</li> <li>• Create collaboratively, sharing ideas, resources and skills.</li> <li>• Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</li> <li>• Share their creations, explaining the process they have used.</li> </ul> |

| Design                                     |   |  |
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| Concept                                    | KS1   | KS2  |
| Understanding contexts, users and purposes | <p><b><u>Across KS1 pupils should:</u></b></p> <ul style="list-style-type: none"> <li>• work confidently within a range of contexts, such as imaginary, story-based, home, school, gardens, playgrounds, local community, industry and the wider environment</li> <li>• state what products they are designing and making</li> <li>• say whether their products are for themselves or other users</li> <li>• describe what their products are for</li> <li>• say how their products will work</li> <li>• say how they will make their products suitable for their intended users</li> <li>• use simple design criteria to help develop their ideas</li> </ul> | <p><b><u>Across KS2 pupils should:</u></b></p> <ul style="list-style-type: none"> <li>• work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment</li> <li>• describe the purpose of their products</li> <li>• indicate the design features of their products that will appeal to intended users</li> <li>• explain how particular parts of their products work</li> </ul> <p><b><u>In early KS2 pupils should also:</u></b></p> <ul style="list-style-type: none"> <li>• gather information about the needs and wants of particular individuals and groups</li> <li>• develop their own design criteria and use these to inform their ideas</li> </ul> <p><b><u>In late KS2 pupils should also:</u></b></p> |

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|  |  | <ul style="list-style-type: none"> <li>• carry out research, using surveys, interviews, questionnaires and web-based resources</li> <li>• identify the needs, wants, preferences and values of particular individuals and groups</li> <li>• <i>develop a simple design specification to guide their thinking</i></li> </ul>  |
| <p>Generating, developing, modelling and communicating ideas</p> | <p><b><u>Across KS1 pupils should:</u></b></p> <ul style="list-style-type: none"> <li>• generate ideas by drawing on their own experiences</li> <li>• use knowledge of existing products to help come up with ideas</li> <li>• develop and communicate ideas by talking and drawing</li> <li>• model ideas by exploring materials, components and construction kits and by making templates and mock-ups</li> <li>• use information and communication technology, where appropriate, to develop and communicate their ideas</li> </ul> | <p><b><u>Across KS2 pupils should:</u></b></p> <ul style="list-style-type: none"> <li>• share and clarify ideas through discussion</li> <li>• model their ideas using prototypes and pattern pieces</li> <li>• use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas</li> <li>• use computer-aided design to develop and communicate their ideas</li> </ul> <p><b><u>In early KS2 pupils should also:</u></b></p> <ul style="list-style-type: none"> <li>• generate realistic ideas, focusing on the needs of the user</li> <li>• <i>make design decisions that take account of the availability of resources</i></li> </ul> <p><b><u>In late KS2 pupils should also:</u></b></p> <ul style="list-style-type: none"> <li>• generate innovative ideas, drawing on research</li> <li>• <i>make design decisions, taking account of constraints such as time, resources and cost</i></li> </ul> |

## Make

| Concept                         | KS1   | KS2   |
|---------------------------------|---|---|
| Planning                        | <p><b><u>Across KS1 pupils should:</u></b></p> <ul style="list-style-type: none"> <li>• <i>plan by suggesting what to do next</i></li> <li>• <i>select from a range of tools and equipment, explaining their choices</i></li> <li>• <i>select from a range of materials and components according to their characteristics</i></li> </ul>  | <p><b><u>Across KS2 pupils should:</u></b></p> <ul style="list-style-type: none"> <li>• <i>select tools and equipment suitable for the task</i></li> <li>• <i>explain their choice of tools and equipment in relation to the skills and techniques they will be using</i></li> <li>• <i>select materials and components suitable for the task</i></li> <li>• <i>explain their choice of materials and components according to functional properties and aesthetic qualities</i></li> </ul> <p><b><u>In early KS2 pupils should also:</u></b></p> <ul style="list-style-type: none"> <li>• <i>order the main stages of making</i></li> </ul> <p><b><u>In late KS2 pupils should also:</u></b></p> <ul style="list-style-type: none"> <li>• <i>produce appropriate lists of tools, equipment and materials that they need</i></li> <li>• <i>formulate step-by-step plans as a guide to making</i></li> </ul>  |
| Practical skills and techniques | <p><b><u>Across KS1 pupils should:</u></b></p> <ul style="list-style-type: none"> <li>• <i>follow procedures for safety and hygiene</i></li> <li>• <i>use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components</i></li> <li>• <i>measure, mark out, cut and shape materials and components</i></li> <li>• <i>assemble, join and combine materials and components</i></li> <li>• <i>use finishing techniques, including those from art and design</i></li> </ul> | <p><b><u>Across KS2 pupils should:</u></b></p> <ul style="list-style-type: none"> <li>• <i>follow procedures for safety and hygiene</i></li> <li>• <i>use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components</i></li> </ul> <p><b><u>In early KS2 pupils should also:</u></b></p> <ul style="list-style-type: none"> <li>• <i>measure, mark out, cut and shape materials and components with some accuracy</i></li> <li>• <i>assemble, join and combine materials and components with some accuracy</i></li> <li>• <i>apply a range of finishing techniques, including those from art and design, with some accuracy</i></li> </ul> <p><b><u>In late KS2 pupils should also:</u></b></p> <ul style="list-style-type: none"> <li>• <i>accurately measure, mark out, cut and shape materials and components</i></li> <li>• <i>accurately assemble, join and combine materials and components</i></li> </ul> |

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|  |  | <ul style="list-style-type: none"><li>• accurately apply a range of finishing techniques, including those from art and design</li><li>• <i>use techniques that involve a number of steps</i></li><li>• demonstrate resourcefulness when tackling practical problems</li></ul> |
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## Evaluate

| Concept                | KS1   | KS2  |
|------------------------|---|--|
| Own ideas and products | <p><b><u>Across KS1 pupils should:</u></b></p> <ul style="list-style-type: none"> <li>• talk about their design ideas and what they are making</li> <li>• make simple judgements about their products and ideas against design criteria</li> <li>• <i>suggest how their products could be improved</i></li> </ul>   | <p><b><u>Across KS2 pupils should:</u></b></p> <ul style="list-style-type: none"> <li>• identify the strengths and areas for development in their ideas and products</li> <li>• consider the views of others, including intended users, to improve their work</li> </ul> <p><b><u>In early KS2 pupils should also:</u></b></p> <ul style="list-style-type: none"> <li>• refer to their design criteria as they design and make</li> <li>• use their design criteria to evaluate their completed products</li> </ul> <p><b><u>In late KS2 pupils should also:</u></b></p> <ul style="list-style-type: none"> <li>• critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make</li> <li>• <i>evaluate their ideas and products against their original design specification</i></li> </ul>          |
| Existing products      | <p><b><u>Across KS1 pupils should explore:</u></b></p> <ul style="list-style-type: none"> <li>• what products are</li> <li>• who products are for</li> <li>• what products are for</li> <li>• how products work</li> <li>• how products are used</li> <li>• where products might be used</li> <li>• what materials products are made from</li> <li>• what they like and dislike about products</li> </ul> | <p><b><u>Across KS2 pupils should investigate and analyse:</u></b></p> <ul style="list-style-type: none"> <li>• how well products have been designed</li> <li>• how well products have been made</li> <li>• why materials have been chosen</li> <li>• what methods of construction have been used</li> <li>• how well products work</li> <li>• how well products achieve their purposes</li> <li>• how well products meet user needs and wants</li> </ul> <p><b><u>In early KS2 pupils should also investigate and analyse:</u></b></p> <ul style="list-style-type: none"> <li>• who designed and made the products</li> <li>• where products were designed and made</li> <li>• when products were designed and made</li> <li>• whether products can be recycled or reused</li> </ul> <p><b><u>In late KS2 pupils should also investigate and analyse:</u></b></p> |

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|                            |                          | <ul style="list-style-type: none"> <li>• how much products cost to make</li> <li>• how innovative products are</li> <li>• how sustainable the materials in products are</li> <li>• what impact products have beyond their intended purpose</li> </ul> |
| Key events and individuals | Not a requirement at KS1 | <p><b><u>Across KS2 pupils should know:</u></b></p> <ul style="list-style-type: none"> <li>• about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products</li> </ul>                                    |

## Technical Knowledge

| Concept              | KS1   | KS2  |
|----------------------|---|--|
| Making products work | <p><b><u>Across KS1 pupils should know:</u></b></p> <ul style="list-style-type: none"> <li>• about the simple working characteristics of materials and components</li> <li>• about the movement of simple mechanisms such as levers, sliders, wheels and axles</li> <li>• how freestanding structures can be made stronger, stiffer and more stable</li> <li>• <i>that a 3-D textiles product can be assembled from two identical fabric shapes</i></li> <li>• <i>that food ingredients should be combined according to their sensory characteristics</i></li> <li>• <i>the correct technical vocabulary for the projects they are undertaking</i></li> </ul> | <p><b><u>Across KS2 pupils should know:</u></b></p> <ul style="list-style-type: none"> <li>• how to use learning from science to help design and make products that work</li> <li>• how to use learning from mathematics to help design and make products that work</li> <li>• that materials have both functional properties and aesthetic qualities</li> <li>• <i>that materials can be combined and mixed to create more useful characteristics</i></li> <li>• that mechanical and electrical systems have an input, process and output</li> <li>• <i>the correct technical vocabulary for the projects they are undertaking</i></li> </ul> <p><b><u>In early KS2 pupils should also know:</u></b></p> <ul style="list-style-type: none"> <li>• how mechanical systems such as levers and linkages or pneumatic systems create movement</li> <li>• how simple electrical circuits and components can be used to create functional products</li> <li>• how to program a computer to control their products</li> <li>• how to make strong, stiff shell structures</li> <li>• <i>that a single fabric shape can be used to make a 3D textiles product</i></li> <li>• <i>that food ingredients can be fresh, pre-cooked and processed</i></li> </ul> <p><b><u>In late KS2 pupils should also know:</u></b></p> <ul style="list-style-type: none"> <li>• how mechanical systems such as cams or pulleys or gears create movement</li> <li>• how more complex electrical circuits and components can be used to create functional products</li> <li>• how to program a computer to monitor changes in the environment and control their products</li> <li>• how to reinforce and strengthen a 3D framework</li> <li>• <i>that a 3D textiles product can be made from a combination of fabric shapes</i></li> <li>• <i>that a recipe can be adapted by adding or substituting one or more ingredients</i></li> </ul> |

## Cooking and nutrition

| Concept                                 | KS1  | KS2  |
|---|--|--|
| Where food comes from                   | <p><b><u>Across KS1 pupils should know:</u></b></p> <ul style="list-style-type: none"> <li>• that all food comes from plants or animals</li> <li>• that food has to be farmed, grown elsewhere (e.g. home) or caught</li> </ul>  | <p><b><u>Across KS2 pupils should know:</u></b></p> <ul style="list-style-type: none"> <li>• 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</li> </ul> <p><b><u>In late KS2 pupils should also know:</u></b></p> <ul style="list-style-type: none"> <li>• that seasons may affect the food available</li> <li>• how food is processed into ingredients that can be eaten or used in cooking</li> </ul>  |
| Food preparation, cooking and nutrition | <p><b><u>Across KS1 pupils should know:</u></b></p> <ul style="list-style-type: none"> <li>• how to name and sort foods into the five groups in The Eatwell plate</li> <li>• that everyone should eat at least five portions of fruit and vegetables every day</li> <li>• how to prepare simple dishes safely and hygienically, without using a heat source</li> <li>• how to use techniques such as cutting, peeling and grating</li> </ul> | <p><b><u>Across KS2 pupils should know:</u></b></p> <ul style="list-style-type: none"> <li>• how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source</li> <li>• how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking</li> </ul> <p><b><u>In early KS2 pupils should also know:</u></b></p> <ul style="list-style-type: none"> <li>• that a healthy diet is made up from a variety and balance of different food and drink, as depicted in The Eatwell plate</li> <li>• that to be active and healthy, food and drink are needed to provide energy for the body</li> </ul> <p><b><u>In late KS2 pupils should also know:</u></b></p> <ul style="list-style-type: none"> <li>• <i>that recipes can be adapted to change the appearance, taste, texture and aroma</i></li> <li>• that different food and drink contain different substances – nutrients, water and fibre – that are needed for health</li> </ul> |

Regular font = DT Programme of Study

*Italics* = Additional objectives