# Year 5 Progressions of Skills - D&T

| 2025/26 | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
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| Unit of work | Electrical systems: Doodlers | | Mechanical Systems option 1: Gears and pulleys | | Developing a recipe | |
| Enrichment opportunities | | | | | | |
| Knowledge | | | | | | |
| Pupils know: | Technical:<br>• To know that series circuits only have one direction for the electricity to flow. To know when there is a break in a series circuit, all components turn off.<br>• To know that an electric motor converts electrical energy into rotational movement, causing the motor's axle to spin.<br>• To know a motorised product is one which uses a motor to function. | | Technical:<br>• That mechanical systems that use gears in everyday objects (eg bicycle, clock).<br>• That gears and pulleys allow us to transfer movement and force from one part of a mechanical system to another.<br>• That gears allow us to increase the output of a mechanism.<br><br>Further Knowledge:<br>• That market research is a way of collecting information about problems or needs. | | • To know that beef comes from cows reared on farms.<br>• To know that recipes can be adapted to suit nutritional needs and dietary requirements.<br>• To know that nutritional information is found on food packaging.<br>• To know that coloured chopping boards can prevent cross-contamination.<br>• To know that food packaging serves many purposes. | |

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| | Further Knowledge:<br>• To know that product analysis is critiquing the strengths and weaknesses of a product.<br>• To know that 'configuration' means how the parts of a product are arranged. | • That constraints are things that might stop our ideas being successful.<br>• That original and innovative ideas are different from what has been made before. That annotations are detailed labels and comments on diagrams.<br>• That risks are things that might happen.<br>• That hot glue creates a strong bond quickly.<br>• That is often better to choose safer equipment.<br>• That sustainability means thinking about the materials that were used to make a product and how the product was made.<br>• That their final product can still be improved by different materials or techniques.<br>• That evaluating their designs in detail will help them understand its successful and less successful parts.<br>• That feedback should be positive, helpful and specific.<br>• That explaining how they used | |

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| | | feedback to improve their design can help them create better products in the future. | |
| Skills | | | |
| Design | • Identifying factors that could be changed on existing products and explaining how these would alter the form and function of the product.<br>• Developing design criteria based on findings from investigating existing products.<br>• Developing design criteria that clarifies the target user. | • Noticing wider-reaching problems or needs in the community.<br>• Identifying a wide range of needs and potential barriers through market research.<br>• Writing more complex problem statements that consider multiple factors and constraints.<br>• Creating more complex design criteria that require considering detailed user needs, environmental impact, materials and cost.<br>• Coming up with a broader range of ideas and deeper innovation, requiring pupils to think critically about their ideas' practicality and originality.<br>• Beginning to use more complex annotated sketches, such as cross-sectional and exploded diagrams and pattern pieces in | • Researching existing recipes.<br>• Suggesting alternative ingredients.<br>• Designing a jar label. |

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| | | design.<br>• Using a series of prototypes to refine and improve their designs. | |
| Make | • Altering a product's form and function by tinkering with its configuration.<br>• Making a functional series circuit, incorporating a motor.<br>• Constructing a product with consideration for the design criteria.<br>• Breaking down the construction process into steps so that others can make the product. | • Consistently apply safety instructions.<br>• Select appropriate scissors to handle delicate cutting tasks and challenging materials.<br>• Cutting patterns and drawings accurately.<br>• In supervised groups, using hot glue guns safely.<br>• Recognising that hot glue is useful for joining materials that need a strong bond that sets quickly.<br>• Choosing PVA glue over hot glue for its safety when joining materials in less intensive projects. | • Writing an alternative recipe.<br>• Understanding cross-contamination.<br>• Using preparation skills.<br>• Making a developed recipe. |
| Evaluate | • Carry out a product analysis to look at the purpose of a product along with its strengths and weaknesses. Determining which parts of a product affect its function and which parts affect its form.<br>• Analysing whether changes in | • Reflecting on the usability, aesthetics, innovation and sustainability of products and discussing how design choices impact these aspects.<br>• Assessing their designs against a more complex set of design criteria that includes functionality, | • Explaining the farm to fork process.<br>• Analysing nutritional content. |

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| | configuration positively or negatively affect an existing product.<br>• Peer evaluating a set of instructions to build a product. | aesthetics, user experience, sustainability and cost.<br>• Considering alternative materials, tools or techniques that could enhance the product. Providing feedback that is helpful, specific, and encouraging.<br>• Incorporating feedback from peers or users improve their product further, explaining the changes they made and the impact they had. | |