### Design and Technology Progression of Skills

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| **KS1** | - Cut, peel or grate ingredients safely and hygienically.  
- Measure or weigh using measuring cups or electronic scales.  
- Assemble or cook healthy ingredients.  
- Understand where food comes from.  
- Cross-curricular links with forest school. | - Cut materials safely using tools provided.  
- Measure and mark out to the nearest centimetre.  
- Demonstrate a range of cutting and shaping techniques such as tearing, cutting, folding and curling.  
- Cross-curricular links with forest school. | - Shape textiles using templates.  
- Cross-curricular links with science. | - Diagnose faults in battery operated devices (such as low battery, water damage or battery terminal damage).  
- Cross-curricular links with science. | - Use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen products.  
- Cross-curricular links with science. | - Create products using levers, wheels and winding mechanisms.  
- Cross-curricular links with science. | - Explore objects and designs to identify likes and dislikes of the designs.  
- Suggest improvements to existing designs.  
- Explore how products have been created. |
| **Lower KS2** | - Prepare ingredients hygienically using appropriate utensils.  
- Measure ingredients to the nearest gram accurately.  
- Follow a recipe.  
- Assemble or cook healthy ingredients (controlling the temperature of the oven or hob, if cooking).  
- Cross-curricular links with forest school. | - Cut materials accurately and safely by selecting appropriate tools.  
- Measure and mark out to the nearest millimetre.  
- Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs).  
- Cross-curricular links with forest school. | - Understand the need for a seam allowance.  
- Cross-curricular links with science. | - Create series and parallel circuits.  
- Cross-curricular links with science. | - Control and monitor models using software designed for this purpose.  
- Cross-curricular links with science. | - Design products that have a clear purpose and an intended user.  
- Make products, refining the design as work progresses.  
- Use software to design.  
- Begin to evaluate their ideas and products against design criteria. | |
| **Upper KS2** | - Understand the importance of correct storage and handling of ingredients (using knowledge of micro-organisms).  
- Measure accurately and calculate ratios of ingredients to scale up or down from a recipe.  
- Cross-curricular links with forest school. | - Cut materials with precision and refine the finish with appropriate tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape).  
- Show an understanding of the qualities of materials to choose appropriate tools to cut and shape (such as the nature of fabric may require sharper scissors than would be used to cut paper).  
- Cross-curricular links with forest school. | - Create objects (such as a cushion) that employ a seam allowance.  
- Cross-curricular links with science. | - Create circuits using electronics kits that employ a number of components (such as LEDs, resistors, transistors and chips.).  
- Cross-curricular links with science. | - Develop a range of practical skills to create products (such as cutting, drilling and screwing, nailing, gluing, filling and sanding).  
- Cross-curricular links with forest school. | - Design with purpose by identifying opportunities to design.  
- Make products by working efficiently (such as by carefully selecting materials).  
- Refine work and techniques as work progresses, continually evaluating the product design.  
- Use software to design and represent product designs. | - Identify some of the great designers (such as Brunel, Mackintosh, Philip Treacy, Marcel Breuer) in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for designs.  
- Improve upon existing designs, giving reasons for choices.  
- Disassemble products to understand how they work. |

### Practical Skills

- **Food**:  
  - Measure and weigh using measuring cups or electronic scales.  
  - Assemble or cook healthy ingredients.  
  - Understand where food comes from.  
  - Cross-curricular links with forest school.

- **Materials**:  
  - Cut materials safely using tools provided.  
  - Measure and mark out to the nearest centimetre.  
  - Demonstrate a range of cutting and shaping techniques such as tearing, cutting, folding and curling.  
  - Cross-curricular links with forest school.

- **Textiles**:  
  - Shape textiles using templates.  
  - Cross-curricular links with science.

- **Electronics**:  
  - Diagnose faults in battery operated devices (such as low battery, water damage or battery terminal damage).  
  - Cross-curricular links with science.

- **Computing**:  
  - Use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen products.  
  - Cross-curricular links with science.

- **Construction**:  
  - Create products using levers, wheels and winding mechanisms.  
  - Cross-curricular links with science.

- **Mechanics**:  
  - Design with purpose by identifying opportunities to design.  
  - Make products by working efficiently (such as by carefully selecting materials).  
  - Refine work and techniques as work progresses, continually evaluating the product design.  
  - Use software to design and represent product designs.