Progression in Design & Technology

Curriculum	Year 1	Year2	Year3	Year4	Year5	Year6
As a technologist **Design**	1. To begin to explore how products have been created. 2. To design products that have a clear purpose and an intended user with support. 3. To make simple diagrams to show my design. 4. To develop design criteria with a group/support.	1. ITo explore how products have been created. 2. To design products that have a clear purpose and an intended user. 3. To use software design.(if available) 4. To make diagrams to show my designs. 5. To develop my own design criteria.	1. To show that my design meets a range of requirements. 2. To put together a plan which shows the equipment and tools I need. 3. To describe a design using an accurately labelled diagram.	1. To design with purpose by identifying opportunities to design. 2. To create cross-sectional diagrams to demonstrate design.	1. To come up with a range of idea after I have collected information. 2. To take a users view into account when designing. 3. To produce a detailed step - by -step plan. 4. To use, cross sectional plan to show my design. To produce prototypes to show my ideas.	1. To design with the user in mind, motivated by the service a product will offer (rather than simply for profit). 2. To use prototypes, cross sectional diagrams and computer aided designs to represent designs. 3.To create innovative designs that improve upon existing products.
As a technologist **Make**	1. To cut safely using tools provided. 2. To begin to show a range of cutting and shaping techniques such as tearing, cutting and folding. 3. To begin to demonstrate a range of joining techniques such as gluing and combing materials to strengthen. 4. To begin to join textiles using running stitches.To colour and decorate textiles using techniques such as dying or adding sequins etc. 5. To begin to use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen. 6.To begin to create products using levers, wheels and winding mechanisms. 7. To begin to refine the design as my work progresses. 8. To begin to choose the right materials for making a product according to the properties needed.	1. To cut materials safely using tools. 2. To measure and mark out to the nearest cm. 3. To demonstrate a range of cutting and shaping techniques e.g. tearing, cutting, folding and curling. 4. To demonstrate a range of joining techniques e.g. gluing, hinges, combing materials to strengthen. 5. To join textiles using running stitches. 6. To colour and decorate textiles using a number of techniques e.g dying, printing adding sequins. 7. To use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen products. 8. To create products using levers, wheels and winding mechanisms. 9.To make products, refining the design as my work progresses. 10.To choose the right materials for making a product according to the properties needed.	1. To use a range of tools and equipment accurately. 2. To measure, mark out, assemble and join materials and components with some accuracy.	1. To cut materials accurately and safely by selecting appropriate tools. 2. To measure and mark out to the nearest mm. 3. To understand the need for a seam allowance. 4.To join textiles with appropriate stitching. 5. To make products by working efficiently e.g. carefully selecting materials etc.	1. To cut materials more accurately and safely by selecting appropriate tools. 2. To measure and mark out accurately to the nearest mm. 3. To ensure a product has a seam allowance. 4. To join textiles using simple stitches. 5. To use a range of tools expertly.	1. To cut materials with precision and refine the finish with appropriate tools e.g. sanding wood after cutting, more precise scissor cut after roughly cutting out a shape etc. 2. To create objects that need a seam allowance. 3. To join textiles with a combination of stitching techniques e.g back stitch for seams, running stitch to attract decorations.

| As a technologist

Evaluate | 1.To begin to explore objects to identify likes and dislikes of the design.

2. To begin to suggest improvements to existing design.

3. To evaluate my design or product against the given design criteria.

4. To begin to show an understanding of how historical events or people have helped shape the technological world today. | 1. To explore objects to identify likes and dislikes of the design.

2. To suggest improvements to existing designs.

3. To evaluate their design of product against their own design criteria.

4. To talk about how historical events or people have helped shape the technological world today. | 1. To be able to look at products and talk about how they work.

2. To practise evaluation skills by evaluating existing products.

3. To evaluate own products.

4. To suggest a change that could be made to improve a product. | 1. To disassemble products to understand how they work.

2. To refine work and techniques as my work progresses, continually evaluating the product design.

3. To improve upon existing designs, giving reasons for choices.

4. To identify some great designs inall areas of study to generate ideas for designs. | 1. To test and evaluate the final product.

2. To evaluate the design and suggest improvements, considering the materials and methods that have been used.

3. To evaluate the appearance and function against the original criteria.

4. To practise evaluation skills by evaluating existing products against criteria which has been set.

5. To explain why their finished product is going to be of good quality.

6. To explain why their product will appeal to the audience.

7. To think about the aesthetic qualities of their work.

8. To think about the functionality of their work. | 1. To make products through stages of prototypes, making continual refinements.

2. To ensure products have a high quality finish, using art skills where appropriate.

3. To evaluate the design of products so as to suggest improvements to the user experience.

4. To combine elements of design from a range of inspirational designers throughout history, giving reasons for choices. |
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| As a technologist

Technical Knowledge | 1. To begin to use their understanding of materials and their properties to strengthen, stiffen or reinforce products.

2. To develop an understanding of hoe to use mechanical systems like gears, pulleys, levers and linkages in their designs and products.

3. To develop an understanding of how to use simple electrical circuits that include switches and bulbs.

4. To begin to develop their knowledge of computing to program, monitor or control their product (if available) | 1. To use their understanding of materials and their properties to strengthen, stiffen or reinforce products.

2. To understand and use mechanical systems like gears, pulleys, levers and linkages in their design and products.

3. To understand and use simple electrical circuits that include switches, bulbs, buzzers or motors in their products.

4. To use their knowledge of computing to program, monitor or control their product.

5. To model design using software. | 1. To choose textiles for a purpose.

2. To join textiles of different types in different ways.

3. To explain how to join things in different ways.

4. To think about how to make a product strong.

5. To devise a template | 1. To choose suitable techniques to construct products.

2. To strengthen products using suitable techniques.

3. To apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material e.g slots or cut-outs.

4. To select appropriate joining techniques.

5. To select the most appropriate techniques to decorate textiles.

6. To create a series of parallel cuts.

7. To usr scientific knowledge of the transference of forces to choose appropriate mechanisms foe a product e.g. levers, winding mechanism, pulleys, gears. | 1. To choose appropriate tools to cut and shape and justify choices with my knowledge e.g. fabric may require sharper scissors than paper would need.

2. To begin to use the qualities of materials to create suitable visual and tactile effects in decoration of textiles.

3. To begin to create circuits using electronics kits that employ a number of components e.g. LED's, resistors, transistors and chips.

4. To begin to develop a range of practical skills to create products e.g. cutting, drilling, screwing, nailing, gluing, filing and sanding.

5. To begin to use innovative combinations of electronics and mechanics in product designs. | 1. To show an understanding of the qualities of materials to choose appropriate tools to cut and shape.

2. To use the qualities of materials to create suitable visual and tactile effects in the decoration of textiles.

3. To create circuits using electronics kits that employ a number of components e.g. LED's, resistors, transistors and chips.

4. Developing a range of practical skills to create products e/g/ cutting, drilling, screwing, nailing, gluing, filing and sanding.

5. To convert rotary motion to linear using cams.

6. To use innovative combinations of electronics and mechanics in product design. |

				8. To control and monitor models using software designed for this purpose. 9. To use software to design and represent product designs.	6. To write code to control and monitor models or products.	7. To write code to control and monitor models and products.
As a technologist **Cooking and Nutrition**	1. To begin to know how to be healthy. 2. To begin to show understanding of a varied diet. 3. To show some understanding of where foods come from. 4. To cut, peel or grate ingredients safely and hygienically with some support. 5. To begin to measure or weigh using measuring cups or electronic scales. 6. To begin to assemble or cook ingredients. 7. To show some understanding of safety when cook/working with ingredients.	1. To talk about how to be healthy. 2. To show an understanding of a varied diet. 3. To talk about where different foods come from. 4. To cut, peel or grate ingredients safely and hygienically. 5. To measure or weigh using measuring cups or electronic scales. 6. To assemble or cook ingredients. 7. To show an understanding of safety when cooking ingredients.	1. To choose the right ingredients for a product. 2. To say what to do to be hygienic and safe. 3. To use equipment safely. 4. To make sure products look attractive. 5. To describe how my combined ingredients come together.	1. To prepare ingredients hygienically using appropriate tools. 2. To measure ingredients to the nearest gram accurately. 3. To follow a recipe. 4. To assemble or cook ingredients, controlling the temperature of the oven or hob if cooking.	1. To understand the correct storage and handling of ingredients. 2. To begin to measure accurately and calculate ratios of ingredients to scale up or down from a recipe. 3.To begin to demonstrate a range of baking and cooking techniques. 4. To begin to create and refine recipes, including ingredients, methods. cooking times and temperatures.	1. To understand the importance of correct storage and handling of ingredients (using knowledge of micro-organisms). 2. To measure accurately and calculate ratios of ingredients to scale up or down from a recipe. 3. To demonstrate a range of baking and cooking techniques. 4. To create and redefine recipes, including ingredients, methods, cooking times and temperatures.