# Furneux Pelham School – Skills Progression for *Design Technology*

| | EYFS | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
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| Develop, plan and communicate ideas | | | | | | | |
| | Use gestures, talking and arrangements of materials and components to show design. | Begin to draw on their own experience to help generate ideas and research conducted on criteria. | Start to generate ideas by drawing on their own and other people's experiences. | Start to order the main stages of making a product. | Start to generate ideas, considering the purposes for which they are designing- link with Mathematics and Science. | Draw up a specification for their design- link with Mathematics and Science. | Draw up a specification for their design- link with Mathematics and Science. |
| | Use contexts set by the teacher and myself. | Begin to understand the development of existing products: What they are for, how they work, materials used. | Identify a purpose for what they intend to design and make. | Understand how well products have been designed, made, what materials have been used and the construction technique. Identify a purpose and establish criteria for a successful product. | Identify the strengths and areas for development in their ideas and products. | Use results of investigations, information sources, including ICT when developing design ideas. | Identify the strengths and areas for development in their ideas and products. Suggest alternative methods of making if the first attempts fail. |

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| | Select appropriate resources. | Understand how to identify a target group for what they intend to design and make based on a design criteria. | Understand how to identify a target group for what they intend to design and make based on a design criteria. | With growing confidence generate ideas for an item, considering its purpose and the user/s. | When planning considers the views of others, including intended users, to improve their work. | Begin to use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose. | Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose.<br>Know how much products cost to make, how sustainable and innovative they are and the impact products have beyond their intended purpose. |
| | Use language of designing and making (join, build, shape, longer, shorter, heavier etc.). | Begin to develop and explain their ideas and designs through talk and drawings, including templates and mock-ups in card and paper or using IT. | Develop their ideas and designs through observing, talking, drawing and labelling parts. Make templates and mock-ups of their ideas in card and paper or using ICT. | Know to make drawings with labels when designing.<br>When planning explain their choice of materials and components including function and aesthetics. | Confidently make labelled drawings from different views showing specific features.<br>Develop a clear idea of what has to be done, planning how to use materials, equipment and | Start to generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded | Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, |

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| | | | | | processes, and suggesting alternative methods of making, if the first attempts fail. | diagrams, prototypes, pattern pieces. | prototypes, pattern pieces. |
| | | | | Learn about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products. | Learn about inventors, designers, engineers, chefs and manufacturers who have developed ground - breaking products. | | |
| | | | | | | With growing confidence apply a range of finishing techniques, including those from art and design. | Accurately apply a range of finishing techniques, including those from art and design. |
| | | | | Start to understand whether products can be recycled or reused. | | With growing confidence select appropriate materials, tools and techniques. | Plan the order of their work, choosing appropriate materials, tools and techniques. |
| Work with tools, equipment, materials and components to make quality products | | | | | | | |

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| | Use simple tools and techniques. | Begin to make their design using appropriate techniques.<br><br>Explore using tools e.g. scissors and a hole punch safely. | Begin to select tools and materials; use correct vocabulary to name and describe them. | Select a range of tools and techniques for making their product.<br><br>Explain their choice of tools and equipment in relation to the skills and techniques they will be using. | Select a wider range of tools and techniques for making their product safely. | Select appropriate materials, tools and techniques. Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities. | Confidently select appropriate tools, materials, components and techniques and use them.<br><br>Use tools safely and accurately. |
| | Build / construct with a wide range of objects. | Begin to build structures, exploring how they can be made stronger, stiffer and more stable. | Build structures, exploring how they can be made stronger, stiffer and more stable. | | Understand how to reinforce and strengthen a 3D framework. | | Know how to reinforce and strengthen a 3D framework. |
| | Construct with a purpose, using a variety of resources. | With help measure, mark out, cut and shape a range of materials. | With help mark out, measure, cut and score with some accuracy. | Measure, mark out, cut, score and assemble components with more accuracy. | Know how to measure, mark out, cut and shape a range of materials, using appropriate tools, | Begin to measure and mark out more accurately. | Measure and mark out accurately and independently. |

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| | | | | | equipment and techniques. | | |
| | | Explore the use of mechanisms [for example, levers, sliders, wheels and axles], in their products. | Use mechanisms [for example, levers, sliders, wheels and axles], in their products. | Start to understand that mechanical systems such as levers and linkages or pneumatic systems create movement. | Know how mechanical systems such as cams or pulleys or gears create movement. | Understand how mechanical systems such as cams or pulleys or gears create movement. | Explain to others how mechanical systems such as cams or pulleys or gears create movement. |
| | | | | Start to understand that mechanical and electrical systems have an input, process and output. | Understand how more complex electrical circuits and components can be used to create functional products. | Know how more complex electrical circuits and components can be used to create functional products and how to program a computer to monitor changes in the environment and control their products. | Know and e explain to others how more complex electrical circuits and components can be used to create functional products and how to program a computer to monitor changes in the environment and control their products. |
| | Select tools & techniques to shape, assemble and join. | Begin to assemble, join and combine materials and components together using a | Join materials or components together in different ways. | Join materials or components together in different ways, varying | Start to join and combine materials and components accurately in temporary and | Cut and join with accuracy to ensure a good-quality finish to the product. | Construct products using permanent joining techniques. |

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| | | variety of temporary methods e.g. glues or masking tape. | | according to the product. | permanent ways. | | Assemble components to make working models. |
| | | Begin to use simple finishing techniques to improve the appearance of their product. | Start to choose and use appropriate finishing techniques based on own ideas. | Begin to apply a range of finishing techniques with some accuracy. | Begin to use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT. | Use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT. | Use finishing techniques to strengthen, develop and improve the appearance of their product using a range of equipment including ICT. |
| | | | | Start to measure, tape or pin, cut and join fabric with some accuracy. | Demonstrate how to measure, tape or pin, cut and join fabric with some accuracy.<br>Sew using a range of different stitches. | Begin to pin and use a range of different stitches to join materials together to create a product, with increasing accuracy. | With confidence pin and use a range of different stitches to join materials together to create a product independently. |
| Evaluate processes and products. | | | | | | | |
| | Talk about how things work. | Start to evaluate their product by discussing how well it works in relation to the purpose (design criteria). | Evaluate their work against their design criteria. | Start to evaluate their product against original design criteria e.g. how well it meets its | Evaluate their products carrying out appropriate tests. Start to evaluate their work both | Start to evaluate a product against the original design specification including by | Evaluate against their original criteria and suggest ways that their product could be improved. |

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| | | | | intended purpose | during and at the end of the assignment. | carrying out tests. | Evaluate their products, identifying strengths and areas for development, and carrying out appropriate tests. |
| | Look at similarities and differences between existing objects / materials / tools. Dismantle, examine, talk about existing objects/structures. | When looking at existing products explain what they like and dislike about products and why. | Look at a range of existing products explain what they like and dislike about products and why. | Begin to disassemble and evaluate familiar products and consider the views of others to improve them. | Be able to disassemble and evaluate familiar products and consider the views of others to improve them. | Begin to evaluate personally and seek evaluation from others. | Record their evaluations using drawings with labels. |
| | Adapt work if necessary. | Begin to evaluate their products as they are developed, identifying strengths and possible changes they might make. | With help, evaluate their products as they are developed, identifying strengths and possible changes they might make. | Start to evaluate their work both during and at the end of the assignment.<br><br>Evaluate the key designs of individuals in design and know how technology has helped shape the world. | Evaluate their work both during and at the end of the assignment. | Confidently, evaluate their work both during and at the end of the assignment. | Independently, evaluate their work both during and at the end of the assignment. |

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| | | begin to measure and join materials, with some support *describe differences in materials *suggest ways to make material/product stronger *measure materials *describe some different characteristics of materials *join materials in different ways *use joining, rolling or folding to make it stronger *use own ideas to try to make product stronger | begin to measure and join materials, with some support *describe differences in materials *suggest ways to make material/product stronger *measure materials *describe some different characteristics of materials *join materials in different ways *use joining, rolling or folding to make it stronger *use own ideas to try to make product stronger | | | | |
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