

**Design and Technology Progression Map** Each milestone is indicative of two years' learning opportunities Milestone 1 = Years 1 and 2, Milestone 2 = Year 3 and 4, Milestone 3 = Year 5 and 6

Threshold Concept     Milestone 1     Milestone 2     Milestone 1       Mater practical skills bit concept involves developing the skills needed by anke high quality products (we have bighlighted a range of skills but they may be added to or changed     Food     •Cut, peel or grate ingredients safely and hygiencical.     •Prepare ingredients using anopy or electron searce ingredients safely and nygiencical.     •Prepare ingredients using anopy or electron searce ingredients safely and nygiencical.     •Neesure or veigh using nygiencical.     •Prepare ingredients using anopy or electron searce ingredients safely anopy or dow robo, if cooking).     •Prepare ingredients using anopy or electron searce ingredients safely anopy or dow robo, if cooking).     •Neesure ingredients using anopy or the ingredients safely using inprovided.     •Neesure ingredients using provided.     •Neesure ingredients using provided.     •Neesure and refin indring or grade using provided.     •Neesure and refin indring or grade using provided.     •Neesure and refin indring or grade using provided.     •Neerareties using provided.     •Neerareties usin drefen the finig using	
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<ul> <li>Measure or weigh using measuring cups or electronic scales.</li> <li>Assemble or cook ingredients.</li> <li>Assemble or cook ingredients.</li> <li>Assemble or cook ingredients.</li> <li>Assemble or cook ingredients.</li> <li>Assemble or cook ingredients (controlling the temperature of the over or hob, if cooking).</li> <li>Demonstrate a range of cutting and safety by selecting and retrieves.</li> <li>Measure and mark out to the nearest continetre.</li> <li>Demonstrate a range of cutting and shaping techniques (such as gluing, hinges or combining materials to strengthen).</li> <li>Textiles</li> <li>Shape textiles using techniques (such as gluing, hinges or combining materials to strengthen).</li> <li>Select appropriate joining techniques (such as gluing, hinges or combining materials to strengthen).</li> <li>Select the most appropriate cutting, adding sequins or printing).</li> </ul>	and ients
changed       scales.       • Assemble or cook ingredients.       • Follow a recipe.       • Measure accurate ind texting and propriate tools.       • Assemble or cook ingredients (controlling the temperature of the over or hob, if cooking).       • Demonstrate a r baking and cooking techniques and temperatures.         Materials       • Cut materials safely using tools provided.       • Cut materials safely using tools provided.       • Cut materials accurately and safely by selecting appropriate tools.       • Cut materials accurately and temperature of the over or hob, if cooking).       • Cut materials accurately and temperatures.         • Demonstrate a range of cutting and curring).       • Demonstrate a range of gluing, hinges or combining materials to strengthen).       • Cut materials safely using techniques (such as gluing, hinges or combining materials to strengthen).       • Cut materials using templates.       • Cut materials using templates.       • Dimenstrate a range of gluing, hinges or combining materials to strengthen).       • Understand the need for a seam allowance.       • Create objects (c cushing).         • Shape textiles using templates.       • Join textiles using running stitch.       • Join textiles using running stitch.       • Join textiles using techniques (such as kering, stitch.       • Join textiles using techniques (such as kering, stitch.       • Select the most appropriate techniques (such as kering, stitch.       • Join textiles with appropriate stitching.       • Join textiles with appropriate stitching.         • Colour and decorate textiles using anumber of techniques (such as kering textingues daveing adding sequin	
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Itee the qualities	ims and
materials to create visual and tactile the decoration of t (such as a soft dec comfort on a cush	e suitable effects in textiles coration for
Electricals and electronics	at employ a nents (such ,
Construction	
Use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen products.     Strengthen materials using suitable techniques.     Choose suitable techniques to construct products or to repair items.     Strengthen materials using suitable techniques.     Overlop a rang practical skills to create products ( cutting, gluing, fil	such as nd screwing,
Mechanics • Create products using • Use scientific knowledge of • Convert rotary	
levers, wheels and the transference of forces to linear using came winding mechanisms. choose appropriate	
mechanisms for a product (such as levers, winding mechanisms, pulleys and gears). • Use innovative combinations of electronics (or co and mechanism product designs.	mputing)

Design, make, evaluate and improve This concept involves developing the process of design thinking and seeing design as a process.

Take inspiration from design throughout history This concept involves appreciating the design process that has influenced the products we use in everyday life.  Design products that have a clear purpose and an intended user.

 Make products, refining the design as work progresses.

· Use software to design.

 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.

 Explore objects and designs to identify likes and dislikes of the designs.

 Suggest improvements to existing designs.

 Explore how products have been created.  Identify some of the great designers 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.  Design with the user in mind, motivated by the service a product will offer (rather than simply for profit).

 Make products through stages of prototypes, making continual refinements.

 Ensure products have a high quality finish, using art skills where appropriate.

 Use prototypes, crosssectional diagrams and computer aided designs to represent designs.

 Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices.

 Create innovative designs that improve upon existing products.

 Evaluate the design of products so as to suggest improvements to the user experience.