

Threshold Progression – Design and Technology

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Master Practical Skills	Food	Cut and peel ingredients safely and hygienically. Assemble ingredients.	Cut, peel and grate ingredients safely and hygienically. Measure or weigh using measuring cups or electronic scales. Assemble or cook ingredients.	Prepare ingredients hygienically using appropriate utensils. Measure ingredients. Assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking).	Prepare ingredients hygienically using appropriate utensils. Measure ingredients accurately to the nearest gram accurately. Follow a simple recipe. Assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking).	Understand the importance of correct storage and handling of ingredients. Measure accurately. Demonstrate some basic baking and cooking techniques developed from previous years. Create simple recipes specific to a design brief.	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. Demonstrate a range of baking & cooking techniques. Create and refine recipes, including ingredients, methods, cooking times and temperatures specific to a design brief.
	Electronics				Use a simple circuit within your product including: <ul style="list-style-type: none"> • Bulbs • Cell • Switch 		Use a simple circuit within your product including: <ul style="list-style-type: none"> • Bulbs • Buzzer • Motor • Cell Switch/Improvised Switch. Using all previously learnt skills choose appropriate components to devise a simple circuit to meet a design brief.
	Computing			Control models using software/hardware designed for this process.	Program and control models using software/hardware designed for this process to achieve an outcome/goal.	Program and control models using software/hardware designed for this process to achieve an outcome/goal. Use software/hardware to monitor models or products.	Use all previously learnt skills to choose appropriate hardware/software to design a product/model to meet a design brief.
	Construction	Build structures exploring how they can be made stronger, stiffer and more stable.	Use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen products.	Choose suitable techniques to construct products. Strengthen materials using suitable techniques.	Choose suitable techniques to construct products. Strengthen materials using suitable techniques.	Develop a range of practical skills to create products such as cutting, shaping, joining and finishing e.g. filing and sanding.	Select from and use a wider range of tools and equipment to perform practical tasks accurately.
	Textiles	Shape textiles using templates. Colour and decorate textiles by adding sequins, items threaded incl. beads.	Join textiles using running stitch. Colour and decorate by using printing and dyeing.	Join textiles using appropriate stitching: <ul style="list-style-type: none"> • Running • Back Stitch • Zig Zag Stitch 	Join textiles using appropriate stitching: <ul style="list-style-type: none"> • Running • Back Stitch • Zig Zag Stitch Choose appropriate technique to decorate eg. No beads for a comfortable pillow.	Understand the need for a seam allowance. Choose appropriate stitching techniques.	Use the qualities of materials to create suitable visual and tactile effects in the decoration of textiles.
	Mechanics	Explore a range of products with moving parts.	Create a product using wheels and axles.	Use knowledge of wheels and axles to support science teaching of forces.		Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears).	
Design, Make, Evaluate and Improve	Design and make own products/models refining the design as the work progresses. Evaluate product/model against own design. Explore objects and designs to identify likes and dislikes of the design.	Design and make product/model that has a clear purpose and an intended user. Evaluate product/model against own design. Explore objects and designs to identify likes and dislikes of the design. Suggest improvements to existing designs.	Design and make product/model that has a clear purpose and an intended user. Evaluate product/model against design brief.	Design and make product/model that has a clear purpose and an intended user. Constantly refine work and techniques as work progresses. Begin to consider the views of others to improve their work. Evaluate product/model against design brief.	Design and make product/model that has a clear purpose and an intended user. Make products through stages of prototypes making continual refinements. Consider the views of others to improve their work. Evaluate product/model against design brief.	Design and make product/model that has a clear purpose and an intended user, motivated by the service a product will offer, rather than simply just for profit. Use prototypes, cross-sectional diagrams, annotated sketches etc to represent designs. Consider the views of others to improve their work and amend accordingly. Ensure products have a high quality finish. Evaluate the design of products so as to suggest improvements to the user experience.	
Take inspiration from design throughout history			Identify some of the designers and key events within the areas of study which have generated and influenced design.	Identify some of the designers and key events within the areas of study which have generated and influenced design.	Combine elements of design from a range of inspirational designers throughout history. Create innovative designs that improve upon existing products.	Combine elements of design from a range of inspirational designers throughout history giving reasons for choices.	