Hemington Primary School

Design Technology Curriculum Progression

	Key Stage 1	Key Stage 2
Design, make, evaluate and improve	• Design products that have a definite function for a particular person. • Make products to meet basic design brief. • Design and make products, modifying the product as the project evolves.	• Product designs with a clear purpose, having explored needs. • Select materials carefully to suit the design and use. • Refine methods and design as work progresses, constantly reassessing design. • Use computer packages to design and model products. • Design by considering the user. • Produce several prototypes each building upon the previous to optimise design. • Produce a good quality finish to products using art techniques. • Include designing processes such as prototypes and cross-sectional diagrams.
Control Technology		• Control and monitor models using software designed for this purpose. • Write code to control and monitor models or products.
Practical Techniques	• Practice techniques to join and/or strengthen materials eg glueing and reinforcing card. • Explore and use mechanisms in their product, wheels and axles	• Select appropriate techniques to construct products. • Apply understanding of forces to select a suitable mechanism e.g. levers, winding mechanism, pulleys and gears, hydraulics. • Construct series and parallel circuits. • Create circuits using electronics kits that combine a number of parts (e.g. LEDs, resistors, chips etc.) • Practice practical skills to a reasonable standard to produce products. • Combine electronics and mechanics to produce original designs • Use cams to change a rotation into a push/pull movement.

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Technical knowledge	• Use materials to practise drilling, screwing, glueing and nailing materials to make and strengthen products. • Create products using levers, wheels and winding mechanisms.	• Choose suitable techniques to construct products or to repair items. • Strengthen materials using suitable techniques. • Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears). • Develop a range of practical skills to create products (such as cutting, drilling and screwing, nailing, glueing, filing and sanding). • Convert rotary motion to linear using cams.
Electronics		• Diagnose faults in battery operated devices (such as low battery, water damage or battery terminal damage). • Use innovative combinations of electronics (or computing) and mechanics in product designs. • Create series and parallel circuits. • Create circuits using electronics kits that employ a number of components (such as LEDs, resistors, transistors and chips).
Cooking and nutrition	• Select from and use ingredients according to their characteristics. • Safely cut, peel or grate ingredients in a hygienic manner. • Use measuring cups or electronic scales to measure the required amounts. • Combine ingredients to produce food.	• Use correct utensils to hygienically prepare food. • Combine and or cook seasonal and savoury foods. • Use correct utensils to hygienically prepare food. • Understand how to store and handle food ingredients properly. • Invent and modify own recipes including savoury ingredients, methods, cooking times and temperature.
Materials and Textiles	• Use a running stitch to join fabric. • Use methods such as dyeing, adding sequins or printing alter the appearance of fabric. • Make use of template to produce shapes.	• Use the correct stitch to join materials. • Add decorative finish using a suitable technique. • Use suitable cutting and shaping techniques. • Choose suitable joining techniques.

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	● Demonstrate safe use of a given tool. ● Perform a range of cutting and shaping techniques e.g. tearing, cutting, folding and curling.	● Use a variety of stitching techniques to join fabrics. ● Understand the purpose of and include a seam allowance. ● Cut with precision and produce a good finish. ● Select appropriate tools to cut and shape a particular type of material.