The Design and Technology skills taught at Callowell

P1 Design products that have a definite function for a particular person (Christmas card e.g.) P1 Make products to meet basic design brief P1 Select from and use ingredients according to their characteristics (Healthy sandwich e.g.) P1 Use a running stitch to join fabric P1 Use methods such as dyeing, adding sequins or printing alter the appearance of fabric P1 Make use of template to produce shapes P1 practice techniques to join and/or strengthen materials eg., gluing and reinforcing card P1 Investigate historic designs to find their strengths and weaknesses (houses for example) P2 Design and make products, modifying the product as the project evolves P3 Safely cut, peel or grate ingredients in a hygienic manner P4 Use measuring cups or electronic scales to measure the required amounts P4 combine ingredients to produce food P5 explore and use mechanisms in their products P6 Demonstrate safe use of a given tool. (e.g. saw) P8 Perform a range of cutting and shaping techniques eg tearing, cutting, folding and curling P8 Use a range of joining techniques eg gluing, hinges or combining materials to strengthen. P5 Take an existing design and propose improvements P6 Explore the processes used to create products Understand where food comes from		
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The Design and Technology skills taught at Callowell

Produce designs with a clear purpose having explored needs Select materials carefully to suit the design and use Use correct stitch to join materials add decorative finish using a suitable technique Select appropriate techniques to construct products Use correct utensils to hygienically prepare food Combine ingredients and or cook Know the work of some recognised designers in all areas of study Understand and apply the principles of a healthy and varied diet Refine methods and design as work progresses, constantly reassessing design Use computer packages to design and model products Construct series and parallel circuits Apply understanding of forces to select a suitable mechanism e.g. levers, winding mechanism, pulleys and gears Use suitable cutting and shaping techniques Choose suitable joining techniques Make improvements to established designs and be able to explain why Disassemble designs to discover how they work		
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VE. Design by appeid aim the year primitivity and function before profit	Y4	Disassemble designs to discover how they work
Design by considering the user, prioritising good function before profit	Y5	Design by considering the user, prioritising good function before profit
Y5 Produce several prototypes each building upon the previous to optimise design	Y5	Produce several prototypes each building upon the previous to optimise design

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Y5	Create circuits using electronics kits that combine a number of parts (e.g. LEDs, resistors, chips etc.)
Y5	Practice practical skills to a reasonable standard to produce products
Y5	use a variety of stitching techniques to join fabrics
Y5	understand the purpose of and include a seam allowance
Y5	Combine designs from several significant designers explaining the selections
Y6	Produce a good quality finish to products using art techniques
Y6	Include designing processes such as prototypes, cross-sectional diagrams and CAD (Computer aided design)
Y6	Understand how to store and handle food ingredients properly
Y6	Invent and modify own recipes including ingredients, methods, cooking times and temperatures
Y6	Cut with precision and produce a good finish
Y6	Select appropriate tools to cut and shape a particular type of material
Y6	Combine electronics and mechanics to produce original designs
Y6	Use cams to change a rotation into a push/pull movement
Y6	Start with existing designs and invent improved ones
Y6	Evaluate the design of products and identify possible further changes to improve it performance
Y6	Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed