

*The Design and Technology skills taught at Callowell*

- Y1 Design products that have a definite function for a particular person (Christmas card e.g.)
- Y1 Make products to meet basic design brief
- Y1 Select from and use ingredients according to their characteristics (Healthy sandwich e.g.)
- Y1 Use a running stitch to join fabric
- Y1 Use methods such as dyeing, adding sequins or printing alter the appearance of fabric
- Y1 Make use of template to produce shapes
- Y1 practice techniques to join and/or strengthen materials eg , gluing and reinforcing card
- Y1 Investigate historic designs to find their strengths and weaknesses (houses for example)
- Y2 Design and make products, modifying the product as the project evolves
- Y2 Safely cut, peel or grate ingredients in a hygienic manner
- Y2 Use measuring cups or electronic scales to measure the required amounts
- Y2 combine ingredients to produce food
- Y2 explore and use mechanisms in their products
- Y2 Demonstrate safe use of a given tool. (e.g. saw)
- Y2 Perform a range of cutting and shaping techniques eg tearing, cutting, folding and curling
- Y2 Use a range of joining techniques eg gluing, hinges or combining materials to strengthen.
- Y2 Take an existing design and propose improvements
- Y2 Explore the processes used to create products
- Y2 Understand where food comes from

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- Y3 Produce designs with a clear purpose having explored needs
- Y3 Select materials carefully to suit the design and use
- Y3 Use correct stitch to join materials
- Y3 add decorative finish using a suitable technique
- Y3 Select appropriate techniques to construct products
- Y3 Use correct utensils to hygienically prepare food
- Y3 Combine ingredients and or cook
- Y3 Know the work of some recognised designers in all areas of study
- Y3 Understand and apply the principles of a healthy and varied diet
- Y4 Refine methods and design as work progresses, constantly reassessing design
- Y4 Use computer packages to design and model products
- Y4 Construct series and parallel circuits
- Y4 Apply understanding of forces to select a suitable mechanism e.g. levers, winding mechanism, pulleys and gears
- Y4 Use suitable cutting and shaping techniques
- Y4 Choose suitable joining techniques
- Y4 Make improvements to established designs and be able to explain why
- Y4 Disassemble designs to discover how they work
- Y5 Design by considering the user, prioritising good function before profit
- 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