What makes a good Mountfields Lodge Design Technologist?

An excellent attitude to learning.

The ability to take creative risks to explore, then produce innovative ideas and communicate these through practical, written and verbal means.

The ability to carry out research, showing initiative and perseverance. Asking questions to develop an understanding of users' needs.

The ability to work independently and with others, whilst using time efficiently.

An understanding of which tools, equipment and materials to use to make their products.

The ability to explore a range of risks. To communicate these to others and manage the risks to make products safely and hygienically.

A desire to explore technological innovations in materials, products and systems. Including taking inspiration from great designers in History.

The ability to apply knowledge from other subject areas.

Progression Map for Design Technology: Skills

Overall Aims:

- Develop the creative. Technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasing technical world.
- Build and apply a repertoire of knowledge, understanding and skills in order to design and make high quality prototypes and products for a range of users.
- Critique, evaluate and test their ideas and products and the work of others.

Aspect of Subject	KS1	Y3/4	Y5/6
Design	Design products that have a clear purpose and an intended user. Communicate design ideas through talking and drawing. Use software with support to design where appropriate (see Computing curriculum)	Identifying opportunities to design with purpose. Communicate design ideas through talking, annotated sketches, mock-ups and templates. Use software to design and represent product designs where appropriate (see Computing curriculum)	Use research and develop design criteria to inform the design of innovative, functional and appealing products that are fit for purpose. Generate, develop, model and communicate their ideas through most appropriate medium e.g. exploded diagrams, prototypes, computer aided design.
Make	Make products, refining the design as work progresses.	Make products by working efficiently (such as by carefully selecting materials).	Make products through stages of prototypes, making continual refinements Ensure products have a high quality finish, using art skills where appropriate
Evaluate	Explore and evaluate a range of existing products to identify likes and dislikes of the designs and suggest improvements, Evaluate their ideas and products against design criteria	Explore existing designs, including those from the past. Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.	Understand how key events and individuals in design technology have helped shape the world. Evaluate their ideas and products independently against design criteria.

		Refine work and techniques as work progresses.	Refine work and techniques as work progresses.

Progression Map for Design Technology Technical Knowledge and Understanding

Aspect of Subject	KS1	Y3/4	Y5/6
Cooking and nutrition	• Cut, peel or grate ingredients safely and hygienically. • Measure or weigh using measuring cups or electronic scales. • Assemble or cook ingredients. • Understand where some simple foods come from. • Understand the basic principles of a healthy and varied diet.	• Prepare ingredients hygienically using appropriate utensils. • Measure ingredients to the nearest gram accurately. • Follow a recipe. • Assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking). • Begin to be aware of seasonal availability; where and how some ingredients are grown and processed. • Understand the principles of a healthy and varied diet.	• 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 and cooking techniques. • Create and refine recipes, including ingredients, methods, numbers involved, cooking times and temperatures. • Understand how to cook within the limits of a budget. • Understand seasonality; where and how a variety of ingredients are grown, transported and processed. • Understand and apply the principles of nutrition and healthy eating.

Textiles	• Shape textiles using templates. • Join textiles using running stitch. • Colour and decorate textiles using a number of techniques (such as dyeing, adding sequins or printing).	• Join textiles with appropriate stitching. • Select the most appropriate techniques to decorate textiles.	• Create objects (such as a cushion) that employ a seam allowance. • Join textiles with a combination of stitching techniques (such as back stitch for seams and running stitch to attach decoration). • Use the qualities of materials to create suitable visual and tactile effects in the decoration of textiles (such as a decoration for comfort on a cushion).
Materials	• Use a limited range of tools and equipment to perform practical tasks. (such as cutting, shaping, joining and finishing) • Use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen products. • Build structures, exploring how they can be made stronger, stiffer and more stable. • Create products using levers, wheels, axles and winding mechanisms	• Select from a range of tools and equipment to perform practical tasks, becoming increasingly accurate. (such as cutting, shaping, joining and finishing) • Choose suitable techniques to construct products. • Strengthen materials using suitable techniques. • Understand and use simple mechanical systems in their products (such as levers, winding mechanisms, pulleys and gears.) • Understand and use the electrical systems in their products (such as series circuits, switches, bulbs)	• Select from a wide range of tools and equipment to perform practical tasks (such as cutting, drilling and screwing, nailing, gluing, filling and sanding). • Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. • Understand and use mechanical systems in their products (such as gears, pulleys, cams, levers and linkages) e.g. Convert rotary motion to linear using cams. • Use innovative combinations of electronics (or computing) and mechanics in product designs • Understand and use the electrical systems in their products (e.g. series circuits, switches, bulbs, buzzers and motors)

'A CURRICULUM TO INSPIRE'

Aim High Reach for the Sky!