Oakfield Primary School Design and Technology Long Term Plan

Term	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Autumn	**Textiles** Knowledge on how to shape textiles using templates, through a range of cutting and shaping techniques, in order to make a poppy.	**Textiles** Knowledge on how to cut materials that have been marked out to the nearest centimetre safely. Knowledge on how to join these materials using a running stitch to make a baby blanket.	**Textiles** Knowledge on how to join textiles with appropriate stitching when making a Christmas decoration.	**Textiles** Knowledge on why a seam allowance is needed. Knowledge on how to decorate textiles, measure and mark to the nearest millimetre, and how to cut and fabric, when making a Christmas decoration.	**Textiles** Knowledge on how the qualities of materials can create suitable visual and tactile effects.	**Food** Knowledge on how to ensure correct storage and hygienic handling of ingredients, paying particular attention to the benefits and disadvantages of microorganisms. Knowledge on how to accurately measure and calculate ratios of ingredients.
Spring	**Food** Knowledge on how to measure, cut, peel or grate ingredients, to create a snack in a safe and hygienic way.	**Food** Knowledge on how to assemble or cook ingredients to make a healthy and nutritious lunch. **Construction** Knowledge on how to design a product using software. Knowledge on how to make a product using joining techniques, drilling, screwing, gluing and nailing. Knowledge on how to refine a product, and suggest improvements to existing designs.	**Food** Knowledge on how to measure ingredients to the nearest gram, when following a recipe to make a treat. **Mechanics** Knowledge on how to use scientific knowledge to improve upon existing designs, when designing an Easter toy with a mechanism. Knowledge on how to accurately and safely cut, and join materials when constructing a product.	**Food** Knowledge on how to prepare, assemble and cook ingredients hygienically, using appropriate utensils, to make a treat. **Mechanics** Knowledge on how to use software to design a moving box with a mechanism. Knowledge on how to use scientific knowledge when designing a product. Knowledge on how to evaluate and then refine the product made.	**Food** Knowledge on how to create and refine recipes, including ingredients, methods, cooking times and temperatures. **Construction** Knowledge on how to use Kinder CAD to design products. Knowledge on how to use a range of practical skills to create a photo frame with a high-quality finish, by using artistic skills where appropriate.	**Mechanics** Knowledge on how to use prototypes, cross-sectional diagrams and computer aided designs to represent products. Knowledge on how to use a combination of electronics and mechanics, and designers throughout history, when designing products. **Construction** Knowledge on how to use prototypes, cross-sectional diagrams and computer aided designs to represent building designs. Knowledge on how to use a range of practical skills to create products influenced by inspirational designers.

Summer	**Construction** Knowledge on how to use software to design a mini-beast house. Knowledge on how to drill, screw, glue and nail materials to make and strengthen the finished product. **Mechanics** Knowledge on how to use software to design a moving card, with a lever, wheel or winding mechanism. Knowledge on how similar existing products have been created.	**Mechanics** Knowledge on how to use software to design a book containing leavers, wheels or winding mechanisms. Knowledge on how to make their products, and suggest improvements to existing designs.	**Construction** Knowledge on how to improve upon and disassemble existing designs when designing a desk tidy. Knowledge on how to accurately and safely cut, and join materials when constructing a product.	**Construction** Knowledge on how to use software to design a bird box generated from great designers' ideas. Knowledge on how to strengthen materials. Knowledge on how to evaluate and then refine the product made.	**Mechanics** Knowledge on how to use Kinder CAD to design a product containing a rotary motion system using linear cams. Knowledge on how to use a range of practical skills to create a product with a high-quality finish, by using artistic skills where appropriate.	**Textiles** Knowledge on how to create objects that employ a seam allowance. Knowledge on how to join textiles with a combination of stitching techniques when making a leavers cushion.