Mersey Park Primary School Design and Technology Long Term Overview – Year 5

	Target Tracker Assessment Focus	Weaving Knowledge, Skills and Understanding
Cooking and Nutrition: Pizza		
	• Understand the main food groups and the different nutrients that are important for health • Understand how a variety of ingredients are grown, reared, caught and processed to make them safe and palatable/tasty to eat • Select appropriate ingredients and use a wide range of techniques to combine them	During KS2 pupils should be taught to: • understand and apply the principles of a healthy and varied diet • prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques • understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. Breadth of study: • Can they describe what they do to be both hygienic and safe? • How have they presented their product well?
Processes: Eye mask, Cam		
Developing planning and communicating ideas	• Use his/her market research to inform the design of his/her own innovative product • Create prototypes to show his/her ideas	During KS2 pupils should be taught to: • use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups • generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design Breadth of study: • Can they come up with a range of ideas after they have collected information? Do they take a user's view into account when designing? • Can they explain how their product will appeal to the audience? • Can they produce a detailed step-by-step plan? • Can they make up a prototype first? • Can they suggest some alternative plans and say what the good points and drawbacks are about each?
Working with tools, equipment, materials and components to make quality products Textiles Stiff and flexible sheet materials	• Make careful and precise measurements so that joins, holes and opening are in exactly the right place • Produce step by step plans to guide his/her making, demonstrating that he/she can apply his/her knowledge of different materials, tools and techniques	During KS2 pupils should be taught to: • select from and use a wider range of tools and equipment to perform practical tasks, such as cutting, shaping, joining and finishing, accurately • select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities Breadth of study: • Can they use a range of tools and equipment expertly? • Do they persevere through different stages of the making process? • Do they think what the user would want when choosing textiles?

Mouldable materials		• Are they motivated enough to refine and further improve their product using mouldable materials?
Evaluating processes and products	• Make detailed evaluations about existing products and his/her own considering the views of others to improve his/her work	During KS2 pupils should be taught to: • investigate and analyse a range of existing products • 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 and technology have helped shape the world Breadth of study: • Can they explain why their finished product is going to be of good quality? • Do they keep checking that their design is the best it can be? • Do they check whether anything could be improved? • Can they evaluate appearance and function against the original criteria?
Electrical and mechanical components	• Understand how to use more complex mechanical and electrical systems	During KS2 pupils should be taught to: • understand and use mechanical systems in their products, (for example as gears, pulleys, cams, levers and linkages) • understand and use electrical systems in their products, (for example series circuits incorporating switches, bulbs, buzzers and motors) • apply their understanding of computing to programme, monitor and control their products. Breadth of study: • Can they incorporate a cam into their product? • Can they select the most appropriate cam for their required movement? • Can they refine their product after testing it?
Construction	• Build more complex 3D structures and apply his/her knowledge of strengthening techniques to make them stronger or more stable	During KS2 pupils should be taught to: • apply their understanding of how to strengthen, stiffen and reinforce more complex structures Breadth of study: • How have they made their product attractive, strong and fit for purpose? • Can they use a range of joining techniques? • Are their measurements accurate enough to ensure that everything is precise?