



Markland Hill Topic Overview for DT –UPKS2 Year B

Autumn	Spring	Summer
	Mars Rover Mechanical Electrical Design 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 Make 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 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	Hearty Traders and Raiders Soup and making bread Food & Nutrition Design 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 Make prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques 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 Evaluate evaluate their ideas and products against their own design criteria and consider the views of others to improve their work

	Evaluate evaluate their ideas and products against their own design criteria and consider the views of others to improve their work understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] Technical Knowledge understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] End points • I can use rotary motion cams to create mars rover model • I can gather ideas and research ideas for my project. • I can cut materials precisely and use appropriate tools to refine their finish. • I can choose quality materials and choose appropriate materials to cut and shape accurately. • I can design my product and refine it as I progress with its process. • I can use products to ensure a high quality finish	Technical Knowledge understand and apply the principles of a healthy and varied diet understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. End points • I can plan my work based on research that I have done and use prototypes to decide on a final design. • I can measure accurately and calculate ratios of ingredients. • I can demonstrate a range of baking and cooking techniques. • I can create and refine recipes, including healthy seasonal ingredients, methods, cooking times and temperatures. • I can understand how a variety of ingredients are grown, reared, caught and processed. • I can understand and apply principles of a healthy and varied diet. • I can compare the similarities and differences in the two types of bread. Bread • I can plan my work based on research that I have done and use prototypes to decide on a final design. • I can measure accurately and calculate ratios of ingredients. • I can demonstrate a range of baking and cooking techniques. • I can create and refine recipes, including healthy seasonal ingredients, methods, cooking times and temperatures.
--	--	--

		- I can understand how a variety of ingredients are grown, reared, caught and processed. - I can understand and apply principles of a healthy and varied diet. - I can compare the similarities and differences in the two types of bread.
	Design Make Evaluate Assemble Select Feature research reed switch, toggle switch, push-to-make switch, push-to-break switch, light dependent resistor (LDR), tilt switch, light emitting diode (LED), bulb, bulb holder, battery, battery holder, USB cable, wire, insulator, conductor, crocodile clip control, program, system, input device,series output device, series circuit, parallel circuit assemble component vehicle	Design Make Evaluate ingredients, yeast, dough, bran, flour, wholemeal, unleavened, baking soda, spice, herbs fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy, intolerance, savoury, source, seasonality utensils, combine, fold, knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble