



	National Curriculum	Mechanisms and Structures	Textiles	Food and 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 Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer aided design	Carry out research, using a variety of sources including web based resources. Can develop a simple design specification to guide their thinking. (materials, dimensions, cost) Describe how specific parts of their product works and how this meets the needs of the user. Develop their ideas by creating labelled cross sectional diagrams. Model ideas by creating prototypes/pattern pieces/ computer aided design.		
Make	Select from and use a wider range of tools and equipment to perform practical tasks (for example, 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	Use a broad range of tools and equipment including drills, saws, hammers, vice, wire cutters with increasing accuracy	-Develop and 'upcycle' and existing product using a variety of techniques developed in previous years. -Use applique and embroidery techniques to create a professional finish.	Choose appropriate ingredients based on taste, availability and sustainability (eg air miles, 'shop local')
Evaluate	Investigate and analyse a range of existing products, Evaluate their ideas and products against their own design criteria and consider the views of other to improve their work Understand how key events and individuals in design and technology have helped shape the world	To look at a range of existing products and identify strengths/weaknesses of each.	Children to look at key at a range of fashion designers and how designs how changed over the decades. Children understand the terms 'fast fashion' and 'upcycling'	-Evaluate and rank food based on appearance, texture, smell, taste, nutritional value and consider organic/locally sourced ingredients. -Prepare simple dishes hygienically and safely, where needed and with a heat source -Use cooking techniques such as: chopping, peeling, grating, slicing, mixing, spreading, kneading and baking -Estimate the amount of ingredients to an appropriate level of accuracy -Select the appropriate tools to follow a given recipe to make a savoury dish
Technical Knowledge	Apply their understanding of how to strengthen , stiffen and reinforce more complex structures Understand and use mechanical systems in their products (for example 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 program, monitor and control their products	Design a product that incorporates a motor and pulley. Use computing knowledge to control their product. -Use a number of triangulation techniques to strengthen structures. -Can use a computer program to control their products e.g. Using a program which would allow them to program a delay or use of a sensor		Can use a computer design program to communicate their ideas. e.g. Use a computer aided design program to create designs with text and graphics
Cooking and Nutrition	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.			-Understand global issues regarding food production (eg sustainable fishing, air miles) -Understand what different effects food types have on the body e.g. the impact of eating too much sugar



				<ul style="list-style-type: none">-Prepare simple dishes hygienically and safely, where needed and, with adult support, use the hob.-Understand that recipes can be adapted to change the appearance, taste and aroma of a dish-Understand that sometimes raw ingredients need to be processed before they can be used in cooking (e.g. De-feathering a chicken)-Sort foods into the 5 groups, understand all groups and why they differ in size, making up a healthy diet-Identify that food and drink provide certain nutritional and health benefits which support a healthy lifestyle
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