



Newnham Junior School – Design, Technology and Food Curriculum Map

Food Technology Knowledge and skills	Designing Knowledge and skills	Making Knowledge and skills	Evaluating Knowledge and skills	Technical knowledge Knowledge and skills
Theme 1 – Healthy diet	Theme 1 – Researching	Theme 1 – Selecting and using tools	Theme 1 – Investigating	Theme 1 – Strengthening
Theme 2 – Making	Theme 2 – Designing	Theme 2 – Making	Theme 2 – Evaluating	Theme 2 – Mechanics
Theme 3 – Seasonality			Theme 3 – History of DT	Theme 3 – Electrical systems
				Theme 4 – Using ICT
YEAR 3 - Biscuit making, Purses, Moving Monsters				
Start to know when, where and how food is grown; explain that a healthy diet is made up of a variety and balance of different food and drink;	Choose thread and recyclable materials for both their suitability and final appearance.	Follow a step-by-step plan, choosing the right equipment and materials. Select the most appropriate tools and techniques for a given task.	Investigate purses to look at different design and recognise how they are made	Know how to strengthen a product by stiffening a part of the structure e.g. papier mâché and secure stitching by using back stitch.
Know how to be both hygienic and safe when using food; use a range of techniques such as mixing, creaming, breaking an egg, rolling, cutting, marking and baking; carefully measure and mix ingredients to make biscuits: start to independently follow a recipe.	Create a design that meets a set criteria. Design a purse and make sure that it looks attractive.	Make a Moving Monster which uses a mechanical component e.g. Pneumatic. Work accurately to measure, make cuts, make holes and have secure stitching.	Evaluate their purse and moving monster against their original design criteria. Explain how to improve their finished purse and moving monster. Know why their purse and moving monster has, or has not, been successful.	Explain the mechanical system of how their monsters move.
Start to know when, where and how food is grown.			Evaluate the key events, including technological developments, and designs of individuals in design and technology that have helped shape the world.	



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YEAR 4 – Bridges, Torches, Photo frames				
	Use ideas from other people when designing.	Know which tools to use for a particular task and show knowledge of handling the tool e.g. hacksaws, glue guns.	Investigate Bridges, Torches and Photo frames for both their purpose and appearance.	To be able to strengthen their bridge structures to allow them to take more weight.
	Produce a plan and explain it. Persevere and adapt work when original ideas do not work. Communicate ideas in a range of ways, including by sketches and drawings which are annotated.	Know how electrical circuits, including switches, can be used to illuminate a torch. Measure accurately to create a stable structure for both Bridges, using wood and Photo frames, using cardboard.	Evaluate the key events, including technological developments, and designs of individuals in design and technology that have helped shape the world. Evaluate and suggest improvements for a design. Explain how the original design has been improved. Evaluate their product against their original design criteria.	Explain the mechanical system of their switches.
			Evaluate the key events, including technological developments, and designs of individuals in design and technology that have helped shape the world.	Make links to their scientific knowledge by using lights and switches. Use electrical systems to enhance the quality of their product.
				Consider how IT could be used to further enhance the quality of the product i.e. from their experience at London Bridge.



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YEAR 5 – Tapestry, Moving Vehicles				
	Come up with a range of ideas after collecting information from different sources.	Use a range of tools and equipment competently e.g. hacksaws, glue guns, bench hooks, circuits, and needles.	Investigate how electrical engines can turn wheels and how wheel alignment is important.	Apply their understanding of how to strengthen, stiffen and reinforce structures to their moving vehicle.
	Produce a detailed step-by-step plan. Explain how a product will appeal to a particular audience. Design a product that requires a motor.	Make a prototype before making a final version e.g. Outer casing of vehicle.	Suggest alternative plans; outlining the positive features and drawbacks. Evaluate appearance and function against original criteria.	Explain how mechanical systems, of the engine driving wheels works.
			Evaluate the key events, including technological developments, and designs of individuals in design and technology that have helped shape the world.	Link scientific knowledge to their design by using a complete circuit to drive a motor.
				Consider how IT could be used to further enhance the quality of the product.



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YEAR 6 - Soups and Smoothies, Cam toys				
Explain that foods contain different substances, such as protein, that are needed for health and be able to apply these principles when planning and preparing dishes;	Use research to inform plans and ideas.	Know which tool to use for a specific practical task. Know how to use any tool correctly and safely. Explain why a specific tool is best for a specific action.	Investigate traditional Cam toys to understand how they are made.	Understand how to strengthen their cam toys to ensure they have longevity
Demonstrate how to prepare a variety of fruit and vegetables safely and hygienically; demonstrate how to safely use a range of cooking techniques, such as chopping, grating and blending; adapt and refine recipes by adding or substituting one or more ingredients to change the appearance, taste, texture and/or aroma.	Follow and refine original plans. Use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas. Explain how particular parts of their products work.	Cut, assemble, join and combine materials and components with accuracy. Refine the finish using techniques to improve the appearance of their product, such as sanding or a more precise scissor cut after roughly cutting out a shape.	Know how to test and evaluate their designed product. Critically evaluate the quality of design, manufacture and fitness for purpose of their product as they design and make. Evaluate their ideas and product against the original design criteria, making changes as needed.	Explain how mechanical systems, such as cams, create movement and then use this mechanical system in their product.
Understand about seasonality;			Evaluate the key events, including technological developments, and designs of individuals in design and technology that have helped shape the world.	
				Consider how IT could be used to further enhance the quality of the product.



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SCHOOL-SPECIFIC - EVENTUAL OUTCOMES FOR THE END OF KS2				
understand and apply the principles of a healthy and varied diet	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	select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately	investigate and analyse a range of existing products	apply their understanding of how to strengthen, stiffen and reinforce more complex structures
prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques	Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design	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 their ideas and products against their own design criteria and consider the views of others to improve their work	understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]
understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.			understand how key events and individuals in design and technology have helped shape the world	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.