

### Design and Technology Knowledge Planner

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Use own ideas to design something and describe how their own idea works	Think of an idea and plan what to do next	Prove that a design meets a set of criteria.	Use ideas from other people when designing	Come up with a range of ideas after collecting information from different sources	Use market research to inform plans and ideas.
Design a product which moves	Explain why they have chosen specific textiles	Design a product and make sure that it looks attractive	Produce a plan and explain it	Produce a detailed, step-by-step plan	Follow and refine original plans
Explain to someone else how they want to make their product and make a simple plan before making	Choose tools and materials and explain why they have chosen them	Choose a material for both its suitability and its appearance	Persevere and adapt work when original ideas do not work	Explain how a product will appeal to a specific audience	Justify planning in a convincing way
Use own ideas to make something	Join materials and components in different ways	Follow a step-by-step plan, choosing the right equipment and materials	Communicate ideas in a range of ways, including by sketches and drawings which are annotated	Design a product that requires pulleys or gears	Show that culture and society is considered in plans and designs
Make a product which moves	Measure materials to use in a model or structure	Select the most appropriate tools and techniques for a given task	Know which tools to use for a particular task and show knowledge of handling the tool	Use a range of tools and equipment competently	Know which tool to use for a specific practical task
Choose appropriate resources and tools	Explain what went well with their work	Make a product which uses both electrical and mechanical components	Know which material is likely to give the best outcome	Make a prototype before making a final version	Know how to use any tool correctly and safely
Describe how something works	Make a model stronger and more stable	Work accurately to measure, make cuts and make holes	Measure accurately	Make a product that relies on pulleys or gears	Know what each tool is used for
Explain what works well and not so well in the model they have made	Use wheels and axles, when appropriate to do so	Explain how to improve a finished model	Evaluate and suggest improvements for design	Suggest alternative plans; outlining the positive features and draw backs	Explain why a specific tool is best for a specific action

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Make their own model stronger	Weigh ingredients to use in a recipe	Know why a model has, or has not, been successful	Evaluate products for both their purpose and appearance	Evaluate appearance and function against original criteria	Know how to test and evaluate designed products
Cut food safely	Describe the ingredients used when making a dish or cake	Know how to strengthen a product by stiffening a given part or reinforce a part of the structure	Explain how the original design has been improved	Links scientific knowledge to design by using pulleys or gears	Explain how products should be stored and give reasons
		Use a simple IT program within the design	Present a product in an interesting way	Uses more complex IT program to help enhance the quality of the product produced	Evaluate product against clear criteria
		Describe how food ingredients come together	Links scientific knowledge by using lights, switches or buzzers	Be both hygienic and safe in the kitchen	Use electrical systems correctly and accurately to enhance a given product
		Weigh out ingredients and follow a given recipe to create a dish	Use electrical systems to enhance the quality of the product	Know how to prepare a meal by collecting the ingredients in the first place	Know which IT product would further enhance a specific product
		Talk about which food is healthy and which food is not	Use IT, where appropriate, to add to the quality of the product	Know which season various foods are available for harvesting	Use knowledge to improve a made product by strengthening, stiffening or reinforcing
		Know when food is ready for harvesting	Know how to be both hygienic and safe when using food		Explain how food ingredients should be stored and give reasons
					Work within a budget to create a meal
			Bring a creative element to the food product being designed		Understand the difference between a savoury and sweet dish