

Design and Technology

Design and technology (DT) is taught as a discrete subject, linked to other subjects through a thematic approach.

Our curriculum for Design and technology (DT) aims to ensure that all pupils:

- develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
- critique, evaluate and test their ideas and products and the work of others
- understand and apply the principles of nutrition and learn how to cook

Design and Technology: Key Stage 1					
	Designing	Making	Evaluating	Technical Knowledge	Food Technology
	<i>Design - purposeful, functional, appealing products for themselves and other users based on design criteria Design - generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</i>	<i>select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</i>	<i>explore and evaluate a range of existing products evaluate their ideas and products against design criteria</i>	<i>build structures, exploring how they can be made stronger, stiffer and more stable explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</i>	<i>use the basic principles of a healthy and varied diet to prepare dishes understand where food comes from</i>
Year 1	<ul style="list-style-type: none"> • think of an idea and plan what to do next • explain why they have chosen specific materials and components (also when designing boats in Science) 	<ul style="list-style-type: none"> • choose tools and materials and explain why they have chosen them • join materials and components in different ways • measure materials to use in a model or structure 	<ul style="list-style-type: none"> • explain what went well with their work 	<ul style="list-style-type: none"> • make a model stronger and more stable • use wheels and axles that work 	<ul style="list-style-type: none"> • describe the ingredients used when making a dish • know that fruit is part of a healthy balanced diet • describe where fruit grows (Science) • cut fruit safely

Year 2	<ul style="list-style-type: none"> • use own ideas to design something and describe how their own idea works • design a product for a given purpose • explain to someone else how they want to make their product and make a simple plan before making 	<ul style="list-style-type: none"> • use own ideas to make something • make a product which fulfils the given purpose • choose appropriate resources and tools 	<ul style="list-style-type: none"> • describe how something works • explain what works well and not so well in the product they have made 	<ul style="list-style-type: none"> • make their own product stronger, better joined or more appealing 	<ul style="list-style-type: none"> • cut food safely • know about how ingredients are part of a healthy, balanced diet • describe where some ingredients come from
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Design and Technology: Key Stage 2					
	Designing	Making	Evaluating	Technical Knowledge	Food Technology
	<p><i>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</i></p> <p><i>generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</i></p>	<p><i>select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</i></p> <p><i>select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</i></p>	<p><i>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</i></p> <p><i>understand how key events and individuals in design and technology have helped shape the world</i></p>	<p><i>apply their understanding of how to strengthen, stiffen and reinforce more complex structures</i></p> <p><i>understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</i></p> <p><i>understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</i></p> <p><i>apply their understanding of computing to program, monitor and control their products.</i></p>	<p><i>understand and apply the principles of a healthy and varied diet</i></p> <p><i>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</i></p> <p><i>understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed</i></p>

Year 3	<ul style="list-style-type: none"> • prove that a design meets a set criteria. • design a product and make sure that it looks attractive • choose a material for both its suitability and its appearance 	<ul style="list-style-type: none"> • follow a step-by-step plan, choosing the right equipment and materials • select the most appropriate tools and techniques for a given task • work accurately to measure, make cuts and make holes 	<ul style="list-style-type: none"> • explain how to improve a finished model • know why a model has, or has not, been successful 	<ul style="list-style-type: none"> • know how to strengthen a product by stiffening a given part or reinforce a part of the structure 	<ul style="list-style-type: none"> • describe how food ingredients come together • weigh out ingredients and follow a given recipe to create a dish • talk about which food is healthy and which food is not(Science)
Year 4	<ul style="list-style-type: none"> • use ideas from other people when designing • 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 	<ul style="list-style-type: none"> • know which tools to use for a particular task and show knowledge of handling the tool • know which material is likely to give the best outcome • measure accurately 	<ul style="list-style-type: none"> • evaluate and suggest improvements for design • evaluate products for both their purpose and appearance • explain how the original design has been improved • present a product in an interesting way 	<ul style="list-style-type: none"> • links scientific knowledge by using lights, switches or buzzers • use electrical systems to enhance the quality of the product 	<ul style="list-style-type: none"> • know how to be both hygienic and safe when using food • bring a creative element to the food product being designed
Year 5	<ul style="list-style-type: none"> • come up with a range of ideas after collecting information from different sources • produce a detailed, step-by-step plan • explain how a product will appeal to a specific audience • design a product that requires pulleys or gears 	<ul style="list-style-type: none"> • use a range of tools and equipment competently • make a prototype before making a final version • make a product that relies on pulleys or gears 	<ul style="list-style-type: none"> • suggest alternative plans; outlining the positive features and draw backs • evaluate appearance and function against original criteria 	<ul style="list-style-type: none"> • links scientific knowledge to design by using pulleys or gears • uses more complex IT program to help enhance the quality of the product produced • use a simple IT program within the design 	<ul style="list-style-type: none"> • be both hygienic and safe in the kitchen • know how to prepare a meal by collecting the ingredients in the first place • know which season various foods are available for harvesting

<p style="text-align: center;">Year 6</p>	<ul style="list-style-type: none"> • use market research to inform plans and ideas. • follow and refine original plans • justify planning in a convincing way • show that culture and society is considered in plans and designs e.g. environmental considerations or benefits of product 	<ul style="list-style-type: none"> • know which tool to use for a specific practical task • know how to use any tool correctly and safely • know what each tool is used for • explain why a specific tool is best for a specific action • make a product which uses both electrical and mechanical components 	<ul style="list-style-type: none"> • know how to test and evaluate designed products • explain how products should be stored and give reasons • evaluate product against clear criteria 	<ul style="list-style-type: none"> • use electrical systems correctly and accurately to enhance a given product • know which IT product would further enhance a specific product • use knowledge to improve a made product by strengthening, stiffening or reinforcing 	<ul style="list-style-type: none"> • explain how food ingredients should be stored and give reasons • work within a budget to create a meal • understand the difference between a savoury and sweet dish
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