Breadsall CE Primary School Curriculum

Progression of skills for:



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Design & Technology: Key Stage 1

	Designing	Making	Evaluating	Technical Knowledge	Food Technology
Coverage	*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*	*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*	*explore and evaluate a range of existing products* *evaluate their ideas and products against design criteria*	*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.*	*use the basic principles of a healthy and varied diet to prepare dishes* *understand where food comes from*
Key Skills and Knowledge	use own ideas to design something describe how own idea works design a product which moves explain to someone else how they want to make their product make a simple plan before making think of an idea and plan what to do next explain why they have chosen specific textiles	use own ideas to make something make a product which moves choose appropriate resources and tools 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	describe how something works explain what works well and not so well in the model they have made explain what went well with their work	make their own model stronger make a model stronger and more stable use wheels and axles when appropriate to do so	cut food safely weigh ingredients to use in a recipe describe the ingredients used when making a dish or cake

Design & Technology: Lower Key Stage 2

	Designing	Making	Evaluating	Technical Knowledge	Food Technology
Coverage	*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*	*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 wide range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities*	*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* *understand how key events and individuals in design and technology have helped shape the world*	*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.*	*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*
Key Skills and Knowledge	prove that a design meets set criteria design a product and make sure that it looks attractive choose a material for both its suitability and its appearance 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	follow a step-by-step plan, choosing the right equipment and materials select the most appropriate tools and techniques for a given task make a product which uses both electrical and mechanical components work accurately to measure, make cuts and make holes 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	explain how to improve a finished model know why a model has or has not been successful 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	know how to strengthen a product by stiffening a given part or reinforce a part of the structure use a simple IT program within the design links scientific knowledge by using lights, switches or buzzers use electrical systems to enhance the quality of the product use IT where appropriate to add to the quality of the product	describe how food ingredients come together weigh out ingredients and follow a given recipe to create a dish can talk about which food is healthy and which food is not know when food is ready for harvesting know how to be both hygienic and safe when using food bring a creative element to the food product being designed

Design & Technology: Upper Key Stage 2

	Designing	Making	Evaluating	Technical Knowledge	Food Technology
Coverage	*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*	*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 wide range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities*	*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* *understand how key events and individuals in design and technology have helped shape the world*	*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.*	*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*
Key Skills and Knowledge	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 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	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 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	suggest alternative plans; outlining the positive features and draw backs evaluate appearance and function against original criteria know how to test and evaluate designed products explain how products should be stored and give reasons evaluate product against clear criteria	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 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	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 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