



Design & Technology Long Term Plan

Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

KS1

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment].

KS2

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].

	Year 1			Year 2		
	Bright Lights, Big City Design & Make: Bread (food & nutrition)	Moon Zoom! Design & Make: Moon Buggies (structures/mechanisms)	Dinosaur Planet Design & Make: A Dinosaur Puppet (textiles)	Towers, Tunnels & Turrets Design & Make: Rapunzel's Tower/Drawbridge (construction/mechanism)	Land Ahoy! Design & Make: Pirate Flag (textiles)	The Scented Garden Design & Make: A dish from home grown vegetables (food & nutrition)
Design						
Design purposeful, functional, appealing products for themselves and other users based on design criteria	x	x	x	x	x	x
Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology	x	x	x	x	x	x
Make						
Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]		x	x	x	x	

Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics	x	x	x	x	x	x
Evaluate						
Explore and evaluate a range of existing products	x	x	x	x	x	x
Evaluate their ideas and products against design criteria	x	x	x	x	x	x
Technical knowledge						
Build structures, exploring how they can be made stronger, stiffer and more stable		x		x		
Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.		x		x		
Cooking & nutrition						
Use the basic principles of a healthy and varied diet to prepare dishes	x					x
Understand where food comes from	x					x

	Year 3			Year 4		
	Forceful Pharaohs Design & Make: Mummy Puppet (mechanisms)	Scrumdiddly -umptious Design & Make: A Healthy Pizza (food & nutrition)	Tribal Tales Design & Make: Wattle & Daub/Wool for Clothing (textiles)	I Am Warrior! Design & Make: Roman Shields (structures)	Traders & Raiders Design & Make: Catapults (mechanisms)	Burps, Bottoms & Bile Design & Make: A healthy snack pack/salad (food & 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	x	x	x	x	x	x
Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design	x	x	x	x	x	x
Make						
Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately	x		x	x	x	
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	x	x	x	x	x	x
Evaluate						
Investigate and analyse a range of existing products	x	x	x	x	x	x
Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work	x	x	x	x	x	x
Understand how key events and individuals in design and technology have helped shape the world			x	x	x	
Technical knowledge						
Apply their understanding of how to strengthen, stiffen and reinforce more complex structures	x			x	x	
Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]	x				x	
Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]	x				x	

Apply their understanding of computing to program, monitor and control their products	x				x	
Cooking & Nutrition						
Understand and apply the principles of a healthy and varied diet		x				x
Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques		x				x
Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed		x				x

	Year 5			Year 6		
	Scream Machine Design & Make: A Theme Park Ride (structures & mechanisms)	Off With Her Head Design & Make: Tudor Rose Cross Stitch (textiles)	France (Fallen Fields) Design & Make: A Wartime Rationed Meal (food & nutrition)	A Child's War Design & Make: Anderson Shelters (structures)	Revolution Design & Make: Zoetrope (electrical mechanisms)	Voices in the Park & Blood Heart Design & Make: Healthy Heart Meal (food & 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	x	x	x	x	x	x
Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design	x	x	x	x	x	x
Make						
Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately	x	x		x	x	
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	x	x	x	x	x	x
Evaluate						
Investigate and analyse a range of existing products	x	x	x	x	x	x
Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work	x	x	x	x	x	x
Understand how key events and individuals in design and technology have helped shape the world	x	x		x	x	
Technical knowledge						
Apply their understanding of how to strengthen, stiffen and reinforce more complex structures	x			x	x	
Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]	x				x	
Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and	x				x	

motors]						
Apply their understanding of computing to program, monitor and control their products	x				x	
Cooking & Nutrition						
Understand and apply the principles of a healthy and varied diet			x			x
Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques			x			x
Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed			x			x