

Design Technology Knowledge and Skills Key Stage 2

Aims

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].

Design		Make		Evaluate			
<ul style="list-style-type: none"> 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 		<ul style="list-style-type: none"> 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 wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities 		<ul style="list-style-type: none"> 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 			
Technical Knowledge: know how to		Key Concepts		Technical Knowledge: know how to		Key Concepts	
Apply their understanding of how to strengthen, stiffen and reinforce more complex structures				Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]			
Year 3 Textiles – 2D shape to 3D product Design and produce a felt bag		Know how to strengthen, stiffen and reinforce existing fabrics Understand how to securely join two pieces of fabric together Understand the need for patterns and seam allowances Know and use technical vocabulary relevant to the project.		Year 4 Electrical Systems – simple circuits and switches		Understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs and buzzers. Apply their understanding of computing to program and control their products Know and use technical vocabulary relevant to the project.	
Year 5 Structures – Frame Structures Playground / Buildings		Understand how to strengthen, stiffen and reinforce 3D frameworks Know and use technical vocabulary relevant to the project					
Year 5 Textiles - Combining different fabric shapes Felt Decorations		A 3D textile product can be made from a combination of accurately made pattern pieces, fabric shapes and different fabrics Fabrics can be strengthened, stiffened and reinforced where appropriate					
Year 6 Textiles – Combining different technical fabric shapes Upcycling							
Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]				Apply their understanding of computing to program, monitor and control their products.			
Year 3 Mechanisms – Levers and Linkages Pop up books and cards		Understand and use lever and linkage mechanisms Distinguish between fixed and loose pivots Know and use technical vocabulary relevant to the project		Year 6 Electrical systems – more complex circuits and switches		Understand and use electrical systems in their products Apply their understanding of computing to program, monitor and control their products Know and use technical vocabulary relevant to the project	
Year 4 Mechanisms -Technical Levers and Linkages Technology based							

<p>Year 5 Mechanical Systems – pulley and gears</p>	<p>Understand that mechanical and electrical systems have an input, process and an output Understand how gears and pulley can be used to speed up, slow down and change the direction of movement</p>		
Cooking and Nutrition			
Aims			
<p>As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.</p>			
<p>Understand and apply the principles of a healthy and varied diet</p>	<p>Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</p>	<p>Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</p>	
Know that:	Know how to cook:	Know that:	
<p>Year 3 Healthy and Varied Diet Know how to use appropriate equipment and utensils to prepare and combine food Know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught Know and use relevant technical and sensory vocabulary appropriately</p>		<p>Year 6 Celebrating culture and seasonality Know how to use utensils and equipment including heat sources to prepare and cook food Understand about seasonality in relation to food products and the source of different food products Know and use relevant technical and sensory vocabulary</p>	
Websites for Primary DT			
<p>STEM: https://www.stem.org.uk/resources/collection/2891/nuffield-primary-design-and-technology The Design and Technology Association https://www.data.org.uk/for-education/primary/#</p>			