



Design Technology

Curriculum Overview

Year 6



Concepts	User	Understand how the needs of the user led to the creation of the product.	
	Implementation	Accurately use precise techniques to produce high quality products that fulfil a need.	
	Innovation	Combine detailed design ideas with a continuous evaluation process, testing different alternatives before creating a final product.	
Electrical Systems	Create electromagnetic toys and more complex electronic circuits to create a steady hand game.		
Context	Design and create a steady hand game, use nets to create the bases and apply knowledge of electrical circuits to build an operational circuit with a buzzer that completes the circuit when the handle makes contact with the wire.		
Design	Generating ideas through sketching and discussion, modelling ideas through prototypes, establishing a list of design criteria		
Make	Selecting and using appropriate materials and equipment, to cut, measure and mark accurately including the use of set-squares and rulers		
Evaluate	Adapting products to improve functionality, testing that the product is fit for purpose and operates as planned against the design criteria		
Technical Knowledge	Creating and using electric series-circuits effectively, knowing how to make electromagnetic motors, creating nets for 3D shapes to house the circuitry and act as a stable base		
Vocabulary	Assemble, battery, battery pack, bulb, bulb holder, buzzer, circuit, circuit symbol, component, conductor, copper, design, design criteria, evaluation, function, insulator, LED, magnetic field, net, perspective drawing, plan, pliers, prototype, series circuit, side view, steady hand game, switch, symmetrical, target audience, test, top view, wire cutters		
Recap	Do I know how to make an electrical circuit including a buzzer and a switch? Do I know how to design and make a net for a 3D shape? Do I know how to use pliers and other specialist tools safely? Do I know how to measure accurately? Do I know how to draw electrical circuits in my designs?		
Skills application	Maths - Using net templates to create the base of their game, Science - Drawing circuit diagrams, naming components and their functions, Art and Design - Exploring one-line drawings, Computing - Recapping rules for safe online searching		
Mechanical Systems	Develop their woodworking skills and explore cams to design and make mechanical window displays.		
Context	Use woodworking skills, pupils construct an automata, measuring and cutting their materials, assembling the frame, choosing cams and designing the characters that sit on the followers to form an interactive shop display.		
Design	To explore the relationship between cam profiles and follower movement, to inform a design decision.		
Make	Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately		
Evaluate	Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work		
Technical Knowledge	Understand and use mechanical systems in their products [for example, gears, pulleys, cams , levers and linkages]		
Vocabulary	Accurate, assembly-diagram, automata, axle, bench hook, cam, clamp, component, cutting list, diagram, dowel, drill bits, exploded-		

	diagram, finish, follower, frame, function, hand drill, jelutong, linkage, mark out, measure, mechanism, model, research, right-angle, set square tenon saw	
Recap	Do I know how to use specialist tools accurately and safely? Do I know how wheel and axle mechanical systems work? Can I measure and cut wood accurately? Can I join wood? Can I design a product to fit the design brief?	
Skills application	Maths - Measuring accurately to the nearest mm, History - Victorian toys	
Food	Work in groups, they will research and prepare a three-course meal that will be taste tested and scored as well as researching the journey of their main ingredient, from 'farm to fork'.	
Context	Research and prepare a three-course meal and taste-test and score their food. Research the journey of their main ingredient from 'farm to fork' or write a favourite recipe.	
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	
Make	Cutting, preparing and cooking vegetables and meat hygienically, using kitchen equipment such as knives, hot pans and hobs in a safe manner, recognising when meat is cooked	
Evaluate	Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work	
Cooking and nutrition	Understand and apply the principles of a healthy and varied diet Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.	
Vocabulary	Accompaniment, adjective, caption, collaboration, cookbook, cross-contamination, equipment, farm, flavour, illustration, imperative-verb, ingredients, method, nationality, preparation, processed, reared, recipe, research, storyboard, target audience, top-tips, unit of measurements	
Recap	Do I know how to safely prepare food? Do I know how to store and handle food correctly? Do I know a variety of healthy ingredients?	
Skills application	Science - Recognising the impact of diet on our bodies, RSHE - Considering different dishes from other cultures, developing awareness of healthy eating, following basic food hygiene	