

Wheeler's Lane Primary School Skills Progression



DESIGN AND TECHNOLOGY

Design					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		when planning, start to explain their choice of materials and components including function and aesthetics;		use research to inform and develop detailed design criteria to inform the design of innovative, functional and appealing products that are fit for purpose and aimed at a target market;	
		when designing, explore different initial ideas before coming up with a final design;			
	understand and follow simple design criteria;	develop and follow simple design criteria;			
	use their knowledge of existing products and their own experience to help generate their ideas;	use their knowledge of a broad range of existing products to help generate their ideas;		use their knowledge of a broad range of existing products to help generate their ideas;	
	design products that have a purpose and are aimed at an intended user;	identify the design features of their products that will appeal to intended customers;		design products that have a clear purpose and indicate the design features of their products that will appeal to the intended user;	
		design innovative and appealing products that have a clear purpose and are aimed at a specific user;			
	explain how their products will look and work through talking and simple annotated drawings;	explain how particular parts of their products work;		explain how particular parts of their products work;	
		use annotated sketches and cross-sectional drawings to develop and communicate their ideas;		use annotated sketches, cross-sectional drawings and exploded diagrams (possibly including computer-aided design) to develop and communicate their ideas;	
	design models using simple computing software;	use computer-aided design to develop and communicate their ideas			
	plan and test ideas using templates and mock-ups;	test ideas out through using prototypes;		generate a range of design ideas and clearly communicate final designs;	
				consider the availability and costings of resources when planning out designs;	
	work in a range of relevant contexts, for example imaginary, story-based, home, school and the wider environment.	work in a broader range of relevant contexts, for example entertainment, the home, school, leisure, food industry and the wider environment.		work in a broad range of relevant contexts, for example conservation, the home, school, leisure, culture, enterprise, industry and the wider environment.	

Make					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
with support, follow a simple plan or recipe;		place the main stages of making in a systematic order;		independently plan by suggesting what to do next;	
				create step-by-step plans as a guide to making;	
begin to select from a range of hand tools and equipment, such as scissors, graters, zesters, safe knives, juicer;		with growing confidence, carefully select from a range of tools and equipment, explaining their choices;		with growing confidence, select from a wide range of tools and equipment, explaining their choices;	
		select from a range of materials, textiles and components according to their characteristics;		select from a range of materials and components according to their functional properties and aesthetic qualities;	
learn to use hand tools and kitchen equipment safely and appropriately and learn to follow hygiene procedures;		learn to use a range of tools and equipment safely and appropriately and learn to follow hygiene procedures;		learn to use a range of tools and equipment safely, appropriately and accurately and learn to follow hygiene procedures;	
use a range of materials and components, including textiles and food ingredients;		use a wider range of materials and components, including construction materials and kits, textiles and mechanical and electrical components;		use a full range of materials and components, including construction materials and kits, textiles, and mechanical components;	
with help, measure and mark out;		with growing independence, measure and mark out to the nearest cm and millimetre;		independently take exact measurements and mark out, to within 1 millimetre;	
cut, shape and score materials with some accuracy;		cut, shape and score materials with increased degree of accuracy;		cut a range of materials with precision and accuracy;	
				shape and score materials with precision and accuracy;	
assemble, join and combine materials, components or ingredients;		assemble, join and combine material and components with some degree of accuracy;		assemble, join and combine materials and components with accuracy;	
demonstrate how to cut, shape and join fabric to make a simple product;		demonstrate how to measure, cut, shape and join fabric with some accuracy to make a simple product;		demonstrate how to measure, make a seam allowance, tape, pin, cut, shape and join fabric with precision to make a more complex product;	
manipulate fabrics in simple ways to create the desired effect;					
begin to use simple finishing techniques to improve the appearance of their product, such as adding simple decorations.		begin to select and use different and appropriate finishing techniques to improve the appearance of a product such as hemming, tie-dye, fabric paints and digital graphics.		refine the finish using techniques to improve the appearance of their product, such as sanding or a more precise scissor cut after roughly cutting out a shape.	
use a basic running stitch;		join textiles with an appropriate sewing technique;		join textiles using a greater variety of stitches, such as backstitch, whip stitch, blanket stitch;	

Evaluate					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
explore and evaluate existing products mainly through discussions, comparisons and simple written evaluations;		explore and evaluate existing products, explaining the purpose of the product and whether it is designed well to meet the intended purpose;		complete detailed competitor analysis of other products on the market;	
explain positives and things to improve for existing products;					
explore what materials products are made from;		explore what materials/ingredients products are made from and suggest reasons for this;			
talk about their design ideas and what they are making;					
as they work, start to identify strengths and possible changes they might make to refine their existing design;		consider their design criteria as they make progress and are willing to alter their plans, sometimes considering the views of others if this helps them to improve their product;			
evaluate their products and ideas against their simple design criteria;		evaluate their product against their original design criteria;		critically evaluate the quality of design, manufacture and fitness for purpose of products as they design and make;	
				evaluate their ideas and products against the original design criteria, making changes as needed.	
start to understand that the iterative process sometimes involves repeating different stages of the process					
		evaluate the key events, including technological developments, and designs of individuals in design and technology that have helped shape the world.			

Technical Knowledge					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
build simple structures, exploring how they can be made stronger, stiffer and more stable;		apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products;		apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products;	
talk about and start to understand the simple working characteristics of materials and components;		understand and demonstrate how mechanical and electrical systems have an input and output process;		understand and demonstrate that mechanical and electrical systems have an input, process and output process	
explore and create products using mechanisms, such as levers, sliders and wheels.		explain how mechanical systems such as levers and linkages create movement;		explain how mechanical systems, such as cams, create movement and use mechanical systems in their products;	

	understand that materials have both functional properties and aesthetic qualities;	
	use mechanical systems in their products.	

Cooking and Nutrition					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
explain where in the world different foods originate from;		start to know when, where and how food is grown (such as herbs, tomatoes and strawberries) in the UK, Europe and the wider world;		know, explain and give examples of food that is grown (such as pears, wheat and potatoes), reared (such as poultry and cattle) and caught (such as fish) in the UK, Europe and the wider world;	
understand that all food comes from plants or animals;					
understand that food has to be farmed, grown elsewhere (e.g. home) or caught;					
name and sort foods into the five groups		explain that a healthy diet is made up of a variety and balance of different food and drink and be able to apply these principles when planning and cooking dishes;		explain that foods contain different substances, such as protein, that are needed for health and be able to apply these principles when planning and preparing dishes;	
understand that everyone should eat at least five portions of fruit and vegetables every day and start to explain why;					
		understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically;		demonstrate how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source;	
		with support, use a heat source to cook ingredients showing awareness of the need to control the temperature of the hob and/or oven;		demonstrate how to use a range of cooking techniques, such as griddling, grilling, frying and boiling;	
cut, peel and grate ingredients, including measuring and weighing ingredients using measuring cups;		use a range of techniques such as mashing, whisking, crushing, grating, cutting, kneading and baking;			
				measure accurately and calculate ratios of ingredients to scale up or down from a recipe;	
		understand that to be active and healthy, nutritious food and drink are needed to provide energy for the body;			
		prepare ingredients using appropriate cooking utensils;			
with support, follow a simple recipe;		start to independently follow a recipe;		independently follow a recipe.	
		start to understand seasonality.		understand about seasonality, how this may affect the food availability and plan recipes according to seasonality;	

		understand that food is processed into ingredients that can be eaten or used in cooking;
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