

Technical Knowledge and Vocabulary Year 1-6 Colney Heath Primary School

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Textiles		<p>Technical Knowledge</p> <ul style="list-style-type: none"> -Understand how simple 3-D textile products are made, using a template to create two identical shapes. -Understand how to join fabrics using different techniques e.g. running stitch, glue, over stitch, stapling. -Explore different finishing techniques e.g. using painting, fabric crayons, stitching, sequins, buttons and ribbons. <p>Vocabulary</p> <p>names of existing products, joining and finishing techniques, tools, fabrics and components, template, pattern pieces, mark out, join, decorate, finish, features, suitable, quality mock-up, design brief, design criteria, make, evaluate, user, purpose, function</p>	<p>Technical Knowledge</p> <ul style="list-style-type: none"> -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. <p>Vocabulary</p> <p>fabric, names of fabrics, fastening, compartment, zip, button, structure, finishing technique, strength, weakness, stiffening, templates, stitch, seam, seam allowance, user, purpose, design, model, evaluate, prototype, annotated sketch, functional, innovative, investigate, label, drawing, aesthetics, function, pattern pieces</p>		<p>Technical Knowledge</p> <ul style="list-style-type: none"> -A 3-D 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. <p>Vocabulary</p> <p>seam, seam allowance, wadding, reinforce, right side, wrong side, hem, template, pattern pieces name of textiles and fastenings used, pins, needles, thread, pinking shears, fastenings, iron transfer paper design criteria, annotate, design decisions, functionality, innovation, authentic, user, purpose, evaluate, mock-up, prototype</p>	<p>Technical Knowledge</p> <ul style="list-style-type: none"> -A 3-D 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. <p>Vocabulary</p> <p>computer aided design (CAD), computer aided manufacture (CAM) font, lettering, text, graphics, menu, scale, modify, repeat, copy, flip, design brief, design criteria, design decisions, innovative, prototype seam, seam allowance, wadding, reinforce, right side, wrong side, hem, template, pattern pieces names of textiles and fastenings used, pins, needles, thread, pinking</p>

						shears, fastenings, iron transfer paper annotate, functionality, innovation, authentic, user, purpose, evaluate, mock-up, prototype
Electrical Systems				Technical Knowledge -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. Vocabulary series circuit, fault, connection, toggle switch, push-to-make switch, push-to-break switch, battery, battery holder, bulb, bulb holder, wire, insulator, conductor, crocodile clip, control, program, system, input device, output device, user, purpose, function, prototype, design criteria, innovative, appealing, design brief		Technical Knowledge -Understand and use electrical systems in their products. -Apply their understanding of computing to program, monitor and control their products. Vocabulary series circuit, parallel circuit, names of switches and components, input device, output device, system, monitor, control, program, flowchart, function, innovative, design specification, design brief, user, purpose

Mechanisms	Technical Knowledge -Explore and use sliders and levers. -Understand that different mechanisms produce different types of movement. Vocabulary slider, lever, pivot, slot, bridge/guide, card, masking tape, paper fastener, join pull, push, up, down, straight, curve, forwards, backwards	Technical Knowledge -Explore and use wheels, axles and axle holders. - Distinguish between fixed and freely moving axles Vocabulary vehicle, wheel, axle, axle holder, chassis, body, cab assembling, cutting, joining, shaping, finishing, fixed, free, moving, mechanism names of tools, equipment and materials used design, make, evaluate, purpose, user, criteria, functional	Technical Knowledge -Understand and use lever and linkage mechanisms. -Distinguish between fixed and loose pivots. Vocabulary mechanism, lever, linkage, pivot, slot, bridge, guide system, input, process, output linear, rotary, oscillating, reciprocating user, purpose, function prototype, design criteria, innovative, appealing, design brief	Technical Knowledge -Understand and use pneumatic mechanisms. Vocabulary components, fixing, attaching, tubing, syringe, plunger, split pin, paper fastener, pneumatic system, input movement, process, output movement, control, compression, pressure, inflate, deflate, pump, seal, air-tight, linear, rotary, oscillating, reciprocating, user, purpose, function, prototype, design criteria, innovative, appealing, design brief, research, evaluate, ideas, constraints, investigate	Technical Knowledge -Understand that mechanical systems have an input, process and an output. -Understand how cams can be used to produce different types of movement and change the direction of movement. Vocabulary cam, snail cam, off-centre cam, peg cam, pear shaped cam, follower, axle, shaft, crank, handle, housing, framework, rotation, rotary motion, oscillating motion, reciprocating motion, annotated sketches, exploded diagrams, mechanical system, input movement, process, output movement, design decisions, functionality, innovation, authentic, user, purpose, design specification, design brief	
Structures		Technical Knowledge -Know how to make freestanding structures stronger, stiffer and more stable. Vocabulary cut, fold, join, fix structure,		Technical Knowledge -Develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes.	Technical Knowledge -Understand how to strengthen, stiffen and reinforce 3-D frameworks. Vocabulary frame structure, stiffen, strengthen, reinforce,	

		wall, tower, framework, weak, strong, base, top, underneath, side, edge, surface, thinner, thicker, corner, point, straight, curved metal, wood, plastic circle, triangle, square, rectangle, cuboid, cube, cylinder, design, make, evaluate, user, purpose, ideas, design criteria, product, function		<p>-Develop and use knowledge of how to construct strong, stiff shell structures.</p> <p>Vocabulary</p> <p>shell structure, three-dimensional (3-D) shape, net, cube, cuboid, prism, vertex, edge, face, length, width, breadth, capacity</p> <p>marking out, scoring, shaping, tabs, adhesives, joining, assemble, accuracy, material, stiff, strong, reduce, reuse, recycle, corrugating, ribbing, laminating, font, lettering, text, graphics, decision, evaluating, design brief</p> <p>design criteria, innovative, prototype</p>	triangulation, stability, shape, join, temporary, permanent design brief, design specification, prototype, annotated sketch, purpose, user, innovation, research, functional	
Cooking and Nutrition	<p>Technical Knowledge</p> <p>-Understand where a range of fruit and vegetables come from e.g. farmed or grown at home.</p> <p>-Understand and use basic principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of <i>The eatwell plate</i>.</p>		<p>Technical Knowledge</p> <p>-Know how to use appropriate equipment and utensils to prepare and combine food.</p> <p>-Know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught.</p>			<p>Technical Knowledge</p> <p>-Know how to use utensils and equipment including heat sources to prepare and cook food.</p> <p>-Understand about seasonality in relation to food products and the source of different food products.</p>

	Vocabulary fruit and vegetable names, names of equipment and utensils sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard, flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients, planning, investigating tasting, arranging, popular, design, evaluate, criteria		Vocabulary name of products, names of equipment, utensils, techniques and ingredients texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, moist, cook, fresh, savoury, hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy/varied diet, planning, design criteria, purpose, user, annotated sketch, sensory evaluations			Vocabulary ingredients, yeast, dough, bran, flour, wholemeal, unleavened, baking soda, spice, herbs, fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy, intolerance, savoury, source, seasonality, utensils, combine, fold, knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble, design specification, innovative, research, evaluate, design brief
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