



XII Apostles RCPS – Design and Technology Curriculum Outcomes Document

Year Group	Topic	Concepts	Outcomes	Key Vocabulary	Further Vocabulary
Year 1	Bridges	Structures	Design <ul style="list-style-type: none"> Generate initial ideas and simple design criteria through talking and using own experiences. Develop and communicate ideas through drawings. To design a purposeful product based on a design criteria 	Design, make, structure, join, finish	Bridge, structure, strengthen, swing bridge, foot bridge, arch, beam, truss, cantilever, suspension, cable stayed
	Smoothies	Cooking and nutrition	Make <ul style="list-style-type: none"> Select from and use a limited range of tools and equipment to perform practical tasks Select from and use a limited range of materials according to their characteristics. 		Chop, peel, grown, seed, flower, fruit, grate, knife, blend
	Wheeled Toys	Mechanisms	Evaluate <ul style="list-style-type: none"> Explore and evaluate a range of existing products Evaluate their ideas throughout and their products against design criteria. Technical knowledge and understanding <ul style="list-style-type: none"> Explore and use wheels, axles and axle holders and distinguish between fixed and freely moving axles. Build bridge structures, exploring how they can be made stronger, stiffer and more stable. Cooking and Nutrition <ul style="list-style-type: none"> Understand where food comes from Select from a limited range of ingredients according to their flavour and appearance 		Wheel, axle, spin, washer, axle holder, dowel, chassis, vehicle, body, cab, assembling, cutting, joining, finishing, fixed, free, moving, mechanism



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			To recognise, understand and use the following key vocabulary accurately: Design, make, structure, join, finish		
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Year 2	Shopping bag	Textiles	Design <ul style="list-style-type: none"> To design a purposeful, functional and appealing product using a design criteria To generate, develop, model and communicate their ideas through talking, drawing and computing paint package (CAD) Make <ul style="list-style-type: none"> Select a range of tools and equipment to develop joining, shaping and cutting techniques Select from and use a range of materials according to their characteristics Evaluate <ul style="list-style-type: none"> Explore and evaluate a range of existing products. Evaluate their ideas and products against a design criteria Technical Knowledge and Skills <ul style="list-style-type: none"> Explore and use the axles mechanism Explore joining techniques including sewing Cooking and Nutrition <ul style="list-style-type: none"> Understand where food comes from- focus on locally produced foods. Use basic principles of a healthy and varied diet to design a food product 	Research, improve, purpose, product, textile	Fabric, recycle, reuse, bunting, design, function, appealing, ideas, sketches, investigate, design criteria, join, stitch, handle, computer programme
	Windmills	Mechanism			Windmill, axle, blade, propeller, turbine, wind, base
	Salads	Cooking and nutrition			Chop, peel, grown above soil, grown below soil, seed, flower, leaf, grate, knife, chopping board, sourced Apply relevant vocabulary from science



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			To recognise, understand and use the following key vocabulary accurately: Research, improve, purpose, product, textile		
Year Group	Topic	Concepts	Outcomes	Key Vocabulary	Further Vocabulary
Year 3	Pencil cases	Textiles	Design <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. Generate and communicate their ideas through discussion, annotated sketches and prototypes. Make <ul style="list-style-type: none"> Select from and use a wider range of equipment to perform practical tasks with some accuracy. 	Function, design criteria, diagram, reinforce, evaluate	Research, fabric, textiles, recycle, reuse, appealing, product, ideas, annotate, sketches, prototypes, investigate, analyse, improve, strengthen, backstitch, running stitch, over stitch, blanket stitch, fastenings
	Greenhouses	Structure	<ul style="list-style-type: none"> Select from and use a wider range of recyclable materials where possible according to their functional properties Select from and use a wider range of ingredients, according to their seasonality and aesthetic qualities. 		Purpose, grow, sunlight, transparent, research, inform, functional, purpose, model, ideas, joins, strengthen, reinforce, structure, materials.
	Sandwiches	Cooking and nutrition	Evaluate <ul style="list-style-type: none"> Investigate 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 		Texture, taste, appearance, healthy, preference, cost, questionnaire, data, frequency, Cut, mix, spread, slice, chop,



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			Technical Knowledge <ul style="list-style-type: none"> Apply their understanding of how to stiffen, strengthen and reinforce more complex structures. To know that a single fabric shape can be used to make 3D textile product. Cooking and Nutrition <ul style="list-style-type: none"> 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 To recognise, understand and use the following key vocabulary accurately: Function, design criteria, diagram, reinforce, evaluate		dicing, filling, ingredients, fridge, food groups, hygiene, flavour, caught, reared, grown, processed. Apply relevant vocabulary from science
Year Group	Topic	Concepts	Outcomes	Key Vocabulary	Further Vocabulary
Year 4	Pop-up books	Mechanism	Design <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. Gather information about users' needs and wants and develop design criteria to inform the design of products that are fit for purpose. 	Temporary/permanent fixing, scoring, linkage, process, prototype	Model, mock-up, plan, fit for purpose fold, adhesive, scoring, cutting, joining, linkage, lever, pivot, flexible, hinge, area, surface, covers, rotary



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			<ul style="list-style-type: none"> Generate, develop, model and communicate their ideas through discussion, annotated sketches, prototypes and CAD. 		movement, linear movement.
	Illuminated signs	Electrical systems	<p>Make</p> <ul style="list-style-type: none"> Select from and use a wider range of tools and equipment to perform practical tasks accurately. Select from and use a wider range of ingredients, materials and components, according to their functional properties, aesthetic qualities and seasonality. <p>Evaluate</p> <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 identify the strengths and areas for improvement in their work, considering the views of others. <p>Technical knowledge</p> <ul style="list-style-type: none"> To connect simple electrical components and a battery in a series circuit to achieve a functional outcome Understand and use mechanical systems in their products (levers and linkages) 		Series circuit, fault, connection, toggle-switch, push-to-make switch, push-to-break switch, battery, battery holder, light emitting diode (LED), bulb, bulb holder, USB cable, wire, insulator, conductor, crocodile clip, control, programme, system, input device, output device, user, purpose, function, design criteria, innovative, design brief
	Potatoes	Cooking and nutrition	<p>Cooking and Nutrition</p> <ul style="list-style-type: none"> Understand and apply the principles of a healthy and varied diet when design and making a savoury product. 		Choosing, investigating, tasting, arranging, experimenting, popular, source, sugar, washing, slicing, dicing, peeling, grating,



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			<ul style="list-style-type: none"> Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed <p>To recognise, understand and use the following key vocabulary accurately: Temporary/permanent fixing, scoring, linkage, process, prototype</p>		<p>cutting, chopping, flavour, texture, peel, flesh, skin, pips, stalk, leaf, root, juice, seeds, bunch, vitamins, boiling, sugar, sauce, roasting, boiling, baking, nutrition, caught, reared, grown, processed, season/ality.</p> <p>Apply relevant vocabulary from science</p>
Year Group	Topic	Concepts	Outcomes	Key Vocabulary	Further Vocabulary
Year 5	<p>Bread</p> <p>Design, make and evaluate bread for a given friend for a Christmas celebration/gift</p>	Cooking and nutrition	<p>Design</p> <ul style="list-style-type: none"> Generate innovative ideas through product and consumer research to develop a design brief and criteria. Explore a range of initial ideas and make design decisions to develop a final product linked to user and purpose. <p>Make</p>	Nutrition, design specification, exploded diagram, mechanical system, computer aided	<p>Ingredients, yeast, dough, bran, flour, wholemeal, unleavened, baking soda, spice, herbs, gluten, dairy, allergy, intolerance, savoury, source, seasonality, utensils, combine, fold, knead, stir, pour,</p>



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			<ul style="list-style-type: none"> To select from and use a wide range of tools and equipment To select from and use a wide range of materials including construction materials according to their functional properties and aesthetic qualities. Produce detailed lists of tools, equipment and materials and formulate adaptable plans. 		<p>mix, whisk, roll out, shape, sprinkle, crumble, research, evaluate, design brief.</p> <p>Apply relevant vocabulary from science</p>
	<p>Easter egg packaging</p> <p>Design, make and evaluate packaging for an Easter egg/chocolate manufacturer for an Easter egg.</p>	Structure	<p>Evaluate</p> <ul style="list-style-type: none"> Carry out sensory evaluations of a range of relevant products and ingredients including those that have been added to a basic recipe. Record the evaluations using a range of techniques. To investigate and analyse a range of existing products. Test products with the intended user, where safe and practical, and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose. 		<p>Structure, packaging, materials, shape, joins, folds, purpose, theme, appealing, functional, research, innovative, annotated sketches, cross-sectional, exploded, prototypes, computer aided design, strengthen, stiffen, reinforce, evaluate</p>
	<p>Cams</p> <p>Design, make and evaluate a mechanism or Ancient Egyptians/3rd world countries for irrigation</p> <p>POAP Y5/6</p>	Mechanical Systems	<p>Technical knowledge</p> <ul style="list-style-type: none"> To apply understanding of how to strengthen, stiffen and reinforce more complex structures. Understand how cams can be used to produce different types of movement and change the direction of movement. <p>Cooking and Nutrition</p>		<p>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</p>



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Year Group	Topic	Concepts	Outcomes	Key Vocabulary	Further Vocabulary
Year 6	Designing an item of clothing for the Amazon.	Textiles	<p>Design</p> <ul style="list-style-type: none"> Generate, develop and communicate ideas through product and consumer research to develop a design brief and criteria. Explore a range of initial ideas, and make design decisions to develop a final product linked to user and purpose. <p>Make</p> <ul style="list-style-type: none"> To select from and use a wide range of decorative materials according to their functional properties and aesthetic qualities. Produce detailed lists of equipment relevant to their tasks and formulate step- 	Seasonality, cross-sectional, program, data, pattern-piece	Context, research, criteria, target group, existing products, annotated sketches, exploded diagrams, decorative, functional, strengthen, stitches, seam, reinforce, right side, wrong side, hem, template, pattern pieces, name of textiles and fastenings used, pins, needles, thread, design



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			by-step plans and, if appropriate, allocate tasks within a team.		decisions, evaluate, prototype
	Designing a security system to protect the crown jewels.	Electrical System	<p><u>Evaluate</u></p> <ul style="list-style-type: none"> To understand how key individuals in design and technology have helped shape the world. To evaluate ideas and products against their own design criteria and considering the views of the person the product is intended for. Record the evaluations using a range of techniques. <p><u>Technical knowledge</u></p> <ul style="list-style-type: none"> Understand a 3-D textile product can be made from a combination of accurately made pattern pieces, fabric shapes and different fabrics. Create and modify a computer control program to enable their electrical product to respond to changes in the environment. 		Toggle switch, push-to-make switch, push-to-break switch, light dependent resistor, Light emitting diode (LED), bulb, bulb holder, battery, battery holder, USB cable, wire, conductor, crocodile clip, control, program, system, input device, output device, series circuit, parallel, design specification, design brief, user, purpose
	Create a 3-course meal	Food	<p><u>Cooking and Nutrition</u></p> <ul style="list-style-type: none"> Apply knowledge of sustainability and seasonality when designing and creating products <p>To recognise, understand and use the following key vocabulary accurately: Seasonality, cross-sectional, program, data, pattern-piece</p>		Ingredients, recipe, texture, taste, appearance, sweet, savoury, varied, preference, evaluate, design brief, cost, fair trade, questionnaire, data, whisk, beat,



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					<p>sprinkle, topping, food groups, hygiene, nutrition, local produce, dietary requirements, intolerance, processed.</p> <p>Apply relevant vocabulary from science</p>
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