

EUXTON C OF E KEY KNOWLEDGE - DT

Cooking & Nutrition	Substantive Knowledge	Disciplinary Knowledge
Reception	<ul style="list-style-type: none"> Understand the importance of healthy food choices 	<ul style="list-style-type: none"> Know how to use a knife to cut food.
Key vocabulary	fruit and vegetable names, healthy, choose, knife, chopping board	
Year 1 <i>Preparing Fruits and Vegetables</i>	<ul style="list-style-type: none"> Understand where a range of fruit and vegetables come from e.g. farmed or grown at home. Recognise characteristics of fruit and vegetables e.g. colour, texture and taste 	<ul style="list-style-type: none"> Know how to cut food safely. Use simple utensils and equipment to e.g. peel, cut, slice, squeeze, grate and chop safely. Know how to evaluate a range of fruit and vegetables to determine the intended user's preferences.
Key Vocabulary	peeler, grater, chopping board, soft, juicy, crunchy, sweet, sticky, smooth, hard, healthy diet,	
Year 2 <i>Preparing Fruits and Vegetables</i>	<ul style="list-style-type: none"> 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>. 	<ul style="list-style-type: none"> Know how to design products for a particular user based on simple design criteria Select appropriate utensils and equipment to e.g. peel, cut, slice, squeeze, grate and chop safely. Know how to add notes to drawings to help explanations Evaluate whether finished product matches their purpose
Key Vocabulary	equipment, peeler, grater, chopping board, , slicing, peeling, cutting, squeezing, grating, chopping, healthy diet, design	
Year 3 <i>Healthy and Varied Diet</i>	<ul style="list-style-type: none"> Know about a range of fresh and processed ingredients and whether they are grown, reared or caught. Understand what a balanced diet looks like 	<ul style="list-style-type: none"> Develop more than one design/adapt initial design Decide upon ingredients and equipment needed Weigh and measure ingredients Explain how the final product can be improved
Key Vocabulary	fresh, processed, reared, caught, balanced, ingredients, equipment, utensil, prepare	
Year 4 <i>Healthy and Varied Diet</i>	<ul style="list-style-type: none"> Know that appearance, taste, texture and aroma are important elements when planning recipes 	<ul style="list-style-type: none"> Use annotated sketches to develop and communicate ideas

	<ul style="list-style-type: none"> • Know the main stages of a recipe, listing ingredients, utensils and equipment 	<ul style="list-style-type: none"> • Select from a range of ingredients to make appropriate food products, thinking about sensory characteristics • Evaluate the ongoing work and final product with reference to the design criteria and views of others
Key Vocabulary	appearance, texture, taste, aroma, appealing, method, design brief, criteria, evaluate	
Year 5 <i>Celebrating food from near and far</i>	<ul style="list-style-type: none"> • Recognise the source of different food products. • Know that various foods are available for harvesting in different seasons. <p>Know how to be hygienic and safe in the kitchen.</p>	<ul style="list-style-type: none"> • Explore a range of innovative ideas to develop a design brief and criteria for design specification • Write a step-by-step recipe • Record evaluations in tables/graphs/charts • Evaluate the final product with reference to the design brief and taking into account the views of others when identifying improvements
Key Vocabulary	ingredients, yeast, dough, flour, wholemeal, baking soda, spice, herbs, fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy, intolerance, savoury, source, seasonality, fold, knead,	



Textiles	Substantive Knowledge	Disciplinary Knowledge
Reception <i>Sewing</i>	<ul style="list-style-type: none"> Know that sewing involves joining materials using a thread and needle. 	<ul style="list-style-type: none"> Explore a variety of materials, tools, textures, forms and functions
Key Vocabulary	sewing, fabric, needle, thread, material	
Year 1 <i>Templates and Joining</i>	<ul style="list-style-type: none"> Know that 3-D textile products are made using a template to create two identical shapes. Know fabrics can be joined using different techniques e.g. running stitch, glue, over stitch, stapling. 	<ul style="list-style-type: none"> Select from and use a range of tools and equipment to perform practical tasks such as marking out, cutting, joining and finishing. Generate, develop, model and communicate their ideas as appropriate through talking, drawing, templates, Evaluate their ideas throughout and their final products against original design criteria
Key Vocabulary	template, join, decorate, finish, suitable, design, make, purpose, thread, needle, textile, fabric	
Year 2 <i>Animal Finger Puppets</i>	<ul style="list-style-type: none"> Understand how simple 3-D textile products are made, using a template to create two identical shapes. Name the tools they use eg. pins, needles, thread 	<ul style="list-style-type: none"> Develop, model and communicate their ideas through drawings and mock-ups with card and paper Explain which materials they are using and why Discuss how closely their finished product matches their design criteria
Key Vocabulary	template, pattern pieces, mark out, join, decorate, finish, suitable, design brief, design criteria, make, evaluate, purpose, thread, needle, textile, fabric	
Year 3 <i>2D shape to 3D product</i>	<ul style="list-style-type: none"> Know fabrics can be strengthened, stiffened and reinforced. Understand how to securely join two pieces of fabric together. Understand the need for patterns and seam allowances. 	<ul style="list-style-type: none"> Generate realistic ideas and design criteria for an appealing, functional product fit for purpose and user Test product against original design criteria and with intended user Understand how a key individual has influenced the development of the chosen product
Key Vocabulary	purpose, user, seam, strengthen, stiffen, reinforce, securely, allowances,	
Year 5 <i>Combining different fabric shapes</i>	<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. 	<ul style="list-style-type: none"> Develop, model and communicate ideas through drawing, talking, templates, mock-ups and prototypes Select from and use a range of tools and equipment to make products that are accurately assembled and well finished. Work within time constraints

		<ul style="list-style-type: none"> Critically evaluate the quality of the design, manufacture, functionality and fitness for purpose
Key Vocabulary	pattern pieces, templates, prototype, evaluate, manufacture, functionality, purpose, intended user,	
Year 6 <i>Using computer aided design in textiles</i>	<ul style="list-style-type: none"> Understand how electrical systems are used in various products. Understand that computer control systems are used in products such as bags, slippers and mobile cases. 	<p>Develop and model ideas and templates using computer-aided designs</p> <p>Use CAD to make products that are accurately assembled and well finished</p> <p>Test products with intended user and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose</p> <p>Consider the views of others to improve work</p>
Key Vocabulary	computer aided design (CAD), computer aided manufacture (CAM) font, lettering, text, graphics, prototype, functionality, innovation, authentic, user, purpose, evaluate, mock-up,	



Mechanical Systems	Substantive Knowledge	Disciplinary Knowledge
Year 1 <i>Wheels and axles</i>	<ul style="list-style-type: none"> Understand how axles are used to mount rotating wheels Distinguish between fixed and freely moving axles 	<ul style="list-style-type: none"> Generate ideas through simple design criteria through talking and own experiences Select tools and equipment to perform practical tasks such as cutting and joining to allow movement Talk about ideas as they develop and identify good and bad points
Key Vocabulary	Wheel, axle, axle holder, chassis, rotate, vehicle, body, assembling, cutting, joining, shaping, finishing, fixed, free, moving, mechanism, design, purpose, user	
Year 2 <i>Mechanisms: sliders and levers</i>	<ul style="list-style-type: none"> Know that mechanisms such as sliders and levers are used to create pop up books. Know what a slider and lever is 	<ul style="list-style-type: none"> Design a few ideas and discuss which might be the most successful and why Plan by suggesting what to do next Evaluate product by discussing how well it works in relation to the purpose and user
Key Vocabulary	slider, lever, pivot, slot, bridge/guide, paper fastener, join pull, push, up, down, design, make, evaluate, user, purpose, ideas, design	
Year 4 <i>Levers and linkages</i>	<ul style="list-style-type: none"> Understand and use lever and linkage mechanisms. Distinguish between fixed and loose pivots 	<ul style="list-style-type: none"> Generate realistic ideas and own design criteria through discussion, focusing on the needs of the user Order the main stages of making Select techniques needed for different parts of the process Identify the strengths/weaknesses of their design in relation to purpose/user
Key Vocabulary	mechanism, lever, linkage, pivot, slot, bridge, guide, system, input, process, output, user, purpose, function, design criteria, design brief	
Year 5 <i>Cams</i>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Develop simple design specification to guide thinking Formulate step-by-step plans and allocate tasks within a team Test products and critically evaluate quality of design, manufacture, functionality and fitness for purpose
Key Vocabulary	cam, axle, shaft, crank, handle, housing, framework rotation, rotary motion, oscillating motion, annotated sketches, functionality, innovation, user, purpose, design specification, design brief	

STRUCTURES	Substantive Knowledge	Disciplinary Knowledge
Reception	<ul style="list-style-type: none"> Know that 3D structures can be built using a range of different materials 	<ul style="list-style-type: none"> Safely use and explore a variety of materials, experimenting with design form and function
Key vocabulary	materials, 3D, tower, wall, build, weak, strong, base, top,	
Year1 <i>Free-standing structures</i>	<ul style="list-style-type: none"> Know that freestanding structures can be made stronger and more stable by adding reinforcements, folding and joining materials. Recognise some shapes are stronger than others 	<ul style="list-style-type: none"> Generate ideas through simple design criteria through talking and own experiences Plan by suggesting what to do next Develop, model and communicate ideas through talking and drawings
Key Vocabulary	cut, fold, join, fix, structure, framework, base, top, underneath, side, edge, surface, metal, wood, plastic, shape names, design, make, user, purpose, ideas,	
Year 3 <i>Shell Structures using Computer Aided Design</i>	<ul style="list-style-type: none"> Know that a net of a 3D shape is what it would look like if opened out flat. Use knowledge of nets of cubes and cuboids to create 3D shapes. Know how to construct strong, stiff shell structures 	<ul style="list-style-type: none"> Develop ideas through analysis of existing shell structures and CAD to model and communicate ideas Use computer-generated finishing techniques for the product they are creating Test and evaluate product against design criteria
Key Vocabulary	shell structure, three-dimensional (3-D) shape, net, cube, cuboid, prism, vertex, edge, face, joining, assemble, font, lettering, text, graphics, decision, evaluating, design brief design criteria, innovative, prototype	
Year 6 <i>Frame Structures</i>	<ul style="list-style-type: none"> Understand how to improve a product by strengthening, stiffening and reinforcing 3-D frameworks. 	<ul style="list-style-type: none"> Produce detailed lists of equipment and materials relevant Formulate step-by-step plans and allocate tasks within a team Test products with intended user and critically evaluate the design, manufacture, functionality and fitness for purpose
	frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent, design brief, design specification, prototype, annotated sketch, purpose, user, innovation, research, functional	

ELECTRICAL SYSTEMS	Substantive Knowledge	Disciplinary Knowledge
Year 4 <i>Simple Circuits and Switches</i>	<ul style="list-style-type: none"> Understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs and buzzers. 	<ul style="list-style-type: none"> Record ideas using annotated sketches Select from and use construction and electrical components according to functional and aesthetic qualities Investigate and analyse existing battery powered products
Key Vocabulary	series circuit, fault, connection, switch, battery, battery holder, bulb, bulb holder, wire, insulator, conductor, crocodile clip, user, purpose, function, prototype, design criteria, innovative, appealing, design brief	
Year 6 <i>Monitoring and Control</i>	<ul style="list-style-type: none"> Understand and use electrical systems accurately to enhance their products. Understand the use of computer control systems in products. 	<ul style="list-style-type: none"> Design purposeful, appealing and functional products for the intended user that are fit for purpose based on simple design specification.
Key Vocabulary	light emitting diode (LED), bulb, bulb holder, battery, battery holder, USB cable, wire, insulator, conductor, crocodile clip, control, program, system, input device, output device, series circuit, parallel circuit, function, innovative, design specification, design brief, user, purpose	

