



FORSBROOK CE PRIMARY DESIGN AND TECHNOLOGY PROGRESSION MAP

	Design	Make	Evaluate	Structures	Food
Relevant ELG	<p>ELG: Listening, Attention and Understanding</p> <ul style="list-style-type: none"> - Hold conversations when engaged in back-and-forth exchanges with their teacher and peers 	<p>ELG: Creating with Materials</p> <ul style="list-style-type: none"> - Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. 			
	<p>ELG: Listening, Attention and Understanding</p> <ul style="list-style-type: none"> - Hold conversation when engaged in back-and-forth exchanges with their teacher and peers. <p>ELG: Speaking</p> <ul style="list-style-type: none"> - Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary. <p>ELG: Self-Regulation</p> <ul style="list-style-type: none"> - Set and work towards simple goals, being able to wait for what they want and control their immediate impulses when appropriate. 	<p>ELG: Managing self</p> <ul style="list-style-type: none"> - Be confident to try new activities and show independence, resilience and perseverance in the face of challenge. <p>ELG: Fine motor skills</p> <ul style="list-style-type: none"> - Use a range of small tools, including scissors, paintbrushes and cutlery. <p>ELG: Creating with Materials</p> <ul style="list-style-type: none"> - Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. - Share their creations, explaining the process they have used. 	<p>ELG: Listening, Attention and Understanding</p> <ul style="list-style-type: none"> - Hold conversation when engaged in back-and-forth exchanges with their teacher and peers. <p>ELG: Speaking</p> <ul style="list-style-type: none"> - Offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate; 		<p>ELG: Managing self</p> <ul style="list-style-type: none"> - Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices. - Set and work towards simple goals, being able to wait for what they want and control their immediate impulses when appropriate. <p>ELG: Fine motor skills</p> <ul style="list-style-type: none"> - Use a range of small tools, including scissors, paint brushes and cutlery;
KS1 readiness objectives	<ul style="list-style-type: none"> • To describe something, they want to make / build / construct • To say who they are making / building / constructing for • To talk about what materials, they are going to use when making / building / constructing 	<ul style="list-style-type: none"> • To make / build / construct objects using a variety of materials • To join materials together when making / building / constructing 	<ul style="list-style-type: none"> • To talk about their constructions / products, and what they are pleased with • To talk about their constructions and say how it could be even better • To talk about everyday objects that they like and say why they are good 	<ul style="list-style-type: none"> • To build / construct structures from a range of materials to a design brief that they have created or been given. • To build / construct structures that are tall or strong. • To know that tape and glue can join materials together and can make structures stronger. 	<ul style="list-style-type: none"> • To recognise different foods as either healthy or unhealthy • To know how to use basic cutlery and utensils to make and eat food • To follow simple instructions to make different foods • To know when we make food for other people that it needs to be appealing.



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Designing	Key Stage 1	Key Stage 2
Understanding contexts, users and purposes	<p>Across KS1 pupils should:</p> <ul style="list-style-type: none"> • work confidently within a range of contexts, such as imaginary, story-based, home, school, gardens, playgrounds, local community, industry and the wider environment • state what products they are designing and making • say whether their products are for themselves or other users • describe what their products are for • say how their products will work • say how they will make their products suitable for their intended users • use simple design criteria to help develop their ideas 	<p>Across KS 2 pupils should:</p> <ul style="list-style-type: none"> • Work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment • Describe the purpose of their products • Indicate the design features of their products that will appeal to intended users • Explain how particular parts of their products work <p>In early KS2 pupils should also:</p> <ul style="list-style-type: none"> • Gather information about the needs and wants of particular individuals and groups • Develop their own design criteria and use these to inform their ideas <p>In late KS2 pupils should also:</p> <ul style="list-style-type: none"> • Carry out research, using surveys, interviews, questionnaires and web-based resources • Identify the needs, wants, preferences and values of particular individuals and groups.
Generating, developing, modelling and communicating ideas	<p>Across KS 1 pupils should:</p> <ul style="list-style-type: none"> • Generate ideas by drawing on their own experiences • Use knowledge of existing products to help come up with ideas • Develop and communicate ideas by talking and drawing • Model ideas by exploring materials, components and construction kits and by making templates and mock-ups • Use information and communication technology, where appropriate, to develop and communicate their ideas 	<p>Across key stage two people should:</p> <ul style="list-style-type: none"> • Share and clarify ideas through discussion • Model their ideas using prototypes and pattern pieces • Use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas • Use computer aided design to develop and communicate their ideas <p>In early stage 2 people should also:</p> <ul style="list-style-type: none"> • generate realistic ideas comment focusing on the needs of the user <p>In late key stage two people should also:</p> <ul style="list-style-type: none"> • generate innovative ideas comment drawing on research
Making	Key Stage 1	Key Stage 2
Planning	<p>Across KS1 people should:</p> <ul style="list-style-type: none"> • Plan by suggesting what to do next • Select from a range of tools and equipment, explaining their choices • Select from a range of materials and components according to their characteristics 	<p>Across KS2 pupils should:</p> <p>Select tools and equipment suitable for the task</p> <ul style="list-style-type: none"> • Explain their choice of tools and equipment in relation to the skills and techniques they will be using • Select materials and components suitable for the task • Explain their choice of materials and components according to functional properties and aesthetic qualities



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		<p>In early KS2 pupils should also:</p> <ul style="list-style-type: none"> Order the main stages of making <p>In late KS2 pupils should also:</p> <ul style="list-style-type: none"> Produce appropriate lists of tools, equipment and materials that they need Formulate step-by-step plans as a guide to making
<p>Practical skills and techniques</p>	<p>Across KS1 people should:</p> <ul style="list-style-type: none"> Follow procedures for safety and hygiene Use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components Measure, mark out, cut and shape materials and components Assemble, join and combine materials and components Use finishing techniques, including those from art and design 	<p>Across KS2 pupils should:</p> <ul style="list-style-type: none"> Follow procedures for safety and hygiene Use a wider range of materials and components that KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components In early KS2 pupils should also: Measure, mark out, cut and shape materials and components with some accuracy Apply a range of finishing techniques, including those from art and design, with some accuracy In late KS2 pupils should also: Accurately measure, mark out, cut and shape materials and components Accurately assemble, join and combine materials and components Accurately apply a range of finishing techniques, including those from art and design Use techniques that involve a number of steps Demonstrate resourcefulness when tackling problems
<p>Own ideas and products</p>	<p>Across KS1 people should:</p> <ul style="list-style-type: none"> Talk about their design ideas and what they are making Make simple judgements about their products and ideas against design criteria Suggest how their products could be improved 	<p>Across KS2 pupils should:</p> <ul style="list-style-type: none"> Identify the strengths and areas for development in their ideas and products Consider the views of others, including intended users, to improve their work <p>In early KS2 pupils should also:</p> <ul style="list-style-type: none"> Refer to their design criteria as they design and make Use their design criteria to evaluate their completed products <p>In late KS2 pupils should also:</p> <ul style="list-style-type: none"> Critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make Evaluate their ideas and products against their original design specification
<p>Existing products</p>	<p>Across KS1 people should explore:</p> <ul style="list-style-type: none"> What products are Who products are for What products are for 	<p>Across KS2 pupils should:</p> <ul style="list-style-type: none"> How well products have been designed How well products have been made Why products have been chosen



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	<ul style="list-style-type: none"> • How products work • How products are used • Where products might be used • What materials products are made from • What they like and dislike about products 	<ul style="list-style-type: none"> • What methods of construction have been used • How well products work • How well products achieve their purposes • How well products meet user needs and wants <p>In early KS2 pupils should also investigate and analyse:</p> <ul style="list-style-type: none"> • Who designed and made the products • Where products were designed and made • Whether products can be recycled or reused <p>In late KS2 pupils should also investigate and analyse:</p> <ul style="list-style-type: none"> • How much products cost to make • How innovative products are • How sustainable the materials in products are • What impact products have beyond their intended purpose
Key events and individuals	Not a requirement in KS1	<p>Across KS2 pupils should know:</p> <ul style="list-style-type: none"> • About inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products
Technical Knowledge	Key Stage 1	Key Stage 2
Making products work	<p>Across KS1 people should know:</p> <ul style="list-style-type: none"> • About the simple working characteristics of materials and components • About the movement of simple mechanisms such as levers, sliders, wheels and axles • How freestanding structures can be made stronger, stiffer and more stable • That a 3D textiles product can be assembled from two identical fabric shapes • That food ingredients can be combined according to their sensory characteristics • The correct technical vocabulary for the projects they are undertaking 	<p>Across KS2 pupils should know:</p> <ul style="list-style-type: none"> • How to use learning from science to help design and make products that work • That materials have both functional properties and aesthetic qualities • That materials can be combined to create more useful characteristics • That mechanical and electrical systems have an input, process and output • The correct technical vocabulary for the projects they are undertaking • In early KS2 pupils should also know: <ul style="list-style-type: none"> • How mechanical systems such as levers and linkages create movement • How simple electrical circuits and components can be used to create functional products • How to program a computer to control their products • How to make strong, stiff shell structures • In late KS2 pupils should also know: <ul style="list-style-type: none"> • How mechanical systems such as cams or pulleys or gears create movement • How more complex electrical circuits and components can be used to create functional products • How to program a computer to monitor changes in the environment and control their products



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		<ul style="list-style-type: none"> • How to reinforce and strengthen a 3D framework • That a 3D textiles product can be made from a combination of fabric shapes • That a recipe can be adapted by adding or substituting one or more ingredients
Cooking and Nutrition	Key Stage 1	Key Stage 2
Where food comes from	<p>Across KS1 people should:</p> <ul style="list-style-type: none"> • That all food comes from plants or animals • That food has to be farmed, grown elsewhere (e.g., Home) or caught 	<p>Across KS2 pupils should:</p> <ul style="list-style-type: none"> • That food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world • In late KS2 pupils should also know: • That seasons may affect the food available • How food is processed into ingredients that can be eaten or used in cooking
Food preparation, cooking and nutrition	<p>Across KS1 people should know:</p> <ul style="list-style-type: none"> • How to name and sort foods into the five groups in The Eatwell Plate • That everyone should eat at least five portions of fruit and vegetables every day • How to prepare simple dishes safely and hygienically, without a heat source • How to use techniques such as cutting, peeling and grating 	<p>Across KS2 pupils should:</p> <ul style="list-style-type: none"> • How to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source • How to use a range of techniques such as peeling, chopping, slicing, grating, mixing, kneading and baking • In early KS2 pupils should also know: • That a healthy diet is made up from a variety and balance of different food and drink, as depicted in The Eatwell Plate • That to be active and healthy, food and drink are needed to provide energy for the body • In late KS2 pupils should also know: • That recipes can be adapted to change the appearance, taste, texture and aroma • That different food and drink contain different substances – nutrients, water and fibre – that are needed for health



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Vocabulary Progression

EYFS

Apron, Chop, Cut, Equipment, Fork, Knife, Mix, Stir, Spoon, Cooking, Healthy eating, Ingredients, Recipe, Bead, Button, Fabric, Felt, Scissors, Cellotape, Glue, Stick, Masking Tape, Paper Clip, Ruler, Straws, Draw, Glue, Brush, Scissors, Pencil, String, Paper, Card, Decoration, Join, Build, Make

	KS 1	LKS 2	UKS 2
Textiles	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	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	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
Food	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	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	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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Structures	cut, fold, join, fix structure, 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	shell structure, three-dimensional (3-D) shape, net, cube, cuboid, prism, vertex, edge, face, length, width, breadth, capacity 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 design criteria, innovative, prototype	frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent design brief, design specification, prototype, annotated sketch, purpose, user, innovation, research, functional
Mechanisms	slider, lever, pivot, slot, bridge/guide card, masking tape, paper fastener, join pull, push, up, down, straight, curve, forwards, backwards design, make, evaluate, user, purpose, ideas, design criteria, product, function	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	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, drive belt, gear, rotation, spindle, driver, follower, ratio, transmit, axle, motor circuit, switch, circuit diagram annotated drawings, exploded diagrams mechanical system, electrical system, input, process, output
Electrical Systems		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	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