



St. Katharine's Primary School Design and Technology Progression Pathway Early Years

Focus	Curriculum Content	Knowledge/Skills	Vocabulary
Textiles <i>Link & Lace</i>	Children find out about and use a range of everyday technology. Children develop their own ideas through selecting and using materials and working on processes that interest them.	Use 'Link & Lace' to develop fine motor skills required for threading and stitching.	Link & Lace Stitch Thread
Resistant Material <i>Water pipes</i> <i>Paper puppets</i>	Through their explorations, they find out and make decisions about how media and materials can be combined and changed. ELG 16 They safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function	<i>What</i> is it for? <i>Who</i> is it for? <i>How</i> will it work? Teachers to give children simple design criteria to help develop ideas. Show examples of end product and children should make suggestions on how to improve them. Examine possible materials. CONSIDER HEALTH AND SAFETY	Function Materials Evaluate Improve Health and safety
Cooking and Nutrition <i>Gingerbread men</i> <i>Crispy cakes</i>	ELG 17 Being imaginative: Children use what they have learnt about media and materials in original ways, thinking about uses and purposes ELG 17 They represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role-play and stories	<i>What</i> is the product? <i>What</i> is it for? <i>Who</i> is it for? Use sight to make the products aesthetically pleasing. Design prototypes before real product. Learn that different cultures have different traditions and that food can come into these. CONSIDER SAFETY AND HYGIENE.	Cooking Ingredients Measure Weigh Safety and hygiene



St. Katharine's Primary School Design and Technology Progression Pathway Year 1

Focus	Curriculum Content	Knowledge/Skills	Vocabulary
Textiles	<p>Design</p> <ul style="list-style-type: none"> ▪ design purposeful, functional, appealing products for themselves and other users based on design criteria 	<p>Use large needles into Binka and thick thread. Teach children running stitch focusing on going from behind with each new stitch.</p>	<p>Binka Running stitch Needle Thread</p>
Resistant Material <i>Junk Model vehicle</i>	<ul style="list-style-type: none"> ▪ generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology <p>Make</p> <ul style="list-style-type: none"> ▪ select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics <p>Evaluate</p> <ul style="list-style-type: none"> ▪ explore and evaluate a range of existing products ▪ evaluate their ideas and products against design criteria 	<p><i>What is the product? What is it for?</i> <i>Who is it for?</i> <i>How will it work? How is it suitable?</i> Teachers to give simple design criteria to help develop ideas. Examine existing products. Evaluate in groups/as a class. Sketch own idea – simple annotations. Examine possible materials (test in isolated circumstances before making end product). Provide existing products and children should make suggestions on how to improve them. Can be presented in a problem way that children should solve. Measure, mark, cut and shape own materials. Put them together. Verbally discuss own product against design criteria. Make suggestions on how to improve. CONSIDER HEALTH AND SAFETY</p>	<p>Product Design criteria Existing products Annotations Sketch Materials Measure Evaluate Improve</p> <p>Health and safety</p>
Cooking and Nutrition <i>Smoothie Making – Fruit and Vegetables</i>	<p>Cooking and Nutrition</p> <ul style="list-style-type: none"> ▪ use the basic principles of a healthy and varied diet to prepare dishes ▪ understand where food comes from. 	<p><i>What is the product? What is it for?</i> <i>Who is it for?</i> <i>How will it work? How is it suitable?</i> Use the senses to combine appropriate characteristics. Learn that all food comes from plants or animals. Food has to be grown, farmed or caught.</p> <p>Area of eatwell guide to be taught in detail: fruit and vegetables.</p> <p>CONSIDER SAFETY AND HYGIENE.</p>	<p>Cooking Nutrition Fruit Vegetables Product Target audience Senses Plants Animals Grown Farmed Caught</p> <p>Safety and hygiene The eatwell guide</p>



St. Katharine's Primary School Design and Technology Progression Pathway Year 2

Focus	Curriculum Content	Knowledge/Skills	Vocabulary
Textiles <i>Puppets</i>	<p>Design</p> <ul style="list-style-type: none"> ▪ design purposeful, functional, appealing products for themselves and other users based on design criteria 	<p>Running stitch onto felt (no binka). Focus on making sure stitches are equal in length. For more able, focus on stitches being equidistance apart also.</p>	<p>Equal Equidistance</p>
Resistant Materials <i>Build Houses</i>	<ul style="list-style-type: none"> ▪ generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology <p>Make</p> <ul style="list-style-type: none"> ▪ select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] ▪ select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics <p>Evaluate</p> <ul style="list-style-type: none"> ▪ explore and evaluate a range of existing products ▪ evaluate their ideas and products against design criteria 	<p><i>What</i> is the product? <i>What</i> is it for? <i>Who</i> is it for? <i>How</i> will it work? <i>How</i> is it suitable? Teachers to give children simple design criteria to help develop ideas. Examine existing products. Evaluate as a class. Sketch own idea – simple annotations. Examine possible materials (test in isolated circumstances before making end product). Measure, mark, cut and shape own materials. Put them together. Build predominately free standing structures (e.g. walls and towers). Through exploring and assembling, they should learn how to make structures stronger, stiffer and more stable. Evaluate own product against design criteria. Make suggestions on how to improve.</p> <p>CONSIDER HEALTH AND SAFETY</p>	<p>Joining Cutting Free standing structure</p> <p>Health and safety</p>
Cooking and Nutrition <i>Fruit Salads</i>	<p>Technical knowledge</p> <ul style="list-style-type: none"> ▪ build structures, exploring how they can be made stronger, stiffer and more stable ▪ explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. <p>Cooking and Nutrition</p> <ul style="list-style-type: none"> ▪ use the basic principles of a healthy and varied diet to prepare dishes ▪ understand where food comes from. 	<p>Use the senses to combine appropriate characteristics. Name and sort foods into five food groups in 'The eatwell guide'. Prepare simple dishes without using heat. Use techniques such as cutting, peeling and grating.</p> <p>Area of eatwell guide to be taught in detail: fruit and vegetables.</p> <p>CONSIDER SAFETY AND HYGIENE.</p>	<p>Cutting Peeling Grating</p> <p>The eatwell guide Safety and hygiene</p>



St. Katharine's Primary School Design and Technology Progression Pathway Year 3

Focus	Curriculum Content	Knowledge/Skills	Vocabulary
Textiles <i>Coin Purse</i>	<p>Design</p> <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 	Recap running stitch for decoration. Teach blanket stitch. Focus on stitches being equidistance apart. Can develop further by sewing button on.	Blanket stitch Button
Resistant Materials <i>Stone age 'junk' tools (joining and cutting wider variety of materials)</i>	<p>Make</p> <ul style="list-style-type: none"> select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately <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 consider the views of others to improve their work 	Teacher to give class specification: Take whole class ideas. Gather information about wants and needs. Begin to develop own design criteria. Examine existing products. Evaluate as a class. Sketch own idea – simple annotations. Examine possible materials (test in isolated circumstances before making end product). Measure, mark, cut and shape own materials. Put them together. Begin to show accuracy. Evaluate own product against design criteria. Make suggestions on how to improve. Consider whether products can be recycled/reused. CONSIDER HEALTH AND SAFETY	Target audience Accuracy Recycled Reused Health and safety
Cooking and Nutrition <i>Sandwich Making</i>	<p>Cooking and Nutrition</p> <ul style="list-style-type: none"> understand how key events and individuals in design and technology have helped shape the world understand and apply the principles of a healthy and varied diet 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. 	Learn that food items can be fresh, pre-cooked and processed. Learn that food is grown, reared and caught in the UK, Europe and wider world. Learn that food is processed into ingredients that can be eaten (e.g. grain milled to produce flour, oil pressed from olives, butter churned from milk). Use a range of techniques such as: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. Learn that a healthy diet is made up from a variety and balance of different food and drink, as depicted in 'The eatwell guide'. Know that to be active and healthy, food and drink are needed to provide energy for the body. Area of eatwell guide to be taught in detail: oils and spreads. CONSIDER SAFETY AND HYGIENE.	Fresh Pre-cooked Processed Grown Reared Caught Chopping Slicing Mixing Spreading Kneading Baking Healthy diet Balanced Oils Spreads The eatwell guide Safety and hygiene



St. Katharine's Primary School Design and Technology Progression Pathway Year 4

Focus	Content and Curriculum	Knowledge/Skills	Vocabulary
Textiles <i>Multi-colour Flowers</i>	<p>Design</p> <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 	Introduce free hand cross stitch. Practise making same size and following directional order of crosses. Use thinner needles with sharper point (health and safety talk required). Sew with two or three pieces of thread at a time. Small running stitches can be used for stem of flowers.	Cross stitch
Resistant Materials <i>Pop-up Books</i>	<ul style="list-style-type: none"> generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design <p>Make</p> <ul style="list-style-type: none"> select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties <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 consider the views of others to improve their work understand how key events and individuals in design and technology have helped shape the world 	Teacher to give class specification: Take whole class ideas. Gather information about wants and needs. Begin to develop own design criteria. Begin to suggest potential resources and how they can be used → consider the need of the user. Examine existing products. Evaluate as a class. Sketch own idea – simple annotations. Examine possible materials (test in isolated circumstances before making end product). Measure, mark, cut and shape own materials. Put them together. Focus on accuracy. Evaluate own product against design criteria. Make suggestions on how to improve. Consider whether products can be recycled/reused. CONSIDER HEALTH AND SAFETY	Resources Isolated circumstances Health and safety
Cooking and Nutrition <i>Cook for an Astronaut/ Viking soup</i>	<p>Cooking and Nutrition</p> <ul style="list-style-type: none"> understand and apply the principles of a healthy and varied diet 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. 	Learn that food items can be fresh, pre-cooked and processed. Use a range of techniques such as: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. Learn that a healthy diet is made up from a variety and balance of different food and drink, as depicted in 'The eatwell guide'. Know that to be active and healthy, food and drink are needed to provide energy for the body. Area of eatwell guide to be taught in detail: dairy and alternatives (longer lasting examples) CONSIDER SAFETY AND HYGIENE.	Energy Variety Alternatives Dairy The eatwell guide Safety and hygiene



St. Katharine's Primary School Design and Technology Progression Pathway Year 5

Focus	Content Curriculum	Knowledge/Skills	Vocabulary
Textiles <i>Make Beanbag</i>	<p>Design</p> <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 	Teach overstitch. Decorate beanbag with cross stitch. Can include running stitch if desired. Use thinner, sharper needles. Two or three pieces of thread each time.	Overstitch
Resistant Materials <i>Rotating Watermill With Real Water</i>	<p>Make</p> <ul style="list-style-type: none"> generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities <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 consider the views of others to improve their work 	Teacher to give broad specification (allow plenty of choice) Conduct own research (survey, questionnaires, interviews, online research). Consider the needs, wants and preferences of target audience. Conduct own research to develop ideas. Consider: Resources Time Cost Measure, mark, cut and shape own materials. Put them together. Focus on accuracy. Evaluate own product against design criteria. Make suggestions on how to improve. Solve own problems encountered during production process. Cost of production. How sustainable materials are. Look at wider impact of products. CONSIDER HEALTH AND SAFETY	Rotating Specification Research – survey, questionnaire Preferences Production process Sustainable Health and safety
Cooking and Nutrition <i>Paella</i>	<p>Technical knowledge</p> <ul style="list-style-type: none"> understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] <p>Cooking and Nutrition</p> <ul style="list-style-type: none"> understand and apply the principles of a healthy and varied diet 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. 	Learn to adapt a recipe by adding or substituting ingredients. Learn to prepare and cook predominately savoury dishes using a heat source. Use a range of techniques such as: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. Learn that seasons affect food availability. Learn how food is processed into ingredients that can be eaten or used in cooking. Know that recipes can be adapted to change appearance, taste, texture and aroma. Area of eatwell guide to be taught in detail: potatoes, bread, rice, pasta and other starchy carbohydrates. CONSIDER SAFETY AND HYGIENE.	Substitutions Prepare Seasons Appearance Taste Texture Aroma Carbohydrates Starch The eatwell guide Safety and hygiene



St. Katharine's Primary School Design and Technology Progression Pathway Year 6

Focus	Curriculum Content	Knowledge/Skills	Vocabulary
Textiles <i>Class Patchwork Quilt</i>	<p>Design</p> <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 generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design 	Teach back stitch. Recap running stitch, cross stitch, over stitch and blanket stitch. Can also include buttons and chain stitch. Children to use thin, sharp needles and one piece of thread at a time. Children come up with own design using an array of stitches.	Back stitch Blanket stitch
Resistant Materials <i>Putt Putt Boat</i>	<p>Make</p> <ul style="list-style-type: none"> select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities <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 consider the views of others to improve their work <p>Technical knowledge</p> <ul style="list-style-type: none"> apply their understanding of how to strengthen, stiffen and reinforce more complex structures Understand and use electrical systems in their products (e.g. series circuits incorporating switches, bulbs, buzzers and motors) Apply their understanding of computing to programme, monitor and control their products 	Teacher to give broad specification (allow plenty of choice) Conduct own research (survey, questionnaires, interviews, online research). Consider the needs, wants and preferences of target audience. Conduct own research to develop ideas. Consider: Resources Time Cost Measure, mark, cut and shape own materials. Put them together. Focus on accuracy. Evaluate own product against design criteria. Make suggestions on how to improve. Solve own problems encountered during production process. Cost of production. How sustainable materials are. Look at wider impact of products. CONSIDER HEALTH AND SAFETY	Wider impact Marketing value Pitch Slogan Bespoke Prototype Health and safety
Cooking and Nutrition <i>Vegetarian Curry</i>	<p>Cooking and Nutrition</p> <ul style="list-style-type: none"> understand and apply the principles of a healthy and varied diet 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. 	Learn to adapt a recipe by adding or substituting ingredients. Learn to prepare and cook predominately savoury dishes using a heat source. Use a range of techniques such as: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. Know that recipes can be adapted to change appearance, taste, texture and aroma. Know that different food and drink contain different substances (nutrients, water and fibre) that are needed for health. Area of eatwell guide to be taught in detail: beans, pulses, fish, eggs, meat and other proteins. CONSIDER SAFETY AND HYGIENE.	Vegetarian Aesthetics Protein Pulses Nutrients Fibre Savoury Sweet The eatwell guide Safety and hygiene