



St Patrick's Design and Technology Curriculum Progression Map

<p>Statutory Framework for the EYFS ELG – Below, we outline how we meet and go beyond the requirements</p> <ul style="list-style-type: none"> ♣ <u>Communication and Language</u> (understanding and being able to use the relevant language, ask questions, talk about what they know and understand) ♣ <u>Physical Development - Health and Self Care</u>, for the aspects linked to healthy eating and hygiene ♣ <u>Understanding the World</u> for exploring and describing materials. 	<p>National Curriculum Subject Content for Key Stage 1: Below, we outline how we meet and go beyond the National Curriculum requirements throughout Key Stage 1</p> <p>Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment]. When designing and making, pupils should be taught to:</p> <p>Design</p> <ul style="list-style-type: none"> ♣ design purposeful, functional, appealing products for themselves and other users based on design criteria ♣ 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>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>National Curriculum Subject Content for Key Stage 2: Below, we outline how we meet and go beyond the National Curriculum requirements throughout Key Stage 2</p> <p>Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment]. When designing and making, pupils should be taught to:</p> <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 <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 ♣ understand how key events and individuals in design and technology have helped shape the world <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 mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] ♣ understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] ♣ apply their understanding of computing to program, monitor and control their products.
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Key Vocabulary							
Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
model, build, cut, stick, plate, cup, knife, spoon, scissors, glue,	fork, bowl, join, materials, strong, weak, hard, soft, melt, freeze,	<u>Cuddly toy</u> Needle, thread felt	<u>Moving Christmas cards-</u> features, function/functional, prototypes,	<u>Photograph Frames-</u> annotated sketch, appealing, criteria, functional, label, purpose, reinforce,	<u>American food - Food technology skill</u> cook, hot, mix, nutrients, vitamins, edible. Allergy, intolerance.ingredients,	<u>Bread - food technology skills</u> allergy, carbohydrate, combine, fold, gluten, intolerance, knead, edible	<u>Go Karts- construction skills</u> axel, circuit, circuit diagram, drive belt, electrical system,

tape, wash, germs, tool, apple,	test, fold, side, thicker, thinner, decorate, slice, chop, peel, mix, taste, ingredients	<p>appeal, design criteria, develop, generate, mock-ups</p> <p><u>Recycled Kite-</u> appeal, design criteria, develop, edge corner product, components, material</p> <p><u>Teddy Bears' Picnic - food technology skill</u> Appealing, design criteria, evaluate Popular, healthy Diet, slicing tasting fillings</p>	<p>purpose, templates, mechanism, more stable, curve, joint, lever, flap, slider, slot, mechanism, investigating</p> <p><u>Perfect Pizzas Food technology skills</u> appealing, design criteria, evaluate ,popular ,healthy Vegetarian, ingredient, diet, slicing, tasting grating</p> <p><u>Hand Puppets- Textiles skills</u> appeal, design criteria, develop, generate, mock-ups stitch material cutting, joining, shaping finishing.</p>	<p>evaluate Sturdy materials, wood, hacksaw,</p> <p><u>Houmous- food technology</u> aroma, flavour, greasy, taste, texture, ingredients, pour, source, sprinkle, utensils</p> <p><u>Lampshades - textile skills</u> annotated sketch, appealing evaluate, frame structure, join, shape, cotton, appearance, Tie-dye, permanent</p>	<p>vegetables, slicing, cutting, healthy,</p> <p><u>Pneumatic Toys- construction skills</u> exploded diagram decision, mechanism reinforce, stability stiffen, strengthen adhesive, assemble pneumatic</p> <p><u>Pencil Cases - textile skills</u> characteristics, cross-sectional, , prototype, fastening, stitch,</p>	<p><u>Toys with cam - construction skills</u> computer aided design, fit for purpose, innovative, template, user, monitor, program, fixed pivot, lever, linkage, oscillating, slider, cams,</p> <p><u>Funky furnishings - textile skills</u> design brief, finishing techniques effort, fixed, force, gears, pulley, hem, reinforce, seam, wadding,</p>	<p>mechanical system, motor, battery, battery holder, wire</p> <p><u>Burgers- food technology</u> texture, preference, dairy, fat, protein, shape, texture</p> <p><u>Fashion textiles- Textile skills</u> design brief, finishing techniques, pattern pieces, research, aesthetic qualities, seam allowance,</p>
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Significant Figures within Design and Technology and planned Enrichment Opportunities							
Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Nadiya Hussain, cook; Yinka Ilori, designer who uses recycled materials;		Richard Steiff, inventor of the teddy bear; Karl Longbottom, kite designer; Rachel Hugh, Co-Founder of The Vurger Co	John Callcott Horsley, painter / designer of the first Christmas card; Tony Gemognani, pizza chef; Jim Henson, puppeteer / producer	Albert Hadley, interior designer ; Michael Solomonov, chef; Isobel Howard, lampshade designer	Enrique Olvera, chef; Lonnie Johnson, inventor of the Super Soaker toy; Lothar von Faber, pencil case inventor	Lionel Poilâne, baker Pierre Jaquet-Doz, cam toys inventor; Justina Blakely, interior designer	Mary Jackson, NASA engineer; Marcus Wareing, chef; Tracy Reese, fashion designer

Working with Parents making some of her recipes	Kite flying in Sefton Park Teddy bears' picnic lunch	Delivering Christmas Cards to care homes Restaurant visit/video call with pizza chef	Working with Arabic parents learning about their cuisine. Visiting a specialist lighting store in The Lighting Centre	Working with (Tommy) school cook to create Mexican food. Designing and delivering products to help the elderly	Video call with a baker Haberdashery visit	Go Karting experience Restaurant visit/video call with fast food chef
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	Cooking and Nutrition	Designing Skills	Evaluating Skills	Making Skills	Technical Knowledge
Nursery	Try a wider range of foods, with different tastes and textures. To begin to understand healthy choices. (objectives from PD health and self-care)	Make simple models which express their ideas. (EAD Dev Matters)	Be able to simply express a point of view (Dev Matters, Comm & Lang)	Join materials and explore different textures. (EAD Dev Matters) Use tools for a purpose. (EAD Birth to 5 Matters)	Know what we use scissors, plates, cups, spoons and knives for.
Reception	Learn how to use a knife and fork. Know and talk about the different factors that support their overall health and wellbeing, including healthy eating. Describes a range of different food textures and tastes when cooking and notices changes when they are combined or exposed to hot and cold temperatures. (objectives from PD health and self-care)	Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form & function; (Objective from EAD creating with materials ELG) Create collaboratively, sharing ideas, resources and skills. (EAD, Dev Matters)	Share creations, explaining the process they have used (Objective from EAD creating with materials ELG)	Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form & function; (Objective from EAD creating with materials ELG)	How to join materials e.g. using glue, tape or string. How to cut with scissors
Year 1	I am beginning to understand the basic principles of a healthy and varied diet when I prepare a dish. I know where different foods come from	I am beginning to understand how to design a purposeful, functional and appealing product based on design criteria. I am beginning to generate ideas for a design through talking. I can develop a design idea through talking or drawing. I can model a design using a template and a mock-up.	I beginning to explore and say what I like and dislike about a range products. I can evaluate ideas for my design and product based on design criteria.	I can select from and use a range of tools for cutting, joining, shaping and finishing	I can make a structure stiffer and stronger
Year 2	I can use the basic principles of a healthy and varied diet when I prepare a dish. I know where different foods come from.	I can design a purposeful, functional and appealing product based on design criteria. I can generate ideas for a design through talking. I can develop a design idea through drawing.	I can explore and say what I like and dislike about a range products. I can evaluate ideas for my design and product based on design criteria.	I can select from and use a wide range of materials and components, including construction material, textiles na ingredients, according to there characteristics. I am beginning to understand the reason for using different textile materials accordingly.	I can explore and use mechanisms. I can make a product more stable

		I can model a design using a template and a mock-up.			
Year 3	<p>I can select and use ingredients according to their taste.</p> <p>I can understand the principals of a healthy diet.</p> <p>I beginning to apply the principals of a healthy diet.</p> <p>I can prepare and cook a savoury dish using a range of techniques.</p> <p>I understand seasonality and have designed a product based on products available.</p> <p>I have helped to grow some of the ingredients I will use.</p>	<p>I beginning to 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</p> <p>I can select and use components.</p> <p>I can select and use textile materials according to their aesthetic properties.</p>	<p>Investigate a range of products.</p> <p>Analyse a range of products.</p> <p>I can evaluate my ideas against my design criteria.</p> <p>I understand how key individuals have helped shaped the world</p>	<p>I can select from and accurately use a range of tools for cutting, joining, and finishing.</p> <p>I can select from and use a wider range of fools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</p> <p>I can select and use textile materials according to their aesthetic properties</p>	<p>I can apply understanding of how to stiffen and reinforce a product</p>
Year 4	<p>I can select and use ingredients according to their taste.</p> <p>I can understand the principals of a healthy diet.</p> <p>I can apply the principals of a healthy diet.</p> <p>I can prepare and cook a savoury dish using a range of techniques.</p> <p>I understand seasonality and have designed a product based on products available.</p> <p>I understand how some foods have may have been processed.</p>	<p>I can 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</p> <p>I can select and use components.</p> <p>I can select and use construction materials based on their functional properties.</p> <p>I can select and use textile materials according to their aesthetic properties</p>	<p>Investigate a range of products.</p> <p>Analyse a range of products.</p> <p>I can evaluate my product against my design criteria</p>	<p>I can select the correct tools and accurately use a range of tools for cutting, joining, shaping, and finishing.</p> <p>I can select and use components.</p> <p>I can select and use textile materials according to their aesthetic properties</p>	<p>I can apply understanding of how to stiffen and reinforce a products with more complex structures.</p>
Year 5	<p>I can select and use ingredients according to their taste.</p> <p>I can understand and apply the principals of a healthy diet.</p> <p>I can prepare and cook a dish using a range of techniques.</p> <p>I understand seasonality and have designed a product based on what is available.</p> <p>I understand how some of the ingredients in my product have been processed</p>	<p>I can generate, develop, model and communicate my ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p> <p>I can select and use construction materials based on their functional properties.</p> <p>I can select and use textile materials according to their aesthetic properties</p>	<p>Investigate a range of products.</p> <p>Investigate a range of gears, levers and pulleys.</p> <p>Analyse a range products.</p> <p>I can consider the views of others to improve my work.</p> <p>I understand how key events in design technology have helped shape the world.</p>	<p>I can select from and accurately use a range of tools for cutting, joining, shaping, and finishing.</p> <p>I can select and use components.</p> <p>I can select and use construction materials based on their functional properties.</p> <p>I can select and use textile materials according to their aesthetic properties</p>	<p>I can understand and use a mechanical system in my product.</p> <p>I can apply my understanding of computing to program, monitor and control a product.</p>

<p>Year 6</p>	<p>I can select and use ingredients according to their taste. I can understand and apply the principals of a healthy diet. I can prepare and cook a savoury dish using a range of techniques. I understand seasonality and have designed a products based on products available. I have helped to grow some of the vegetables used in my product. I understand that the meaning of processed foods.</p>	<p>I can develop, model and communicate my ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design indeoendently.</p> <p>I can select and use components. I can select and use construction materials based on their functional properties. I can select and use textile materials according to their aesthetic properties</p>	<p>Investigate a range of products. Analyse a range products. I can consider the views of others to improve my work.</p>	<p>I can select from and accurately use a range of tools for cutting, joining, shaping, and finishing. I can select and use components independently I can select and use construction materials based on their functional properties. I can select and use textile materials according to their aesthetic properties.</p>	<p>I can understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] I can apply their understanding of computing to program, monitor and control their products.</p>
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