



St Patrick's Design and Technology Curriculum Progression Map

| Statutory Framework for the EYFS | National Curriculum Subject Content for Key Stage 1: | National Curriculum Subject Content for Key Stage 2: |
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| <p>ELG - <u>Physical Development</u> -</p> <ul style="list-style-type: none">♣ Use a range of small tools, including scissors, paintbrushes and cutlery. <p>ELG - <u>Expressive Arts & Design</u></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>Below, we outline how we meet and go beyond the requirements</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].</p> <p>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>Below, we outline how we meet and go beyond the</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].</p> <p>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, |

National Curriculum requirements throughout Key Stage 1

series circuits incorporating switches, bulbs, buzzers and motors]
 * apply their understanding of computing to program, monitor and control their products.

Below, we outline how we meet and go beyond the National Curriculum requirements throughout Key Stage 2

| Key Vocabulary | | | | | | | |
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| Nursery | Reception | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| model, build, cut, stick, plate, cup, knife, spoon, scissors, glue, tape, wash, germs, tool, apple, | fork, bowl, join, materials, strong, weak, hard, soft, melt, freeze, test, fold, side, thicker, thinner, decorate, slice, chop, peel, mix, taste, ingredients | <p>Cuddly toy Needle, thread felt appeal, design criteria, develop, generate, mock-ups</p> <p>Recycled Kites appeal, design criteria, develop, edge corner product, components, material</p> <p>Teddy Bears' Picnic - food technology skill Appealing, design criteria, evaluate Popular, healthy Diet, slicing tasting fillings</p> | <p>Moving Christmas cards features, function/functional, prototypes, purpose, templates, mechanism, more stable, curve, joint, lever, flap, slider, slot, mechanism, investigating</p> <p>Perfect Pizzas Food technology skills appealing, design criteria, evaluate ,popular ,healthy Vegetarian, ingredient, diet, slicing, tasting grating</p> <p>Hand Puppets - Textiles skills appeal, design criteria, develop, generate, mock-ups stitch material cutting, joining, shaping, finishing.</p> | <p>Photograph Frames annotated sketch, appealing, criteria, functional, label, purpose, reinforce, evaluate Sturdy materials</p> <p>Houmous - food technology aroma, flavour, greasy, taste, texture, ingredients, pour, source, sprinkle, utensils</p> <p>Lampshades - textile skills annotated sketch, appealing frame evaluate, join, shape, structure, appearance, Tie-dye, permanent</p> | <p>American food - Food technology skill cook, hot, mix, nutrients, vitamins, edible. Allergy, intolerance.ingredients, vegetables, slicing, cutting, healthy,</p> <p>Pneumatic Toys - construction skills exploded diagram, decision, mechanism, reinforce, stability, stiffen, strengthen, adhesive, assemble, pneumatic</p> <p>Pencil Cases - textile skills characteristics, cross-sectional, , prototype, fastening, stitch,</p> | <p>Bread - food technology skills allergy, carbohydrate, combine, fold, gluten, intolerance, knead, edible</p> <p>Toys with cam - construction skills computer aided design, fit for purpose, innovative, template, user, monitor, program, fixed pivot, lever, linkage, oscillating, slider, cams,</p> <p>Funky furnishings - textile skills design brief, finishing techniques effort, fixed, force, gears, pulley, hem, reinforce, seam, wadding,</p> | <p>Go Karts - construction skills axel, circuit, circuit diagram, drive belt, electrical system, mechanical system, motor, battery, battery holder, wire</p> <p>Burgers - food technology texture, preference, dairy, fat, protein, shape, texture</p> <p>Fashion textiles- Textile skills design brief, finishing techniques, pattern pieces, research, aesthetic qualities, seam allowance,</p> |

| 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 | |
| Examples of further D & T enrichment: Working with parents making some recipes and junk modelling. | Examples of further D & T enrichment: Kite flying in Sefton Park Teddy bears' picnic lunch | Examples of further D & T enrichment: Delivering Christmas Cards to care homes Restaurant visit/video call with pizza chef | Examples of further D & T enrichment: Working with Arabic parents learning about their cuisine. Visiting a specialist lighting store in The Lighting Centre | Examples of further D & T enrichment: Working with (Tommy) school cook to create Mexican food. Designing and delivering products to help the elderly | Examples of further D & T enrichment: Video call with a baker Haberdashery visit | Examples of further D & T enrichment: Go Karting experience Restaurant visit/video call with fast food chef | |

| | Cooking and Nutrition | Designing Skills | Evaluating Skills | Making Skills | Technical Knowledge |
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| 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 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 | I can explore and say what I like and dislike about a range of 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 |

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| | | through drawing. I can model a design using a template and a mock-up. | | | |
| 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 model a design using a template and a mock-up. | I can explore and say what I like and dislike about a range of 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 explore and use mechanisms. I can make a product more stable |
| Year 3 | I can select and use ingredients according to their taste. I can understand the principals of a healthy diet. I can 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 product based on products available. I have helped to grow some of the ingredients I will use. I understand how some foods have been processed. | I can select from and accurately use a range of tools for cutting, joining, shaping, and finishing. I can select and use components. I can select and use textile materials according to their aesthetic properties. | Investigate a range of products. Analyse a range of products. I can evaluate my ideas against my design criteria. I understand how key individuals have helped shaped the world | I can select from and accurately use a range of tools for cutting, joining, shaping, and finishing. I can select and use components. I can select and use textile materials according to their aesthetic properties | I can apply understanding of how to stiffen and reinforce a product |
| Year 4 | I can select and use ingredients according to their taste. I can understand the principals of a healthy diet. I can 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 product based on products available. I have helped to grow some of the ingredients I will use. I understand how some foods have been processed. | I can select from and accurately use a range of tools for cutting, joining, shaping, and finishing. 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 | Investigate a range of products. Analyse a range of products. I can evaluate my product against my design criteria | I can select from and accurately use a range of tools for cutting, joining, shaping, and finishing. I can select and use components. I can select and use textile materials according to their aesthetic properties | I can apply understanding of how to stiffen and reinforce a product |

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| <p>Year 5</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 dish using a range of techniques. I understand seasonality and have designed a product based on what is available. I understand how some of the ingredients in my product have been processed</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. 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. Investigate a range of gears, levers and pulleys. Analyse a range products. I can consider the views of others to improve my work. 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. 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>I can understand and use a mechanical system in my product. 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 how some of the ingredients used in my product have been processed.</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. 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. 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 apply understanding of how to strengthen a product. I can understand and use an electrical system in my product.</p> |