

St Paul's C of E Academy

Design & Technology Curriculum



| Aspect | Reception | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
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| Everyday objects | AOL: Exp A&D Use everyday products, stories, pictures, interests and experiences to inspire their creations. | Explore and evaluate a range of existing products. | | | | | |
| Staying safe | AOL: PSED Explain the reasons for rules, know right from wrong and try to behave accordingly. AOL: PD Explore a range of tools and equipment to perform practical tasks safely, for example, cutting and joining. | Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world. | | | Critique, evaluate and test their ideas and products and the work of others. | | |
| Mechanisms & movement | AOL: Exp A&D Explore and create using a wide range of materials and components, including upcycled materials, construction kits, textiles and ingredients. | Explore and use mechanisms (for example, levers, sliders, wheels and axles), in their products. | | Understand and use mechanical systems in their products (for example, gears, pulleys, cams, levers and linkages). | | | |
| | | Know about personal hygiene and germs including bacteria, viruses, how they are spread and treated, and the importance of handwashing. | | | | | |

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| Electricity | AOL: Exp A&D Use pictures, interests and experiences to inspire their creations. breadth | Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world. | Understand and use electrical systems in their products (for example, series circuits incorporating switches, bulbs, buzzers and motors). | 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. |
| Generation of ideas | AOL: Exp A&D Share their creations, explaining the process they have used. | 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. | 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. | |

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| Structures | AOL: Exp A&D Explore and create using a wide range of materials and components, including upcycled materials, construction kits, textiles and ingredients. | Build structures, exploring how they can be made stronger, stiffer and more stable. | | Build structures, exploring how they can be made stronger, stiffer and more stable. Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. | | | |
| Use of ICT | AOL: Exp A&D Share their creations, explaining the process they have used. | Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world. | | Apply their understanding of computing to program, monitor and control their products. | | | |
| Investigation | AOL: PD Use a range of small tools, including scissors, paintbrushes and cutlery. AOL: PD Explore a range of tools and equipment to perform practical tasks safely, for example, cutting and joining. | Select from and use a range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing). | | | | | |
| Evaluation | AOL: Exp A&D Share their creations, explaining the process they have used. | Evaluate their ideas and products against design criteria. | | Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. | | | |

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| Cutting and joining textiles | | 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 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. | Select from and use a wider range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing), accurately. | | |
| Materials for purpose | AOL: Exp A&D Explore and create using a wide range of materials and components, including upcycled materials, construction kits, textiles and ingredients. | Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics. | 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. | | | | |

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| Big Idea | Aspect | Reception | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
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| Nature | Food preparation & cooking | AOL: Maths Use everyday language to talk about length and height, weight and capacity. | Use the basic principles of a healthy and varied diet to prepare dishes. | Select from and use a range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing). Use the basic principles of a healthy and varied diet to prepare dishes. | Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. | | | |
| | | | Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics. | 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. | 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. | | |
| Materials | Decorating and embellishing textiles | | | | | | | |

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| Nutrition | <p>AOL: PSED Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.</p> | <p>Understand and apply the principles of a healthy and varied diet.</p> <p>Know what constitutes a healthy diet (including understanding calories and other nutritional content).</p> <p>Know the principles of planning and preparing a range of healthy meals.</p> | <p>Understand and apply the principles of a healthy and varied diet.</p> <p>Know what constitutes a healthy diet (including understanding calories and other nutritional content).</p> | <p>Understand and apply the principles of a healthy and varied diet.</p> <p>Know what constitutes a healthy diet (including understanding calories and other nutritional content).</p> <p>Know the principles of planning and preparing a range of healthy meals.</p> | <p>Understand and apply the principles of a healthy and varied diet.</p> <p>Know what constitutes a healthy diet (including understanding calories and other nutritional content).</p> | <p>Understand and apply the principles of a healthy and varied diet.</p> <p>Know what constitutes a healthy diet (including understanding calories and other nutritional content).</p> <p>Know the principles of planning and preparing a range of healthy meals.</p> | <p>Understand and apply the principles of a healthy and varied diet.</p> <p>Know what constitutes a healthy diet (including understanding calories and other nutritional content).</p> <p>Know the principles of planning and preparing a range of healthy meals.</p> |
| Origins of food | <p>AOL: World Make observations about the world around them.</p> | <p>Understand where food comes from.</p> | | <p>Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</p> | | | |

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| Compare & contrast | AOL: Exp A&D Share their creations, explaining the process they have used. | Explore and evaluate a range of existing products. | Understand how key events and individuals in design and technology have helped shape the world. | Investigate and analyse a range of existing products. covered | Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. | Investigate and analyse a range of existing products. |
| Significant people | AOL: Exp A&D Use pictures, interests and experiences to inspire their creations. | Explore and evaluate a range of existing products. | Understand how key events and individuals in design and technology have helped shape the world. | | | |