# Sunnybrow Primary School: Design & Technology End-of-year expectations

| By the end of Key Stage 1: | Reception | Year 1 | Year 2 |
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| **Design**<br>I can design purposeful, functional, appealing products for myself and other users based on design criteria<br><br>I can generate, develop, model and communicate my ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology | • Design & construct with a specific purpose in mind to build mechanisms and simple structures<br>• Use knowledge from exploration to inform design | • Draw on their own experience to help generate ideas<br>• Suggest ideas and explain what they are going to do<br>• Identify a target group for what they intend to design and make<br>• Model their ideas in card and paper<br>• Develop their design ideas applying findings from their earlier research | • Generate ideas by drawing on their own and other people's experiences<br>• Develop their design ideas through discussion, observation , drawing and modelling<br>• Identify a purpose for what they intend to design and make<br>• Identify simple design criteria<br>• Make simple drawings and label parts |
| **Make**<br>I can select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]<br><br>I can select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics | • Use a range of small tools, including scissors, paint brushes and cutlery<br>• Use different joining techniques (including trying pivot hinge and levers, pulleys, wheels and axis)<br>• Join different materials together<br>• -Use real tools competently for a purpose (scissors, stapler, hole punch, glue gun, knife, grater, juicer, peeler, masher)<br>• Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function | • Make their design using appropriate techniques<br>• With help measure, mark out, cut and shape a range of materials<br>• Use tools e.g. scissors and a hole punch safely<br>• Assemble, join and combine materials and components together using a variety of temporary methods e.g. glues or masking tape<br>• Select and use appropriate fruit and vegetables, processes and tools<br>• Use basic food handling, hygienic practices and personal hygiene<br>• Use simple finishing techniques to improve the appearance of their product | • Begin to select tools and materials; use vocab' to name and describe them<br>• Measure, cut and score with some accuracy<br>• Use hand tools safely and appropriately<br>• Assemble, join and combine materials in order to make a product<br>• Cut, shape and join fabric to make a simple garment. Use basic sewing techniques<br>• Follow safe procedures for food safety and hygiene<br>• Choose and use appropriate finishing techniques |
| **Evaluate**<br>I can explore and evaluate a range of existing Products<br><br>I can evaluate my ideas and products against design criteria | • Check if their model matches their plan<br>• Test their design and consider what could have been done differently if they were to do it again | • Evaluate their product by discussing how well it works in relation<br>• to the purpose<br>• Evaluate their products as they are developed, identifying<br>• strengths and possible changes they might make | • Evaluate against their design criteria<br>• Evaluate their products as they are developed, identifying strengths and possible changes they might make<br>• Talk about their ideas, saying what they like and dislike about them |

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| | | • Evaluate their product by asking questions about what they have<br>• made and how they have gone about it | |
| <u>Technical knowledge</u><br>I can build structures, exploring how they can be made stronger, stiffer and more stable<br>I can explore and use mechanisms [for example, levers, sliders, wheels and axles], in my products. | | | |
| <u>Cooking and Nutrition</u><br>I can use the basic principles of a healthy and varied diet to prepare dishes<br>I understand where food comes from. | | | |

| By the end of Key Stage 2: | Year 3 | Year 4 | Year 5 | Year 6 |
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| <u>Design</u><br>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<br><br>generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design | • Generate ideas for an item, considering its purpose and the user/s<br>• Identify a purpose and establish criteria for a successful product.<br>• Plan the order of their work before starting<br>• Explore, develop and communicate design proposals by modelling ideas<br>• Make drawings with labels when designing | • Generate ideas, considering the purposes for which they are designing<br>• Make labelled drawings from different views showing specific features<br>• Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making, if the first attempts fail<br>• Evaluate products and identify criteria that can be used for their own designs | • Generate ideas through brainstorming and identify a purpose for their product<br>• Draw up a specification for their design<br>• Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making if the first attempts fail<br>• Use results of investigations, information sources, including ICT when developing design ideas | • Communicate their ideas through detailed labelled drawings<br>• Develop a design specification<br>• Explore, develop and communicate aspects of their design proposals by modelling their ideas in a variety of ways<br>• Plan the order of their work, choosing appropriate materials, tools and techniques |
| <u>Make</u><br>select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately<br><br>select from and use a wider range of | • Make their design using appropriate techniques<br>• With help measure, mark out, cut and shape a range of materials<br>• Use tools e.g. scissors and a hole punch safely | • Begin to select tools and materials; use vocab' to name and describe them<br>• Measure, cut and score with some accuracy<br>• Use hand tools safely and appropriately | • Select appropriate materials, tools and techniques<br>• Measure and mark out accurately<br>• Use skills in using different tools and equipment safely and accurately | • Select appropriate tools, materials, components and techniques<br>• Assemble components make working models<br>• Use tools safely and accurately<br>• Construct products using |

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| materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities | • Assemble, join and combine materials and components together using a variety of temporary methods e.g. glues or masking tape<br>• Select and use appropriate fruit and vegetables, processes and tools<br>• Use basic food handling, hygienic practices and personal hygiene<br>• Use simple finishing techniques to improve the appearance of their product | • Assemble, join and combine materials in order to make a product<br>• Cut, shape and join fabric to make a simple garment.<br>• Use basic sewing techniques<br>• Follow safe procedures for food safety and hygiene<br>• Choose and use appropriate finishing techniques | • Weigh and measure accurately (time, dry ingredients, liquids)<br>• Apply the rules for basic food hygiene and other safe practices e.g. hazards relating to the use of ovens<br>• Cut and join with accuracy to ensure a good-quality finish to the product | permanent joining techniques<br>• Make modifications as they go along<br>• Pin, sew and stitch materials together create a product<br>• Achieve a quality product |
| <u>Evaluate</u><br>investigate and analyse a range of existing products<br><br>evaluate their ideas and products against their own design criteria and consider the views of others to improve their work<br><br>understand how key events and individuals in design and technology have helped shape the world | • Evaluate their product against original design criteria e.g. how well it meets its intended purpose<br>• Disassemble and evaluate familiar products | • Evaluate their work both during and at the end of the assignment<br>• Evaluate their products carrying out appropriate tests | • Evaluate a product against the original design specification<br>• Evaluate it personally and seek evaluation from others | • Evaluate their products, identifying strengths and areas for development, and carrying out appropriate tests<br>• Record their evaluations using drawings with labels<br>• Evaluate against their original criteria and suggest ways that their product could be improved |
| <u>Technical knowledge</u><br>apply their understanding of how to strengthen, stiffen and reinforce more complex structures<br>understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]<br>understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]<br>apply their understanding of computing to program, monitor and control their products | | | | |
| <u>Cooking & Nutrition</u><br>understand and apply the principles of a healthy and varied diet<br>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques<br>understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed | | | | |