



Spring Gardens Primary School

Design and Technology Curriculum Overview

Early Years Foundation Stage	Key Stage 1	Key Stage 2
<p>Pupils should be taught about:</p> <p>Expressive Arts and Design ELGs</p> <p>Creating With Materials</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 processes they have used. Make use of props and materials when role playing characters in narratives and stories. <p>Being Imaginative and Expressive</p> <ul style="list-style-type: none"> Invent, adapt and recount narratives and stories with peers and their teacher. Sing a range of well know nursery rhymes and songs. Perform songs, rhymes, poems and stories with others, and when appropriate, try to move in time with music. 	<p>Pupils should be taught about:</p> <p>Design Design purposeful, functional, appealing products for themselves and other users based on design criteria.</p> <p>Generate, develop, model and communicate their ideas through talking, drawing, templates, mock ups and where appropriate ICT.</p> <p>Make Select from and use a range of tools and equipment to perform practical tasks such as cutting, shaping, joining and finishing.</p> <p>Select from and use a wide range of materials and components including construction materials, textiles and ingredients according to their characteristics.</p> <p>Evaluate Explore and evaluate a range of products. Evaluate their ideas and products against design criteria.</p> <p>Technical Knowledge</p> <p>Cooking and nutrition Use the principles of a healthy and varied diet to prepare dishes. Understand where food comes from.</p> <p>Structures Build structures exploring how they can be made stronger, stiffer and more stable.</p> <p>Mechanisms Explore and use mechanisms such as levers, sliders, wheels, and axles in their products.</p>	<p>Pupils should be taught about:</p> <p>Design Use research and develop design criteria to inform the design of innovative functional appealing products that are fit for purpose and aimed at particular individuals or groups.</p> <p>Generate, develop model and communicate their ideas through discussion, annotated sketches, cross sectional and exploded diagrams, prototypes, pattern pieces and computer aided design.</p> <p>Make Select from and use a wider range of tools and equipment to perform tasks such as cutting, shaping, joining, and finishing accurately.</p> <p>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> <p>Evaluate Investigate and analyse a range of existing products.</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p> <p>Understand how key events and individuals in DT have helped shaped the world.</p> <p>Cooking and nutrition Understand and apply the principles of a healthy and varied diet. Prepare and cook a variety of predominantly savoury dishes using a range of techniques. Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.</p> <p>Structures Apply their understanding of how to strengthen, stiffen, and reinforce more complex structures.</p> <p>Mechanics Understand and use mechanical systems in their products such as gears, pulleys, cams levers and linkages.</p> <p>Electrics Understand and use electrical systems in their products such as series circuits. Incorporating switches, bulbs, buzzers and motors.</p> <p>ICT Apply their understanding of computing to programme, monitor and control their products.</p>



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Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Autumn term Topics: All About Me</p> <p>Explores and develops interests in using different construction materials</p>	<p>Autumn term Topics: All about me / Celebrations</p> <p>Explore construction resources with a range of joining techniques (magnetic, click and twist). Stack, align, build with blocks Join with glue sticks, glue spreaders. Use scissors correctly.</p>	<p>Unit: Food & Nutrition (preparing fruit and vegetables)</p> <p>Project: Design, make and evaluate healthy dips</p>	<p>Unit: Mechanical Systems</p> <p>Project: Design, make and evaluate moving pictures with levers and sliders</p>	<p>Unit: Mechanical Systems</p> <p>Project: Design, make and evaluate mechanical posters with linkages</p>	<p>Unit: Stiff and flexible materials</p> <p>Project: Design, make and evaluate a gift box / desk tidy</p>	<p>Unit: Electrical and mechanical components (cams)</p> <p>Project: Design, make and evaluate moving toys</p>	<p>Unit: Electrical and mechanical components. Programming.</p> <p>Project: Design, make and evaluate a zoetrope</p>
<p>Spring Term Topics: Traditional Tales / Growing</p> <p>Builds and constructs with a purpose creating enclosures and making spaces. Joins materials for a purpose.</p>	<p>Spring Term Topics: Local Area / Farm</p> <p>Twist, wrap, weave, overlap materials. Join materials with masking tape. Combine materials to make Chinese Dragon (Chinese new year theme). Join reclaimed materials using glue and tape. Cut with knives</p>	<p>Unit: Mechanical Systems (wheels and axles)</p> <p>Project: Design, make and evaluate a vehicle with moving wheels.</p>	<p>Units: Structures (Stiff & flexible materials) Food and Nutrition</p> <p>Project: Design, make & evaluate a bridge.</p> <p>Make fruit salad / fruit kebabs</p>	<p>Stiff and flexible Materials</p> <p>Unit: British Inventors</p> <p>Investigate key events / designs that have changed the world.</p> <p>Choose suitable techniques to strengthen and waterproof materials.</p>	<p>Unit: Electrical Components</p> <p>Project: Design, make and evaluate a light box. It requires an electrical circuit with switches.</p>	<p>Unit: Textiles (Flexible materials)</p> <p>Project: Design, make and evaluate a draw string bag</p>	
<p>Summer Term Topics: Bears & Jungle explorers</p> <p>Join construction materials in a range of ways using own ideas and past experiences. Use tools for a purpose.</p>	<p>Summer Term Topics: Seashore / Mini beasts</p> <p>Design & create transient sculptures with natural materials. Join wood and reclaimed materials. Use wood work tools Join materials with split pins and treasury tags. Use celloptape/ double sided tape.</p>	<p>Unit: Structures (Stiff and flexible materials)</p> <p>Project: design, make and evaluate enclosures.</p>	<p>Unit: Materials -Textiles</p> <p>Project: Design, make and evaluate a puppet.</p>	<p>Unit: Food & Nutrition</p> <p>Project: Healthy diet, preparing food safely.</p> <p>Design, make and evaluate pittas / wraps.</p>	<p>Unit: Food and Nutrition</p> <p>Project: Design, make and evaluate a dish with several processes/ techniques e.g. apple crumble.</p>	<p>Unit: Food and nutrition</p> <p>Project: Seasonal cooking. Design, make and evaluate a dish with several processes / techniques</p>	<p>Unit: Electrical & mechanical components Frame structures (Pulleys and gears)</p> <p>Project: Moving vehicle /fairground toy</p>