



Our Design Technology Curriculum

Design and Technology is a practical and creative subject, where children have the opportunity to solve problems within relevant and inspiring contexts. It draws upon a range of skills, including mathematics, art, computing and science, and promotes curiosity, resilience and imagination. Here at LWPS children develop an understanding of technology and its impact in an ever-changing world, as well as practical life skills.

At LWPS DT is carefully mapped through the school, with some projects taught discretely and others with cross-curricular links. Our children follow a process of designing, making and evaluating their work. Through high quality inclusive teaching, we teach the children technical skills, covering a range of skill areas, including use of textiles, construction materials, mechanisms, moldable materials, cookery and nutrition.

Children develop problem-solving skills and have the opportunity to take risks in their learning as they make links in their experiences, choose ways to do things and persist when challenges occur. Through practical work, children begin to select resources, test ideas and choose ways to solve problems. Children evaluate their work and the work of others against design criteria, considering the effectiveness of the methods and resources used, and responding to constructive feedback from others.

Determination, Independence, Aspiration, Curiosity and Community-Mindedness taught through our core Christian values of compassion, resilience and trust

Determination As Engineers, we expect our children to strive for excellence in all that they do and demonstrate strong intent to get the job done and to do it to the best of their ability. We want them to show this academically as well as in their generosity of spirit within our whole school community. Our children are *resilient* learners, constantly showing their growth mindset in all that they do. In design technology, this can be seen in our pupils' desire to do well to overcome design flaws and critically analyse their product.

Independence As Engineers and future leaders, our children self-organise and self-regulate very well, knowing what to do and where to go for further support if and when they need it. They show great *trust* in one another and the adults around them, knowing who they can go to for help or support if and when needed. We expect our children to exercise their independence at all levels so that they become confident and capable young people ready for their next challenge at each stage of their development.

Aspiration As Engineers, our pupils are ambitious, showing a drive to follow their dreams and apply the skills and knowledge they are learning to all areas of their learning. They are excited by their programme of study and constantly strive for challenge building their *resilience* as they learn. Our pupils aspire to look for every day examples of quality design and the impacts these products have on our day-to-day. They demonstrate DT skills in areas such as maths and Science and can identify these links in their learning.

Curiosity As Engineers, we expect our children to be active participants in their learning, always wanting to expand their knowledge and skills. They are driven by rich questioning and reasoning that extends their thinking and challenges their beliefs. We want our children to question their own understanding and beliefs showing an understanding of the world around them, demonstrating *compassion* for those around the world.

Community-Mindedness As Engineers, our children understand what it means to be mindful of those in and around our school community. They fundraise extensively, showing *compassion* in all that they do. They understand how we are all different and yet the same, and what impact their own actions have on those around them. They care deeply for one another and show tolerance and respect in all that they do.

Programme of Study

	EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
Design	They are confident speaking in a familiar group, will talk about their ideas, and will choose the resources they need for their chosen activities Children use what they have learnt about media and materials in original ways, thinking about uses and purposes	Create simple designs for a product. Use pictures and words to describe what he/she wants to do.	Design purposeful, functional, appealing products for himself/herself and other users based on design criteria. Generate, develop, model and communicate his/her ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology. Choose appropriate tools, equipment,	Use knowledge of existing products to design his/her own functional product. Create designs using annotated sketches, cross-sectional diagrams and simple computer programmes. Strengthen frames using diagonal struts. Understand how mechanical systems such as levers and linkages or pneumatic systems create movement.	Use knowledge of existing products to design a functional and appealing product for a particular purpose and audience. Create designs using exploded diagrams. Use his/her knowledge of techniques and the functional and aesthetic qualities of a wide range of materials to plan how to use them.	Use his/her research into existing products and his/her market research to inform the design of his/her own innovative product. Create prototypes to show his/her ideas. Produce step by step plans to guide his/her making, demonstrating that he/she can apply his/her knowledge of different materials, tools and techniques.	Use research he/she has done into famous designers and inventors to inform the design of his/her own innovative products. Generate, develop, model and communicate his/her ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.

			techniques and materials from a wide range.				
Make	<p>Children show good control and co-ordination in large and small movements</p> <p>They handle equipment and tools effectively, including pencils for writing They select and use technology for particular purposes They safely use and explore a variety of materials, tools and techniques, experimenting with colour, design,</p>	<p>Select from and use a range of tools and equipment to perform practical tasks e.g. cutting, shaping, joining and finishing.</p> <p>Use a range of simple tools to cut, join and combine materials and components safely.</p> <p>Build structures, exploring how they can be made stronger, stiffer and more stable.</p> <p>Use wheels and axles in a product.</p>	<p>Safely measure, mark out, cut and shape materials and components using a range of tools.</p> <p>Investigate different techniques for stiffening a variety of materials and explore different methods of enabling structures to remain stable.</p> <p>Explore and use mechanisms e.g. levers, sliders, wheels and axles, in his/her products.</p>	<p>Safely measure, mark out, cut, assemble and join with some accuracy.</p> <p>Make suitable choices from a wider range of tools and unfamiliar materials and plan out the main stages of using them.</p>	<p>Use techniques which require more accuracy to cut, shape, join and finish his/her work e.g. Cutting internal shapes, slots in frameworks.</p> <p>Apply techniques he/she has learnt to strengthen structures and explore his/her own ideas.</p> <p>Understand and use electrical systems in products.</p>	<p>Make careful and precise measurements so that joins, holes and openings are in exactly the right place.</p> <p>Build more complex 3D structures and apply his/her knowledge of strengthening techniques to make them stronger or more stable.</p> <p>Understand how to use more complex mechanical and electrical systems.</p>	<p>Use technical knowledge accurate skills to problem solve during the making process.</p> <p>Use his/her knowledge of famous designs to further explain the effectiveness of existing products and products he/she have made.</p> <p>Use a wide range of methods to strengthen, stiffen and reinforce complex structures and can use them accurately and appropriately.</p> <p>Apply his/her</p>

	<p>texture, form and function</p> <p>They represent their own ideas, thoughts and feelings through design and technology.</p>						<p>understanding of computing to program, monitor and control his/her product.</p>
Evaluate		<p>Ask simple questions about existing products and those that he/she has made.</p>	<p>Evaluate and assess existing products and those that he/she has made using a design criteria.</p>	<p>Investigate and analyse existing products and those he/she has made, considering a wide range of factors.</p>	<p>Consider how existing products and his/her own finished products might be improved and how well they meet the needs of the intended user.</p>	<p>Make detailed evaluations about existing products and his/her own considering the views of others to improve his/her work.</p>	<p>Apply his/her knowledge of materials and techniques to refine and rework his/her product to improve its functional properties and aesthetic qualities.</p>
Cooking and Nutrition	<p>Begin to develop a food vocabulary using taste,</p>	<p>Talk about what he/she eats at home and begin to discuss what</p>	<p>Understand the need for a variety of food in a diet.</p>	<p>Talk about the different food groups and name food from each</p>	<p>Understand what makes a healthy and balanced diet, and that</p>	<p>Understand the main food groups and the different nutrients that</p>	<p>Confidently plan a series of healthy meals based on the principles of a</p>

	<p>texture and feel. Explore familiar food products e.g. fruit and vegetables. Stir, spread, knead, and shape a range of food and ingredients.</p> <p>Begin to work safely and hygienically. Start to think about the need for a variety of foods in a diet.</p>	<p>healthy foods are.</p> <p>Say where some food comes from and give examples of food that is grown.</p> <p>Use simple tools with help to prepare food safely.</p>	<p>Understand that all food has to be farmed, grown or caught.</p> <p>Use a wider range of cookery techniques to prepare food safely.</p>	<p>group. Understand that food has to be grown, farmed or caught in Europe and the wider world. Use a wider variety of ingredients and techniques to prepare and combine ingredients safely.</p>	<p>different foods and drinks provide different substances the body needs to be healthy and active. Understand seasonality and the advantages of eating seasonal and locally produced food. Read and follow recipes which involve several processes, skills and techniques.</p>	<p>are important for health. Understand how a variety of ingredients are grown, reared, caught and processed to make them safe and palatable / tasty to eat. Select appropriate ingredients and use a wide range of techniques to combine them.</p>	<p>healthy and varied diet.</p> <p>Use information on food labels to inform choices. Research, plan and prepare and cook a savoury dish, applying his/her knowledge of ingredients and his/her technical skills.</p>
--	--	--	---	--	---	---	--