



## Sibertswold Design and Technology- Intent, Implementation and Impact



<b>Intent</b>	<p><i>Design and Technology intent with links to school intent:</i></p> <p>At Sibertswold CEP School we aim to provide children with a DT education that is relevant in our rapidly changing world. We want to encourage our children to use <b>prior knowledge</b> acquired through Maths and Science and to <b>make connections</b> as they become problem solvers who can work creatively on a project.</p> <p>We believe that high-quality DT lessons will inspire children's <b>curiosity</b>, encouraging them to think independently, innovatively and develop creative, procedural and technical understanding. Our DT curriculum provides children with opportunities to research, represent their ideas, explore and investigate. They will have opportunities to be <b>reflective</b> learners; to develop their ideas, make a product and evaluate their work. Children will be exposed to a wide range of subject-specific <b>resources</b> including textiles, cooking equipment and tools for woodwork; through this, children will develop their skills, vocabulary and resilience.</p> <p>We will ensure that across the key stages coverage is provided across the key strands; 'design', 'make', 'evaluate', 'technical knowledge', 'cooking and nutrition'. The repetition of the key themes 'Food', 'Mechanisms', 'Structures', 'Textiles' and 'Electrical Systems' (at Key stage 2) will aid the children in the development of their Design and Technology schemas.</p>	
<b>Implementation</b>	<p><i>Action points:</i></p> <p>Through the support of the Kapow! Design and Technology scheme, children will experience an array of progressive and linkable knowledge and skills over the course of their time at Sibertswold Primary School</p>	<p><i>What I will be looking for from teachers and learning:</i></p> <ul style="list-style-type: none"><li>• Design and Technology folders to be cumulative documents that show progression</li></ul>



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	<ul style="list-style-type: none"> <li>• Design and Technology is taught in blocks to provide an immersive and memorable experience.</li> <li>• Design and Technology language to be taught progressively and added to the vocabulary spine.</li> <li>• Mini quizzes and 'convince me..' challenges at the end of lessons to help lock learning into pupils' long-term memory.</li> </ul>	<p>of knowledge and skills as children advance through the school.</p> <ul style="list-style-type: none"> <li>• For each project, the design, make and evaluate sequence is followed, allowing children time to reflect upon their design and products and think of ways that they could be improved or adapted.</li> <li>• Children discussing their projects using subject specific language from the Design and Technology vocabulary spine.</li> <li>• <span style="background-color: yellow;">Teacher's encouraging critical thinking from pupils; engaging pupils in giving reasons behind their choices ('Convince me that this is the best material for...').</span></li> </ul>					
<p><b>Impact</b></p>	<p>We measure the impact of our curriculum through the following methods:</p> <ul style="list-style-type: none"> <li>• Assessing children's understanding of topic linked vocabulary through pupil discussions about their learning.</li> <li>• Images of the children's practical learning recorded in class big books and individual D and T folders.</li> <li>• Interviewing the pupils about their learning (pupil voice).</li> <li>• Moderation staff meetings where pupil's folders are scrutinised and there is the opportunity for a dialogue between teachers to understand their class's work.</li> <li>• Annual reporting of standards across the curriculum.</li> <li>• Simple class assessment grids showing which children are working <i>below, at, or above</i> the 'Expected' level.</li> </ul>						
<p><b>Coverage</b></p>	Year R	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Right from the	<b>Structures:</b>	<b>Structures:</b>	<b>Structures:</b>	<b>Structures:</b>	<b>Structures:</b>	<b>Structures: Apply</b>



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<p><b>From years 1-6, five Design and Technology units will be taught. It is at the teacher's discretion to decide on timetabling sessions as long as Design and Technology is taught regularly (one unit in each of the five longer terms).</b></p>	<p>start pupils in EYFS begin to explore DT in a number of continuous provision areas in the classroom. These include; play dough, loose parts, large parts, brick and junk modelling. Children learn how to cut, stick and join materials, exploring and reviewing their designs.</p> <p>Children experience regular opportunities throughout the year to prepare food in teacher directed groups.</p>	<p>Inspired by the song, 'Mouse in a windmill', design and construct a windmill for a client (mouse) to live in. Explore various types of windmill, how they work and their key features.</p>	<p>Explore stability and methods to strengthen structures, then create a stable and strong chair for baby bear.</p>	<p>Research, design and make a recycled-material castle (structure).</p>	<p>Investigate and model frame structures to improve their stability, then apply this research to design and create a stable, decorated pavilion.</p>	<p>Explore material properties and sources, before marking, sawing and assembling a wooden truss bridge.</p>	<p>knowledge of net and frame structures, bracing and cladding to design and make a playground.</p>
		<p><b>Textiles:</b> Puppets- Design and make a character-based hand puppet using a preferred joining technique, before decorating. (Explore methods of joining fabric.)</p>	<p><b>Textiles:</b> Learn how to sew a running stitch ready to design, make and decorate a pouch using a template.</p>	<p><b>Textiles:</b> Cushions- Learn and apply two new sewing techniques – cross-stitch and appliqué. Utilise these new skills to design and make a cushion.</p>	<p><b>Textiles:</b> Create a book sleeve using fabric fastenings.</p>	<p><b>Textiles:</b> Learn blanket stitch then design and make 3D stuffed toys.</p>	<p><b>Textiles:</b> Using a combination of textiles skills such as attaching fastenings, appliqué and decorative stitches, design, assemble and decorate a waistcoat for a chosen purpose.</p>
		<p><b>Mechanisms:</b> Explore slider mechanisms and the movement they output, to design, make and evaluate a</p>	<p><b>Mechanisms:</b> Making a moving monster. Explore levers, linkages and pivots through existing products</p>	<p><b>Electrical Systems; Static electricity-</b> Explore the science behind static electricity and apply this</p>	<p><b>Electrical Systems:</b> Create a functioning torch.</p>	<p><b>Electrical Systems:</b> Develop an electronic greeting card, using paper-applicable circuit</p>	<p><b>Electrical Systems:</b> Create an electronic circuit to make a steady hand game.</p>



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		moving storybook from a range of templates.	and experimentation, use this research to construct and assemble a moving monster.	new knowledge to generate ideas for and make a static-electricity game.		components.	
		<p><b>Mechanisms:</b> Learn about the key parts of a wheeled vehicle, to develop an understanding of how wheels, axles and axle holders work. Design and make a moving vehicle.</p>	<p><b>Mechanisms:</b> Design and create a functional Ferris wheel. Learn how different components fit together so that the wheel rotates and the structure stands freely.</p>	<p><b>Mechanisms:</b> Explore pneumatic systems, then apply this understanding to design and make a pneumatic toy including thumbnail sketches and exploded diagrams.</p>	<p><b>Mechanical Systems:</b> <b>Slingshot Car</b> Using a range of materials, design and make a car with a working slingshot mechanism and house the mechanism using a range of nets.</p>	<p><b>Mechanisms:</b> Use a range of mechanisms and construction techniques to create a pop-up storybook for younger children.</p>	<p><b>Mechanical Systems:</b> Develop a functional automata window display, to meet the requirements in a design brief. (Cam and axle mechanisms).</p>
		<p><b>Food:</b> Design and make a fruit and vegetable smoothie and accompanying packaging.</p>	<p><b>Food:</b> Learn about the food groups (carbohydrates, proteins, fruits and vegetables, dairy, oils and spreads) to understand a balanced diet. Design &amp; make a healthy wrap for</p>	<p><b>Food:</b> Eating seasonally. Make a crumble using seasonal ingredients.</p>	<p><b>Food:</b> Adapt a recipe to create a final design that falls within a set budget and brief.</p>	<p><b>Food:</b> Discover the farm to fork process, understand the key welfare issues for rearing cattle. Compare the nutritional value of existing sauces and develop a healthier recipe.</p>	<p><b>Food:</b> Come Dine With Me- Work in groups to research and prepare a three course meal.</p>



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			a class picnic.				
<i>Design and Technology language for vocabulary spine:</i>	Build, stack, join, fix, stronger, sturdy, improve, measure, weigh, ingredients, sieve, knead, shape	Client, net, Assemble, design, evaluation, stable, strong, structure, windmill axle, windmill turbine, mechanism, safety pin, technique, slider, template, axle, axle holder, chassis, mechanic, healthy, ingredient, blender, peeler, recipe, smoothie,	function, man-made, natural, stable, structure, fabric, running-stitch, template, sew, linkage, mechanical, output, pivot, survey, Ferris wheel, Ferris wheel pod, axle, waterproof, Alternative, balanced diet, nutrients, carbohydrates, protein, dairy	Applique, cross-stitch, seam, target audience, attract, component, electrostatic, motion, repel, constructive criticism, criteria, façade, recyclable, scoring, exploded-diagram, input, linkage, lever, net, output, pivot, pneumatic system, thumbnail sketch, climate, exported, imported, nationality, seasonal, temperate.	Aesthetic, cladding, frame-structure, inspiration, pavilion, reinforce, target customer, assemble, mock-up, cell, component, conductor, electronic, insulator, series circuit, air-resistance, chassis, function, graphics, kinetic energy, adapt, budget, method, prototype, quantity, utilities.	Arch bridge, beam bridge, suspension bridge, truss bridge, bench hook, tension, compression, coping saw, tenon saw, file, set square, annotate, appendage, blanket-stitch, buzzer, circuit, conductor, graphite, innovative, insulator, LED, modify, parallel circuit, series circuit, computer-aided-design (CAD), cross-contamination, ethical issues, reared, substitute, welfare.	Adapt, annotate, unique, Bulb holder, circuit symbol, magnetic field, perspective drawing, pliers, wire cutters, bench hook, coping saw, jelutong, modify, reinforce, tenon saw, vice, automata, dowel, follower, accompaniment, collaboration, processed