

St Vincent's Design and Technology Curriculum Knowledge Map

DESIGN TECHNOLOGY	Autumn 1	Spring 1	Summer 1	Autumn 2	Spring 2	Summer 2
Driving Question	How can we show compassion, care and love to those in need?	Why should we show respect for others and how can we do this?	How can we be stewards of our environment and of one another?	In what practical ways can we learn from our mistakes?	Why should we not judge others?	How can we build trusting relationships?
EYFS	<p>Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park.</p> <p><u>Make a hospital/Doctors surgery/Fire Station-people who help us.</u></p>	<p>Create collaboratively, sharing ideas, resources and skills</p> <p><u>Work in groups to make healthy sandwiches.</u></p>	<p>Create closed shapes with continuous lines, and begin to use these shapes to represent objects.</p> <p><u>Make a vehicle, discussing shapes used.</u></p>	<p>Explore, use and refine a variety of effects to express their ideas and feelings.</p> <p><u>Create 'ourselves' picture frames.</u></p>	<p>Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p> <p><u>Create a Superhero from a range of materials.</u></p>	<p>Creating with Materials-Share creations, explaining the process they have used.</p> <p><u>'Use a range of materials to make a boat. Test out in a water tray.</u></p>
KS1	<p>Design, Make and Evaluate</p> <p>Structures- To build structures, exploring how they can be made stronger, stiffer and more stable.</p> <p><u>Frames for leaf prints</u></p> <p>-Create frames for leaf prints from strip wood using triangular card joints.</p>	<p>Design, Make and Evaluate</p> <p>Food Technology-To use the basic principles of a healthy and varied diet to prepare a dish.</p> <p><u>Make a meal for Galapagos explorers</u></p> <p>-Create a healthy sandwich Sort and classify an increasing range of food according to specific food groups and work safely and hygienically</p>	<p>Design, Make and Evaluate</p> <p>Electrical and mechanical components.</p> <p><u>Explore how a light switch works and use it for seasonal change dance.</u></p> <p>-Create simple circuits incorporating a battery, bulb, switch, buzzer and wires.</p>	<p>Design, Make and Evaluate</p> <p>Textiles-To select and use a wide range of materials, including textiles, according to their characteristics.</p> <p><u>Sew used/ recycled fabric from artwork to make a new piece of material.</u></p> <p>-Talk about and begin to select textiles based on characteristics of an increasing range of materials.</p> <p>-Cut and join fabrics using running stitch, buttons and bond web.</p>	<p>Design, Make and Evaluate</p> <p>Mechanisms</p> <p><u>Make a musical instrument from natural products to make a rainforest song.</u></p> <p>-Construct a simple slider independently.</p> <p>-Construct a simple pneumatic system with one moving part.</p>	<p>Design, Make and Evaluate</p> <p>Axels, pulleys and gears</p> <p><u>Plan, design and make a trustworthy London taxi</u></p> <p>-Attach wheels to a chassis using an axle, e.g. cotton</p> <p>-With support attach a fixed axle to a chassis and add wheels ensuring that they can move freely.eels and dowel</p>

<p>LKS2</p>	<p>Design, Make and Evaluate</p> <p>Structures-To apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p> <p><u>3D shapes -Create nets to make a victorian candle holder.</u></p> <p>-Create nets of increasingly complex 3D shapes which include the addition of glueing tabs.</p> <p>-Explain in detail why some structures fail.</p>	<p>Design, Make and Evaluate</p> <p>Food Technology-To prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.</p> <p><u>Roman Meal</u></p> <p>-Design a Roman meal using the understanding of the ways in which specific food groups apply to the principles of a healthy and varied diet.</p> <p>-Measure and weigh accurately to create the meal.</p>	<p>Design, Make and Evaluate</p> <p>Electrical and mechanical components.</p> <p><u>Research, design and make a litter picker.</u></p> <p>-Identify key features of electrical safety.</p> <p>-Explore and explain how the direction and speed of an electrical motor can be controlled.</p>	<p>Design, Make and Evaluate</p> <p>Textiles- To and use a wider range of tools and equipment to perform practical tasks.</p> <p><u>Sewing-sewing a sail for a viking boat.</u></p> <p>-Make and use a simple paper pattern.</p> <p>-Sew using a range of stitches including, backward running stitch and over sewing.</p>	<p>Design, Make and Evaluate</p> <p>Mechanisms</p> <p><u>Create moving pictures of The Stone Age</u></p> <p>-Combine sliders and levers to produce a range of movements.</p> <p>-Describe the way in which a cam changes rotary motion into linear motion.</p>	<p>Design, Make and Evaluate</p> <p>Axels, pulleys and gears</p> <p><u>Design and make a Mayan temple.Use pulleys and gears to help transport materials.</u></p> <p>-Describe in detail the way in which an axle and chassis help a vehicle to move.</p> <p>-Use a range of different ways to attach an axle to a chassis, e.g. card triangles, drilled holes, cable clips and clothes pegs.</p>
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<p>UKS2</p>	<p>Design, Make and Evaluate</p> <p>Structures-To use a wider range of tools and equipment to perform practical tasks [to cut, shape, join and finish accurately.</p> <p><u>Make Load bearing lighthouses</u></p> <p>-Investigate, measure and record the load tolerance of different structures and find ways of improving a structures load- bearing capacity.</p>	<p>Design, Make and Evaluate</p> <p>Food Technology-To understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</p> <p><u>Design and make a West African savoury dish-</u></p> <p>-Understand the source, seasonality and characteristics of a broad range of ingredients.</p> <p>-Use a range of cooking techniques, e.g. selecting and preparing ingredients, application of heat, seasoning dishes, combining ingredients.</p>	<p>Design, Make and Evaluate</p> <p>Electrical and mechanical components.</p> <p>To use electrical systems in their products.</p> <p><u>Design a Light-up information board for Forest School</u></p> <p>-Explore and describe how switches can be used in a range of circuits to control components.</p> <p>-Use computer-based systems to control an increasing range of components</p>	<p>Design, Make and Evaluate</p> <p>Textiles.</p> <p>To research and select appropriate textiles according to their functional properties and aesthetic qualities.</p> <p><u>Explore suitable materials for space suits and create for a model.</u></p> <p>-Create increasingly complex patterns and templates with more than one part that are accurately measured.</p> <p>-Use a broad range of material joining techniques including stitching, mechanical fastenings, heat processes and adhesives.</p>	<p>Design, Make and Evaluate</p> <p>Mechanisms</p> <p><u>Make a Greek themed toy for Reception using CAMS</u></p> <p>-Choose and use a range of sliders and levers accurately to create a range of effects.</p> <p>-Discuss the relationship between a cam and follower, an off-centre cam, a peg cam, a pear-shaped cam and a snail cam.</p>	<p>Design, Make and Evaluate</p> <p>Axels, pulleys and gears</p> <p><u>Design and make a pyramid.</u></p> <p>-To understand and use the properties of materials and the performance of structural elements to achieve functioning solutions.</p> <p>-To design and build a working model where the direction of movement can be controlled using a chassis with a pivoting axle.</p>
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