



# Design & Technology Subject Map

2021 -2022

Key Stage 1	Key Stage 2
<p><b>Design</b></p> <ul style="list-style-type: none"> <li>Design purposeful, functional and appealing products for themselves and others users based on design criteria.</li> <li>Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.</li> </ul> <p><b>Make</b></p> <ul style="list-style-type: none"> <li>Select from and use a range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing).</li> <li>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</li> </ul> <p><b>Evaluate</b></p> <ul style="list-style-type: none"> <li>Explore and evaluate a range of existing products.</li> <li>Evaluate their ideas and products against design criteria.</li> </ul> <p><b>Technical Knowledge</b></p> <ul style="list-style-type: none"> <li>Build structures, exploring how they can be made stronger, stiffer and more stable.</li> <li>Explore and use mechanisms (for example, levers, sliders, wheels and axles) in their products.</li> </ul> <p><b>Cooking and nutrition</b></p> <ul style="list-style-type: none"> <li>Use the basic principles of a healthy and varied diet to prepare dishes.</li> <li>Understand where food comes from.</li> </ul>	<p><b>Design</b></p> <ul style="list-style-type: none"> <li>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.</li> <li>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</li> </ul> <p><b>Make</b></p> <ul style="list-style-type: none"> <li>Select from and use a wider range of tools and equipment to perform practical tasks (for example cutting, shaping, joining and finishing), accurately.</li> <li>Select from and use a wider range of materials, textiles and ingredients, according to their functional properties and aesthetic qualities.</li> </ul> <p><b>Evaluate</b></p> <ul style="list-style-type: none"> <li>Investigate and analyse a range of existing products.</li> <li>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</li> <li>Understand how key events and individuals in design and technology have helped shape the world.</li> </ul> <p><b>Technical Knowledge</b></p> <ul style="list-style-type: none"> <li>Apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> <li>Understand and use mechanical systems in their products (for example gears, pulleys, cams, levers and linkages).</li> <li>Understand and use electrical systems in their products (for example series circuits incorporating switches, bulbs, buzzers and motors).</li> <li>Apply their understanding of computing to programme, monitor and control their products.</li> </ul> <p><b>Cooking and nutrition</b></p> <ul style="list-style-type: none"> <li>Understand and apply the principles of a healthy and varied diet.</li> <li>Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.</li> <li>Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</li> </ul>

# DESIGN AND TECHNOLOGY

Year	Autumn	Spring	Summer
R	<p><b>Topics:</b>  <b>Me and my Community</b>  <b>Autumn</b></p> <ul style="list-style-type: none"> <li>• Exploring tools, materials and techniques</li> <li>• Construction materials</li> <li>• Junk modelling emergency vehicles</li> <li>• Threading</li> </ul>		
	<p><b>Topics:</b>  <b>Once Upon a Time</b>  <b>Sparkle and Shine</b></p> <ul style="list-style-type: none"> <li>• Fairy tale buildings</li> <li>• Making houses for the three little pigs.</li> <li>• Food technology (Making porridge, fruit kebabs, gingerbread biscuits.)</li> <li>• Designing wrapping paper</li> <li>• Wrapping presents</li> <li>• Developing cutting skills.</li> </ul>		
1	<p><b>Moon Zoom</b>            Design and make a model alien spaceship.</p> <p>Explore and evaluate a selection of space related toys - how they work/move/operate/what it can do - how it can be better?</p>	<p><b>Paws, Claws and whiskers</b>            Design and make an enclosure for a particular zoo animal (small groups: different zoo animal enclosures) bring them all together and discuss how to place all the enclosures in the zoo.</p> <p>Design a label for tiger food.</p>	<p><b>Superheroes</b>            Explore superfoods - describes food smells, tastes. Sample distinctive flavours. Follow simple superfood recipe. Discuss origins of ingredients.</p>
	<p><b>Splendid Skies</b>            Make a seasonal picture - using materials available for that season</p> <p>Design and make their own sandwich.</p>	<p><b>Dinosaur Planet</b>            Cut, collage, split pins to make dinosaur egg that opens.</p> <p>Explore an artist and make a class blanket inspired by an artist. Sewing skills to create a pattern.</p>	<p><b>Big Lights, Big Cities</b>            Use colour magic to draw a London vehicle - print on card. Use a sliding mechanism to make a moving picture and evaluate.</p>
2	<p><b>Wriggle and Crawl</b>            Paper plate ladybirds, painting, cutting spots with split pins so wings move.</p> <p>Symmetry - drawing the other half of a mini beast and</p>	<p><b>Towers, Tunnels and Turrets</b>            Castle making</p> <p>Design a castle individually selecting different materials to use            Work within a group, talk and develop ideas into one design for each group</p>	<p><b>Scented Garden</b></p>

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	<p>honeycomb symmetrical patterns.</p> <p>Cutting and sticking mini beasts on a grid and colouring to camouflage.</p>	<p>Select a range of materials and tools to make one castle per group. Look at how they can make stronger Include a drawbridge mechanism and evaluate.</p> <p>Prepare and make a fruit salad and discuss origins of the ingredients.</p> <p><b>Street Detectives</b> <b>Beat, Band and Boogie</b> Make instruments for sensory garden.</p> <p>Design own shake and rain makers. Decorate bottles and fill, evaluate</p> <p>Explore a range of different instruments and look at how they've been made, how they operate and the materials used for them.</p>	<p><b>Land Ahoy</b> Pirate paper plate faces Choose a range of materials, use stronger glue, fabric, felt, wool and beads to thread for braids</p>
3	<p><b>Scrumdidliumptious</b> Make a healthy meal Identify what different foods are used for in our bodies</p> <p>Understand and apply the principles of a healthy and varied diet.</p> <p>Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.</p> <p>Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p>	<p><b>Flow</b> Create 3D model of a water cycle</p>	<p><b>Tribal Tales</b> Creating spears, making shelters (inspired by Stig of the dump)</p> <p>Clay pots inspired by the Beaker folk.</p>
	<p><b>Heroes &amp; Villains</b> Healthy Diet Nutrition</p> <p><b>Mighty Metal</b> Create a large iron man from 3D boxes</p> <p>Wind chimes for sensory garden Look at examples of chimes Design, make, evaluate</p>	<p><b>Urban Pioneers</b> Creating outdoor sensory garden using sustainable materials. Look at Barbara Hepworth, Jim Dine</p>	<p><b>Gods and Mortals</b> Create a Greek meal</p> <p>Create puppets for myths - create own props for Icarus and Daedalus</p>

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4	<p><b>I am warrior</b> To make a shield and helmet - using a wide range of materials and tools.</p>	<p><b>Bottoms, Burps and Bile</b> Prepare a menu of healthy in season snacks</p> <p>Look at and evaluate existing toothpaste packaging. Design own tube of paste and packaging.</p>	<p><b>Traders and Raiders</b> Create their own Viking house to demonstrate what it looks like.</p>
	<p><b>Playlist</b> Research musical instruments and explore how they are made. Make a musical instrument</p>	<p><b>Potions</b> Design a potions bottle label - research existing potion bottles and record good ideas.</p> <p>Make potion bottles Design, make using clay, evaluate</p>	<p><b>Blue Abyss</b> Find out about Corelius Drebbel (inventor of the submarine in 1600's) Create a model of how submarines work using bendy straws and weight.</p>
5	<p><b>Stargazers</b> Design and make a planet.</p> <p><b>Creation</b> Plan/design and make either model or picture choosing appropriate materials to create personal response to one day of creation.</p>	<p><b>Scream machine</b> Use kinetics to build a working model of a rollercoaster. Evaluate models.</p>	<p><b>Off with her head</b> Make detailed sketches of Tudor costume and jewellery and make own pieces.</p>
	<p><b>Pharaohs</b> Draw and decorate Ancient Egyptian artefacts, design and make a canopic jar.</p> <p>Design and make clay cartouche. Make mosaic Egyptian collars using paper plates abd coloured paper.</p>	<p><b>Time Travellers</b> Design, prepare and evaluate a food item to take to a different time period.</p>	<p><b>Beast creator</b> Make a model of a flower manipulating wire and using different craft paper. Create a mini beast hotel.</p>
6	<p><b>Hola Mexico</b> Following a recipe for 'Puncha de Frutas' Tasting Mexican Food</p>	<p><b>Frozen Kingdom</b></p> <p><b>ID</b> Design and create own t-shirt using research and computer aided design</p>	<p><b>Blood Heart</b></p>
	<p><b>Fallen Fields</b> Homework project - create a poppy - memorial/display</p> <p><b>Frozen Kingdom</b></p>	<p><b>Gallery Rebels</b></p>	<p><b>A child's War</b> Food - A 'rationed' meal from WW2</p> <p>Bridges - building bridges - proposed local study</p>