



Design Technology Long-term Overview	AUTUMN	SPRING	SUMMER
Year 1	<p style="text-align: center;"><b>Homes</b></p> <p>Children will learn:</p> <ol style="list-style-type: none"> <li>1. about the various types of houses people live in around the world, as well as the shapes you find in houses.</li> <li>2. to join and combine shapes to make a house.</li> <li>3. how they can create the interior features of a house.</li> <li>4. to design a house using their previously learnt knowledge.</li> <li>5. to create their houses using the knowledge they have previously learnt. to evaluate their work.</li> </ol>	<p style="text-align: center;"><b>Moving Pictures</b></p> <p>Children will learn:</p> <ol style="list-style-type: none"> <li>1. what a moving mechanism is and how to create one.</li> <li>2. what levers and pivots are and how to create this mechanism.</li> <li>3. what a wheel mechanism is and how to create one.</li> <li>4. to design a moving picture that has one of the previously learnt moving mechanisms.</li> <li>5. to follow their designs to create their moving picture.</li> <li>6. to evaluate their own moving pictures.</li> </ol>	<p style="text-align: center;"><b>Eat More Fruit and Vegetables</b></p> <p>Children will learn:</p> <ol style="list-style-type: none"> <li>1. fruits and vegetables.</li> <li>2. to describe the different features of fruits and vegetables.</li> <li>3. about food preparation using different tools safely and using the appropriate associated language.</li> <li>4. about the importance of eating more fruit and vegetables than certain other groups of foods.</li> </ol> <p>to evaluate what they have learnt about fruits and vegetables and their recipe designs.</p>
Year 2	<p style="text-align: center;"><b>Wacky Windmills</b></p> <p>Children will learn:</p> <ol style="list-style-type: none"> <li>1. what a windmill is and identify the different parts they have.</li> <li>2. about windmill bases and what they are made of.</li> <li>3. about windmill sails and what materials are used to make them.</li> <li>4. about different windmills around the worlds and their differences.</li> <li>5. to use a range of craft materials to make their windmill from their own plan. to evaluate the windmill-making process.</li> </ol>	<p style="text-align: center;"><b>Flying Kites</b></p> <p>Children will learn:</p> <ol style="list-style-type: none"> <li>1. about kites made in different countries and what they are used for.</li> <li>2. about materials that could be used to make different kites.</li> <li>3. what a carp kite is and why it is flown on Children's Day in Japan.</li> <li>4. about a diamond kite.</li> <li>5. to use a range of materials to follow their plan and make a diamond kite.</li> <li>6. to evaluate the kite-making process.</li> </ol>	<p style="text-align: center;"><b>Teddy Bear's Picnic</b></p> <p>Children will learn:</p> <ol style="list-style-type: none"> <li>1. about different picnic foods and where they have come from.</li> <li>2. what are the most appropriate foods to take on a picnic.</li> <li>3. to make Teddy Bear Biscuits by following a set of instructions.</li> <li>4. to design a healthy food skewer to take on a picnic.</li> <li>5. to follow their designs to make their food skewers, remembering to be safe and careful.</li> </ol>

			to evaluate their picnic food.
<b>Year 3</b>	<p><b>Functions of Fabric</b></p> <p>Children will learn:</p> <ol style="list-style-type: none"> <li>1. what a fabric is.</li> <li>2. about the differences in natural and synthetic fabrics.</li> <li>3. about different materials and how sustainable they are.</li> <li>4. about different types of stitch and fastenings to join fabrics and what stitch is the most secure.</li> <li>5. what a design brief and design criteria are. to construct and evaluate the bags they have designed.</li> </ol>	<p><b>Moving Monsters</b></p> <p>Children will learn:</p> <ol style="list-style-type: none"> <li>1. about objects that use air to make them work.</li> <li>2. about simple pneumatic systems.</li> <li>3. about the use of pneumatic systems in a moving monster toy/model.</li> <li>4. to develop their ideas about the use of pneumatic systems in a moving monster toy/model.</li> <li>5. to create their moving monster toys/models. to evaluate both their process and their finished product.</li> </ol>	<p><b>Seasonal Food</b></p> <p>Children will learn:</p> <ol style="list-style-type: none"> <li>1. why certain British foods are seasonal and why foods from other parts of the world are available all year round.</li> <li>2. how and when a variety of fruits are produced in Britain, including how farming methods are used to slow down or speed up the ripening process.</li> <li>3. about a variety of vegetables grown in Britain, when they are in season, and why they are important in a healthy diet.</li> <li>4. about the nutritional value of meat, eggs and dairy products.</li> <li>5. why some meats are seasonal and some are available all year round.</li> <li>6. how, where and when fish is farmed or caught in Britain and some issues associated with fishing.</li> </ol> <p>about some unusual foods that are only in season for a brief period each year.</p>
<b>Year 4</b>	<p><b>British Inventors</b></p> <p>Children will learn:</p> <ol style="list-style-type: none"> <li>6. about Alexander Graham Bell and his invention of the telephone.</li> <li>7. about the differences between the internet and the WWW.</li> <li>8. about WB Wilkinson's invention of reinforced concrete and ways that it has been used to build record-breaking buildings.</li> <li>9. about the invention of waterproof fabric and the subsequent invention of the mackintosh.</li> <li>10. which inventions have changed people's lives the most.</li> </ol>	<p><b>Light-Up Signs</b></p> <p>Children will learn:</p> <ol style="list-style-type: none"> <li>1. about the purposes of illuminated signs and ways in which signs may be illuminated.</li> <li>2. how LEDs may be used in simple series circuits (along with a resistor).</li> <li>3. ways in which electrical components in a simple circuit can be partially 'hidden' inside products to make them more attractive.</li> <li>4. about the pros and cons of using different materials in the construction of a decorative light box sign.</li> <li>5. ways in which they can make more permanent circuits to fit and fix inside their finished decorative illuminated light box signs.</li> </ol>	<p><b>Sandwich Snacks</b></p> <p>Children will learn:</p> <ol style="list-style-type: none"> <li>1. about the nutritional content of a variety of sandwiches and fillings.</li> <li>2. identify, taste, describe and sort a variety of different breads and sandwich fillings.</li> <li>3. to devise their own sandwich recipe, selecting bread and filling.</li> <li>4. to make their own sandwiches.</li> </ol> <p>to evaluate their own process as well as their finished product.</p>

		6. ways in which lights in electronic products may be programmed and controlled.	
<b>Year 5</b>	<p style="text-align: center;"><b>Fashion and Textiles</b></p> <p>Children will learn:</p> <ol style="list-style-type: none"> <li>1. how some natural and synthetic textiles are produced and consider their uses in clothing.</li> <li>2. ways in which textiles may be joined and decorated.</li> <li>3. how fashion designers use pattern pieces when making products.</li> <li>4. how design features of pattern pieces are transferred to fabric.</li> <li>5. how to pin and hand-sew fabric pieces together.</li> </ol>	<p style="text-align: center;"><b>Chinese Inventions</b></p> <p>Children will learn:</p> <ol style="list-style-type: none"> <li>1. about the history of the invention of the moveable-type printing press and the ancient process of paper making.</li> <li>2. about the history of the invention of gunpowder and the compass.</li> <li>3. the use of water power when building early machines in ancient China.</li> <li>4. about different materials used to make the sail and the frame of a kite by making prototypes.</li> <li>5. to generate design criteria for their kites and be conscientious in meeting these criteria within their design. to build and evaluate their own kite using the materials they chose.</li> </ol>	<p style="text-align: center;"><b>Burgers</b></p> <p>Children will learn:</p> <ol style="list-style-type: none"> <li>1. about different burgers and restaurants and their nutrition facts.</li> <li>2. how to check the nutrition fact labels.</li> <li>3. different methods for cooking burger patties.</li> <li>4. about the additional ingredients that may be found in burgers, such as vegetables and sauces, as well as accompanying side dishes.</li> <li>5. about a range of burger buns and their suitability.</li> <li>6. to plan and design their own burger. to create their burgers and evaluate the process.</li> </ol>
<b>Year 6</b>	<p style="text-align: center;"><b>Building Bridges</b></p> <p>Children will learn:</p> <ol style="list-style-type: none"> <li>1. how simple bridges are constructed using beams, pillars or piers.</li> <li>2. how trusses are used in bridge design to spread out compression forces.</li> <li>3. how arches are used to spread and redirect compression forces acting on bridges.</li> <li>4. how suspension bridges use tension to support bridge decks spanning large distances.</li> <li>5. to develop criteria for a bridge design that will meet the terms of the brief. ways in which they might test their bridge design once constructed.</li> </ol>	<p style="text-align: center;"><b>Programming Pioneers</b></p> <p>Children will learn:</p> <ol style="list-style-type: none"> <li>1. that many more complex electrical products are controlled using embedded computer systems, often with microcontrollers with specially written programs on them.</li> <li>2. about the work of computer hardware and software engineers, and about some famous computer engineering partnerships.</li> <li>3. how a range of electronic components in products might work.</li> <li>4. how pioneering computer scientists made computers easier to use over time.</li> <li>5. to design a product such as an automatic light or an alarm/door entry buzzer that could be installed in a room.</li> <li>6. more about why and how microcontrollers are used to control electronic products.</li> </ol>	<p style="text-align: center;"><b>Great British Dishes</b></p> <p>Children will learn:</p> <ol style="list-style-type: none"> <li>1. about some national savoury dishes of England, the origin of each one and how healthy it is.</li> <li>2. about the RDA (Recommended Daily Allowance) values for sugar.</li> <li>3. about seasonal fruits as a natural source of sugar for ingredients of desserts.</li> <li>4. how oats, a staple crop in Scotland, are grown, harvested and processed.</li> <li>5. about the importance of sheep farming in Wales and how this has led to lamb becoming a popular ingredient in a lot of Welsh food.</li> <li>6. how and why the cuisines of other countries have influenced British dishes over the years, with a focus on Anglo-Indian food.</li> </ol>

		<ol style="list-style-type: none"><li>7. how to 'debug' a simple program written to control a switch and an LED.</li><li>8. why we make prototype models.</li><li>9. how using models to explain ideas can be interesting and inspiring.</li><li>10. to evaluate their own product designs and design process.</li></ol>	<ol style="list-style-type: none"><li>7. about the shelf life of different products and the difference between 'best before' and 'use by' labels.</li></ol> <p>the steps that need to be taken in order to plan and shop for a specific meal.</p>
--	--	--	---