



## Maryland Design and Technology Progression Map

	Autumn	Spring	Summer
Reception	<p><b>Topic: Our Fabric Faces - Textile Technology</b>  <b>Cross-curricular link: Understanding the World - All About Me</b></p> <p><b>Specific knowledge:</b></p> <ul style="list-style-type: none"> <li>● History of dolls and observe dolls found in different cultures and places from around the world</li> <li>● Exploring Fabrics</li> </ul> <p><b>Specific skills:</b></p> <ul style="list-style-type: none"> <li>● Create a fabric face that represents themselves using different materials</li> <li>● Joining Fabrics</li> <li>● Use key vocabulary</li> <li>● Reflect and evaluate</li> </ul>	<p><b>Topic: Eat More Vegetables (Dips and Dippers) - Cooking and Nutrition</b>  <b>Cross-curricular link: Geography - Seasons</b></p> <p><b>Specific knowledge:</b></p> <ul style="list-style-type: none"> <li>● Explore different times of the years/seasons</li> <li>● Seasonality of vegetables available in Britain</li> <li>● Evaluating different dips from around the world</li> <li>● Healthy Eating - Eatwell Plate</li> <li>● Food Hygiene Rules</li> </ul> <p><b>Specific skills:</b></p> <ul style="list-style-type: none"> <li>● Prepare a simple savoury dish</li> <li>● Use a range of tools and equipment to perform practical tasks (for example, cutting, deseeding)</li> <li>● Learn to use kitchen equipment safely</li> <li>● Hygiene procedures</li> <li>● Use key vocabulary</li> <li>● Reflect and evaluate</li> </ul>	<p><b>Topic: World Structures (Bridges and Buildings) - Construction</b>  <b>Cross-curricular link: Geography - Journeys – Where do we go on holiday?</b></p> <p><b>Specific knowledge</b></p> <ul style="list-style-type: none"> <li>● Discuss what an architect is</li> <li>● Landmarks around the world</li> <li>● Explore famous architects: Zaha Hadid, Norman Foster, Renzo Piano, I. M. Pei, Richard Rogers and Anish Kapoor</li> </ul> <p><b>Specific skills:</b></p> <ul style="list-style-type: none"> <li>● build simple structures: tower, bridge with recyclable materials</li> <li>● Explore how they can make their structure stronger, stiffer and more stable</li> <li>● Use key vocabulary</li> <li>● Reflect and evaluate</li> </ul>



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Year 1	<p><b>Topic:</b> Fly a Kite/ Let's go fly a kite - Construction</p> <p><b>Cross-curricular link:</b> History - My Family History</p> <p><b>Specific knowledge:</b></p> <ul style="list-style-type: none"> <li>● History of Kites</li> <li>● Exploring Materials</li> </ul> <p><b>Specific skills:</b></p> <ul style="list-style-type: none"> <li>● Make a Carp Kite (cutting, glueing, rolling, sticking and decorating)</li> <li>● Create Diamond Kites - explore types of materials and equipment</li> <li>● Use key vocabulary</li> <li>● Reflect and evaluate</li> </ul>	<p><b>Topic:</b> Moving Pictures - Mechanical Systems</p> <p><b>Cross-curricular link:</b> History - Great Explorers</p> <p><b>Specific knowledge:</b></p> <ul style="list-style-type: none"> <li>● Moving Mechanisms (sliders, levers)</li> <li>● Pop Up Mechanism: Rotary Motion</li> <li>● Wheel Mechanisms</li> </ul> <p><b>Specific skills:</b></p> <ul style="list-style-type: none"> <li>● Explore and create products using mechanisms, such as levers, sliders and wheels</li> <li>● Cutting, joining and drawing</li> <li>● Use key vocabulary</li> <li>● Reflect and evaluate</li> </ul>	<p><b>Topic:</b> Teddy Bears Picnic (sandwiches/wraps) - Cooking and Nutrition</p> <p><b>Cross-curricular link:</b> History - Our Local Area</p> <p><b>Specific knowledge:</b></p> <ul style="list-style-type: none"> <li>● History of Sandwiches</li> <li>● Explore different sandwiches from around the world</li> <li>● Explore famous sandwich restaurants</li> <li>● Farmed, Caught and Grown - explore different sandwich/wraps ingredient fillings</li> <li>● Healthy Eating - Eatwell Plate</li> </ul> <p><b>Specific skills:</b></p> <ul style="list-style-type: none"> <li>● Design a sandwich</li> <li>● Draw an exploded diagram</li> <li>● Food preparation - cutting, deseeding, hulling peeling, grating</li> <li>● Learn to use kitchen equipment safely</li> <li>● Hygiene procedures</li> <li>● Use key vocabulary</li> <li>● Reflect and evaluate</li> </ul>



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Year 2	<p><b>Topic: Castles - Drawbridge (Pulley) - Mechanical Systems and Construction</b></p> <p><b>Cross-curricular link: History - Mediaeval Castles</b></p> <p><b>Specific knowledge:</b></p> <ul style="list-style-type: none"> <li>• Features of a castle</li> <li>• Study simple machines (pulleys)</li> </ul> <p><b>Specific skills:</b></p> <ul style="list-style-type: none"> <li>• Simple designing and labelling of castle structure, cutting, sticking, glueing, joining, covering, decorating</li> <li>• Make a moving drawbridge, by making a pulley</li> <li>• Explore the different ways of attaching an axle to the chassis</li> <li>• With help, measure and mark out</li> <li>• Cutting, measuring and joining</li> <li>• Assemble, join and combine materials</li> <li>• Begin to use simple finishing techniques</li> <li>• Use key vocabulary</li> <li>• Reflect and evaluate</li> </ul>	<p><b>Topic: Bread (Making 17th Century Bread) - Cooking and Nutrition</b></p> <p><b>Cross-curricular link: History - The Great Fire of London</b></p> <p><b>Specific knowledge:</b></p> <ul style="list-style-type: none"> <li>• History of Bread</li> <li>• Different types of bread from different countries and its purpose and cultural impact</li> <li>• Healthy eating (Food group)</li> <li>• Investigating breads ingredients found in bread and their origins</li> <li>• Food hygiene</li> </ul> <p><b>Specific skills:</b></p> <ul style="list-style-type: none"> <li>• Bake the 17th century bread</li> <li>• Learn to use kitchen equipment safely</li> <li>• Hygiene procedures</li> <li>• use a range of food ingredients</li> <li>• Measuring ingredients using measuring cups</li> <li>• Use key vocabulary</li> <li>• Reflect and evaluate</li> </ul>	<p><b>Topic: Seaside - Puppets - Textile Technology</b></p> <p><b>Cross-curricular link: Geography - Seaside</b></p> <p><b>Specific knowledge:</b></p> <ul style="list-style-type: none"> <li>• History of puppets</li> <li>• Explore puppets from different cultures and countries</li> <li>• Analyse different types of puppets</li> <li>• History of British seaside puppet shows</li> <li>• Understand different materials according to their properties</li> <li>• Recognize different ways to join</li> </ul> <p><b>Specific skills:</b></p> <ul style="list-style-type: none"> <li>• Sewing skills - basic sewing techniques (e.g. starting, ending, basic running stitch, over stitch)</li> <li>• Demonstrate how to cut, shape and join fabric to make a simple product</li> <li>• Simple designing and labelling of puppet</li> <li>• Joining, cutting, sewing, decorating, glueing</li> <li>• Make hand glove puppet</li> <li>• Use key vocabulary</li> <li>• Reflect and evaluate</li> </ul>



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Year 3	<p><b>Topic: Moving Monsters (Dinosaurs) - Mechanical Systems</b></p> <p><b>Cross-curricular link: History - Prehistoric Britain</b></p> <p><b>Specific knowledge:</b></p> <ul style="list-style-type: none"> <li>History of pneumatics and discuss inventors and inventions that involve pneumatics</li> <li>Elijah Maccoy, Lonnie Johnson and John Boyd Dunlop</li> </ul> <p><b>Specific skills:</b></p> <ul style="list-style-type: none"> <li>Design a moving monster plan</li> <li>Use key vocabulary</li> <li>Reflect and evaluate</li> </ul>	<p><b>Topic: Roman Purses - Textile Technology</b></p> <p><b>Cross-curricular link: History - Romans</b></p> <p><b>Specific knowledge:</b></p> <ul style="list-style-type: none"> <li>History of money containers</li> <li>Analyse how money containers are constructed</li> </ul> <p><b>Specific skills:</b></p> <ul style="list-style-type: none"> <li>Sewing skills (running stitch, overstitch, backstitch, zig zag stitch, whip stitch, cross-stitch, french knot, blanket stitch)</li> <li>Join textiles with an appropriate sewing technique</li> <li>Design and create a Roman money container (drawstring purses)</li> <li>Create a prototype of your money purse out of newspaper</li> <li>Use key vocabulary</li> <li>Reflect and evaluate</li> </ul>	<p><b>Topic: Ancient Egyptian Moving Book - Mechanical Systems</b></p> <p><b>Cross-curricular link: History - Ancient Egyptians</b></p> <p><b>Specific knowledge</b></p> <ul style="list-style-type: none"> <li>History on a particular Ancient Egyptian topic</li> <li>Study paper engineers</li> <li>Learn about different mechanisms and how they create different movement, eg slider, hinge, flaps and spins</li> <li>Research moving mechanisms</li> <li>Observe paper concertina and pop-out objects</li> </ul> <p><b>Specific skills:</b></p> <ul style="list-style-type: none"> <li>Create a prototype</li> <li>Cutting, joining and drawing</li> </ul>



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Year 4	<p><b>Topic: Alarms</b>  <b>Cross-curricular link: Science - Electricity</b></p> <p><b>Specific knowledge:</b></p> <ul style="list-style-type: none"> <li>History of electricity</li> <li>Inventors and engineers who helped progress electrical technology</li> <li>History of alarms</li> <li>Identifying the components such as bulbs, wire, switches and their functions to make a simple working circuit</li> </ul> <p><b>Specific skills:</b></p> <ul style="list-style-type: none"> <li>Constructing various electric circuits with different components</li> <li>technical drawing and annotation of torch</li> <li>Learn scientific circuit symbols</li> <li>Design an alarm system</li> <li>Use key vocabulary</li> <li>Reflect and evaluate</li> </ul>	<p><b>Topic: Greek Meze (Global Foods)</b>  <b>Cross-curricular link: History – Ancient Greece</b></p> <p><b>Specific knowledge:</b></p> <ul style="list-style-type: none"> <li>Global Food - Greek Food</li> <li>Health benefits of food and a balanced diet</li> <li>Evaluating Ancient Greek Diet/Foods</li> <li>Analyse a Greek meze/platter</li> </ul> <p><b>Specific skills:</b></p> <ul style="list-style-type: none"> <li>Labelling, design, make and evaluate a Greek meze/platter</li> <li>Cutting, deseeding, hulling peeling, grating, mixing different vegetables</li> <li>Following a hummus recipe</li> <li>Food hygiene safety</li> <li>Use key vocabulary</li> <li>Reflect and evaluate</li> </ul>	<p><b>Topic: Making Mini Greenhouses</b>  <b>Cross-curricular link: Science - Living things and their habitats</b></p> <p><b>Specific knowledge</b></p> <ul style="list-style-type: none"> <li>Climate change and Global Goals</li> <li>Eco-saving practices around the world</li> <li>Explore greenhouses</li> </ul> <p><b>Specific skills:</b></p> <ul style="list-style-type: none"> <li>Generate ideas and design mini greenhouse</li> <li>Use the success criteria to create a greenhouse</li> <li>Create a prototype</li> <li>Make their mini greenhouses according to their plans and design criteria</li> <li>Use key vocabulary</li> <li>Reflect and evaluate</li> </ul>



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Year 5	<p><b>Topic: Moving Toys/ Automata Viking Ship</b>  <b>Cross-curricular link: History - Vikings</b></p> <p><b>Specific knowledge:</b></p> <ul style="list-style-type: none"> <li>● Research viking ships</li> <li>● Moving toys</li> <li>● Cam Mechanisms - cams create movement and use mechanical systems</li> </ul> <p><b>Specific skills:</b></p> <ul style="list-style-type: none"> <li>● Understand and use mechanical systems in their products (cams)</li> <li>● Designing and make a moving toy (Automata Viking Ship)</li> <li>● Use key vocabulary</li> <li>● Reflect and evaluate</li> </ul>	<p><b>Topic: Caribbean Cuisine - Ginger Cake (Global Foods)</b>  <b>Cross-curricular link: History – Windrush Generation</b></p> <p><b>Specific knowledge:</b></p> <ul style="list-style-type: none"> <li>● Global Food</li> <li>● Foods that originate globally and from the Caribbean</li> <li>● Discuss the history of Caribbean cuisine</li> <li>● Understand basic ingredients for Jamaican Ginger Cake</li> </ul> <p><b>Specific skills:</b></p> <ul style="list-style-type: none"> <li>● Study different baking methods for making cakes (whisking method/ rubbing in method/ melting method)</li> <li>● Analyse taste of ginger cake</li> <li>● Design and make their own Jamaican Ginger Cake with alterations</li> <li>● Food hygiene</li> <li>● Accurately follow a recipe for making Jamaican ginger cake, with their design variations</li> <li>● Use key vocabulary</li> <li>● Reflect and evaluate</li> </ul>	<p><b>Topic: Bird House Builder</b>  <b>Cross-curricular link: Science - Living Things and Their Habitat</b></p> <p><b>Specific knowledge</b></p> <ul style="list-style-type: none"> <li>● Research British birds and their habitats</li> <li>● Investigate bird houses</li> </ul> <p><b>Specific skills:</b></p> <ul style="list-style-type: none"> <li>● Design a birdhouse</li> <li>● Create an exploded diagram</li> <li>● Create a prototype</li> <li>● Constructing a birdhouse</li> <li>● Use key vocabulary</li> <li>● Reflect and evaluate</li> </ul>



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Year 6	<p><b>Topic: Electronic Pioneers</b>  <b>Cross-curricular link: Science - Animals including humans (Link to exercise and healthy living)</b></p> <p><b>Specific knowledge:</b></p> <ul style="list-style-type: none"> <li>• Research electronics devices and pedometers</li> <li>• Critically evaluate the design and technological purpose of pedometers</li> </ul> <p><b>Specific skills:</b></p> <ul style="list-style-type: none"> <li>• Sketch and label functions, features and parts of pedometers</li> <li>• Research pedometers</li> <li>• Conduct market research and surveys of pedometers</li> <li>• Program a micro:bit and use code to set up their pedometer</li> <li>• Test out their product.</li> <li>• Use key vocabulary</li> <li>• Reflect and evaluate</li> </ul>	<p><b>Topic: Eat the Seasons (Seasonal Foods)</b>  <b>Cross-curricular link: Science - Animals including humans (Link to exercise and healthy living)</b></p> <p><b>Specific knowledge:</b></p> <ul style="list-style-type: none"> <li>• Seasonality/Seasonal Produce in the UK</li> <li>• Debate efficacy of transporting fruit and vegetables globally</li> <li>• Healthy diet</li> </ul> <p><b>Specific skills:</b></p> <ul style="list-style-type: none"> <li>• Design a couscous seasonal vegetable salad</li> <li>• Food preparation - cutting, deseeding, hulling peeling, grating</li> <li>• Food hygiene safety</li> <li>• Use key vocabulary</li> <li>• Reflect and evaluate</li> </ul>	<p><b>Topic: Fashion and Textiles</b>  <b>Cross-curricular link: Geography - Fair Trade - Does fairtrade help create a better world for us?</b></p> <p><b>Specific knowledge</b></p> <ul style="list-style-type: none"> <li>• Research how are clothes made</li> <li>• Links to fairtrade and throw away fashion trends</li> <li>• Discover how cotton is made into fabric</li> <li>• How fabrics are joined by sewing, glueing, riveting or with fasteners e.g. zips or laces</li> <li>• Research appliqué as a decorative technique</li> </ul> <p><b>Specific skills:</b></p> <ul style="list-style-type: none"> <li>• Recycling and upcycling old clothing</li> <li>• Joining and sewing (running stitch, overstitch, cross-stitch, backstitch, blanket stitch, herringbone stitch, french knot)</li> <li>• Decorating products</li> <li>• Measure, mark and cut</li> <li>• Use key vocabulary</li> <li>• Reflect and evaluate</li> </ul>