

## Design & Technology

YEAR 3	<p style="text-align: center;"><b>AUTUMN FOCUS</b></p> <p style="text-align: center;"><b>Packaging:</b> <i>Different varieties and purposes of packaging. Design own net for Christmas package/product</i></p> <p style="text-align: center;"><b>VISIT/TRIP/DISPLAY:</b></p> <p style="text-align: center;"><b>FINAL PRODUCT:</b> Christmas gift package</p> <p style="text-align: center;"><b>Opportunities for Exploring Diversity:</b> Diwali: Rangoli patterns</p>	<p style="text-align: center;"><b>SPRING FOCUS</b></p> <p style="text-align: center;"><b>Pneumatics:</b> <i>Sculpture &amp; environment relationship. Where would your sculpture fit in St Albans?</i></p> <p style="text-align: center;"><b>VISIT/TRIP/DISPLAY:</b></p> <p style="text-align: center;"><b>FINAL PRODUCT:</b> Use a pneumatic system to create a moving monster</p> <p style="text-align: center;"><b>Opportunities for Exploring Diversity:</b> Chinese New Year (Story Telling) World Book Day</p>	<p style="text-align: center;"><b>SUMMER FOCUS</b></p> <p style="text-align: center;"><b>Healthy &amp; Varied Diet/ Sandwich:</b> <i>(Link to Science unit - food groups)</i></p> <p style="text-align: center;"><b>VISIT/TRIP/DISPLAY:</b></p> <p style="text-align: center;"><b>FINAL PRODUCT:</b> Design a healthy sandwich showing awareness of food groups and has nutritional benefits!</p> <p style="text-align: center;"><b>Opportunities for Exploring Diversity:</b> Understand significance of Commonwealth related to coronation chicken filling</p>
Artist/Texts/websites	<p><b>D &amp; T:</b></p> <p><a href="https://www.twinkl.co.uk/resource/t2-m-937-match-the-3d-net-worksheet">https://www.twinkl.co.uk/resource/t2-m-937-match-the-3d-net-worksheet</a></p> <p><a href="https://www.twinkl.co.uk/resource/t-n-710-net-of-a-cube">https://www.twinkl.co.uk/resource/t-n-710-net-of-a-cube</a></p>	<p><b>D &amp; T:</b></p> <p>Twinkl: All about pneumatics PowerPoint</p> <p>Twinkl: Pneumatic Monster activity</p> <p><a href="http://resources.hwb.wales.gov.uk/VTC/pneumatic_pumps/eng/resources/act1.html">http://resources.hwb.wales.gov.uk/VTC/pneumatic_pumps/eng/resources/act1.html</a></p> <p><a href="https://www.youtube.com/watch?v=BFYkCz1q-b0">https://www.youtube.com/watch?v=BFYkCz1q-b0</a></p>	<p><b>D &amp; T:</b></p> <p><a href="https://www.youtube.com/watch?v=7k6n46xBTxs">https://www.youtube.com/watch?v=7k6n46xBTxs</a></p> <p><a href="https://www.youtube.com/watch?v=rNZmA0h-AhA">https://www.youtube.com/watch?v=rNZmA0h-AhA</a></p>
Skills	<p><b>NC POS D &amp; T:</b></p> <p>Design</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 discussions, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</li> </ul> <p>Make</p> <ul style="list-style-type: none"> <li>Select from and use a wider range of tools and equipment to perform practical tasks accurately.</li> <li>Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.</li> </ul>	<p><b>NC POS D &amp; T:</b></p> <p>Design</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 discussions, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</li> </ul> <p>Make</p> <ul style="list-style-type: none"> <li>Select from and use a wider range of tools and equipment to perform practical tasks accurately.</li> <li>Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.</li> </ul>	<p><b>NC POS D &amp; T:</b></p> <p>Design</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 discussions, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</li> </ul> <p>Make</p> <ul style="list-style-type: none"> <li>Select from and use a wider range of tools and equipment to perform practical tasks accurately.</li> <li>Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.</li> </ul>

	<p>Evaluate</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>Technical Knowledge</p> <ul style="list-style-type: none"> <li>Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.</li> </ul>	<p>Evaluate</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>Technical Knowledge</p> <ul style="list-style-type: none"> <li>Understand and use mechanical systems in their products</li> </ul>	<p>Evaluate</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>Cooking &amp; Nutrition</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 predominately 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>
<b>Key Vocabulary</b>	<b>Net, packaging,</b> design, materials, card, glue, folds, purpose, <b>computer-aided design,</b> pattern, diagram, make, evaluate, structure, build, strong, <b>stable,</b> 3D shape, <b>reinforce, stiffen,</b>	Construction, <b>pneumatics, mechanical system,</b> purpose, <b>proto-type,</b> investigate, evaluate, <b>air pressure, control movements,</b> moving, <b>components, assemble, durability, syringe, plunger, deflate, inflate,</b> construct, <b>pressure, tubing,</b>	Cooking, <b>nutrition, nutrient,</b> food, sandwich, filling, healthy eating, <b>varied diet, balanced diet, savoury,</b> preparing, washing, cutting, <b>dicing, peeling, slicing,</b> flavour, <b>food groups – dairy, protein, carbohydrates, dairy, fats,</b>
<b>Opportunities for Learning / Cross Curricular</b>	<b>RE – Seasonal/Christmas theme</b>  Art – Designing  Maths – Shape/net of box	English – The True Story of the Three Little Pigs  Science – Pneumatics: air pressure  Art and D & T – Design and construction	Science – Animals including humans: Balanced diet & food groups  History – Earl of Sandwich!  <b>Geography - Commonwealth</b>
<b>Learning Overview / WALTs</b>	<p><b>Week 1</b></p> <ul style="list-style-type: none"> <li>WALA: the different uses of packaging.</li> </ul> <p>KQ What is the purpose of packaging? Why is it used?</p> <p><b>Week 2</b></p> <ul style="list-style-type: none"> <li>WAL: what materials are used in packaging?</li> </ul> <p>KQ How many different materials used in packaging can you name?</p> <p><b>Week 3</b></p> <ul style="list-style-type: none"> <li>WALA: packaging being made form nets.</li> </ul> <p>KQ What is a net? KQ Can you link the net to the shape?</p> <p><b>Week 4 &amp; 5</b></p> <ul style="list-style-type: none"> <li>WALT: create our own packaging design. (Education City – 3D Designs - Nets)</li> </ul> <p>KQ What 3D shape would you like to use? KQ What design/colours/shapes/ patterns do you think would work best?</p> <p><b>Week 6</b></p> <ul style="list-style-type: none"> <li>WALT: evaluate our work.</li> </ul> <p>KQ Were you pleased with your design? If you could change anything, what would it be?</p>	<p><b>Week 1</b></p> <ul style="list-style-type: none"> <li>WALT: know how air pressure can be used to produce and control movement.</li> </ul> <p>KQ Can you inflate the balloon?</p> <p><b>Week 2</b></p> <ul style="list-style-type: none"> <li>WALT: compare the effectiveness of different pneumatic systems.</li> </ul> <p>KQ Which syringe do you think will be most effective and why?</p> <p><b>Week 3</b></p> <ul style="list-style-type: none"> <li>WALT: design a moving monster.</li> </ul> <p>KQ Can you link your monster to a character from a traditional tale?</p> <p><b>Week 4 &amp; 5</b></p> <ul style="list-style-type: none"> <li>WALT: use a pneumatic system.</li> </ul> <p>KQ Is the syringe connected to the correct part?</p> <p><b>Week 6</b></p> <ul style="list-style-type: none"> <li>WALT: evaluate our design!</li> </ul> <p>KQ Was your design effective? Did the, 'pneumatics' part of your design work?</p>	<p><b>Week 1</b></p> <ul style="list-style-type: none"> <li>WALT: know the history of the sandwich</li> </ul> <p>KQ How did the sandwich get it's name?</p> <p><b>Week 2</b></p> <ul style="list-style-type: none"> <li>WALT: know food can be divided into different groups and that sandwiches can form part of a healthy diet.</li> </ul> <p>KQ What foods are in each group?</p> <p><b>Week 3</b></p> <ul style="list-style-type: none"> <li>WALT: carry out market research.</li> </ul> <p>KQ What will your questions tell you?</p> <p><b>Week 4 &amp; 5</b></p> <ul style="list-style-type: none"> <li>WALT: design and plan a sandwich for the Queen's jubilee. (Birthday after 2022)</li> </ul> <p>KQ Does your sandwich provide a balanced meal?</p> <p><b>Week 6</b></p> <ul style="list-style-type: none"> <li>WALT: create a healthy sandwich.</li> </ul> <p>KQ Did you follow your design? Were you happy with how it tasted?</p>