

## Year 4 Design and Technology Coverage



<b><i>'As Designers, we plan, test and create so we can solve relevant problems to meet the needs of ourselves and those around us'</i></b>			
Unit:	The Romans are Coming	A Recipe for Success	And the Band Played On
National Curriculum	<ul style="list-style-type: none"> <li>• Understand and use lever and linkage mechanisms.</li> <li>• Distinguish between fixed and loose pivots.</li> <li>• Know and use technical vocabulary relevant to the project.</li> </ul>	<ul style="list-style-type: none"> <li>• Understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs and buzzers.</li> <li>• Apply their understanding of computing to program and control their products.</li> <li>• Know and use technical vocabulary relevant to the project.</li> </ul>	<ul style="list-style-type: none"> <li>• Understand and use pneumatic mechanisms.</li> <li>• Know and use technical vocabulary relevant to the project.</li> </ul>
Subject Focus	D&T topic - Levers and linkages Make a moving Christmas Card	D&T topic - Simple circuits and switches Make a burglar alarm D&T topic - Make a Pizza	D&T topic - Pneumatics Make a mechanism to raise and lower a lifeboat.
Top Ten / Fab Five	<ul style="list-style-type: none"> <li>• We will learn about a range of lever and linkage mechanisms</li> <li>• We will accurately measure, mark out, cut and join a range of materials.</li> <li>• We will make replicas of the systems we learn about</li> <li>• We will be able to discuss our work using the correct vocabulary</li> <li>• We will use what we have learned to make a moving Christmas card / decoration.</li> </ul>	<ul style="list-style-type: none"> <li>• We will learn / recap how to make simple series circuits</li> <li>• We will learn about short circuits and how to avoid them</li> <li>• We shall use sketches, cross-sectional and exploded diagrams to share our ideas.</li> <li>• We shall make a variety of switches using a range of materials</li> <li>• We shall use what we have learned to make a working burglar alarm</li> <li>• We will undertake product research into favourite pizza flavours</li> <li>• We will learn how to make a simple pizza base, measuring the ingredients</li> <li>• We will consider allergies through discussion</li> </ul>	<ul style="list-style-type: none"> <li>• We will look at a range of objects that use air to make them work</li> <li>• We shall make simple pneumatic systems using balloons, tubes and bottles</li> <li>• We will look at a range of prepared pneumatic systems using syringes</li> <li>• We will use joined tubes and syringes of different sizes to see the effects</li> <li>• We will use what we have learned to make a pneumatic system to raise and lower a model lifeboat.</li> </ul>

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<p>Unit specific Vocabulary</p>	<p>mechanism, lever, linkage, pivot, slot, bridge, guide system, input, process, output linear, rotary, oscillating, reciprocating user, purpose, function prototype, design criteria, innovative, appealing, design brief</p>	<p>series circuit, fault, connection, toggle switch, push-to-make switch, push-to-break switch, battery, battery holder, bulb, bulb holder, wire, insulator, conductor, crocodile clip control, program, system, input device, output device user, purpose, function, prototype, design criteria, innovative, appealing, design brief knead, mix, measure, flavour, taste, allergy</p>	<p>series circuit, fault, connection, toggle switch, push-to-make switch, push-to-break switch, battery, battery holder, bulb, bulb holder, wire, insulator, conductor, crocodile clip control, program, system, input device, output device user, purpose, function, prototype, design criteria, innovative, appealing, design brief</p>
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