

## 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 - 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> </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>
Unit specific Vocabulary	mechanism, lever, linkage, pivot, slot, bridge, guide system, input, process, output linear, rotary, oscillating, reciprocating user, purpose, function	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	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

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