

**Year 9 – Design and Technology**

<p><b>Curriculum intent</b></p>	<p>The aim of the curriculum is that through the delivery of the rubrics and a project-based approach learners are prepared for work and life in the 21<sup>st</sup> century by allowing them to participate confidently and successfully in an increasingly technological world. Key concepts are highlighted at the start of the rubrics and are recorded in learner books in order to clearly convey the project intent. Projects have been designed to develop learner's knowledge and understanding of the key areas of the Design and Technology subject. A complete design and make project based around wood as a material group is rotated termly. This exposes them to opportunities for skill development in research, sketching, foam modelling and basic workshop tasks. The ability to design for others is considered here, as well as the use of CAD/CAM to enhance quality.</p>					
<p><b>Term</b></p>	<p><b>Autumn 1</b></p>	<p><b>Autumn 2</b></p>	<p><b>Spring 1</b></p>	<p><b>Spring 2</b></p>	<p><b>Summer 1</b></p>	<p><b>Summer 2</b></p>
<p><b>Knowledge</b></p>	<p><b><u>Bottle Balance</u></b>  Health and Safety training forms the basis of the first lesson. The project offers the opportunity to explore more formal drawing styles, with simple orthographic drawing used to convey the concept of scale and accuracy. The use of modelling using blue foam allows learners to begin gaining an appreciation for material thickness and how complexity impacts on their practical ability.</p>	<p><b><u>Bottle Balance</u></b>  Following modelling the practical outcome is intended to be simple in nature, whilst allowing learners to gain an understanding of how basic hand tools are used.</p>	<p><b><u>Bottle Balance</u></b>  Health and Safety training forms the basis of the first lesson. The project offers the opportunity to explore more formal drawing styles, with simple orthographic drawing used to convey the concept of scale and accuracy. The use of modelling using blue foam allows learners to begin gaining an appreciation for material thickness and how complexity impacts on their practical ability.</p>	<p><b><u>Bottle Balance</u></b>  Following modelling the practical outcome is intended to be simple in nature, whilst allowing learners to gain an understanding of how basic hand tools are used.</p>	<p><b><u>Bottle Balance</u></b>  Health and Safety training forms the basis of the first lesson. The project offers the opportunity to explore more formal drawing styles, with simple orthographic drawing used to convey the concept of scale and accuracy. The use of modelling using blue foam allows learners to begin gaining an appreciation for material thickness and how</p>	<p><b><u>Bottle Balance</u></b>  Following modelling the practical outcome is intended to be simple in nature, whilst allowing learners to gain an understanding of how basic hand tools are used.</p>



					complexity impacts on their practical ability.	
<b>Skills</b>	<ul style="list-style-type: none"> <li>• Graphics, covering sketching in 2D and 3D</li> <li>• Technical drawing; mathematical terms and measurement</li> <li>• Isometric drawing of simple components</li> <li>• Modelling in foam to produce scale prototypes</li> <li>• Graphics based covering sketching in 2D and 3D</li> <li>• Quality outcomes produced using workshop skill</li> </ul>	<ul style="list-style-type: none"> <li>• Graphics, covering sketching in 2D and 3D</li> <li>• Technical drawing; mathematical terms and measurement</li> <li>• Isometric drawing of simple components</li> <li>• Modelling in foam to produce scale prototypes</li> <li>• Graphics based covering sketching in 2D and 3D</li> <li>• Quality outcomes produced using workshop skill</li> </ul>	<ul style="list-style-type: none"> <li>• Graphics, covering sketching in 2D and 3D</li> <li>• Technical drawing; mathematical terms and measurement</li> <li>• Isometric drawing of simple components</li> <li>• Modelling in foam to produce scale prototypes</li> <li>• Graphics based covering sketching in 2D and 3D</li> <li>• Quality outcomes produced using workshop skill</li> </ul>	<ul style="list-style-type: none"> <li>• Graphics, covering sketching in 2D and 3D</li> <li>• Technical drawing; mathematical terms and measurement</li> <li>• Isometric drawing of simple components</li> <li>• Modelling in foam to produce scale prototypes</li> <li>• Graphics based covering sketching in 2D and 3D</li> <li>• Quality outcomes produced using workshop skill</li> </ul>	<ul style="list-style-type: none"> <li>• Graphics, covering sketching in 2D and 3D</li> <li>• Technical drawing; mathematical terms and measurement</li> <li>• Isometric drawing of simple components</li> <li>• Modelling in foam to produce scale prototypes</li> <li>• Graphics based covering sketching in 2D and 3D</li> <li>• Quality outcomes produced using workshop skill</li> </ul>	<ul style="list-style-type: none"> <li>• Graphics, covering sketching in 2D and 3D</li> <li>• Technical drawing; mathematical terms and measurement</li> <li>• Isometric drawing of simple components</li> <li>• Modelling in foam to produce scale prototypes</li> <li>• Graphics based covering sketching in 2D and 3D</li> <li>• Quality outcomes produced using workshop skill</li> </ul>



<b>Assessments</b>	Progress Test 1, including extended written answer. Orthographic and Isometric drawings	Practical outcome - model and working prototype.	Progress Test 1, including extended written answer. Orthographic and Isometric drawings	Practical outcome - model and working prototype.	Progress Test 1, including extended written answer. Orthographic and Isometric drawings	Practical outcome - model and working prototype.
<b>Enrichment</b>	<a href="https://www.bbc.co.uk/bitesize/subjects/zfr9wmn">https://www.bbc.co.uk/bitesize/subjects/zfr9wmn</a>	<a href="https://www.bbc.co.uk/bitesize/subjects/zfr9wmn">https://www.bbc.co.uk/bitesize/subjects/zfr9wmn</a>	<a href="https://learning.sciencemuseumgroup.org.uk/resources/?subject=design-and-technology">https://learning.sciencemuseumgroup.org.uk/resources/?subject=design-and-technology</a>	<a href="https://www.bbc.co.uk/teach/gcse-national-5-design-and-technology/z7vkt39">https://www.bbc.co.uk/teach/gcse-national-5-design-and-technology/z7vkt39</a>	<a href="https://www.bbc.co.uk/teach/gcse-national-5-design-and-technology/z7vkt39">https://www.bbc.co.uk/teach/gcse-national-5-design-and-technology/z7vkt39</a>	<a href="https://www.bbc.co.uk/bitesize/guides/znmnb9q/revision/1">https://www.bbc.co.uk/bitesize/guides/znmnb9q/revision/1</a>