

## CURRICULUM OVERVIEW: DESIGN AND TECHNOLOGY YEAR 9

Year	Term	Unit/s of Work	Assessment	Skills to be covered
9	1	<p><b>Graphic Design</b></p> <ul style="list-style-type: none"> <li>• Introduction to Sketching</li> <li>• Tone &amp; Shading</li> <li>• Rendering for Design</li> <li>• Isometric Sketching &amp; Drawing</li> </ul> <p><b>Night Light</b></p> <ul style="list-style-type: none"> <li>• Electronic theory</li> <li>• Common electronic components</li> <li>• CAD/CAM</li> <li>• Assembling electronic circuits</li> </ul>	<ul style="list-style-type: none"> <li>• Development of key graphical techniques</li> <li>• Using key technique in familiar and unfamiliar situations</li> </ul> <ul style="list-style-type: none"> <li>• Further investigation into the process of metal casting and finishing techniques</li> <li>• Design ideas – Ability to generate a range of suitable design proposals to suit the design brief</li> <li>• Development – Ability to develop a chosen design idea and justify improvements</li> <li>• Making – Ability to produce a quality and functioning final product</li> <li>• Evaluation – Students will evaluate their final product against the specification and design brief</li> </ul>	<ul style="list-style-type: none"> <li>• Rendering</li> <li>• Isometric Sketching</li> <li>• Isometric Drawing</li> </ul> <ul style="list-style-type: none"> <li>• Using 2D Design</li> <li>• Using the laser cutter</li> <li>• Soldering &amp; electronic components</li> <li>• Joining unfamiliar materials</li> <li>• Using pre bought components to assemble products</li> </ul>

	2	<p><b>Complete Night Light Project</b></p> <p><b>Textiles Project</b></p> <ul style="list-style-type: none"> <li>• Textile materials</li> <li>• Smart materials</li> <li>• Introduction to CAD/CAM with textiles</li> <li>• Traditional and modern textile processes</li> </ul>	<ul style="list-style-type: none"> <li>• Further investigation into materials types</li> <li>• Design ideas – Ability to generate a range of suitable design proposals to suit the design brief</li> <li>• Making – Ability to produce a quality and functioning final product</li> <li>• Evaluation – Students will evaluate their final product against the specification and design brief</li> </ul>	<ul style="list-style-type: none"> <li>• Cutting and shaping fabrics</li> <li>• Joining fabrics</li> <li>• Decorating and manipulating fabrics</li> </ul>
	3	<p><b>Board Game Project</b></p> <ul style="list-style-type: none"> <li>• Research Existing Products</li> <li>• Theme and Mood Board</li> <li>• Sustainability and the Environment</li> <li>• Material Properties</li> <li>• Design Development</li> <li>• Workshop Practices</li> <li>• Quality Control</li> <li>• Testing and Evaluation</li> </ul>	<ul style="list-style-type: none"> <li>• Investigating the design task: Research includes a target user profile and in depth analysis of existing products</li> <li>• Development of design proposals: Production of 8 initial and original design solutions followed by further development of 3 viable designs. This will include 3D modelling</li> <li>• Making: Students will be assessed on their final product which will include the quality of finish and rigour.</li> <li>• Testing and Evaluation: Written piece evaluating the final product against the specification including third party feedback.</li> </ul>	<ul style="list-style-type: none"> <li>• 2D design</li> <li>• Measuring and marking out using a tri square , an engineering rule and a marking gauge</li> <li>• Finger, mitre and dovetail joints</li> <li>• Fitting a hinge (optional)</li> <li>• Finishing using abrasive papers, wax, varnish or paint (depending on the design)</li> <li>• Cutting using a scroll, tenon and a coping saw</li> </ul>