

<p><b>This half term: Skills, Knowledge and Understanding to be developed:</b></p> <ul style="list-style-type: none"> <li><b>SKILLS:</b> Each individual will be able to use the iterative design process to design and make a light project.</li> <li><b>KNOWLEDGE:</b> Students will understand and know about the importance of iterative design to design products. They will also know about different joint that they have studied and to be used in their project.</li> <li><b>UNDERSTANDING:</b> Students will show their understanding by designing, developing and manufacturing a light project.</li> </ul> <p><i>It must be noted that due to the practical nature of this module that all students are working at a different pace so some changes to the Learning programme is inevitable.</i></p>			<p><b>Key Terms / Words:</b></p> <p>Brief, Specification, Quality control, Tolerance, Samples, Drawing, Tools, Saw, Attach, Shaping, Laser Cutter, Comb, Lathe Turning, Pineboard, Innovative, Joining, Jig, Joints, Steam Bending, Adhesives.</p>
<p><b>Week 1 Learning Outcomes:</b></p> <p><b>1. Students will.....</b>understand the criteria for the new unit by being given a design brief to work from. Students will demonstrate their thinking skills by Mind Mapping ideas for their Light. Students will need to consider the following statements – Who / What / When / Where / Why. They will need to summarise their choices and design 1-2 ideas for their light.</p> <p><b>2 &amp; 3. Students will.....</b>understand about different types of wooden joints. They will demonstrate their design ideas in their sketchbooks. They will need to Complete and label their ideas for their Pine wood light with a Laser etched design. They will then be able to develop one into a final drawing and render it to a high quality using skills learnt previously in unit 1. Students will start their light project by measuring, marking and cutting the 4 needed joints: lap, butt, finger and screw &amp; plug. They will also need a housing joint for an acrylic sieve to fit in their light. They will demonstrate their practical skills and knowledge to produce different wooden joints. A demonstration will be given and all steps undertaken will be logged and explained in their sketchbooks including advantages / disadvantages to each joint. Sample pieces will need to be tested for strength and toughness.</p>		<p><b>Success Criteria:</b></p> <ol style="list-style-type: none"> <li>Understand what a Design Brief is.</li> <li>Understand the importance of knowing who their client is and how it will shape their designing. Understand what is meant by iterative design.</li> </ol>	<p><b>Homework W1</b></p>
<p><b>Week 2 Learning Outcomes:</b></p> <p><b>4. Students will.....</b>demonstrate their practical skills by measuring, marking and cutting a comb joint. A demonstration will be given and students will use previous knowledge to produce a strong, successful joint. They will need to cut the pins and chisel / file them to fit accurately.</p> <p><b>5. Students will....</b>demonstrate their practical skills by measuring, marking and cutting a lap joint. A demonstration will be given and students will use previous knowledge to produce a strong, successful joint. They will need to cut the joint for it to fit accurately. If they have not finished their lap joint, they need to complete it in this lesson.</p>		<p><b>Success Criteria:</b></p> <ol style="list-style-type: none"> <li>They will be able to select the correct marking out tools and mark out dimensionally accurate.</li> <li>They will be able to cut and assemble with accuracy.</li> <li>They will understand about the importance of H &amp; S.</li> </ol>	<p><b>Homework W2</b></p>
<p><b>Week 3 Learning Outcomes:</b></p> <p><b>6. Students will....</b>demonstrate their practical skills by measuring, marking and cutting a mitre or a screw and plug butt joint. A demonstration will be given and students will use previous knowledge to produce a strong, successful joint. They will need to drill / countersink 2 of the 4 holes or cut an angle correctly for an accurate joint.</p> <p><b>7 &amp; 8. Students will....</b>demonstrate their practical skills by measuring, marking and cutting a dowel joint. A jig can be used for accurate drilling and they will need to measure and cut a 5mm dowel to size. A demonstration will be given and students will use previous knowledge to produce a strong, successful joint.</p>		<p><b>Success Criteria:</b></p> <ol style="list-style-type: none"> <li>They will be able to select the correct marking out tools and mark out dimensionally accurate.</li> <li>They will be able to cut and assemble with accuracy.</li> <li>They will understand about the importance of H &amp; S.</li> </ol>	<p><b>Homework W3</b></p> <p><b>Research task – Airbus UK???</b></p>
<p><b>Week 4 Learning Outcomes:</b></p> <p><b>9 &amp; 10. Students will.....</b>know how a lathe is used to turn materials and a Milling machine to create a slot / edge. They will be shown how to set it up and plane the material ready for turning. They will need to record the work in their sketchbooks as theory. Students will learn about the principles of producing wood products using the following processes: jointing, veneering,</p>	<p style="text-align: center;"></p> <p style="text-align: center;"><u>APP:</u> <b>Lathe work &amp; Steam bending</b></p>	<p><b>Success Criteria:</b></p> <ol style="list-style-type: none"> <li>They will understand about different processes / forming</li> <li>They will use the information in their SA</li> </ol>	<p><b>Homework W4</b></p>

<p>laminating and steam bending.</p>	<div style="border: 1px solid blue; padding: 2px; width: fit-content; margin: 0 auto;">Summative Assessment:</div> <div style="border: 2px solid red; padding: 5px; width: fit-content; margin: 5px auto;">Grade:</div>		
<p><b>Week 5 Learning Outcomes:</b></p> <p><b>11. Students will..... undertake their third SA based on previous knowledge and Lathe work / Steam bending.</b></p> <p><b>12. Students will.....demonstrate their practical skills by cleaning / preparing their joints to perfectly fit ready for gluing. They will understand about the programme Techsoft 2D Design and design their etched logo for the front of their light. All steps need to be recorded as a step by step plan. They will choose their colour of Acrylic and Laser cut and etch it to size using the correct tolerances / speeds. The sieve can be put in the light and the frame glued using clamps / a wooden vice. A piece of hardboard will need to be screwed on the back and a coat of oil applied as a finish.</b></p>	<div style="text-align: center;">  </div> <p style="text-align: center;"> <u>Summative Assessment:</u>  <b>Light Project</b>  <b>(Practical)</b> </p> <div style="border: 1px solid blue; padding: 2px; width: fit-content; margin: 0 auto;">Summative Assessment:</div> <div style="border: 2px solid red; padding: 5px; width: fit-content; margin: 5px auto;">Grade:</div>	<p><b>Success Criteria:</b></p> <ol style="list-style-type: none"> <li>1. They will be able to select the correct marking out tools and mark out dimensionally accurate.</li> <li>2. They will be able to cut and assemble with accuracy.</li> <li>3. They will understand about the importance of H &amp; S.</li> </ol>	<p><b>Homework W5</b></p>
<p><b>Week 6 Learning Outcomes:</b></p> <p><b>12. Students will.....demonstrate their practical skills by completing their practical outcome. They will create a pictorial plan of how they made their project showing all tools used and steps undertaken. Students will then write an Evaluation of their light. They will answer what went well, what new skills that they learnt and how they would improve it in future. Students will also need to complete a CAD Techsoft 2D Design idea and a Google Sketchup 3D idea of their final design.</b></p>		<p><b>Success Criteria:</b></p> <ol style="list-style-type: none"> <li>1. They will be finalising their product and summarising their project in Evaluation form and a final plan.</li> </ol>	<p><b>Homework W6</b></p>

**This programme is subject to change.**