

|                     | Autumn 1<br>7 weeks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Autumn 2<br>7 weeks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Spring 1<br>5 weeks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Spring 2<br>5 weeks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Summer 1<br>5 weeks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Summer 2<br>7 weeks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Learning Objectives | <p><b>Design and Technology Skills:</b><br/>Theory:</p> <ol style="list-style-type: none"> <li>What is good Design</li> <li>The role and responsibility of a designer</li> <li>Design Strategies/Process</li> <li>Material Properties/forces</li> <li>Timber - Origin and impact</li> <li>Timber - Hard wood/soft wood</li> <li>Timber - manufactured boards</li> </ol> <p>Project 1: Design Communication practice:<br/>Investigation<br/><b>Design</b></p> <ul style="list-style-type: none"> <li>Isometric</li> <li>1 point perspective</li> <li>2-point perspective</li> <li>Oblique</li> </ul> <p>Manufacture<br/>Evaluation</p> <p>Project 2: Timber Christmas Tea Light<br/><b>Investigation</b></p> <ul style="list-style-type: none"> <li>Analysis of the design brief</li> <li>Research</li> <li>Specification</li> </ul> <p><b>Design</b></p> <ul style="list-style-type: none"> <li>Thumbnails – Christmas light</li> <li>Card model</li> <li>Developed version</li> </ul> <p>Manufacture<br/><b>Evaluation</b></p> <ul style="list-style-type: none"> <li>Thumbnails against specification</li> <li>Feedback</li> </ul> | <p><b>Design and Technology Skills:</b><br/>Theory:</p> <ol style="list-style-type: none"> <li>Polymers</li> <li>Paper Board</li> <li>Textiles</li> <li>Metals</li> <li><b>Topic Test</b></li> <li>Electronic</li> <li>Topic test review</li> </ol> <p>Project 2: Timber Christmas Tea Light<br/>Investigation<br/>Design</p> <ul style="list-style-type: none"> <li>Final Design</li> </ul> <p><b>Manufacture</b></p> <ul style="list-style-type: none"> <li>Manipulate 1 meter of pine into a high-quality finished outcome</li> </ul> <p><b>Evaluation</b></p> <ul style="list-style-type: none"> <li>Peer feedback</li> <li>Final project WWW/EBI – what have I learnt</li> </ul> | <p><b>Design and Technology Skills:</b><br/>Theory:</p> <ol style="list-style-type: none"> <li>Cad/Cam</li> <li>New Emerging technology – Industrial revolution</li> <li>New Emerging technology – Automation</li> <li>Crowdfunding/Fairtrade/ Cooperatives</li> <li>Laser cutter set up</li> <li>Sustainability – 6rs</li> <li>Sustainability - LCA</li> </ol> <p>Project 3:CAD/CAM- 2D<br/>Laser cutter<br/>Investigation:<br/>Design:<br/>Personal keyring<br/>Make:<br/>Acrylic Keyring<br/>Evaluation:</p> | <p><b>Design and Technology Skills:</b><br/>Theory:</p> <ol style="list-style-type: none"> <li>Energy Generation – fossil fuels</li> <li>Energy Generation – Alternative energies</li> <li>Energy Generation – Storage</li> <li><b>Topic Test</b></li> <li>Topic test review</li> </ol> <p>Project 4: Scaled Plywood furniture<br/><b>Investigation:</b></p> <ul style="list-style-type: none"> <li>Design Brief</li> <li>Research</li> <li>Specification</li> </ul> <p><b>Design:</b></p> <ul style="list-style-type: none"> <li>Sketch models/Thumbnails</li> </ul> <p>Project 4B: Plywood manipulation techniques</p> <ul style="list-style-type: none"> <li>Wood Joints</li> <li>Lamination</li> <li>Finishing techniques</li> </ul> | <p><b>Design and Technology Skills:</b><br/>Theory:</p> <ol style="list-style-type: none"> <li>Work of others</li> <li>Mechanisms – Gears</li> <li>Mechanisms – Cam and Follower</li> <li>Mechanism – Levers and linkages</li> <li>Mechanism – Pully &amp; Belts</li> </ol> <p>Project 4: Scaled Plywood furniture<br/><b>Investigation:</b></p> <ul style="list-style-type: none"> <li>Further research</li> </ul> <p><b>Design:</b></p> <ul style="list-style-type: none"> <li>Initial design ideas</li> <li>Cardboard development</li> <li>Final design</li> <li>Manufacturing specification</li> </ul> <p><b>Make:</b></p> <ul style="list-style-type: none"> <li>Scaled seating – flatpack</li> <li>Combination of wood joints</li> </ul> <p>Evaluation:</p> <ul style="list-style-type: none"> <li>Testing against specification</li> <li>Evaluation with modification suggestions</li> </ul> | <p><b>Design and Technology Skills:</b><br/>Theory:</p> <ol style="list-style-type: none"> <li>Production Aid</li> <li>Scale of production</li> <li>Sustainability – 6rs</li> <li>Sustainability - LCA</li> </ol> <p>Project 4: Scaled Plywood furniture<br/><b>Make:</b></p> <ul style="list-style-type: none"> <li>Scaled seating – flatpack</li> <li>Combination of wood joints</li> </ul> <p>Evaluation:</p> <ul style="list-style-type: none"> <li>Final evaluation of outcome www/ebi – What have I learnt</li> </ul> |
| Assessment          | <ul style="list-style-type: none"> <li>Homework - marked in line with the Kingsdale ESD code - Depth of knowledge/presentation</li> <li>Isometric Camera drawing</li> <li>Thumbnail Creativity</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <ul style="list-style-type: none"> <li>Homework - marked in line with the Kingsdale ESD code Depth of knowledge/presentation</li> <li>Topic Test – week 5</li> <li>✓ Covered Theory</li> <li>Quality of outcome</li> <li>Machine and tool confidence</li> <li>H&amp;S independence</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                         | <ul style="list-style-type: none"> <li>Homework - marked in line with the Kingsdale ESD code Depth of knowledge/presentation</li> <li>CAM outcome complexity and independence</li> <li>Grasp of user needs and wants features in final design</li> </ul>                                                                                                                                                                                                                                                        | <ul style="list-style-type: none"> <li>Homework - marked in line with the Kingsdale ESD code Depth of knowledge/presentation</li> <li>Topic Test – week 5</li> <li>✓ Covered Theory</li> <li>Quality and accuracy of outcome.</li> <li>Application of finish and decoration</li> <li>Suitable scale and function</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                              | <div>End of year assessment week<br/>May 2025 and final reports</div> <ul style="list-style-type: none"> <li>Homework - marked in line with the Kingsdale ESD code Depth of knowledge/presentation</li> <li>Exploded drawing and Orthographic drawing of automaton</li> <li>Presentation complicity and confidence</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <ul style="list-style-type: none"> <li>Parents Evening</li> <li>Homework - marked in line with the Kingsdale ESD code Depth of knowledge/presentation</li> <li>Completion of project</li> <li>Match to designer style to final outcome</li> <li>Functionality</li> </ul>                                                                                                                                                                                                                                                    |
| Extra Curricular    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <ol style="list-style-type: none"> <li>Lunch club/support for practical work progress</li> <li>After School Theory support</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <ol style="list-style-type: none"> <li>Lunch club/support for practical work progress</li> <li>After School Theory support</li> </ol>                                                                                                                                                                                                                                                                                                                                                                           | <ol style="list-style-type: none"> <li>Lunch club/support for practical work progress</li> <li>After School Theory support</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <ol style="list-style-type: none"> <li>Lunch club/support for practical work progress</li> <li>After School Theory support</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <ol style="list-style-type: none"> <li>Lunch club/support for practical work progress</li> <li>After School Theory support</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                       |