

<b>Subject: DT</b>	<b>Year 7 - Bauhaus inspired Desk Tidies</b>	<b>Year 8 - Retro Robots</b>	<b>Year 9 – Problem Solving</b>
Key Knowledge	<ul style="list-style-type: none"> <li>• Materials and material properties</li> <li>• Health and safety in a workshop</li> <li>• How to use basic machinery and hand tools</li> <li>• Designers and their influence</li> <li>• Design movements through history and impact on the wider world</li> </ul>	<ul style="list-style-type: none"> <li>• Creating different mechanisms to solve problems</li> <li>• Using more advanced joining techniques to create movable parts</li> <li>• Understanding client briefs and customer needs</li> <li>• Use of technology to bring ideas to life</li> <li>• Material working properties</li> </ul>	<ul style="list-style-type: none"> <li>• How to conduct appropriate research in order to find a way to solve a problem by creating a product.</li> <li>• Use of ICT in Design</li> <li>• Quality control and scales of production</li> <li>• How material properties can be used to aid design decisions</li> </ul>
Progression	<p>Students will be entering secondary education with basic knowledge depending on the resources available to them previously. Projects are designed to allow for students with prior knowledge to increase their independence and for those with limited knowledge to catch up with their peers and gain an enthusiasm for the subject area.</p>	<p>Students will be building on their knowledge of a range of materials. Selecting appropriate materials based on their working properties.</p> <p>Students will use their understanding of design to create models which fulfil a design brief and meet a customer's requirements.</p>	<p>Students will bring together all their knowledge of materials, processes, design techniques to design and make a product which solves a specific problem.</p> <p>Students will be encouraged to test ideas and find their own inspiration to aid them to work confidently on an independent project.</p>
Challenge	<p>Students are challenged to solve problems about structure, balance and joining techniques independently.</p>	<p>Students will be creating a 'Retro Robot' with movable parts a challenging task. However, those who require an extra level of challenge will be asked to create a robot which can transform into another object using a series of mechanisms.</p>	<p>Students will be challenged to solve a problem around the house completely independently and within a tight time frame. Those requiring an extra level of challenge will be guided towards more complex ideas and challenged to create a commercially viable outcome.</p>
Skills	<ul style="list-style-type: none"> <li>• Isometric drawing</li> <li>• Use of annotations to communicate ideas</li> <li>• Cutting, drilling and sanding techniques used to create and finish pieces to a high standard</li> </ul>	<ul style="list-style-type: none"> <li>• Orthographic Drawing</li> <li>• Use of presentation skills</li> <li>• More complex and accurate manufacturing techniques</li> <li>• Use of stop motion video and editing techniques</li> </ul>	<ul style="list-style-type: none"> <li>• Making independent decisions about manufacturing outcomes</li> <li>• Use of advanced manufacturing techniques and joining methods such as finger joints</li> <li>• Creating high level finishes</li> </ul>

	<ul style="list-style-type: none"> <li>• Use of analysis to assess their own work and make decisions</li> <li>• Google SketchUp</li> </ul>	<ul style="list-style-type: none"> <li>• Use of ACCESS FM for analysis</li> <li>• Evaluation and testing skills</li> </ul>	<ul style="list-style-type: none"> <li>• Working towards a tight deadline</li> <li>• Using a range of problem-solving skills</li> <li>• Building resilience</li> </ul>
Local/Global	Links to materials and environmental issues	Using environmental and social considerations to produce work that will appeal to a wide audience.	Understanding different perspectives and designing for inclusive living.
Assessment	Design work and practical work are both assessed for progress against target levels.	Design work and practical work are both assessed for progress against target levels.	Design work and practical work are both assessed for progress against target levels.