

Year 9 Design Technologies “Auto-weld” Overview

AUTO-WELD			VICTORIAN CURRICULUM
“Auto Term”	Unit name	Learning focus	Strands and substrands
Week 1 - 5	Engines	<p>Operation of, inspecting, testing, dismantling, measuring, assembling, servicing, of everything related to engines.</p> <p>Develop an understanding for the correct use of tools and equipment. How and why engines are made the way they are.</p>	<p>Engineering principles and systems Investigate and make judgements on how the characteristics and properties of materials are combined with force, motion and energy to create engineered solutions</p> <p>Materials and technologies specialisations Investigate and make judgements on how the characteristics and properties of materials, systems, components, tools and equipment can be combined to create designed solutions</p>
Week 6 - 8	Threads.	<p>Threads are made and repaired using taps & dies, thread files, die nuts etc. Broken bolts removed and stripped threads repaired with ‘ezeouts’</p> <p>Develop an understanding of thread production and repair.</p>	<p>Investigating Critique needs or opportunities to develop design briefs and investigate and select an increasingly sophisticated range of materials, systems, components, tools and equipment to develop design ideas</p>
Week 9 - 10	Spokes.	<p>Noting the way wheels are laced. Dismantle several wheels fully, then re-spoke the wheel and adjust all spokes to reduce or remove any sign of a buckle.</p> <p>Develop the skills and confidence to be able to perform a major or minor wheel repair.</p>	<p>Producing Work flexibly to safely test, select, justify and use appropriate technologies and processes to make designed solutions</p>

'Weld Term'	Oxy/Acetylene	Learning to use OXY welding equipment	<p>Engineering principles and systems Investigate and make judgements on how the characteristics and properties of materials are combined with force, motion and energy to create engineered solutions</p>
Week 1-3		Develop the knowledge to safely set, light up, use and shut down correctly.	
Week 4-5	ARC Welding.	<p>Learning to use ARC welding equipment.</p> <p>Develop the skills to be able to use a 'stick' welder for a variety of uses</p>	<p>Materials and technologies specialisations Investigate and make judgements on how the characteristics and properties of materials, systems, components, tools and equipment can be combined to create designed solutions</p>
Week 6-10	MIG welding.	<p>Learning to use MIG welding equipment.</p> <p>Develop the skills and knowledge to be able to use a MIG for a variety of uses</p>	<p>Generating Apply design thinking, creativity, innovation and enterprise skills to develop, modify and communicate design ideas of increasing sophistication</p> <p>Evaluating Evaluate design ideas, processes and solutions against comprehensive criteria for success recognising the need for sustainability</p> <p>Planning and managing Develop project plans to plan and manage projects individually and collaboratively taking into consideration time, cost, risk and production processes</p>