



**GEMDTM - ASSESSMENT OUTLINE**  
**MATERIALS DESIGN & TECHNOLOGY/GENERAL YEAR 11: 2021**  
**UNIT 1 AND UNIT 2**



Assessment type	Assessment type weighting	Assessment task weighting	When/due date/ start and submission date	Assessment task	Syllabus content
Design	25%	10%	Term 1 Weeks 1-5	Task 1:	<p><b>Task 1: Folding Shovel Design Folio</b>            Students are producing a project from a set of supplied workshop plans to demonstrate correct interpretation of a plan. They will design their own handle. Students will create a folio that demonstrates understanding of the required skills and techniques and demonstrate prior knowledge and understanding</p> <p><b>Production Management</b></p> <ul style="list-style-type: none"> <li>• Production plan</li> <li>• Use ongoing evaluation techniques: diary, journal or portfolio notes and use of photography to record ongoing progress/decision changes made to the project</li> </ul> <p><b>Skills and Techniques</b></p> <ul style="list-style-type: none"> <li>• ICT, portfolio development and communication skills</li> <li>• Context appropriate drawings and relevant technical information to produce the final product</li> <li>• Workroom/studio terminology appropriate to context</li> <li>• Select appropriate materials and calculate the quantities of materials required to complete the project</li> <li>• With supervision, operate machinery and tools appropriate to context</li> </ul> <p><b>Safety</b></p> <ul style="list-style-type: none"> <li>• Correct use of personal protective equipment (PPE) where applicable</li> </ul> Occupational safety and health (OSH) practices appropriate to tasks being undertaken in workshops
		15%	Term 2 Weeks 6 - 11		<p><b>Task 2: BBQ Design Folio</b>            Students are to design their own portable BBQ with parameters outlined in the brief</p> <p><b>Design Fundamentals and Skills</b></p> <ul style="list-style-type: none"> <li>• Investigate</li> <li>• Devise</li> </ul>



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					<ul style="list-style-type: none"> <li>• Elements of design</li> <li>• Evaluate</li> </ul> <p><b>Skills and Techniques</b></p> <ul style="list-style-type: none"> <li>• ICT, portfolio development and communication skills</li> <li>• Context appropriate drawings and relevant technical information to produce the final product</li> <li>• Workroom/studio terminology appropriate to context</li> <li>• Select appropriate materials and calculate the quantities of materials required to complete the project</li> <li>• With supervision, operate machinery and tools appropriate to context</li> </ul> <p><b>Safety</b></p> <ul style="list-style-type: none"> <li>• Correct use of personal protective equipment (PPE) where applicable</li> <li>• Occupational safety and health (OSH) practices appropriate to tasks being undertaken in workshops</li> </ul> <p><b>Production Management</b></p> <ul style="list-style-type: none"> <li>• Production plan</li> <li>• Ongoing Evaluation Techniques; Diary, journal portfolio notes to record ongoing progress/decision changes made to project.</li> </ul>
<b>Production</b>	<b>60%</b>	<b>10%</b>	<b>Term 1 Weeks 1 - 4</b>	<b>Task 3: Folding Tray</b>	<p><b>Safety</b></p> <ul style="list-style-type: none"> <li>• Correct use of personal protective equipment (PPE) where applicable</li> <li>• Occupational safety and health (OSH) practices appropriate to tasks being undertaken in workshops</li> </ul> <p><b>Skills and Technology</b></p> <p><b>Skills and Techniques</b></p> <ul style="list-style-type: none"> <li>• Read and correctly interpret plans/patterns/templates</li> <li>• Use appropriate conventions and workroom terminology</li> <li>• Select and apply appropriate and accurate marking out tools and techniques</li> <li>• Apply skills in using a range of tools for sheet metal fabrication</li> </ul> <p>Demonstrate workshop clean up procedures</p>



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		15%	Term 2 Weeks 6 - 11	<i>Task 4: Folding Shovel</i>	<p><b>Safety</b></p> <ul style="list-style-type: none"><li>• Correct use of personal protective equipment (PPE) where applicable</li><li>• Occupational safety and health (OSH) practices appropriate to tasks being undertaken in workshops</li></ul> <p><b>Skills and Technology</b> <b>Skills and Techniques</b></p> <ul style="list-style-type: none"><li>• Read and correctly interpret plans/patterns/templates</li><li>• Use appropriate conventions and workroom terminology</li><li>• Select and apply appropriate and accurate marking out tools and techniques</li><li>• Apply skills in using a range of tools for sheet metal fabrication</li><li>• Apply skills using a range of tools and machinery, with safe machine operation</li><li>• Correct use of machine speeds and cutting fluids</li><li>• Cutting patterns or shapes using gas or electric cutting equipment</li><li>• Use permanent joining and non-permanent fixing of metals</li><li>• Use hand held grinding tools</li><li>• Apply different metal finishes</li></ul> <p>Demonstrate workshop clean up procedures</p>



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		20%	<b>Term 3</b> <b>Weeks 1 - 10</b> <b>Term 4</b> <b>Weeks 1 - 4</b>	<i>Task 5: BBQ</i>	<b>Safety</b> <ul style="list-style-type: none"> <li>• Correct use of personal protective equipment (PPE) where applicable</li> <li>• Occupational safety and health (OSH) practices appropriate to tasks being undertaken in workshops</li> </ul> <b>Skills and Technology</b> <b>Skills and Techniques</b> <ul style="list-style-type: none"> <li>• Read and correctly interpret plans/patterns/templates</li> <li>• Use appropriate conventions and workroom terminology</li> <li>• Select and apply appropriate and accurate marking out tools and techniques</li> <li>• Apply skills in using a range of tools for sheet metal fabrication</li> <li>• Apply skills in using a range of tools and machinery, including safe machine operation</li> <li>• Cutting patterns or shapes using gas or electric cutting equipment</li> <li>• Correct use of machine speeds and cutting fluids</li> <li>• Use permanent joining and non-permanent fixing of metals</li> <li>• Use hand held grinding tools</li> <li>• Apply different metal finishes</li> </ul> Demonstrate workshop clean up procedures
		5%	<b>Term 1</b> <b>Weeks 1 - 4</b>	<i>Task 6: Oxy Welding Exercises</i>	<ul style="list-style-type: none"> <li>• Correct use of personal protective equipment (PPE) where applicable</li> <li>• Occupational safety and health (OSH) practices appropriate to tasks being undertaken in workshops</li> </ul> <b>Nature and properties of Materials</b> Permanent and non-permanent fixings
		5%	<b>Term 2</b> <b>Weeks 6-11</b>	<i>Task 7: MIG Welding Exercises</i>	<b>Safety</b> <ul style="list-style-type: none"> <li>• Correct use of personal protective equipment (PPE) where applicable</li> <li>• Occupational safety and health (OSH) practices appropriate to tasks being undertaken in workshops</li> </ul> <b>Nature and properties of Materials</b> Permanent and non-permanent fixings
		5%	<b>Term 2</b> <b>Weeks 6-11</b>	<i>Task 8: Arc Welding Exercises</i>	<b>Safety</b> <ul style="list-style-type: none"> <li>• Correct use of personal protective equipment (PPE) where applicable</li> </ul>



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					<ul style="list-style-type: none"> <li>Occupational safety and health (OSH) practices appropriate to tasks being undertaken in workshops</li> </ul> <b>Nature and properties of Materials</b> Permanent and non-permanent fixings
<b>Response</b>	<b>15%</b>	3%	Term 2 Weeks 8 – 9 – 10-11	<i>Task 9: Types of Metals and Uses work sheet</i>	<b>Materials</b> <b>Nature and Properties of Materials</b> <ul style="list-style-type: none"> <li>Identification of origins of common ferrous and non-ferrous metals</li> <li>Classification of the properties of common ferrous and non-ferrous metals by weld properties and workability</li> </ul>
		3%	Term 3 Weeks 5 – 6 - 7	<i>Task 10: Recycling of Metals work sheet</i>	<b>Materials in context</b> <ul style="list-style-type: none"> <li><b>Identification of environmental considerations</b></li> <li>3 Rs- reduce, re-use, recycle</li> <li>Ways to reduce waste</li> <li>Ways to re-use and recycle</li> </ul>
		3%	Term 3 Weeks 8 – 9 - 10	<i>Task 11: Steel Production work sheet</i>	<b>Nature of Properties of Materials</b> <ul style="list-style-type: none"> <li>Identification of common metal sections</li> <li>Identification of common associated materials used with metal</li> </ul>
		3%	Term 1 Weeks 1 - 4	<i>Task 12: Metal Careers work sheet</i>	This allows students to investigate the careers that are associated with Metals and helps students to identify possible careers. Many students do TAFE courses and it ensures that they are doing a course that is relevant to the career path that they are following
		3%	Term 4 Weeks 1 - 4	<i>Task 13: Metal Characteristics work sheet</i>	<ul style="list-style-type: none"> <li><b>Identification of different metal finishes from the following range of finishes</b></li> <li>Painted</li> <li>Galvanised</li> <li>Plastic or powder coatings</li> </ul> lacquer



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Total	100%	100%			
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**PLEASE NOTE:** ASSESSMENT DATES MAY CHANGE DUE TO SCHOOL COMMITMENTS AND CHANGES TO THE SCHOOL CALENDAR