MERBEIN P-10 DESIGN, CREATIVITY TECHNOLOGY COURSE OUTLINE TECHNOLOGY METALS (Vic Curriculum based)

Year	Investigating & Generating	Producing	Analysing & Evaluating
P			
1			
2			
3			
4			
5			
6			
7	**Class work consists of:** • Materials and Limitations • Tools and Equipment • Safety in the workshop • Measurement using Millimeters • Skill development using basic hand and power tools	• Marking out using –Engineers square/Rule/Chalk/Pencil/Center punch • Cutting materials using – Scroll saws/Guillotine • Drilling holes using- Pedestal drill/ Pistol drill • Changing shape of Plastic using-Strip Heater/Oven • Scrolling metal for wrought iron • Use of File, Sandpaper, steel wool to prepare materials Projects: • Photo Frames (Plastics) • Candle Holder (Metals) • Electronic Siren (Electronics)	• Introduction to the Design process including; Investigation, Generating, Producing a and Evaluating.

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8	**Class work consists of:** • Individual development of a Design including logical steps involved in constructing a project • Creating working drawings of the project. Include all measurements/angles/joint structure/ • Measurement details of length, Width, thickness using Millimetres • Considerations of different materials and the limitations or suitability to the task • Creating working drawings of the project-Include all measurements/angles/joint structure and material selected.	• Producing a metal creation of the student choice, involving use of basic hand and power tools (One – two more complex tools used in the design) • Safe use of tools and equipment the workshop • Skill development using basic hand and power tools (One –two more complex tools used in the design)	• Detailed procedure for the project is written to display understanding and planning. • Evaluation of tools procedures used and suitability of the materials chosen/skill level displayed and improvements needed.

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9	**Class work:** • Create a Design Brief create a design that they have considered different materials, researched and developed a solution to fit the need of this item. Ergonomics, colours, strength and process selection must be discussed within the research displayed in the folio. Considerations of different materials and the limitations or suitability of the application • Creating working drawings of the project including all measurements/angles/joint structure and material selected., annotated with measurement using Millimetres is assessed to 3mm tolerance • Detailed procedure for the project is written to display understanding and planning • Producing one or more metal creation of the student choice, involving use of basic	• Producing a metal creation of the student choice, involving use of basic hand and power tools (One –two more complex tools used in the design) • Safe use of tools and equipment the workshop (More complex tools and equipment are identified and the dangers that exist when using this type of equipment are discussed. All Personal Protective Equipment is identified and worn during use of these tools. Safety is specifically taught to satisfy OHS requirements)	• Evaluation of tools used and suitability of the materials chosen/skill level displayed and improvements needed. • MIG TIG Oxygen/Acetylene Welding, associated cutting and shaping tools and techniques undertaken by the students are analysed and evaluated with teacher input into improvement techniques • Evaluate ergonomics, colours, strength and process selection and sustainability of the finished production

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	or suitability to the task.		
10	**Class work:** • Create a Design Brief create a design that they have considered different materials, researched and developed a solution to fit the need of this item. Ergonomics, colours, strength and process selection must be discussed within the research displayed in the folio. • Considerations of different materials and the limitations or suitability to the task • Creating working drawings of the project including all measurements/angles/joint structure and material selected., annotated with measurement using Millimetres is assessed to 3mm tolerance • Detailed procedure for the project is written to display ~~understanding and planning~~ Producing one or more metal creation of the students	• Producing a metal creation of the student choice, involving use of basic hand and power tools (One –two more complex tools used in the design) • Safe use of tools and equipment the workshop (More complex tools and equipment are identified and the dangers that exist when using this type of equipment are discussed. All Personal Protective Equipment is identified and worn during use of these tools. Safety is specifically taught to satisfy OHS requirements)	• Evaluation of tools used and suitability of the materials chosen/skill level displayed and improvements needed. • MIG TIG Oxygen/Acetylene Welding, associated cutting and shaping tools and techniques undertaken by the students are analysed and evaluated with teacher input into improvement techniques • Evaluate ergonomics, colours, strength and process selection and sustainability of the finished production

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