

Engineering Skills 2024 v1.2

C1: Practical demonstration — Sheet metal working

Sample assessment instrument

This sample has been compiled by the QCAA to assist and support teachers in planning and developing assessment instruments for individual school settings.

Schools develop internal assessments for each Applied subject, based on the learning and assessment described in the syllabus.

Student name

Student number

Teacher

Issued

Due date

Overall result

Result					Comment
A	B	C	D	E	

Conditions

Technique	Practical demonstration
Unit	Unit option C: Sheet metal working
Duration	10 hours of class time or 3–4 weeks
Response requirements	Practical demonstration of sheet metal working • Practical demonstration: the skills and procedures used in 3–5 production processes Documentation • Multimodal (at least two modes delivered at the same time): up to 3 minutes, 6 A4 pages, or equivalent digital media
Individual/group	Individual
Other	Students can develop their responses in class time and their own time. This is an individual task. Students have access to materials, tools and equipment as required to complete the assessment. Products constructed for Assessment A1 must be separate from the product component of Assessment A2.
Resources	Drawings and technical information to be provided by the classroom teacher

Context

In the sheet metal industry, the manufacture of sheet metal items involves the utilisation of a diverse range of materials for sheet metal purposes. Tradespeople work with a range of sheet metal tools, machinery, and equipment and they recognise that products are manufactured using drawings and technical information that detail the expected quality standards of the final product, e.g. size, type and grade of metal, tolerances, fits, finish and joints.

Task

Manufacture a sheet metal drill bit box and document and reflect on your selection of industry practices, production skills and procedures through a multimodal.

To complete this task you must:

- interpret a provided drawing with technical information
- identify the skills required to manufacture a sheet metal product
- select industry practices, production skills and procedures
- annotate sketches, photographs and/or video footage to capture decision-making
- demonstrate production skills and procedures used in 3–5 production processes
- reflect on the industry practices, and production skills and procedures used to manufacture the sheet metal product.

Stimulus

Detailed drawings and technical information provided by your teacher, e.g.

- orthographic views of the drill bit box
- isometric pictorials of the drill bit box
- assembly drawings or exploded views of the drill bit box
- technical information from industry-standard drawings and documents.

Checkpoints

- ☐ Term 1 Week 6: Receive feedback on marking out and cutting of the drill bit box, prior to assembly.
- ☐ Term 1 Week 9: Submit drill bit box and multimodal.

Authentication strategies

- Your teacher will provide class time for task completion.
- You must submit a declaration of authenticity.
- Your teacher will ensure class cross-marking occurs.

Scaffolding

Further scaffolding information will be provided by your teacher, e.g.

- materials, tools and equipment risk assessments
- Safety operating procedures (SOPs)
- Material data safety sheets (MSDSs).

Instrument-specific standards (C1): Practical demonstration — Sheet metal working

Demonstrate	Interpret	Select	Evaluate	Grade
The student response has the following characteristics:				
proficient demonstration of sheet metal working industry practices, and production skills and procedures when manufacturing a sheet metal product	insightful and justified interpretation of sheet metal working drawings and technical information when manufacturing a sheet metal product	discerning selection of sheet metal working industry practices, and production skills and procedures when manufacturing a sheet metal product	insightful and justified evaluation of sheet metal working production skills, procedures and a sheet metal product	A
efficient demonstration of sheet metal working industry practices, and production skills and procedures when manufacturing a sheet metal product	detailed and supported interpretation of sheet metal working drawings and technical information when manufacturing a sheet metal product	thorough selection of sheet metal working industry practices, and production skills and procedures when manufacturing a sheet metal product	detailed and supported evaluation of sheet metal working production skills, procedures and a sheet metal product	B
demonstration of sheet metal working industry practices, and production skills and procedures when manufacturing a sheet metal product	interpretation of sheet metal working drawings and technical information when manufacturing a sheet metal product	selection of sheet metal working industry practices, and production skills and procedures when manufacturing a sheet metal product	evaluation of sheet metal working production skills, procedures and a sheet metal product	C
rudimentary demonstration of production skills and procedures when manufacturing an incomplete sheet metal product with obvious inaccuracies.	narrow and unsupported reference to drawings when manufacturing an incomplete sheet metal product with obvious inaccuracies.	inconsistent selection of production skills and procedures when manufacturing an incomplete sheet metal product with obvious inaccuracies.	narrow and unsupported evaluation of production skills, procedures and an incomplete sheet metal product with obvious inaccuracies.	D
The student response does not match any of the descriptors above.	The student response does not match any of the descriptors above.	The student response does not match any of the descriptors above.	The student response does not match any of the descriptors above.	E



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