

Industrial Technology Skills 2019 v1.0

Sample assessment instrument

July 2018

Project — Retro furniture

Information for teachers

This sample has been compiled by the QCAA to help 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 approved study plan.

Purpose of the project

This technique assesses a response to a single task, situation and/or scenario in a module of work that provides students with authentic opportunities to demonstrate their learning in both 'Industry practices' and 'Production processes'. The student response will consist of a collection of at least two assessable components, demonstrated in different circumstances, places and times, and may be presented to different audiences and through different modes.

Further information about the specifications for this assessment technique can be found in the Assessment techniques section of the Industrial Technology Skills syllabus.

Assessment dimensions

This assessment instrument is used to determine student achievement in the following dimensions:

- Knowing and understanding
- Analysing and applying
- Producing and evaluating

In Industrial Technology Skills, all objectives from each dimension must be assessed in each Project.

Subject	Industrial Technology Skills
Technique	Project
Unit number and module number and name	Unit: 3 Module: 3 Manufacturing enterprise — Retro furniture

Conditions	Units 3–4
Product component	Retro dresser/cabinet from detailed drawings and technical information
Multimodal component	
• non-presentation	8 A4 pages max (or equivalent)
Further information	
Duration (including class time)	13 weeks class time
Individual/group	Component 1: Product — completed in small groups, with results awarded individually Component 2: Multimodal — completed individually
Resources available	Access to manufacturing space, tools and machines Detailed drawings and technical information

Context

As a class, you have been exploring industrial technology skills. In this task, you will show these skills in a manufacturing environment.

Furniture-making refers to making or repairing individual pieces of furniture. Associated processes include wood and composites machining, which involves using a range of machinery to cut, shape and mould wood into functional forms to be used in furniture-making production processes.

Welding and fabrication refers to the shaping, joining and repairing of metal products and components using heat or electrical current. Different welding techniques and equipment, such as manual arc welding, oxyacetylene welding, spot welding, MIG and TIG are used, depending on the application and the type and size of the metal.

Tiling refers to laying ceramic, clay, slate, marble, glass and other types of tiles on external and internal walls and floors to provide protective and decorative finishes.

Task

Demonstrate and document industry practices and construction processes when creating a retro dresser/cabinet with a steel base and tiled doors from specifications.

The task includes two components.

- **Component 1: Product**

In groups, create and apply finishes to a retro dresser/cabinet with a steel base and tiled doors from the detailed drawings and technical information provided. Safely and efficiently demonstrate fundamental production skills and procedures in a manufacturing environment during the process. You will be assigned roles and responsibilities by your teacher prior to commencing the task.

- **Component 2: Multimodal**

Individually, maintain a photographic production journal with annotations to document and evaluate your use of industry practices and construction skills and evaluate your retro dresser/cabinet.

To complete this task, you must:**Component 1: Retro dresser/cabinet**

Select, apply and demonstrate fundamental production skills to complete the retro dresser/cabinet

- work cooperatively with others in the workplace
- use safe working practices and procedures
- interpret and analyse specifications in detailed drawings
- select and sequence production skills and procedures
- select and organise materials and tools
- plan the sequence of and access to equipment
- plan and calculate the cost of materials and consumables
- plan the production processes, considering any adaptations needed
- demonstrate furniture-making skills to create a retro dresser/cabinet to specifications
- demonstrate furniture finishing skills to apply finishes to suit the material and the product's intended use
- demonstrate welding and fabrication skills to create a steel base to specifications
- demonstrate tiling skills to create the tiled doors to specifications.

Component 2: Photographic production journal

Use photographs, annotations and other documentation to individually record and reflect on your work on the project, including the following:

- detailed risk assessments (workplace health and safety)
- description of the expectations of work roles and the required teamwork
- description of the quality standards and selection of production processes
- planning and calculations for tools and materials
- photographs with annotations of the manufacturing process
- evaluation of industry practices and production processes
- evaluation of the retro dresser/cabinet
- recommendations for improvement of production processes and products.

Checkpoints

- Term [X] Week [X]/[Date]: Complete dresser/cabinet carcass
- Term [X] Week [X]/[X]: Complete steel base
- Term [X] Week [X]/[X]: Complete tiled doors
- [Due date]: Complete retro dresser/cabinet and submit photographic production journal

Authentication strategies

Your teacher will use ways to check that the work you are assessed on is your own work.

- When working as part of a group, your individual response is assessed by your notes, teacher observation recording sheets or photographic evidence of the process.
- Discuss with your teacher or provide documentation of your progress at indicated checkpoints.
- Your teacher will observe you completing work in class.
- Submit the declaration of authenticity.
- Your teacher will compare the responses of students who have worked together in groups.
- Your results may be cross-marked by a teacher from another class.

Stimulus

Detailed drawings and technical information will be provided by the teacher, e.g.

- orthographic views of the retro dresser/cabinet, steel base frame and tiled doors
- isometric pictorials of the retro dresser/cabinet, steel base frame and tiled doors
- assembly drawings or exploded views of the retro dresser/cabinet
- technical information from industry-standard drawings and documents.

Instrument-specific standards matrix

	Standard A	Standard B	Standard C	Standard D	Standard E
Knowing and understanding	<p>The student work has the following characteristics:</p> <ul style="list-style-type: none"> comprehensive description of industry practices in manufacturing tasks consistent and proficient demonstration of fundamental production skills informed and accurate interpretation of drawings and technical information. 	<p>The student work has the following characteristics:</p> <ul style="list-style-type: none"> detailed description of industry practices in manufacturing tasks effective demonstration of fundamental production skills effective interpretation of drawings and technical information. 	<p>The student work has the following characteristics:</p> <ul style="list-style-type: none"> description of industry practices in manufacturing tasks demonstration of fundamental production skills interpretation of drawings and technical information. 	<p>The student work has the following characteristics:</p> <ul style="list-style-type: none"> statements about industry practices in manufacturing tasks partial demonstration of aspects of fundamental production skills statements about drawings and technical information. 	<p>The student work has the following characteristics:</p> <ul style="list-style-type: none"> inconsistent statements of industry practices minimal demonstration of aspects of fundamental production skills inconsistent statements about drawings and technical information.
Analysing and applying	<p>The student work has the following characteristics:</p> <ul style="list-style-type: none"> thorough analysis of manufacturing tasks to proficiently organise materials and resources discerning selection and proficient application of production skills and procedures in manufacturing tasks coherent and succinct use of visual representations, language conventions and features to communicate for particular purposes. 	<p>The student work has the following characteristics:</p> <ul style="list-style-type: none"> effective analysis of manufacturing tasks to organise materials and resources relevant selection and purposeful application of production skills and procedures in manufacturing tasks effective use of visual representations, language conventions and features to communicate for particular purposes. 	<p>The student work has the following characteristics:</p> <ul style="list-style-type: none"> analysis of manufacturing tasks to organise materials and resources selection and application of production skills and procedures in manufacturing tasks use of visual representations, language conventions and features to communicate for particular purposes. 	<p>The student work has the following characteristics:</p> <ul style="list-style-type: none"> partial analysis of manufacturing tasks to organise some materials and resources partial application of aspects of production skills and procedures in manufacturing tasks vague use of visual representations, language conventions and features to somewhat communicate. 	<p>The student work has the following characteristics:</p> <ul style="list-style-type: none"> minimal organisation of some materials or resources minimal application of aspects of some production skills and procedures in manufacturing tasks unclear use of visual representations, language conventions and features that impedes communication.

	Standard A	Standard B	Standard C	Standard D	Standard E
Producing and evaluating	The student work has the following characteristics:	The student work has the following characteristics:	The student work has the following characteristics:	The student work has the following characteristics:	The student work has the following characteristics:
	<ul style="list-style-type: none"> thorough planning and discerning adaptation of production processes proficient creation of products that meet specifications discerning evaluation of practices, processes and products, and valid recommendations made. 	<ul style="list-style-type: none"> effective planning and adaptation of production processes methodical creation of products that meet specifications with minor variations effective evaluation of practices, processes and products, and plausible recommendations made. 	<ul style="list-style-type: none"> planning and adaptation of production processes creation of products from specifications evaluation of practices, processes and products, and recommendations made. 	<ul style="list-style-type: none"> partial planning of production processes creation of incomplete products with obvious variation from specifications superficial evaluation of practices, processes and products, and simple recommendations made. 	<ul style="list-style-type: none"> minimal planning of some production processes creation of aspects of products statements about practices, processes or products.