

12 GSK: Drafting in the building and construction industry

Achievement Standard: The Industrial Graphics Skills subject focuses on the underpinning industry practices and drafting processes required to produce the technical drawings used in a variety of industries, including building and construction, engineering and furnishing. It provides a unique opportunity for students to experience the challenge and personal satisfaction of producing technical drawings and models while developing beneficial vocational and life skills.

The subject includes two core topics — 'Industry practices' and 'Drafting processes'. Industry practices are used by manufacturing enterprises to manage the manufacturing of products from raw materials. Drafting processes combine drawing skills and procedures with knowledge of materials and tools to produce industry-specific technical drawings. Students explore the knowledge, understanding and skills of the core topics through selected industry-based electives in response to local needs, available resources and teacher expertise.

Through both individual and collaborative learning experiences, students learn to meet customer expectations of product quality at a specific price and time. The majority of learning is done through drafting and modelling tasks that relate to business and industry, and that promote adaptable, competent, self-motivated and safe individuals who can work with colleagues to solve problems and complete tasks.

By doing drafting and modelling tasks, students develop transferrable skills relevant to a range of industry-based electives and future employment opportunities. They understand industry practices, interpret technical drawings, demonstrate and apply safe practical modelling procedures with tools and materials, communicate using oral and written modes, organise and produce technical drawings and evaluate drawings using specifications.

Unit Specific Information: We are learning industry practices and drafting processes

This module builds on prior learning of industry practices and drafting processes used in the creation of technical drawings for the manufacturing industry. Drafters play a vital role by assisting in the construction of quality structures that meet industry requirements. This unit develops knowledge and skills of residential building drafting, council requirements and national standards.

Assessment:

1 Project

- Product component
Technical drawings for an attached granny flat extension, developed from a basic sketch. Production of physical model of dwelling.
- Multimodal component — non presentation
Maximum: 8 A4 pages

2 Practical demonstration

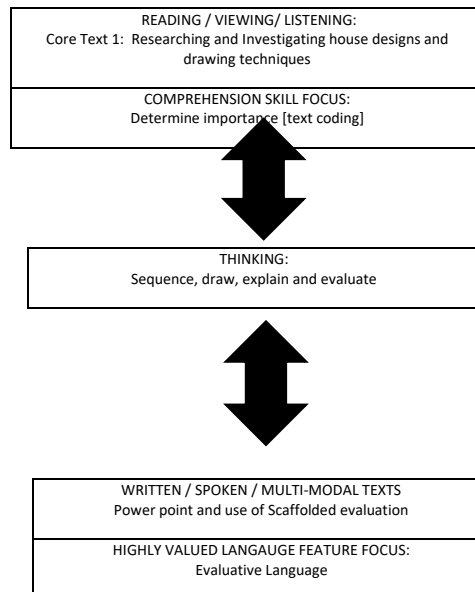
- Create a 3D rendered walk through animation of a granny flat.



Proficiency Scale: *Tracking Successful Learning*

CONTENT DESCRIPTOR: A person who demonstrates competency in this unit will produce fully dimensioned technical drawings of a study desk/ bed with multiple views and annotations, through the use of Inventor Software. You can produce a photo logbook detailing your actions and how you completed the task.

3	In addition to score 2, I can Competently demonstrate the following skills related to the unit.
2	With support: I am able to demonstrate some of the required knowledge and skills related to the performance criteria in Industrial Graphics. <ul style="list-style-type: none"> • <i>Describe</i> industry practices in drafting and modelling tasks • <i>Demonstrate</i> fundamental drawing skills • <i>Interpret:</i> drawings and technical information • <i>Analyse</i> drafting tasks to organise information • <i>Apply</i> drawing skills and procedures in drafting tasks • <i>Use</i> of language conventions and features to communicate for particular purposes • <i>Construct</i> models from drawings <p>However, you exhibit major errors or omissions regarding the more complex ideas and processes.</p>



DRAWING PRACTICES

Students produce a set of technical drawings from specifications detailing alterations to a house, adding a granny flat with bedroom, kitchen, living and bathroom from given client details. Students produce a range of technical drawings to demonstrate basic building and construction details.

- Key take home skills;**
- Have a clear understanding of drawing requirements
 - Demonstrate basic practical skills such as the use of relevant tools
 - Perform a sequence of routine tasks given clear directions
 - Timeline for project completion
 - Use computer-aided drafting (CAD) software to generate technical drawings
 - Follow a CAD tutorial to develop a 3D digital model