



National Certificate of Educational Achievement  
TAUMATA MĀTAURANGA Ā-MOTU KUA TĀEA

## **Exemplar for Internal Achievement Standard Technology Level 2**

This exemplar supports assessment against:

**Achievement Standard 91347**

Demonstrate understanding of advanced concepts used to make products

An annotated exemplar is an extract of student evidence, with a commentary, to explain key aspects of the standard. It assists teachers to make assessment judgements at the grade boundaries.

New Zealand Qualifications Authority

To support internal assessment

	Grade Boundary: Excellence
1.	<p>For Excellence, the student needs to demonstrate comprehensive understanding of advanced concepts used to make products.</p> <p>This involves discussing how accepted conventions guide the construction of products in diverse contexts.</p> <p>There is no student work currently available at this grade.</p> <p>A student at this grade may, for example, compare and contrast accepted conventions used in furniture making, boat building and making musical instruments.</p> <p>The student could discuss the accepted conventions used in the construction of a pedestal table, comparing and contrasting this with some of the scribing conventions used to fit contoured shapes such as cabinets or seats to a hull in a boat.</p> <p>The student could then also discuss (compare and contrast) accepted conventions used in guitar making to achieve symmetry. For example, using perpendiculars off the centre (symmetry) line when marking out and cutting a fret board on a guitar.</p>

	Grade Boundary: Merit
2.	<p>For Merit, the student needs to demonstrate in-depth understanding of advanced concepts used to make products.</p> <p>This involves:</p> <ul style="list-style-type: none"><li>• discussing how accepted conventions guide constructing products in similar contexts</li><li>• explaining the differences between safe practice in classroom and industrial environments.</li></ul> <p>There is no student work currently available at this grade.</p> <p>In order to demonstrate in-depth understanding, a student may, for example, compare and contrast the conventions used in constructing a range of furniture products. This could be within the school, or looking at commercial construction of products, such as how machinery is used in a joinery factory to achieve alignment and precision fit in kitchen furniture.</p> <p>Students could explain the differences between teacher/student responsibility (i.e. for using safeguards on the machines in the workshop) and employer/employee liability (i.e. for failing to use safeguards in a joinery factory). The student could refer to occupational health and safety guidelines, and compare these to the guidelines for safe practice in school workshops.</p>

	Grade Boundary: Achieved
3.	<p>For Achieved, the student needs to demonstrate understanding of advanced concepts to make products.</p> <p>This involves:</p> <ul style="list-style-type: none"> <li>• describing accepted conventions used in constructing products</li> <li>• explaining how accepted conventions support constructing products in a specific context</li> <li>• explaining how accepted conventions are achieved through use of tools, techniques and materials in a specific context</li> <li>• explaining strategies used to manage safety in school workshops.</li> </ul> <p>There is no student work currently available at this grade. The following paragraphs give examples of different contexts in which the student might address these criteria. The contexts that a student selects might vary for the different criterion.</p> <p>The student could describe accepted conventions used in making furniture, such as the tools and machinery used to produce accurate biscuit joints.</p> <p>The student could explain the accepted conventions in the construction, machining and alignment in the context of their own project in class. For example, they could explain the setup of the router to ensure that a groove for a drawer runner is true (i.e. that the drawer moves smoothly on the runner and clears the carcass).</p> <p>When using the wood lathe, the student could explain the accepted conventions used in setting out and locating high points, and explain how this is done to ensure the symmetry and repeat of a pattern.</p> <p>The student could explain how the identification of hazards is practiced in the school workshop, addressing how those hazards can be eliminated, isolated or minimised. For example, the student might explain the use of RCD devices or personal safety equipment.</p>