Title	Demonstrate knowledge of physical characteristics of wood		
Level	2	Credits	5

Purpose	People credited with this unit standard are able to demonstrate knowledge of: the structure of radiata pine; wood types and the factors that impact on end use; and wood as a raw material.

Classification	Wood Manufacturing - Generic Skills > Wood Manufacturing Foundation Skills

Available grade	Achieved

Guidance Information

1   Definitions
     Accepted industry practice refers to approved codes of practice and standardised
     procedures accepted by the wider wood manufacturing industry as examples of best
     practice.
     Workplace procedures refer to documented policies and procedures set by the
     organisation carrying out the work, and to documented or other directions provided to
     staff, and applicable to the tasks being carried out. They may include but are not
     limited to – standard operating procedures, site specific procedures, site safety
     procedures, equipment operating procedures, quality assurance procedures, product
     quality specifications, references, approved codes of practice, housekeeping
     standards, environmental considerations, on-site briefings, supervisor's instructions,
     and procedures to comply with legislative and local body requirements relevant to the
     wood manufacturing sector.

2   Assessment information
     All activities and evidence must meet workplace procedures and accepted industry
     practice.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of the structure of radiata pine.

Performance criteria

1.1   Differences between earlywood and latewood are explained.

         Range   differences include – density, moisture content, time of formation.

1.2   Differences between heartwood and sapwood are explained.

         Range   differences include – function, location.

1.3   Differences between corewood and outerwood found in radiata pine are explained.

         Range   differences include – density, moisture content, time of formation, end use.

1.4   The location of spiral grain in the log is identified.

Outcome 2

Demonstrate knowledge of wood types and the factors that impact on end use.

Performance criteria

2.1   The differences in hardwoods and softwoods are identified.

         Range   leaves or needles, fruit or cones, thin or thick cell walls, deciduous or evergreen, covered or naked seed, round or conical shape.

2.2   The effects of age, geographical location, and climatic conditions on density are compared.

2.3   The impact of density on end use is described.

Outcome 3

Demonstrate knowledge of wood as a raw material.

Performance criteria

3.1   The physical characteristics of wood as a raw material are described.

         Range   characteristics include – variability, durability, appearance, versatility, thermal conductivity, sustainability.

3.2   The advantages of wood as a raw material are compared with metals, plastics, concrete, and fibre-based products.

Planned review date	31 December 2024

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	27 January 1994	31 December 2012
Review	2	24 October 1996	31 December 2012
Review	3	10 February 1999	31 December 2012
Revision	4	14 March 2000	31 December 2012
Review	5	18 December 2006	31 December 2012
Review	6	15 April 2011	N/A
Review	7	28 May 2020	N/A

Consent and Moderation Requirements (CMR) reference	0013

This CMR can be accessed at http://www.nzqa.govt.nz/framework/search/index.do.

Comments on this unit standard

Please contact Competenz qualifications@competenz.org.nz if you wish to suggest changes to the content of this unit standard.