

Competency Standards for Caribbean Vocational Qualifications (CVQ)

CCLMF20108

Level II in Furniture Making

Unit Number	Unit Title	Mandatory/ Elective	Hours
LMFCOR0011A	Follow safe working policies and practices	Mandatory	20
LMFCOR0021A	Communicate in the work place	Mandatory	20
LMFCOR0031A	Carry out measurements and calculations	Mandatory	30
LMFCOR0041A	Work effectively with others	Mandatory	20
LMFCOR0051A	Draw and interpret simple drawings	Mandatory	30
LMFCOR0061A	Move and store materials and products	Mandatory	60
LMFCOR0071A	Read and interpret work documents	Mandatory	60
LMFFMK0011A	Construct a basic timber-furnishing product	Mandatory	20
LMFFMK0021A	Operate basic woodworking machines	Mandatory	20
LMFFMK0031A	Use furniture making hand and power tools	Mandatory	20
LMFFMK0041A	Assemble furnishing components	Mandatory	20
LMFFMK0071A	Join solid timber	Mandatory	40
LMFFMK0081A	Hand make timber joints	Mandatory	40
LMFFMK0091A	Follow plans to assemble production furniture	Mandatory	20
LMFFMK0161A	Construct furniture using leg and rail method	Mandatory	20
LMFFMK0172A	Produce angled and curved furniture using manufactured board	Mandatory	20
LMFPTF0891A	Cut mouldings to length	Mandatory	20
LMFPTF0901A	Join moulding	Mandatory	20
LMFFMK0052A	Select and apply hardware	Mandatory	20
LMFFMK0122A	Set up, operate and maintain basic static machines	Mandatory	40
LMFFMK0152A	Construct chair and couch frames	Mandatory	20
LMFFMK0222A	Select timbers for furniture production	Mandatory	40
LMFFMK0182A	Produce angled and curved furniture using solid timber	Mandatory	20
LMFFMK0262A	Set up, operate and maintain sawing machines	Mandatory	30
LMFFMK0061A	Apply sheet laminates by hand	Elective	20
LMFFMK0101A	Bend and form cane	Elective	35
LMFFMK0111A	Construct cane (wicker) furniture	Elective	35
LMFFIN0391A	Finish a basic furniture finishing product	Elective	20
LMFFIN0431A	Prepare surface for finishing	Elective	10
LMFFIN0461A	Apply stains, fillers and bleach	Elective	20
LMFFIN0471A	Apply surface coatings by hand	Elective	20
LMFPTF0871A	Frame a simple art work	Elective	20
LMFPTF0881A	Use picture framing sector hand and power tools	Elective	30
ITICOR0011A	Carry out data entry and retrieval procedures	Elective	40
LMFWHC0012A	Develop design, prepare and transfer patterns	Elective	40
LMFWHC0022A	Perform wood carving	Elective	40
LMFFMK0132A	Apply manufactured board conversion techniques	Elective	20
BSBSBM0012A	Craft personal entrepreneurial strategy	Elective	50

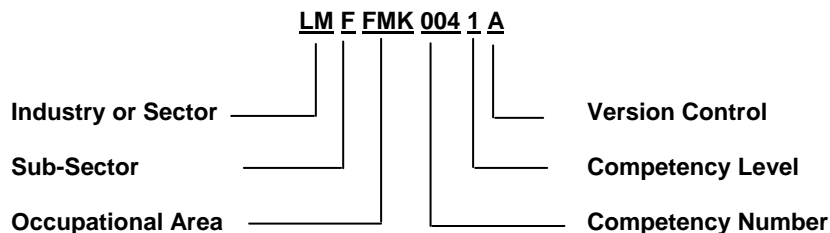
Unit Number	Unit Title	Mandatory/ Elective	Hours
LMFFMK0142A	Set up, operate and maintain pressure clamping machines	Elective	20
LMFFMK0202A	Install furnishing products	Elective	40
LMFFMK0212A	Prepare and apply furniture decorative finishes	Elective	40
LMFFMK0272A	Set up, operate and maintain drilling machines	Elective	30
LMFFMK0282A	Set up, operate and maintain jointing machines	Elective	30
LMFFMK0312A	Set up, operate and maintain routing and shaping machines	Elective	50
LMFFMK0322A	Set up, operate and maintain mechanical wood turning lathes	Elective	70
LMFFMK0342A	Fabricate synthetic solid surface products	Elective	40
LMFGGL1892A	Prepare and install mirrors	Elective	10
LMFFMK0193A	Fabricate custom furniture	Elective	40
LMFFMK0233A	Produce manual and computer-aided production drawings	Elective	40
LMFFMK0243A	Prepare cutting list from plans and job specifications	Elective	20
LMFFMK0353A	Set up, operate and maintain CNC sizing machines	Elective	70
LMFFMK0373A	Produce and maintain cutting tools	Elective	30
LMFFMK0383A	Construct jigs and fixtures	Elective	40
LMFCOR1353A	Estimate and cost job	Elective	30

To obtain this qualification, all Mandatory competencies plus a minimum of one level one elective, three level two electives and one level three elective must be achieved.

Nominal Training Hours (Institutional Delivery) include total hours of Mandatory competencies and electives selected.

Legend to Code

Example: LMFFMK0041A



Key: COR – MANDATORY; LMF – Furnishing; FMK – Furniture Making;
 PTF – Picture Framing; SBM – Small Business Management;
 BSB – Business Service (Business); ITI – Information Technology (Information);
 FIN – Furniture Finishing; GGL – Glass & Glazing; WHC – Wood Hand Curving

LMFCOR0011A: Follow safe working policies and practices

Competency Descriptor:

This unit deals with the skills and knowledge required to satisfy safe work practices within the furnishing industry.

Competency Field:

Timber Furniture Manufacturing

ELEMENT OF COMPETENCY PERFORMANCE CRITERIA

1.	Follow workplace procedures for hazard identification and risk control	1.1	Hazards in the work area are recognised and reported to designate personnel according to workplace procedures.
		1.2	Workplace procedures and work instructions for assessing and controlling risks are followed accurately.
		1.3	Personal protective measures are followed in accordance with workplace procedures.
		1.4	Safe manual handling methods are followed in accordance with authorised codes of practice and workplace procedures.
		1.5	Workplace procedure for dealing with accidents, fires and emergencies are followed whenever necessary.
2.	Maintain personal well-being for job	2.1	Standards of fitness and well-being are maintained in accordance with workplace medical requirements.
		2.2	Risks to personal well-being are identified and preventative strategies are adopted.
		2.3	Situations, which may endanger the individual or other workers are identified and corrected or reported.
		2.4	Organisation's policy on smoking, alcohol and drug use is identified, clarified and followed.
3.	Apply emergency response first aid	3.1	Emergency response first aid is administered in accordance with authorised procedures.
		3.2	Details of first aid administered are reported in accordance with enterprise and/or workplace procedures.

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|---|-----|--|
| 4. Contribute to the workplace management of occupational health and safety | 4.1 | Workplace incident and injury statistics are understood. |
| | 4.2 | Incidents and injuries are reported to designated personnel in accordance with workplace procedures. |
| | 4.3 | Contribution to and participation in occupational health and safety management is made in accordance with workplace procedures and the scope of responsibilities and competencies. |

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

The following variables may be present for this particular unit:

Hazardous situations:

- risks associated with tools and equipment
- moving parts and guarding systems
- lighting
- electricity and water
- toxic and hazardous substances
- packaging material or containers
- inflammable materials and fire hazards
- lifting practices
- spillage
- waste and debris

Relevant workplace policies and procedures:

- risk management policies and procedures
- first aid procedures
- safe manual handling and lifting procedures
- emergency
- fire and accident procedures
- materials safety procedures
- personal safety procedures
- procedures for the use of personal protective equipment
- use of motor vehicles
- issue resolution procedures
- job procedures and work instructions

Relevant information:

- OH&S regulations and of practice, environmental legislation and practice relating to hazards in the workplace
- obligations under relevant safety and health legislation
- provisions relating to roles and responsibilities of health and safety representatives and/or Occupational Health and Safety committees
- provisions relating to Occupational Health and Safety issue resolution

Hazard identification and risk control:

- checking equipment or the work area before work commences and during work
- identifying hazards
- assessing risks
- treating (including avoiding) risks
- workplace inspections
- housekeeping

Participative arrangements:

- formal and informal meetings which include coverage of safety and health
- safety committees (by whatever titles)
- other committees, for example, consultative, planning and purchasing
- health and safety representatives
- suggestions, requests, reports and concerns put forward by employees to management (verbal or written)

Designated personnel may include:

- supervisors
- managers
- team leaders
- specified Occupational Health and Safety personnel
- other persons authorised or nominated by the enterprise or industry to perform, approve, inspect and direct specified work

Emergency procedure may include that related to:

- sudden illness
- accidents
- fire or workplace evacuation involving staff or customers

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical Aspects of Evidence

- Accurately follow workplace procedures relevant to assessing, reporting and dealing with risks in the workplace.
- Identify and respond to threats to personal well-being.
- Apply emergency response first aid.
- Operate workplace fire fighting equipment
- Accurately report incidents (including near-misses, and accidents)

(2) Pre-requisite Relationship of Units

Pre-requisite for this unit is:

- Nil

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- obligations of all workplace parties under legislation, regulations and codes of practice
- the implications of workplace safety on efficiency, morale and customer relations
- basic risk management and control processes
- Occupational Health and Safety regulations/requirements, equipment, material and personal safety requirements.
- the purpose and use of safety Standards
- safe manual handling theory and practice
- the selection and applications of workplace fire fighting equipment
- material safety management systems, dangerous goods and hazardous chemicals handling processes
- workplace reporting procedures

Skills

The ability to:

- collect, organise and analyse information related to workplace health and safety systems and procedures and the application of these to work situations
- use first aid skills to the emergency response level
- communicate ideas and information on workplace safety issues including the recording and reporting of incidents/accidents, and the framing of suggestions for improvements
- plan and organise activities including the inspection of their workplace, the safe layout of their work materials and the planning of their own safe work sequences
- work with others and in a team to the level which recognises dependencies and uses co-operative approaches to achieve workplace safety
- use mathematical ideas and techniques to correctly complete measurements and calculations associated with risk analysis, safety distances and work planning
- use problem solving skills to conduct basic risk analysis and control activities aimed at self-protection and system improvements
- use the workplace technology related to the reporting, recording and responding to safety threats and emergencies

(4) Resource Implications

- relevant environmental and health and safety legislation, regulations and codes of practice
- organisation's health and safety policies and procedures
- personal protective equipment
- relevant work areas for identification of hazards and control measures

(5) Method of Assessment

To ensure that the contingency management component (ability to deal with irregularities and breakdowns) of competency is adequately assessed, evidence needs to be gathered across a range of workplace operations and circumstances that the individual would be expected to deal with in the workplace. This could be either in an actual workplace or in a simulation of realistic workplace conditions.

When assessing entry-level workers, assessment techniques that allow collection of evidence from relevant workplace experience should be used.

Techniques for assessment could include:

- observation
- simulation
- case studies
- interviews
- written tests
- workplace projects

(6) Context of Assessment

This unit should be assessed by a combination of workplace and realistic workplace simulations and off-the-job assessment. The context of assessment should ensure that evidence relating to the contingency management components (ability to deal with irregularities and breakdowns) of the competency can be collected.

Evidence must include observation in the workplace as well as off-the-job techniques such as interviews and simulations.

Conditions for simulations should:

- accurately simulate the range of activities and circumstances that the individual would be expected to deal with in the workplace
- allow for discussion
- ensure that the relevant documents and resources are available
- in particular, evidence of ability to follow emergency procedures and contribute to participative arrangements may be gathered through simulations
- the assessor should have recognised expertise in managing Occupational Health and Safety in the industry or work in an assessment team with such a person

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFCOR0021A: Communicate in the work place

Competency Descriptor:

This unit deals the skills and knowledge required to communicate in a furnishing industry workplace. It covers the activities of gathering, conveying and receiving information together with completing routine written correspondence.

Competency Field:

Timber Furniture Manufacturing

ELEMENT OF COMPETENCY PERFORMANCE CRITERIA

1.	Gather, convey and receive information and ideas	1.1	Information to achieve work responsibilities is collected from appropriate sources.
		1.2	The methods/equipment used to communicate ideas and information is appropriate to the audience.
		1.3	Effective listening and speaking skills are used in oral communication.
		1.4	Input from internal and external sources is sought, and used to develop and refine new ideas and approaches.
		1.5	Instructions or enquiries are responded to promptly and in accordance with organisational requirements.
2.	Draft routine correspondence	2.1	Written information and ideas are presented in clear and concise language and recipient understands the intended meaning of correspondence.
		2.2	Correspondence is drafted and presented within designated timelines.
		2.3	Presentation of written information meets organisational standards of style, format and accuracy.

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

The following variables may be present for this particular unit:

The furnishing industry will require communication to be carried out in workplaces involved in the manufacture, repair or maintenance of:

- domestic furniture
- commercial furniture
- furniture components

Communication may therefore be under testing noise and respiratory safety conditions

Communication equipment may include but is not limited to:

- network systems
- telephones
- keyboard equipment including mouse, touch-pad, keyboard
- pens
- pencils
- information technology components including hardware, software and communication packages
- facsimile machines

Written information may include but is not limited to:

- handwritten and printed materials
- e-mail
- internal memos
- briefing notes
- facsimiles
- general correspondence
- telephone messages

Correspondence may include but is not limited to:

- memoranda
- messages
- proformas
- e-mails
- standard/form letters

Oral communication may include but is not limited to:

- answering telephone calls
- requests from colleagues
- use of voice mail
- informal discussions
- answering enquiries from clients

Organisational requirements may be included in:

- quality assurance and/or procedures manual
- goals, objectives, plans, systems and processes
- business and performance plans
- legal and organisation policy/guidelines and requirements
- access and equity principles and practice
- ethical standards
- OH&S policies, procedures and programmes
- quality and continuous improvement processes and standards
- defined resource parameters

Standards may include:

- standards set by work group
- organisational policies and procedures
- specified work standards
- legislation

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

In order to achieve consistency of performance, evidence should be collected over a set period of time, which is sufficient to include dealings with an appropriate range and variety of situations.

(1) Critical Aspects of Evidence

- communication methods used are appropriate to the audience
- communications are in the language of the industry/sector
- messages and written communication are clear, concise and correct
- requests for information are responded to promptly
- information is given to clients in a clear and concise format
- correspondence produced is relevant to request

(2) Pre-requisite Relationship of Units

Pre-requisite for this unit is:

- Nil

(3) Underpinning Knowledge and Skills

Knowledge

Knowledge of:

- the relevant requirements from all agencies of government that affect furnishing operations, especially in regard to OH&S and environmental issues, equal opportunity, industrial relations and anti-discrimination
- the industry/sector terminology and language
- the organisation's policies, plans and procedures, especially style guide
- attention to standard turnaround times
- spelling, grammar and punctuation
- principles of effective communication in relation to listening, questioning and non-verbal communication

Skills

The ability to:

- use literacy skills to identify work requirements and understand and process basic, relevant workplace documentation
- use communication skills to request advice, receive feedback and work with a team
- use planning skills to organise work priorities and arrangements
- apply problem solving skills to solve routine problems
- use technology skills including the ability to select and use technology appropriate to a task
- use reading skills sufficient to understand basic workplace documentation
- relate to people from a range of social, cultural and ethnic backgrounds and physical and mental abilities

(4) Resource Implications

- access to appropriate documentation and resources normally used in the workplace

(5) Method of Assessment

Competence should be assessed through direct questions related to underpinning knowledge and skills.

Competency in this unit may be determined concurrently, based upon project work.

Competency shall be assessed while work is being done under general guidance, checking at various stages of the process and at the completion of the activity, against the performance criteria and specifications.

(6) Context of Assessment

Competency is demonstrated by performance of all stated criteria, including paying particular attention to the critical aspects and the knowledge and skills elaborated in the Evidence Guide, and within the scope as defined by the Range Statement.

Assessment of performance requirements in this unit should be undertaken in an actual workplace or simulated environment.

Assessment should reinforce the integration of the key competencies

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFCOR0031A: Carry out measurements and calculations

Competency Descriptor:

This unit deals with the skills and knowledge required to accurately complete measurements and calculations of materials relevant to the work requirements.

Competency Field:

Timber Furniture Manufacturing

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Obtain measurements	1.1 The purpose of obtaining measurements is clarified and confirmed. 1.2 The most appropriate method of obtaining the measurement is selected and applied. 1.3 Accurate measurements are obtained, confirmed and recorded. 1.4 Quality assurance requirements, standards and tolerances associated with the company's operations are recognised and adhered to.
2. Perform simple calculations	2.1 The purpose of performing the calculations is clarified and confirmed. 2.2 The method or formula for achieving the required result is selected. 2.3 Simple calculations involving length, perimeter, mass and volume are carried out. 2.4 The results are confirmed and recorded.
3. Estimate approximate quantities	3.1 The types and standard unit packaging of materials are identified from workplace documentation. 3.2 The dimensions of the job are obtained from workplace documentation/plans. 3.3 Quantities of materials suitable for the work to be undertaken are calculated, confirmed and recorded. 3.4 Material costs for simple jobs are estimated to within % specified.

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

The following variables may be present for this particular unit.

This unit applies to simple measurements and calculations applicable to:

- furniture manufacture
- manufacture and installation of cabinets
- processing and installation of glass
- construction and fitting of soft furnishings
- upholstery
- picture framing
- installation of floor coverings
- manufacture of musical instruments

Calculations to include:

- area
- perimeter
- volume
- mass
- scales
- ratios (ingredients/elements and triangulation)
- the application of addition, subtraction, multiplication and division processes

Measurements are:

- to be in metric scale
- cover all dimensions of furnishing
- involve the use of rulers, tape measures, and squares
- may involve laser or equivalent technology

OH&S requirements may include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods codes safe operating procedures

Materials include:

- all materials utilised in the production of furniture and furnishings applicable to the sector

Calculations are to be performed both:

- manually
- with the aid of a calculator

Information and procedures:

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical Aspects of Evidence

- identify the factors relevant to the measurements and calculations
- communicate effectively to enable accurate calculations and measurements
- accurately measure and record particulars for routinely required sector sites and materials
- accurately perform calculations related to routine sector requirements
- estimate quantities and basic costs of job materials

(2) Pre-requisite Relationship of Units

Pre-requisite for this unit is:

- Nil

(3) Underpinning Knowledge and Skills

Knowledge

Knowledge of:

- basic analysis of drawings, specifications and job detail
- materials relevant to the furnishing industry
- basic operations in simple geometry and measurement
- the theory and practice of calculations (addition, subtraction, multiplication, division)
- costing processes relative to the sector activities

Skills

The ability to:

- collect, organise and understand information related to work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications and the reporting of work outcomes and problems
- plan and organise activities to avoid any back tracking or work flow interruptions
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow
- use mathematical ideas and techniques to correctly complete measurements, calculate area, perimeter, volume, mass, scales and ratios and estimate material requirements
- use pre-checking techniques to anticipate calculation and measurement problems and avoid reworking
- use workplace technology related to calculation and measurement including tools, equipment, calculators and measuring devices

(4) Resource Implications

- information on the subjects for measurement and calculation, suitable work area appropriate to the activity, suitable site plans/drawings and/or specifications, and measuring and calculating devices.

(5) Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency

(6) Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
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Collect, analyse and organise information	Level 2	
Communicate ideas and information	Level 2	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 2	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFCOR0041A: Work effectively with others

Competency Descriptor:

This unit deals with the skills and knowledge required to work in a group environment requiring group commitment and co-operation and support of other group members.

Competency Field:

Timber Furniture Manufacturing

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
1.	Develop effective workplace relationships	1.1	Responsibilities and duties are undertaken in a positive manner to promote cooperation and good relationships.
		1.2	Assistance is sought from workgroup members when difficulties arise and these are addressed through discussions.
		1.3	Constructive feedback provided by others in the workgroup is encouraged, acknowledged and acted upon.
		1.4	Differences in personal values and beliefs are respected and their value acknowledged in the development of relationships.
2.	Contribute to workgroup activities	2.1	Support is provided to team members to ensure workgroup goals are met.
		2.2	Constructive contributions to workgroup goals and tasks are made according to organisational requirements.
		2.3	Information relevant to work is shared with workgroup to ensure designated goals are met.
		2.4	Strategies/opportunities for improvement of the workgroup are identified and planned in liaison with workgroup.

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Effective work practices will be required in workplaces involved in the manufacture, repair or maintenance of domestic furniture, commercial furniture and/or furniture components.

The following variables may be present for this particular unit:

Organisational requirements may be included in:

- goals, objectives, plans, systems and processes
- legal and organisation policy/guidelines and requirements
- OH&S policies, procedures and programs
- business and performance plans
- anti-discrimination and related policy
- access and equity principles and practice
- ethical standards
- quality and continuous improvement processes and standards
- defined resource parameters

Workgroup members may include but are not limited to:

- coach/mentor
- supervisor or manager
- peers/work colleagues/team/enterprise
- other members of the organisation

Feedback on performance may include:

- formal/informal performance appraisals
- obtaining feedback from supervisors and colleagues
- obtaining feedback from clients
- personal, reflective behaviour strategies
- routine organisational methods for monitoring service delivery

Strategies/opportunities for improvement may include:

- coaching, mentoring and/or supervision
- formal/informal learning programs
- internal/external training provision
- work experience/exchange/opportunities
- personal study
- career planning/development
- performance appraisals
- workplace skills assessment
- recognition of Prior Learning/initial assessment

Responsibilities and duties may include:

- job description and employment arrangements
- organisation's policy relevant to work role
- team structures
- supervision and accountability requirements including OH&S
- skills, training and competencies
- code of conduct

Providing support to team members may include:

- explaining/clarifying
- helping colleagues
- problem solving
- providing encouragement
- providing feedback to another team member
- undertaking extra tasks if necessary

Information to be shared may include:

- assisting a colleague
- clarifying the organisation's preferred task completion methods
- open communication channels
- encouraging colleagues
- acknowledging satisfactory performance
- workplace hazards, risks and controls
- acknowledging unsatisfactory performance

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement

In order to achieve consistency of performance, evidence should be collected over a set period of time, which is sufficient to include dealings with an appropriate range and variety of situations.

(1) Critical Aspects of Evidence

- applies key aspects of the industry and sector context, practices and language to their role
- is proactive and positive within the group
- provides support to team members to ensure goals are met
- seeks and acts on feedback from clients and colleagues
- accesses learning opportunities to extend own personal work competencies to enhance team goals and outcomes

(2) Pre-requisite Relationship of Units

Pre-requisite for this unit is:

- LMFCOR0021A: Communicate in the work place

(3) Underpinning Knowledge and Skills

Knowledge

Knowledge of:

- the industry and sector context including history, evolution, language, current structure, economic importance and probable future trends
- the relevant legislation from all levels of government that affect business operation, especially in regard to OH&S and environmental issues, equal opportunity, industrial relations and anti-discrimination
- why co-operation and good relationships are important
- the organisation's policies, plans and procedures
- how to elicit and interpret feedback
- techniques to develop personal plans and establish priorities
- how to identify and prioritise personal development opportunities and options
- workgroup members' responsibilities and duties
- importance of demonstrating respect and empathy in dealings with colleagues

Skills

The ability to:

- use literacy skills to identify work requirements and understand and process basic, relevant workplace documentation
- use communication skills to request advice, receive feedback and work with a team
- apply planning skills to organise work priorities and arrangements
- use technology skills including the ability to select and use technology appropriate to a task.
- relate to people from a range of social, cultural and ethnic backgrounds and physical and mental abilities

(4) Resource Implications

- the learner and trainer should have access to appropriate documentation and resources normally used in the workplace.

(5) Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

(6) Context of Assessment

Competency is demonstrated by performance of all stated criteria, including paying particular attention to the critical aspects and the knowledge and skills elaborated in the Evidence Guide, and within the scope as defined by the Range Statement.

Assessment of performance requirements in this unit should be undertaken in an actual workplace or simulated environment.

Assessment should reinforce the integration of the key competencies

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFCOR0051A: Draw and interpret simple drawings

Competency Descriptor:

This unit deals with the skills and knowledge required to effectively draw and interpret simple layout drawings and sketches, and applies to individuals working in the furnishing industry.

Competency Field:

Timber Furniture Manufacturing

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Prepare for drawing	1.1 Drawing instruments and supplies are correctly identified and selected. 1.2 Alphabet of lines is identified and applied with all lines distinct, easily read and of the appropriate line weight and type. 1.3 Measurements are performed using appropriate scales. 1.4 Lettering is constructed distinctly and is easily read.
2. Draw geometric constructions	2.1 The completed drawing illustrates a series of geometric shapes and activities. 2.2 The finished drawing is neat and clear of smudges.
3. Construct multi-view (orthographic 2-D) drawing	3.1 The drawing illustrates three views of specified object with correct line representation. 3.2 The finished multi-view drawing is constructed correctly.
4. Develop a pictorial (3D) drawing	4.1 The drawing has a correct view orientation (isometric). 4.2 The complete pictorial (3D) drawing is correctly developed with hidden features.
5. Construct and dimension drawings	5.1 All major features on the drawing are appropriately dimensioned to correct specification. 5.2 All necessary details and information are shown.
6. Apply notes and leaders	6.1 The finished drawing is neatly and appropriately labelled. 6.2 Completed drawing illustrates correct application of notes and leaders.

7.	Prepare freehand sketch	7.1	Sketch correctly drawn with appropriate views where applicable.
		7.2	Necessary dimensions are shown and instructions and/or information conveyed by appropriate use of notes.
8.	Interpret details from sketches and drawings	8.1	Components, assemblies or objects correctly identified.
		8.2	Commonly used symbols and abbreviations are recognised.
		8.3	Dimensions and instructions are identified and followed as required.
		8.4	Material requirements are correctly identified as required.

RANGE STATEMENTS

This unit applies to the preparation and interpretation of simple working drawings and sketches of furniture components or units.

Drawing instruments and supplies:

- drafting kit
- CAD workstation
- drafting paper
- drawings/modules/photographs

Types of scale:

- architectural
- metric
- engineering
- civil

Measurement systems:

- metres/milimeter
- metric(SI) system

Multi-view (orthographic 2-D) drawings:

- full scale (1:1) orthographic 3-view drawing using third angle projection with top, front and right side view – show all hidden features and centrelines

Alphabet of line:

- object line
- hidden line
- centre line
- section line
- dimension
- extension line
- cutting line
- short break line
- phantom line

Geometric construction to include:

- circles
- regular polygons with four, six and eight sides
- pentagon inscribed within measured circle
- ellipse
- triangles with specified angles
- arcs thru three points; tangent to two circles

Pictorial (3-D) drawing to include:

- isometric corner with left and right side lines each 30 degrees up from horizontal and third line at a vertical, with all three lines joining in a common intersection
- full scale (1:1) basic isometric drawing

Dimension drawings:

- dimensioning styles and methods: coordinate, linear/datum
- dimensioning 2-D drawing
- dimensioning complex shapes: spheres, cylinders, tapers, pyramids

EVIDENCE GUIDE

Competency is to be demonstrated by developing and effectively reading and interpreting simple drawings and sketches to locate or identify specified features or specifications in accordance with the performance criteria and the range listed within the range statement.

(1) Critical Aspects and Evidence

It is essential that competence is observed in the following aspects:

- identify and understand various types of drawings
- identify alphabet of lines, scales, lettering, dimensions, symbols, abbreviations and key features
- identify title panel and reference date of drawings

(2) Pre-requisite Relationship of Units

- Nil

(3) Underpinning Knowledge and Skills

Knowledge

Knowledge of:

- types and use of drawing instruments and supplies
- identification of alphabet of lines, line type variation, order of usage and application on drawings
- types of scale and proportion and how they are used for measurement
- symbols, dimensions and terminology
- types of drawings and their applications

Skills

The ability to:

- make simple freehand sketches
- prepare technical drawings with drawing instruments and with Auto CAD
- read and interpret sketches and working drawings
- measure accurately
- communicate effectively

(4) Resource Implications

The following resources should be made available:

- drawing instruments/CAD
- drawing supplies
- objects for drawing

(5) Method of Assessment

Competency may be assessed in a training institution under direct supervision with regular checks by the instructor.

Competency in this unit would be determined by an individual working alone or based upon integrated project work.

Assessment would be continuous by checking at the various stages of the job application in accordance with the performance criteria.

The candidate will have access to drawing instrument, equipment, materials and documentation required.

(6) Context of Assessment

Competency should be assessed in a classroom environment in accordance with work practices and safety procedures.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFCOR0061A: Move and store materials and products

Competency Descriptor:

This unit deals with the skills and knowledge required to move, store and record raw materials for furnishings and for the finished products.

Competency Field:

Common Competency

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
1.	Identify products to be stored and stock records/inventory systems	1.1	Materials and products to be stored are correctly identified.
		1.2	Potential uses, frequency of use of the materials or frequency of dispatch to other work sections or customers are identified.
		1.3	Size, shape and special storage requirements are determined.
		1.4	Requirements for safe storage are identified and forwarded to appropriate personnel.
		1.5	Stock/inventory systems records are maintained.
		1.6	Relevant product information, including instructions, care labels and product identification information, are located.
		1.7	When required reorder documentation is forwarded to appropriate personnel.
2.	Establish storage areas	2.1	Storage areas selected meet requirements for storing product type and quantity.
		2.2	Appropriate workplace clearances for use of storage areas are obtained.
		2.3	Storage areas are cleared of waste and contaminants and any required safety equipment is installed.
		2.4	Storage areas are planned to safely and effectively store goods based on frequency of use, safe height, weight and size.
		2.5	Other considerations such as: other stored items, handling, rearranging crushing, scratching or contamination are taken in arranging storage areas.

- 2.6 Access and working space for safe use by appropriate manual handling equipment, forklifts or safe lifting by personnel is ensured.
- 3. Move materials and products
 - 3.1 Movement activities are completed as an individual or working directly with others as required by the work tasks.
 - 3.2 Roles and related responsibilities for the successful completion of the safe lifting activity are identified and applied.
 - 3.3 Materials handling equipment appropriate to the task is selected and used in accordance with job requirements
 - 3.4 Materials or products safely lifted, moved and set down in accordance with approved work procedure.
 - 3.5 Feedback from others is constructively accepted and acted on to continuously improve team and work performance.
- 4. Store materials and products
 - 4.1 Condition of materials or products is observed on arrival and appropriate action taken if any product is below specification.
 - 4.2 Workplace health and safety requirements, including personal protection needs, are observed throughout.
 - 4.3 Materials and products are stored observing any requirements for separation of particular types of hazardous or incompatible materials or products.
 - 4.4 Materials are stacked appropriately for weight loading, size and crushability of goods or products.
 - 4.5 Products are located to enable access to frequently required items.
 - 4.6 Work is undertaken in accordance with workplace procedures.

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

The following variables may be present for this particular unit:

Materials:

- materials may include perishable and non-perishable inventory required to support production operations

Products may include:

- furniture
- furnishing items
- components and other outcomes (outputs of the local production processes)

Tools and equipment may include but are not limited to:

- pre-fabricated and fixed shelving
- open and enclosed pallets
- shipping containers
- non-motorised lifting and movement aids

Information and procedures:

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

Materials handling equipment:

- materials handling equipment covered by this unit is restricted to non-regulated machines and appliances

OH&S requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- safe operating procedures

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical Aspects of Evidence

- locate, interpret and apply information relevant to the requirements of the goods to be moved or stored
- apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- plan layout of storage areas
- interpret regulations and workplace order requirements
- follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- establish and maintain storage areas for:
 - raw materials
 - production outputs
- use a range of non-regulated materials handling devices
- work effectively with others
- modify activities to cater for variations in workplace contexts and environment

(2) Pre-requisite Relationship of Units

Pre-requisite for this unit is:

- Nil

(3) Underpinning Knowledge and Skills

Knowledge

Knowledge of:

- workflow in relation to use of goods and materials in store
- potential hazards including fire and explosion risk, security issues and operator safety around products to be stored
- appropriate controls and safety equipment to manage risk
- requirements for minimising damage to and maintaining contaminant-free unfinished materials goods and completed products
- requirements of working with others in a team

Skills

The ability to:

- collect, organise and understand information related to the movement and storage of materials and products, work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the storage site to avoid any back tracking or work flow interruptions
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area, estimate storage requirements and material requirements
- use checking and inspection techniques to anticipate movement and storage problems, avoid reworking and avoid wastage
- use the limited workplace technology related to movement and storage including inventory systems, tools, equipment and measuring and recording devices

(4) Resource Implications

- storage area, manual materials handling equipment, products/materials for storage

(5) Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

(6) Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level -	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skill.

LMFCOR0071A: Read and interpret work documents

Competency Descriptor:

This unit deals with the skills and knowledge required to interpret work documents including cutting lists, standards, drawings and specifications to produce or repair furnishings and to install furnishing items.

Competency Field:

Timber Furniture Manufacturing

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
1.	Identify document type and purpose	1.1	Key information is identified, such as title, version, scale, legend and keys.
		1.2	Any relevant explanatory or additional information needed to interpret the document is located.
		1.3	Clarification is sought to confirm the intention of information.
2.	Read and interpret the document	2.1	Information such as symbols, abbreviations, acronyms and technical terms are identified and interpreted in terms of: <ul style="list-style-type: none"> • the work to be completed • any statutory requirements • the equipment and tools to be used • the items to be produced or repaired
		2.2	Document information is compared to component or supplier recommendations for use of the materials and, where appropriate, relevant statutory requirements.
		2.3	Design and style features shown in drawings are identified by industry recognised terms.
3.	Plan own work sequence	3.1	Work sequence, required tools and equipment and tasks to be performed are identified from the documents.
		3.2	Work sequence is planned, identifying stages where checks against specifications must be made.
		3.3	Specifications noted in the work plan are checked for accuracy against the drawings and specifications, and any errors are rectified.

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|----|-------------------------|-----|--|
| 4. | Maintain document files | 4.1 | Plans and documents are handled carefully and maintained intact. |
| | | 4.2 | Any explanatory documentation, additional information and/or modification information is kept with the work plan and original documentation according to workplace procedures. |
| | | 4.3 | All documentation replaced in workplace filing or storage system for retrieval by others as required. |

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is to be carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, and organisation insurance requirements.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the reading of work documents and the preparation of work plans.

The following variables may be present for this particular unit.

Competency may be determined in workplaces involved in the manufacture and or installation of:

- domestic furniture
- commercial furniture
- kitchen and bathroom cabinets
- furniture components, picture frames
- soft furnishings
- floor covering and finishing
- glass and glazing

OH&S requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- safe operating procedures

Work documents to be considered are to include but may not be limited to:

- standards
- drawings
- cutting lists
- job specifications and architects'/builders' plans or equivalent, and
- manufacturers' specifications and/or operating instructions
- Work documents are to include hard copy and may include computerised versions

Information and procedures:

- workplace plans, drawings and specifications applicable to all sectors of the industry
- relevant statutory requirements applicable to the industry sectors
- workplace procedures relating to the preparation of own work plans and the maintenance of work documentation
- suppliers' and manufacturer's technical data and information
- workplace procedures relating to reporting and communication

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical Aspects of Evidence

- recognise and explain the meanings of symbols, technical terms and conventions of specifications and plans
- check accuracy of copied specifications
- maintain condition of documentation
- locate, read and interpret a minimum of 10 selected/specified work documents which must include:
 - statutory requirements relevant to the sector
 - manufacturers' technical instructions and specifications
- real or simulated local work documents including:
 - work plans
 - material safety data sheets
 - relevant building codes, where appropriate
 - job procedures
 - safe work instructions or equivalent
 - work effectively with others
- modify activities to cater for variations in workplace context and environment

(2) Pre-requisite Relationship of Units

Pre-requisites for this unit are:

- Nil

(3) Underpinning Knowledge and Skills

Knowledge

Knowledge of:

- different types of work documents used in the furnishing industry, and their function
- conventions and symbols of plans, drawings and specifications
- workplace procedures for maintenance of documentation

Skills

The ability to:

- collect, organise and understand information related to the range of work documents relevant to the sector
- communicate ideas and information to enable confirmation of work requirements and specifications
- plan and organise activities to avoid any back tracking, work flow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise information management
- use mathematical ideas and techniques to correctly interpret the content of work documents
- identify alternative methods of accessing and sources of work information
- use workplace technology related to work documentation, its access and storage

(4) Resource Implications

- access to a range of drawings, standards, plans, specifications and cutting lists relevant to the work

(5) Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and generally be in conjunction with assessment of other units of competency.

(6) Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process, equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 2	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 2	
Work with others and in team	Level 2	
Use mathematical ideas and techniques	Level 3	
Solve problems	Level 2	
Use technology	Level 2	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFMK0011A: Construct a basic timber-furnishing product

Competency Descriptor:

This unit deals with the skills and knowledge required to construct, assemble and finish a basic timber-furnishing product.

Competency Field: Timber Furniture Manufacturing

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1 Work instructions are used to determine job requirements, including design variations, tolerances, process, materials, finish and quantity.</p> <p>1.2 Construction and assembly sequence are planned.</p> <p>1.3 Procedures are determined for checking quality at each stage of the process.</p> <p>1.4 Workplace health and safety requirements, including personal protection needs, are observed throughout the work.</p> <p>1.5 Suitable work area is selected for the task.</p> <p>1.6 Preparatory drawings/set-outs for tasks are confirmed.</p> <p>1.7 Cutting list for project components is accessed and interpreted.</p> <p>1.8 Materials are selected following work instructions.</p> <p>1.9 Tools and equipment suitable for construction are identified and checked for safe and effective operation.</p>
2. Complete instruction	<p>2.1 Material is set out and prepared according to work instructions and components are marked according to workplace procedures.</p> <p>2.2 Tools, machines and equipment are used in accordance with safety requirements and manufacturers' specifications.</p> <p>2.3 Components are manufactured, including any specified shapes, angles or curves, and checked against set-outs and job requirements.</p> <p>2.4 Components are assembled using jigs and/or clamps and fasteners.</p>

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|----|---|-----|---|
| 3. | Finalise operation and maintain equipment | 2.5 | Adhesives are applied according to workplace procedures and/or manufacturers' instructions. |
| | | 2.6 | Joining process is undertaken according to workplace procedures. |
| | | 2.7 | Assembled product is checked for compliance with specifications. |
| | | 2.8 | Item is finished in accordance with work instructions. |
| | 3.1 | 3.1 | Work area is cleaned, hand and/or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures. |
| | 3.2 | 3.2 | Off-cuts and unused materials are collected and stored for reuse or disposed of following workplace procedures. |
| | 3.3 | 3.3 | Waste and scrap materials are dealt with following workplace procedures. |

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency. It relates to the unit as a whole and facilitates holistic assessment.

Work is carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

The following variables may be present for this particular unit.

Basic timber furnishing products may typically include but are not limited to:

- occasional and coffee tables
- jewellery boxes
- tool boxes
- CD racks
- small cabinets
- entertainment units
- timber stools
- clocks

OH&S requirements include:

- relevant legislation
- material safety requirements
- hazardous substances and dangerous goods requirements
- safe operating procedures

Work to be carried out in workplaces or simulated workplaces involved in the manufacture of:

- solid timber furniture
- domestic furniture
- commercial furniture and/or furniture component

Work involves:

-
- reading and interpreting the project plan
- using hand and power tools
- operating basic woodworking machinery
- applying quality requirements
- applying product finishing techniques and materials

Tools and equipment may include:

- measuring tapes or rulers
- hammers
- mallets
- squares
- bevels
- chisels
- planes
- hand saws
- power saws
- cordless drills/screwdrivers
- power drills
- fixing and joining devices
- jigs
- clamping devices
- pincers

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet

Checking of constructed product is to cover:

- squareness
- alignment
- wind (level)
- hardware
- fittings and attachments

Materials to be used may include but are not limited to:

- timber
- manufactured board
- adhesives
- screws
- nails
- bolts
- dowels
- metal fasteners
- steel
- plastics
- primers, and
- coating materials

Machines may include:

- band saws
- cross cut saws
- rip saws
- panel planers
- belt sander
- horizontal borers
- vertical drill presses
- pedestal grinders, and
- hand wood turning lathes

Information and procedures

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical aspects of evidence

Interpret work instructions and locate and apply relevant information.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Follow work instructions, operating procedures and inspection practices to:

- minimise the risk of injury to self or others
- prevent damage to goods, equipment or products, achieve required production output and product quality
- adapt or vary furnishing product designs

Construct, assemble and finish at least one basic furnishing product from the list in the Range Statement.

Work effectively with others.

Modify activities to cater for variations in workplace contexts and environment.

(2) Pre-requisite Relationship of units

Pre-requisites for this unit are:

- LMFFMK00031A: Use furniture making hand and power tools
- LMFFMK00021A: Operate basic woodmaking machines

(3) Underpinning knowledgeKnowledge

Knowledge of:

- The types, characteristic, properties and limitations of timber used in furniture construction
- the interpretation of plan representation of furniture design
- the preparation of drawings/set-outs
- workflow in relation to furniture construction
- Identification of hand and/or power tools, materials, equipment, processes and procedures

Skills

The ability to:

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination with site supervisor, other workers and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate construction problems, avoid reworking and avoid wastage
- use the limited workplace technology related to this construction, including tools, equipment, materials and measuring devices

(4) Resource implications

The following resources should be made available:

- drawings and specifications
- hand and/or power tools
- equipment
- appropriate materials and fixtures
- woodworking machinery
- layout, assembly and finishing work areas

(5) Method of assessment

Competency should be assessed by direct observation of tasks and questioning on the underpinning knowledge.

Assessment may be conducted in conjunction with assessment of other units of competency.

Competency may be by intermittent checking at various stages of the job application in accordance with the performance criteria

(6) Context of assessment

Competency assessment may occur on the job or in a workplace simulated facility with relevant equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
Carries out established processes Makes judgement of quality using given criteria	Manages process Selects the criteria for the evaluation process	Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability skills.

LMFFMK0021A: Operate basic woodworking machines

Competency Descriptor:

This unit deals with the skills and knowledge required to operate basic woodworking machines used for sawing, planing, sanding and drilling in the production of furniture.

Competency Field: Timber Furniture Manufacturing

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Prepare for work	1.1 Work instructions are used to identify job requirements, including quality, materials, equipment, and quantities. 1.2 Workplace health and safety requirements, including ventilation requirements and personal protection needs, are observed throughout the work. 1.3 Material for machining is selected and inspected for quality. 1.4 Machines, cutting tools and jigs are identified and checked for safe and effective operation.
2. Operate machines	2.1 Safety equipment including emergency stops, gauges, guards and controls are checked. 2.2 Machine start-up procedure is carried out in accordance with manufacturers' instructions. 2.3 Material is fed into machine in accordance with manufacturers' instructions, safe handling procedures and standard workplace operating procedures. 2.4 Machine is operated in accordance with its designed capacity and purpose, tooling requirements and to manufacturers' recommendations. 2.5 Machine operation is monitored to ensure product quality and output. 2.6 Waste quantities are checked and minimised. 2.7 Items that do not meet quality requirements are recycled or discarded according to workplace procedures.

- 2.8 Problems with the required work and/or the operation of the machine are identified and reported to appropriate persons.
3. Clean up work area and maintain equipment
- 3.1 Material that can be reused is collected and stored.
- 3.2 Waste and scrap are removed following workplace procedures.
- 3.3 Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures.
- 3.4 Unserviceable equipment is reported in accordance with workplace procedures.

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency. It relates to the unit as a whole and facilitates holistic assessment.

Work is carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

The unit scope is to cover a minimum of one saw, one planer, one drill and one sander and related tasks from the following list:

The following variables may be present for this particular unit.

Sawing operations

Cross cut saw

- docking (oversize + 20mm)
- docking (accurate to +/- 0.25mm)
- docking square (no tolerance)

Panel sawing

- cut flat panel board (off rip fence using scribe saw)
- cut flat panel board (off cross-cut fence using scribe saw)

Planing operations

- surface planer (jointer)
- machine face
- machine edge
- panel planer (thicknesser)
- parallel plane width
- parallel plane thickness

Material to be machined may include but is not limited to:

- solid timber
- manufactured board

Ripsaw cutting operations:

- parallel rip (oversize by 5mm+)
- scroll band saw
- off fence ripping
- freehand ripping
- freehand curve cutting

Sanding operations

- sand concave surface (bobbin sander)
- sand straight surface (disc/belt sander)
- sand end grain (disc/belt sander)
- sand flat surfaces (disc/belt sander)
- sand convex surface (disc/belt sander)

Drilling/boring**Vertical drill press**

- drill holes to pre-determined depth vertically
- select and replace drill bits
- hinge boring

Horizontal drill:

- horizontal borer (single bit)
- drill holes to pre-determined depths horizontally
- select and replace drill bits

Statutory requirements:

- material safety management systems
- hazardous substances and dangerous goods
- safe operating procedures

Information and procedures

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

Personal protective equipment is to include:

- safety boots
- respirator or dust mask
- coverall
- goggles
- ear muff

Competency may be demonstrated in workplaces involved in the manufacture of solid timber furniture, domestic furniture, commercial furniture, kitchen and bathroom cabinets and/or furniture components.

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical aspects of evidence

It is critical that competence be observed in the following aspects:

- identify work requirements
- apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- identify materials used in the work process

Critical aspects of evidence (Cont'd)

Follow work instructions, operating procedures and inspection processes to:

- minimise the risk of injury to self or others
- prevent damage to goods, equipment and products
- maintain required production output and product quality

Operate and monitor the machines and complete the tasks identified in the Range Statement for:

- one saw
- one planer
- one drill
- one sander

Work effectively with others

(2) Pre requisite Relationship of units

- Nil

(3) Underpinning knowledge and skillsKnowledge

Knowledge of:

- the characteristics, uses and limitations of basic woodworking machines
- general workplace quality standards and procedures
- workplace safety policies and procedures
- procedures for reporting machinery faults and material defects

Skills

The ability to:

- collect, organise and understand information related to work orders, machine operations, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications and the reporting of work outcomes and problems
- plan and organise activities, including the preparation of the worksite and the obtaining of equipment and materials to avoid any back tracking, or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- apply basic arithmetical processes
- use checking techniques to identify, avoid or solve work problems
- use the workplace technology related to machine operations, including tools, equipment and basic measuring devices

(4) Resource implications

The following resources should be available:

- access to basic woodworking machinery as identified in the Range Statement
- standard operating procedures
- unprocessed materials

(5) Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

(6) Context of assessment

Assessment may occur on the job or in a workplace-simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> • Carries out established processes • Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> • Manages process • Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> • Establishes principles and procedures • Evaluates and reshapes process • Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFMK0031A: Use furniture making hand and power tools

Competency Descriptor:

This unit deals with the skills and knowledge required to identify, select and use hand and power tools in applications relating to the furniture making sector and applies to individuals engage in wooden furniture making.

Competency Field: Timber Furniture Manufacturing

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
1.	Identify hand and power tools	1.1	Types of hand and power tools and their functions identified.
		1.2	Workplace health and safety requirements, including personal protection needs, are observed throughout the work.
		1.3	Sources of power supply recognised.
2.	Select hand tools	2.1	Hand tools selected are consistent with needs of the job.
		2.2	Selected hand tools are checked for serviceability and safety and any faults reported to supervisor.
		2.3	Equipment is selected to hold or support material for hand tools application where applicable.
3.	Use hand tools	3.1	Material is located and held in position for hand tool application.
		3.2	Hand tools are safely and effectively used according to their intended use.
		3.3	Hand tools are safely located when not in immediate use.
4.	Select power tools	4.1	Power tools are selected consistent with needs of the job in accordance with conventional work practice.
		4.2	Power tools are visually checked for serviceability and safety in accordance with Occupational Health & Safety requirements and any faults reported to supervisor.

	4.3	Equipment is selected to hold or support materials for power tool application as applicable.
5. Use power tools	5.1	Material is located and held in position for power tool application as applicable.
	5.2	Power tools are safely and effectively used in application processes.
	5.3	Power tools are safely located when not in use.
6. Clean up work area and tools	6.1	All tools are cleaned, maintained and stored.
	6.2	Equipment is cleaned, maintained and stored.
	6.3	Work area is cleared and waste removed.

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school-hops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

This unit requires individuals are to demonstrate skill, accuracy and dexterity in the application of tools to perform work tasks

The following variables may be present for this particular unit:

Hand tools for furniture making are to include, but not be limited to:

- hand planes
- chisels
- hand saws
- spoke shave
- hammer
- mallet
- marking-out tools
- files
- rasps
- scraper
- screwdrivers
- hand drill

Power tools for furniture making are to include, but not be limited to:

- circular power saw
- planer
- drill
- jig saw
- router
- trimmer
- biscuit machine
- brad/nail and staple gun
- sanders

Work tasks should include:

- dressing materials
- cutting joints
- finishing surfaces
- cutting straight and compound angles
- jointing materials
- edge trimming
- the basic grinding of cutting tools

OH&S requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- safe operating procedures

Reporting of faults in the operation of hand and power tools may be verbal or written.

Personal protective equipment is to include:

- safety boots
- coverall
- gloves
- dust mask
- goggles
- ear muffs

Information and procedures to include:

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical aspects of evidence

Locate and apply relevant information related to hand and power tools.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Follow work instructions, operating procedures and inspection practices to:

- minimise the risk of injury to self or others
- prevent damage to goods, tools, equipment or products
- maintain required production output and product quality

Adopt and carry out correct procedures prior to and during use of the range of hand and power tools stipulated in the range statement.

Carry out operator maintenance on hand and power tools, including the grinding of:

- chisels
- hard plane blades or irons
- drill bits

Modify activities to cater for variations in workplace contexts and environment.

(2) Pre-requisite Relationship of units:

Pre-requisite for this unit is:

- Nil

(3) Underpinning knowledge and skills

Knowledge

Knowledge of:

- types, characteristics, uses, limitations and maintenance requirements of hand tools commonly used in furniture production
- types, characteristics, uses, limitations and maintenance requirements of power tools commonly used in furniture production
- workplace safety requirements and OH&S requirements
- workflow within the workplace

Skills

The ability to:

- collect, organise and understand information related to hand and power tools, work orders, maintenance systems and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate problems, avoid reworking and avoid wastage
- use workplace technology related to the operation and maintenance of hand and power tools

(4) Resource implications

The following resources should be provided:

- furniture making sector hand and power tools
- materials used in the manufacturing and/or installation of furnishing products

(5) Method of assessment

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment may be in conjunction with assessment of other relevant units of competency.

(6) Context of assessment

Assessment may occur on the job or in a simulated workplace facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> • Carries out established processes • Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> • Manages process • Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> • Establishes principles and procedures • Evaluates and reshapes process • Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFMK0041A: Assemble furnishing components

Competency Descriptor:

This unit deals with the skills and knowledge required to assemble timber components to produce furniture frames or complete furniture units.

Competency Field: Timber Furniture Manufacturing

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Prepare for assembly	<p>1.1 Work instructions are used to determine job requirements, including design, tolerances, process, materials, finish and quantity.</p> <p>1.2 Assembly sequence is planned.</p> <p>1.3 Procedures are determined for checking quality at each stage of the process.</p> <p>1.4 Workplace health and safety requirements, including personal protection needs, are observed throughout the work.</p> <p>1.5 Suitable work area is selected for the task.</p> <p>1.6 Tools and equipment suitable to the fixing method are selected and checked for safe operation.</p> <p>1.7 Components, hardware, fittings and attachments are collected.</p> <p>1.8 Fixing and joining devices are selected in line with work instructions and type of materials to be joined.</p> <p>1.9 Jigs are selected and checked for suitability of purpose.</p>
2. Assemble components	<p>2.1 Components are laid out and joined using jigs and appropriate fastenings.</p> <p>2.2 Hand and/or power tools and equipment are used as required.</p> <p>2.3 Assembled frame is checked for compliance with specifications.</p>

- 2.4 Components are prepared, assembled and fitted as per specification.
- 2.5 Frames, which do not meet quality specifications are repaired or tagged for further processing or recycling/disposal.
- 2.6 Finished products are organised and stored in holding area.
- 3. Clean work area and maintain equipment
 - 3.1 Faulty and/or defective equipment is tagged and reported in accordance with workplace procedures.
 - 3.2 Waste and scrap are removed following workplace procedures.
 - 3.3 Tools and equipment used are cleaned, inspected for serviceable condition and stored appropriately in accordance with workplace procedures.
 - 3.4 Equipment and work area clean-up is maintained in accordance with workplace procedures.

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school-shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is to be carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the assembly of furnishing components.

The following variables may be present for this particular unit.

Furnishing components may include, but are not limited to:

- carcasses
- doors
- drawers
- frames
- shelves
- ends
- tops
- limited basic end items

Materials to be used may include, but are not limited to:

- timber
- manufactured board
- glues
- screws
- nails
- dowels
- knock-down fittings
- biscuits

Work to be carried out in workplaces involved in the manufacture of:

- solid timber furniture
- domestic furniture
- commercial furniture
- kitchen and bathroom cabinets
- furniture components

OH&S requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- safe operating procedures

Tools and equipment include, but are not limited to:

- measuring tapes or rulers
- hammers
- mallets
- squares
- bevels
- chisels
- planes
- hand saws
- power saws
- power drills/screwdrivers
- clamps
- screwdrivers
- pincers
- pneumatic tools

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet
- goggles

Assembled component checking process is to cover:

- alignment
- squareness
- correct number and fitting of fasteners
- hardware, fittings and attachments
- conformity to work instruction and quality requirements

Information and procedures:

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- manufacturers' specifications and operational procedures

Storage of finished products must ensure that there is:

- no obstruction to traffic
- components are not damaged in storage
- incompatible items are not stored together
- products are arranged to match the sequence of work

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical aspects of evidence

Interpret work order and locate and apply relevant information.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Follow work instructions, operating procedures and inspection practices to:

- minimise the risk of injury to self or others
- prevent damage to goods, equipment and products
- maintain required production output and product quality

Assemble at least four furnishing components from the list in the Range Statement.

Work effectively with others.

Modify activities to cater for variations in workplace context and environment.

(2) Pre-requisite Relationship of units:

Pre-requisites for this unit are:

- LMFFMK0031A: Use furniture making hand and power tools
- LMFFMK0021A: operate basic woodworking machines

(3) Underpinning knowledge and skillsKnowledge

Knowledge of:

- types, characteristics, uses and limitations of common furnishing components
- the interpretation of basic furniture plans
- identification of hand and/or power tools, materials, equipment, processes and procedures
- workflow in relation to furniture production

Skills

The ability to:

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate assembly problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the assembly, including tools, equipment, materials and measuring devices

(4) Resource implications

The following resources should be provided:

- access to plans, hand and/or power tools, equipment, materials, cauls and jigs, woodworking machinery, and a work area

(5) Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning Knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

(6) Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFMK0071A: Join solid timber

Competency Descriptor:

This unit deals with the skills and knowledge required to prepare and join solid timber required for the manufacture of solid timber flat surfaces.

Competency Field: Wood Furniture Manufacturing

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Prepare the work	1.1 Work instructions are used to determine job requirements, including: process, materials, finish and quantity. 1.2 Application sequence is planned. 1.3 Procedures are determined for checking quality at each stage of the process. 1.4 Workplace health and safety requirements, including personal protection needs, are observed throughout the work. 1.5 Suitable work area is selected for the task. 1.6 Tools and equipment suitable for application are identified and checked for safe and effective operation.
2. Layout and prepare materials	2.1 Timbers are selected and checked for defects following work instructions. 2.2 Suitable joining processes are selected and prepared. 2.3 Timbers are prepared for joining and laid out.
3. Join timber	3.1 Timbers are measured, marked and cut to size. 3.2 Machinery is used in accordance with workplace procedures, including use of personal protective equipment. 3.3 Adhesives are applied according to workplace procedures and/or manufacturers' instructions. 3.4 Final trim and finishing are completed to specifications. 3.5 Work is checked against required quality standards.

- | | | | |
|----|---|-----|--|
| 4. | Finalise operation and maintain equipment | 4.1 | Work area cleaned, hand and/or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures. |
| | | 4.2 | Machinery is cleaned and left in a safe mode. |
| | | 4.3 | Faulty and/or defective equipment is tagged and reported in accordance with workplace practices. |
| | | 4.4 | Off-cuts and unused materials are collected and stored for reuse or disposal following workplace procedures. |
| | | 4.5 | Waste and scrap materials are dealt with following workplace procedures. |

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills in joining solid timber.

The following variables may be present for this particular unit.

Joining techniques are to cover widening joints, including the following edge joining methods:

- butt
- dowel
- moulded edge joint (finger-joint, tongue in groove, zigzag)
- biscuit joint
- slip-tongue joint

Work to be carried out in workplaces involved in the manufacture of:

- domestic furniture
- commercial furniture
- kitchen and bathroom cabinets, and/or
- furniture components

OH&S requirements include:

- Relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods code
- safe operating procedures

Tools and equipment may include, but are not limited to:

- measuring tapes or rulers
- hammers
- mallets
- squares
- bevels
- chisels
- planes
- hand saws

Materials to be used may include but are not limited to:

- solid timber
- plywood
- adhesives
- abrasives
- cleaning materials
- MDF

Information and procedures:

- workplace procedures relating to the use and operation of tools and equipment
- workplace instructions, including job sheets, plans, drawings and designs
- workplace procedures relating to reporting and communications
- manufacturers' instructions for the use of equipment and materials

Machines may include:

- panel saw, cross-cut saw
- rip saw
- surface planers
- panel planer
- spindle moulder
- sanders, and
- vertical and horizontal drills

- power saws
- power drills
- biscuit machines
- pneumatic tools
- dowel jigs
- hoses
- clamps, and
- pincers

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical aspects of evidence

Interpret work order and locate relevant information.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Follow work instructions, operating procedures and inspection practices to:

- prevent damage to goods, equipment and products
- maintain required production output and product quality
- minimise the risk of injury to self or others

Join at least four solid timber tops of a minimum of three sections and using a minimum of four different widening joints.

Work effectively with others.

Modify activities to cater for variations in workplace context and environment.

(2) Pre-requisite Relationship of units:

Pre-requisites for this unit are:

- LMFFMK0031A: Use furniture making hand and power tools
- LMFFMK0021A: Operate basic woodworking machines

(3) Underpinning knowledge and skillsKnowledge

Knowledge of:

- types, characteristics (including cupping, expansion, twisting, bowing, spring and grain direction), uses and limitations of timbers
- the interpretation of plan representation of furniture design
- joining techniques and their effect on timbers
- types of sawing methods, including through sawn and quarter sawn, and the impact of these on joining
- preparation of drawings/set-outs
- identification of hand and/or power tools, materials, equipment, processes and procedures
- workflow in relation to furniture production

Skills

The ability to:

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate application problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the application, including tools, equipment, calculators and measuring devices

(4) Resource implications

- access to plans, hand and/or power tools, equipment, joining and finishing materials, woodworking machinery, and work area

(5) Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

(6) Context of assessment

Assessment may occur on the job or in a workplace-simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFMK0081A: Hand make timber joints

Competency Descriptor:

This unit deals with the skills and knowledge required to construct and assemble the range of timber joints used in furniture making using hand and portable power tools.

Competency Field: Wood Furniture Manufacturing

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
1.	Plan and prepare for work	1.1	Workplace health and safety requirements, including personal protection needs, are observed throughout the work.
		1.2	Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition.
		1.3	Product purpose, furniture style and joint type are identified from workplace documentation.
		1.4	Tools, adhesives and fasteners are selected to match the joint type.
2.	Make joint	2.1	Joint components are marked out according to joint type and dimensional specifications.
		2.2	Measurements and calculations are checked for accuracy to ensure quality outcomes.
		2.3	Joint components cut to specifications without spoilage. Joint dry fitted and confirmed as suitable to be assembled.
		2.4	Joint assembled and clamped using adhesives and/or fasteners, where required to make joints firm.
		2.5	Finished joint is checked against quality requirements.
3.	Complete housekeeping	3.1	Unused materials are stored or recycled as required.
		3.2	Tools and equipment are cleaned and stored appropriately.

- 3.3 Work area is cleaned and rubbish disposed of appropriately.
- 3.4 Workplace documentation and/or reports are completed.

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is carried out in accordance with statutory obligations, organisation insurance requirements, environment legislation, and manual handling procedures and relevant regulations.

Work involves the use of tools to create hand made timber joints.

The following variables may be present for this particular unit.

Joints to include:

- dowel
- mortise and tenon
- dovetail
- biscuit joint
- finger joint
- mitre
- housing joint
- bridle joints

Workplace health and safety requirements may include:

- H&S legislation
- material safety management systems
- hazardous and dangerous goods codes, and
- local safe operating procedures or equivalent

Tools and equipment may include:

- chisels
- mallets
- mortise gauges
- calipers
- vices
- dovetail saws
- tenon saws
- portable biscuit machines
- hand power planers
- hand power saws
- hand power sanders
- coping saws
- planes
- files
- hand drills
- power drills
- dowel jigs
- hand routers

Timbers may include

- indigenous
- imported

Personal protective equipment to include:

- safety boots
- dust mask
- coverall
- gloves
- safety helmet

Quality requirements include:

- alignment
- neatness
- firmness
- acceptable tolerances

Information and procedures:

- workplace procedures relating to the use and operation of tools
- production planning figures
- work instructions, including job sheets, plans, drawing and designs
- workplace procedures relating to reporting and communication
- manufacturers' instructions for the use of equipment and materials

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical aspects of evidence

Interpret work order and locate and apply relevant information.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Follow work instructions, operating procedures and inspection practices to:

- minimise the risk of injury to self or others
- prevent damage to goods, equipment and products
- maintain required production output and product quality

Select appropriate joint types for the furniture item.

Utilise at least two different adhesive types.

To produce a minimum of four different joint types as specified in the Range Statement in accordance with industry standards on tolerances with at least two produced substantially by hand operations.

Work effectively with others.

Modify activities to cater for variations in workplace context and environment.

(2) Pre-requisite Relationship of units:

Pre-requisites for this unit are:

- LMFFMK0031A: Use furniture making sector hand and power tools
- LMFFMK0021A: Operate basic woodworking machines

(3) Underpinning knowledge and skills

Knowledge

Knowledge of:

- characteristics, properties and selection criteria of adhesives used
- capabilities and limitations of tools used
- matching requirements of adhesives and fasteners to timbers/materials used
- workflow in relation to the furniture items being made or repaired

Skills

The ability to:

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate assembly problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the lay out, cut and assembly joints, including tools, equipment, materials and measuring devices

(4) Resource implications

The following resources should be provided

- timber, chisels, mallets, mortise gauges, calipers, vices, dovetail saws, planes, files and drills

(5) Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

(6) Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFMK0091A: Follow plans to assemble production furniture

Competency Descriptor:

This unit deals with the skills and knowledge required to prepare and assemble timber production furniture using modular construction methods and components to a given plan.

Competency Field: Wood Furniture Manufacturing

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Prepare for assemble	1.1 Work instructions are used to determine job requirements, including: process, materials, finish and quantity. 1.2 Assembly sequence is planned. 1.3 Procedures are determined for checking quality at each stage of the process. 1.4 Workplace health and safety requirements, including personal protection needs, are observed throughout the work. 1.5 Suitable work area is selected for the task. 1.6 Tools and equipment suitable to the assembly are selected and checked for safe operation. 1.7 Fixing and joining devices are selected in line with work instructions and type of materials to be joined. 1.8 Components, hardware, fittings and attachments are collected.
2. Assemble furniture	2.1 Components are laid out and joined using appropriate fastenings. 2.2 Hand and/or power tools are used as required. 2.3 Assembled furniture is checked for compliance with specifications. 2.4 Doors, drawers, shelves and/or runners are prepared and fitted as per set out. 2.5 Hardware and decorative accessories are applied to specification.

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| | 2.6 | Item is prepared for finishing, including the removal of bruises, scratches, dents and marks. |
| | 2.7 | Work is checked against required standard and non-conforming items rectified. |
| | 2.8 | Finished products are organised and stored in holding area |
| 3. | 3.1 | Faulty and/or defective equipment is tagged and reported in accordance with workplace procedures. |
| Clean work area maintain equipment | 3.2 | Waste and scrap are removed following workplace procedures. |
| | 3.3 | Tools and equipment used are cleaned, inspected for serviceable condition, maintained and stored appropriately in accordance with workplace procedures. |
| | 3.4 | Machinery and work area clean-up is maintained in accordance with workplace procedures. |

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is to be carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the assembly of furniture.

The following variables may be present for this particular unit.

Furniture may include but is not limited to:

- wall units
- vanity units
- kitchen cabinets
- side-boards/buffets
- drawer units
- display cabinets
- counters
- tables
- beds
- clocks

OH&S requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- safe operating procedures

Work to be carried out in workplaces involved in the manufacture of:

- domestic furniture
- commercial furniture
- kitchen and bathroom cabinets, and/or
- furniture components

Tools and equipment may include, but are not limited to:

- measuring tapes or rulers
- hammers
- mallets
- squares
- bevels
- chisels
- planes
- hand saws
- power saws
- power drills/screwdrivers
- pneumatic tools
- clamps
- screwdrivers
- pincers

Checking process for assembled furniture is to cover:

- alignment and squareness
- correct number and fitting of fasteners
- hardware, fittings and attachments
- conformity to work instruction and quality requirements

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet

Materials to be used may include, but are not limited to:

- manufactured board
- glass
- alloys
- adhesives
- screws
- nails
- dowels
- knock-down fittings
- metal fasteners and associated hardware

Storage of assembled furniture must ensure that:

- there is no obstruction to traffic
- products are not damaged in storage
- incompatible items are not stored together,
- products are arranged to match the sequence of work

Information and procedures

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical aspects of evidence

Interpret work order and locate and apply relevant information.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Follow work instructions, operating procedures and inspection practices to:

- minimise the risk of injury to self or others
- prevent damage to goods, equipment and products
- maintain required production output and product quality

Assemble at least two items of production furniture, one of manufactured board and one of solid timber construction, with each featuring:

- a door
- a drawer
- shelving

Work effectively with others.

Modify activities to cater for variations in workplace context and environment.

(2) Pre-requisite Relationship of units:

Pre-requisites for this unit are:

- LMFFMK0031A: Use furniture making hand and power tools
- LMFFMK0021A: Operate basic woodworking machines

(3) Underpinning knowledge and skillsKnowledge

Knowledge of:

- the interpretation of plan representation of furniture design
- the preparation of drawings/set-outs
- identification of hand and/or power tools, materials, equipment, processes and procedures
- workflow in relation to furniture production

Skills

The ability to:

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage

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Skills

The ability to(cont'd)

- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate assembly problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the assembly, including tools, equipment, materials and measuring devices

(4) Resource implications

The following resources should be provided

- access to plans, hand and/or power tools, equipment, materials, cauls and jigs, woodworking machinery, and a work area

((5) Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

(6) Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFMK0161A: Construct furniture using leg and rail method

Competency Descriptor:

This unit deals with the skills and knowledge required to follow plans to construct and assemble furniture using leg and rail construction.

Competency Field: Furniture Manufacturing

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1 Work instructions are used to determine job requirements, including design, quality, materials, equipment, and quantities.</p> <p>1.2 Workplace health and safety requirements, including personal protection needs, are observed throughout the work.</p> <p>1.3 Construction and assembly sequence is planned.</p> <p>1.4 Procedures are determined for checking quality at each stage of the process.</p> <p>1.5 Suitable work area is selected for the task.</p> <p>1.6 Preparatory drawings/set-outs for tasks are completed.</p> <p>1.7 Cutting list for components is developed.</p> <p>1.8 Materials are selected following work instructions.</p> <p>1.9 Tools and equipment suitable for construction are identified and checked for safe and effective operation.</p>
2. Complete construction	<p>2.1 Material is set out and prepared according to work instructions and components are marked according to workplace procedures.</p> <p>2.2 Tools, machines and equipment are used in accordance with safety requirements and manufacturers' specifications.</p> <p>2.3 Components are manufactured including any specified shapes, angles or curves and checked against set out and job requirements.</p> <p>2.4 Components are assembled using jigs and/or clamps and fastenings.</p>

- 2.5 Adhesives are applied according to workplace procedures and/or manufacturers' instructions.
 - 2.6 Joining process is undertaken according to workplace procedures.
 - 2.7 Assembled chair/couch is checked for compliance with specifications.
 - 2.8 Furniture item is finished to suitable state for surface preparation.
 - 2.9 Any non-conformity with the required quality standards is rectified.
3. Finalise operation and maintain equipment
- 3.1 Faulty and/or defective equipment is tagged and reported in accordance with workplace practices.
 - 3.2 Work area is cleaned; hand and/or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures.
 - 3.3 Off-cuts and unused materials are collected and stored for reuse or disposed following workplace procedures.
 - 3.4 Waste and scrap materials are dealt with following workplace procedures.

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is to be carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set-up, operation and maintenance of machines.

Work involves reading and interpreting plans, developing set-outs, using static machines, using hand and power tools to construct furniture using traditional jointing methods (mortise and tenon, mitre, dowel and bridle).

The following variables may be present for this particular unit.

Furniture to be constructed using the leg and rail method may include:

- dining
- occasional
- hall and side tables
- dining and occasional chairs, and
- cabinets

Competency may be demonstrated in workplaces involved in the manufacture of:

- domestic furniture
- commercial furniture
- furniture components

Tools and equipment may include, but are not limited to:

- measuring tapes or rulers
- hammers
- mallets
- squares
- bevels
- chisels
- planes
- hand saws
- power saws
- cordless drills/screwdrivers
- power drills
- fixing and jointing devices
- pneumatic tools
- jigs
- clamps
- pincers

OH&S requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- safe operating procedures

Materials to be used may include but are not limited to:

- timber
- manufactured board
- adhesives
- screws
- nails
- dowels
- knock down fittings

Machines may include, but are not limited to:

- band saws
- cross cut saws
- jig saws
- panel and rip saws
- surface planers
- panel planers
- belt sanders
- horizontal borers
- vertical drill presses for mortise and tenon dovetail
- grinders
- wood turning lathes
- veneer guillotines and presses

Checking of constructed product is to cover:

- squareness
- parallel
- twist
- distortion and product faults

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet
- goggles

Information and procedures

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical aspects of evidence

Read and interpret cutting lists and job specifications to prepare for work.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Identify materials used in the work process.

Follow work instructions, operating procedures and inspection practices to:

- minimise the risk of injury to self or others
- prevent damage and wastage of goods, equipment and products
- maintain required production output and product quality

Construct a minimum of two furniture products, which are to include:

- a table with a drawer
- a chair with shaped and angled components, and
- require the jointing processes listed in the Range Statement

Work effectively with others.

Modify activities to cater for variations in workplace contexts and environment.

(2) Pre-requisite Relationship of units:

Pre-requisites for this unit are:

- LMFFMK0031A: Use furniture making hand and power tools
- LMFFMK0021A: Operate basic woodworking machines

(3) Underpinning knowledge and skillsKnowledge

Knowledge of:

- the interpretation of plan representation of furniture design
- the preparation of drawings/set-outs/rods
- the types, characteristics, properties and limitations of timber used in furniture construction
- material selection and structural standards
- application of ergonomic principles and guidelines to furniture construction
- identification of hand and/or power tools, materials, equipment, processes and procedures
- workflow in relation to furniture production

Skills

The ability to:

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate assembly problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the assembly, including tools, equipment, materials and measuring devices

(4) Resource implications

The following resources should be provided

- access to plans
- hand and/or power tools
- equipment
- materials
- woodworking machinery
- work area

((5) Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

(6) Context of assessment

Assessment may occur on the job or in a workplace-simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 2	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFMK0172A: Produce angled and curved furniture using manufactured board

Competency Descriptor:

This unit deals with the skills and knowledge required to construct and assemble manufactured board furniture using angled and curved construction methods.

Competency Field: Timber Furniture Manufacturing

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1 Work instructions are used to determine job requirements, including design, quality, materials, equipment, and quantities.</p> <p>1.2 Workplace health and safety requirements, including personal protection needs, are observed throughout the work.</p> <p>1.3 Construction and assembly sequence is planned.</p> <p>1.4 Procedures are determined for checking quality at each stage of the process.</p> <p>1.5 Suitable work area is selected for the task.</p> <p>1.6 Preparatory drawings/set-outs for tasks are completed.</p> <p>1.7 Cutting list for components is developed.</p> <p>1.8 Materials are selected following work instructions.</p> <p>1.9 Tools and equipment suitable for construction are identified and checked for safe and effective operation.</p>
2. Complete construction	<p>1.2 Materials are set out and prepared according to work instructions and components are marked according to industry practices.</p> <p>2.2 Tools, machines and equipment are used in accordance with safety requirements and manufacturers' specifications.</p> <p>2.3 Materials are bent and formed in accordance with the plan.</p> <p>2.4 Components are manufactured and checked against set out for tolerances, fit and accuracy.</p>

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| 3. | Finalise operation and maintain equipment | 2.5 | Components are assembled and checked against set out for accuracy, fit, twist and distortion. |
| | | 2.6 | Doors, drawers and shelves are assembled and fitted. |
| | | 2.7 | Product is prepared for final finish, including the removal of bruises, scratches, dents and marks. |
| | | 2.8 | Product is checked against plans at identified checkpoints. |
| | | 3.1 | Faulty and/or defective equipment is tagged and reported in accordance with workplace practices. |
| | | 3.2 | Work area is cleaned; hand and/or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures. |
| | | 3.3 | Off-cuts and unused materials are collected and stored for reuse or disposed following workplace procedures. |
| | | 3.4 | Waste and scrap materials are dealt with following workplace procedures. |

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is to be carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work involves reading and interpreting plans, developing set outs, using hand and/or power tools, equipment and operating woodworking machinery.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set-up, operation and maintenance of machines.

The following variables may be present for this particular unit.

Manufactured board furniture is to include:

- angled cabinets
- curved cabinets
- counters
- display units

OH&S requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- safe operating procedures

Competency may be demonstrated in workplaces involved in the manufacture of:

- domestic furniture
- commercial furniture
- furniture components

Materials to be used may include but are not limited to:

- manufactured board
- adhesives
- screws
- nails
- dowels
- knockdown fittings
- glass
- decorative finishes
- abrasive paper
- finishing materials

Tools and equipment include, but are not limited to:

- measuring tapes or rulers
- hammers
- mallets
- squares
- bevels
- chisels
- planes
- hand saws
- power saws
- power drills/screwdrivers
- pneumatic tools
- clamps
- screwdrivers
- pincers

Machines may include, but are not limited to:

- band saws
- cross cut saws
- mitre saws
- panel saws
- surface planers
- panel planers
- belt sanders
- horizontal borers
- vertical drill presses
- dovetail
- pedestal grinders
- veneer guillotines and presses

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet
- goggles

Information and procedures

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical aspects of evidence

Read and interpret cutting lists and job specifications to prepare for work.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Identify materials used in the work process.

Follow work instructions, operating procedures and inspection practices to:

- minimise the risk of injury to self or others
- prevent damage and wastage of goods, equipment and products
- maintain required production output and product quality

Produce a minimum of two significant manufactured board products, which must include one curved cabinet with rails and one cabinet with glass shelves, panels and doors.

Conduct operator maintenance on machines and related tools and equipment.

Work effectively with others.

Modify activities to cater for variations in workplace contexts and environment.

(2) Pre-requisite Relationship of units:

Pre-requisites for this unit are:

- LMFFMK0031A: Use furniture making hand and power tools
- LMFFMK0021A: Operate basic woodworking machines

(3) Underpinning knowledge and skills

Knowledge

Knowledge of:

- the types, characteristics, uses and limitations of manufactured board
- the interpretation of plan representation of furniture design
- the preparation of drawings and set-outs
- identification of hand and/or power tools, materials, equipment, processes and procedures
- workflow in relation to furniture production

Skills

The ability to:

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate assembly problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the assembly, including tools, equipment, materials and measuring devices

(4) Resource implications

The following resources should be provided:

- access to plans
- hand and/or power tools
- equipment
- cauls and jigs
- materials
- woodworking machinery
- work area

((5) Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

(6) Context of assessment

Assessment may occur on the job or in a workplace-simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> • Carries out established processes • Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> • Manages process • Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> • Establishes principles and procedures • Evaluates and reshapes process • Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 2	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFPTF0891A: Cut mouldings to length

Competency Descriptor:

This unit deals with the skills and knowledge required to cut frame mouldings to the required length with guillotines, saws or other equipment.

Competency Field: Picture Framing

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Prepare for installation	<p>1.1 Patterns, work instructions and/or plans are read and interpreted to identify:</p> <ul style="list-style-type: none"> • type of moulding to be cut • pattern or plan to be followed • process required to complete work tasks • number of items to be cut and holding area for completed items • equipment settings for the materials that are being cut • required cutting fluids <p>1.2 Workplace health and safety requirements, including personal protection needs, are observed throughout the work.</p> <p>1.3 The process for obtaining materials/components and moving completed work to the next process is identified.</p> <p>1.4 Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work in terms of quality, serviceability and safety.</p> <p>1.5 Cutting equipment components and controls, including emergency stops and guards, are identified.</p> <p>1.6 Work sequence is planned to suit the job.</p>
2. Conduct cutting operation	<p>2.1 Equipment is operated and monitored to ensure correct cut quality, output and that wastage is within allowable limits.</p> <p>2.2 Problems occurring during work operations are identified and reported to appropriate persons.</p> <p>2.3 Authorised changes in working procedures are followed.</p> <p>2.4 Routine lubrication and adjustments for the equipment are completed.</p>

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| | 2.5 | Items, which do not meet quality requirements, are rectified or discarded. |
| | 2.6 | Finished work is inspected for compliance with work order, workplace requirements and finish. |
| 3. Complete work | 3.1 | Scraps and off-cuts are removed for disposal/recycling as required by workplace procedures. |
| | 3.2 | Work area is cleaned and rubbish disposed of as appropriate. |
| | 3.3 | Workplace documentation is completed as required. |
| | 3.4 | Tools, equipment and unused materials are cleaned and stored following workplace procedures. |

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school-shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements.

Work requires individuals to demonstrate discretion, judgement and problem solving skills in the set up, operation, adjustment and monitoring of equipment used to cut picture frame mouldings.

Cut mouldings addresses the work involved in the set up, operation, adjustment and monitoring of equipment used to cut picture frame mouldings.

The following variables may be present for this particular unit.

Mouldings are to include but are not limited to:

- solid timber
- composites
- metal and alloy extrusion
- synthetics

OH&S requirements may include:

- safe working practices
- use of tools and equipment
- use of power tools
- safe handling, and
- storage of materials in accordance with enterprise procedures

Work may be performed in workplaces which are involved in the framing of a wide range of items, including, but not limited to:

- original artwork
- reproductions
- photographs
- documents
- three-dimensional items

Information and procedures:

- workplace procedures relating to the use and operation of tools and equipment
- workplace instructions, including job sheets, plans, drawings and designs
- workplace procedures relating to reporting and communications
- manufacturers' instructions for the use of equipment and materials

Machines may include, but are not limited to:

- guillotines
- static mounted circular saws
- drop saws
- docking saws
- mitre saws

Personal protective equipment to include:

- gloves
- safety glasses
- ear protection
- safety footwear
- aprons
- overalls

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical Aspects of Evidence

Identify and operate equipment, including the use of safety cut outs and guards.

Identify materials, ensuring quality and aesthetics, to be used in the work process.

Interpret work order and locate and apply relevant information to set up, operate, adjust and monitor equipment used to cut picture frame mouldings.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment, safety and environmental protection equipment.

Follow work instructions, operating procedures and inspection practices to:

- minimise the risk of injury to self and others
- prevent damage to goods, equipment and products
- maintain required production output and product quality

Cut mouldings for a picture frame (up to 100wide) of each of the following materials:

- timber (multi-angle and 45°)
- aluminium 45°
- synthetic 45°

Work effectively with others.

Modify activities to cater for variations in workplace contexts and environment.

(2) Pre-requisite Relationship of Units

Pre-requisite for this unit is:

- LMFPTF0881A: Use picture framing sector hand and power tools

(3) Underpinning Knowledge and Skills

Knowledge

Knowledge of:

- the type, characteristics, uses and limitations of moulding materials
- the types, characteristics and applications of cutting machines and devices
- the types, uses and operation of tools
- techniques for cutting frame mouldings
- workplace safety system requirements related to cutting frame mouldings
- workflow in relation to cutting frame mouldings

Skills

The ability to:

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate quantities and estimate material requirements
- use pre-checking and inspection techniques to anticipate cutting problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the cutting of frame mouldings, including drawing aids, tools, equipment, calculators and measuring devices

(4) Resource Implications

- Guillotines
- static mounted circular saws
- docking saws and mitre saws fitted with appropriate blades
- standard operating procedures
- unprocessed materials and work area

(5) Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency, which form a part of the job role.

(6) Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant frame moulding cutting machines/devices, framing materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFPTF0901A: Join moulding

Competency Descriptor:

This unit deals with the skills and knowledge required to join mouldings to form picture frames.

Competency Field: Picture Framing

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Identify work requirements	<p>1.1 Patterns, work instructions and/or plans are read and interpreted to identify:</p> <ul style="list-style-type: none"> • size of the frames • types of attachments to be used • required materials and tools • quality requirements for the frames • assembly steps and sequence <p>1.2 Workplace health and safety requirements relevant to the operation of joining mouldings, including personal protection needs, are observed throughout the work.</p> <p>1.3 The process for obtaining materials/components and moving completed work to the next process is identified.</p> <p>1.4 Required components, attachments, tools and equipment are identified.</p> <p>1.5 Work sequence is planned to suit the job.</p>
2. Prepare for frame assembly	<p>2.1 Components of the frame are selected and checked against work instructions for:</p> <ul style="list-style-type: none"> • size • number • pattern and finish • profile <p>2.2 Fixing and joining devices are selected in line with work instructions and type of moulding to be joined.</p> <p>2.3 Other tools, equipment (including jigs) and materials are selected and checked prior to use to ensure that they are appropriate for the work in terms of quality, serviceability and safety.</p> <p>2.4 Shortages/defective items are notified in accordance with workplace practices.</p>

3. Assemble frame
 - 3.1 Components are laid out and joined using:
 - jig (if required)
 - appropriate fastenings
 - appropriate tools and equipment
 - 3.2 Assembled frame is checked for:
 - alignment
 - pattern matching (if appropriate)
 - correct number and fitting of fasteners and other attachments
 - conformity to work instruction and quality requirements
 - 3.3 Corners are finished in accordance with workplace requirements.
 - 3.4 Joined frames are stored according to workplace requirements.
4. Complete work
 - 4.1 Completed frames are inspected for quality, with those not meeting specification being repaired or tagged for further processing or recycling/disposal.
 - 4.2 Tools, equipment and unused materials are cleaned and stored following workplace procedures.
 - 4.3 Equipment faults are identified, tagged and reported to appropriate personnel.
 - 4.4 Work area is cleaned and rubbish disposed of as appropriate.
 - 4.5 Workplace documentation is completed as required.

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school-shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the assembly of mouldings.

Work may be performed in workplaces, which are involved in the manufacture and assembly of picture frame mouldings or in the framing of items, including, original and reproduction artwork, photographs and documents.

Join mouldings addresses the work involved in the planning, preparation and assembly of picture frame mouldings to form frames.

The following variables may be present for this particular unit.

OH&S requirements may include:

- safe working practices
- use of tools and equipment
- use of power tools
- safe handling, and
- storage of materials in accordance with enterprise procedures

Moulding materials include, but are not limited to:

- solid timber
- composites
- metal and alloy extrusion
- synthetics
- filler
- putties
- touch-up pens
- paints/stains

Tools and equipment are to include:

- underpinners (pneumatic or power V-nailer)
- V-nails
- drill
- nail punch
- screwdrivers
- touch-up material
- glues, and
- finishing tools, including files and sandpaper

Personal protective equipment to include:

- gloves
- safety glasses
- ear protection
- safety footwear
- aprons or
- overalls

Information and procedures:

- workplace procedures relating to the use and operation of tools and equipment
- workplace instructions, including job sheets, plans, drawings and designs
- machine and moulding manufacturers' specifications
- workplace procedures relating to reporting and communication

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical Aspects of Evidence

Interpret work order and locate and apply relevant information.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment, safety and environmental protection equipment.

Identify and assemble components, attachments, tools and materials required to join picture frames to specification and required pattern (including pattern matching).

Follow work instructions, operating procedures and inspection practices to:

- minimise the risk of injury to self and others
- prevent damage to goods, equipment and products
- maintain required production output and product quality

As a minimum:

- join each of the following frames (at least one of them being a multi-angle frame) up to a width of 100 mm:
 - synthetic
 - timber
 - aluminium

Each in the following profiles:

- flat
- traditional
- reverse

Work effectively with others.

Modify activities to cater for variations in workplace contexts and environment.

(2) Pre-requisite Relationship of Units

Pre-requisite for this unit is:

- LMFPTF0881A: Use picture framing sector hand and power tools

(3) Underpinning Knowledge and Skills**Knowledge**

Knowledge of:

- the type, characteristics, uses and limitations of moulding materials
- workplace safety system requirements related to joining picture frame mouldings
- workflow in relation to frame production
- operation of tools and equipment used in the assembly process
- identification of equipment, processes and procedures

Skills

The ability to:

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate quantities and estimate material requirements
- use pre-checking and inspection techniques to anticipate cutting problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the joining of picture frame mouldings, including design aids, tools, equipment, calculators and measuring devices

(4) Resource Implications

- timber
- metal or synthetic mouldings
- frame components
- consumables
- workplace procedures
- appropriate work area
- tools and equipment

(5) Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency, which together form a part of the job role.

(6) Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant frame joining equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFMK0052A: Select and apply hardware

Competency Descriptor:

This unit deals with the skills and knowledge required to identify, select and fix hardware to furniture items, and applies to new and refurbished furniture.

Competency Field: Timber Furniture Manufacturing

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Plan and prepare work	1.1 Work instructions are used to determine job requirements, including design, colour, finish process and required hardware quality. 1.2 Workplace health and safety requirements, including personal protection needs, are observed throughout the work. 1.3 Types of hardware are identified and selected for the work. 1.4 Tools, equipment and accessories for application are identified and checked for safe and effective operation. 1.5 Surfaces are cleaned and prepared to enable accurate colour matching.
2. Apply/fit and install hardware	2.1 Hardware items are laid out/placed in the required design. 2.2 Tools and equipment used in accordance with workplace procedures, including use of personal protective equipment. 2.3 Fastening/securing process is undertaken according to workplace procedures. 2.4 Adhesives, where used are applied according to workplace procedures and/or manufacturers' instructions. 2.5 Work is checked against required quality standards.
3. Finalise operation and maintain equipment	3.1 Work area cleaned, hand and/or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures. 3.2 Machinery is cleaned and left in a safe mode.

- 3.3 Faulty and/or defective equipment is tagged and reported in accordance with workplace practices.
- 3.4 Unused hardware is collected and stored for reuse or disposal following workplace procedures.
- 3.5 Waste and scrap materials are dealt with following workplace procedures.

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school-shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills in selecting and applying hardware.

The following variables may be present for this particular unit.

Hardware to be covered here is to include at a minimum:

- hinges
- handles
- drawer-runners
- metal drawer systems
- sliding rail systems,
- rotating storage systems
- slide-out storage systems

OH&S requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- safe operating procedures

Work to be carried out in workplaces involved in the manufacture of:

- solid timber furniture
- domestic furniture
- commercial furniture
- kitchen and bathroom cabinets
- furniture components

Materials to be used may include but are not limited to:

- timber
- manufactured board
- hinges
- hardware consumables
- cleaning chemicals and materials

Tools and equipment may include, but are not limited to:

- measuring tapes or rulers
- levelling devices
- hammers
- mallets
- squares
- bevels
- chisels
- planes
- hand saws
- power saws
- power drills/screwdrivers
- pneumatic tools
- clamps
- screwdrivers
- pincers

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet

Information and procedures

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical aspects of evidence

Interpret work order and locate relevant information.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Follow work instructions, operating procedures and inspection practices to:

- prevent damage to goods, equipment and products
- maintain required production output and product quality
- minimise the risk of injury to self or others

Select and apply each item in the range of hardware stipulated in the Range Statement.

Work effectively with others.

Modify activities to cater for variations in workplace context and environment.

(2) Pre-requisite Relationship of units:

Pre-requisites for this unit are:

- LMFFMK0031A: Use furniture making hand and power tools

(3) Underpinning knowledge and skillsKnowledge

Knowledge of:

- types, characteristics, uses and limitations of hardware
- the interpretation of plan representation of furniture design
- the preparation of drawings/set-outs
- identification of hand and/or power tools, materials, equipment, processes and procedures
- workflow in relation to furniture production

Skills

The ability to:

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with shop supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate application problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the selection and application of hardware, including tools, equipment, calculators and measuring devices

(4) Resource implications

The following resources should be provided:

- access to plans, hand and/or power tools, equipment, hardware materials, woodworking machinery, and a work area

(5) Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other relevant units of competency.

(6) Context of assessment

Assessment may occur on the job or in a simulated workplace facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFMK0122A: Set up, operate and maintain basic static machines

Competency Descriptor:

This unit deals with the skills and knowledge required to operate and maintain basic static machines used for sawing, planing, sanding and drilling in the production of furniture.

Competency Field: Timber Furniture Manufacturing

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Prepare for work	1.1 Work instructions are used to identify job requirements, including quality, materials, equipment and quantities. 1.2 Cutting list and job specifications are read and interpreted. 1.3 Workplace health and safety requirements, including ventilation requirements and personal protection needs, are observed throughout the work. 1.4 Material for machining is selected and inspected for quality. 1.5 Machines, cutting tools and jigs are identified and checked for safe and effective operation. 1.6 Procedures are determined for minimising waste material. 1.7 Procedures are identified for maximising energy efficiency while completing the job.
2. Set up machines	2.1 Safety equipment, including emergency stops, gauges, guards and controls are checked. 2.2 Machine settings and adjustments are made in accordance with job requirements and machine and tool manufacturers' instructions. 2.3 Trial runs are conducted to check machine operation, accuracy and quality of finished work. 2.4 Necessary adjustments are made to machine settings.
3. Operate machine	3.1 Machine start-up procedure is carried out in accordance with manufacturers' instructions.

- 3.2 Material is fed into machine in accordance with manufacturers' instructions, safe handling procedures and standard workplace operating procedures.
 - 3.3 Machine is operated in accordance with its designed capacity and purpose, tooling requirements and to manufacturers' recommendations.
 - 3.4 Machine operation is monitored to ensure product quality and output.
 - 3.5 Waste quantities are checked and minimised. Items that do not meet quality requirements are repaired, recycled or discarded according to workplace procedures.
 - 3.6 Problems with the required work and/or the operation of the machine are identified and reported to appropriate persons.
4. Clean up work area and maintain equipment
- 4.1 Material that can be reused is collected and stored.
 - 4.2 Waste and scrap are removed following workplace procedures.
 - 4.3 Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures.
 - 4.4 Operator maintenance is completed in accordance with manufacturers' specifications and site procedures.
 - 4.5 Unserviceable equipment is tagged and faults identified in accordance with workplace procedures.
 - 4.6 Equipment and tooling are maintained in accordance with workplace procedures.

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is to be carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills

The unit scope is to cover all the following basic machines and functions or tasks:

Crosscut saw

- remove/replace saw blade
- blade selection/identification
- docking (oversize + 20mm)
- docking (accurate to $\pm 0.25\text{mm}$)
- docking square (no tolerance)
- machine fault finding

Ripsaw

- remove/replace saw blade
- blade selection/identification
- set up riving knife
- parallel rip (oversize by 5mm+)
- machine fault finding

Bobbin sander

- sand concave surface
- disc sander
- sand straight surface
- sand convex surface
- sand end grain
- machine fault finding

Panel saw

- remove/replace saw blade
- set up scribe saw
- set up riving knife
- cut flat panel board (off rip fence using scribe saw)
- cut flat panel board (off cross-cut fence using scribe saw)
- machine fault finding

Horizontal borer (single bit)

- select and replace drill bits
 - drill holes to pre-determined depths horizontally
 - hinge boring
- machine fault finding

Belt sander

- remove/replace belts
- sand veneer face of flat panel board
- sand solid timber face
- sand solid timber edges (remove arris/shape)
- machine fault finding

Scroll band saw

- remove/replace saw blade
- fold, unfold, reverse saw blade
- blade selection
- off fence ripping
- freehand ripping
- freehand curve cutting
- machine fault finding

Surface planer (buzzer/jointer)

- machine face
- machine edge
- machine chamfer or bevel
- machine fault finding

Panel planer (thicknesser)

- parallel plane width
- parallel plane thickness
- machine fault finding

Vertical drill press

- select and replace drill bits
- drill holes to pre-determined depths vertically
- hinge boring
- machine fault finding

Material to be machined may include but is not limited to:

- solid timber
- manufactured board
- metal

OH&S requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- safe operating procedures

Work to be carried out in workplaces involved in the manufacture of:

- domestic furniture
- commercial furniture
- kitchen and bathroom cabinets
- furniture components

Information and procedures:

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet
- goggle

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical aspects of evidence

Interpret work order and locate and apply relevant information.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Follow work instructions, operating procedures and inspection practices to:

- minimise the risk of injury to self or others
- prevent damage to goods, equipment and products
- maintain required production output and product quality

Identify, set up, operate and monitor the machines and complete the tasks identified in the Range Statement.

Work effectively with others.

Modify activities to cater for variations in workplace context and environment.

(2) Pre-requisite Relationship of units:

Pre-requisites for this unit are:

- Nil

(3) Underpinning knowledge and skills

Knowledge

Knowledge of:

- the range, characteristics, uses and limitations of basic static machines
- characteristics of materials and uses of products produced
- general workplace quality standards and procedures
- workplace guidelines regarding acceptable tolerance levels
- workplace safety policies and procedures
- procedures for reporting machinery faults and material defects

Skills

The ability to:

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate assembly problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the assembly, including tools, equipment, materials and measuring devices

(4) Resource implications

The following resources should be provided

- access to basic static machinery as identified in the Range Statement
- standard operating procedures
- unprocessed materials

((5) Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

(6) Context of assessment

Assessment may occur on the job or in a workplace-simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> • Carries out established processes • Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> • Manages process • Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> • Establishes principles and procedures • Evaluates and reshapes process • Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 2	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFMK0152A: Construct chair and couch frames

Competency Descriptor:

This unit deals with the skills and knowledge required to construct and assemble chair and couch frames.

Competency Field: Timber Furniture Manufacturing

ELEMENT OF COMPETENCY PERFORMANCE CRITERIA

1. Prepare for work	1.1	Work instructions are used to determine job requirements, including design, quality, materials, equipment, and quantities.
	1.2	Workplace health and safety requirements, including personal protection needs, are observed throughout the work.
	1.3	Construction and assembly sequence is planned.
	1.4	Procedures are determined for checking quality at each stage of the process.
	1.5	Suitable work area is selected for the task.
	1.6	Preparatory drawings/set-outs for tasks are completed.
	1.7	Cutting list for components is developed.
	1.8	Materials are selected following work instructions.
	1.9	Tools and equipment suitable for construction are identified and checked for safe and effective operation.
2. Complete construction	2.1	Material is set out and prepared according to work instructions and components are marked according to workplace procedures.
	2.2	Tools, machines and equipment are used in accordance with safety requirements and manufacturers' specifications.
	2.3	Components are manufactured including any specified shapes, angles or curves and checked against set-outs and job requirements.
	2.4	Components are assembled using jigs and/or clamps and fastenings.

- | | | | |
|----|---|-----|---|
| 3. | Finalise operation and maintain equipment | 2.5 | Adhesives are applied according to workplace procedures and/or manufacturers' instructions. |
| | | 2.6 | Joining process is undertaken according to workplace procedures. |
| | | 2.7 | Assembled chair/couch is checked for compliance with specifications. |
| | | 2.8 | Item is finished to suitable state for surface preparation. |
| | | 2.9 | Any non-conformity with the required quality standards is rectified. |
| | | 3.1 | Faulty and/or defective equipment is tagged and reported in accordance with workplace practices. |
| | | 3.2 | Work area is cleaned; hand and/or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures. |
| | | 3.3 | Off-cuts and unused materials are collected and stored for reuse or disposed following workplace procedures. |
| | | 3.4 | Waste and scrap materials are dealt with following workplace procedures. |

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is to be carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set-up, operation and maintenance of machines.

Work involves reading and interpreting plans, developing set-outs using hand and power tools, equipment and operating woodworking machinery.

The following variables may be present for this particular unit.

Chair and couch frames may include but are not limited to:

- dining chairs
- office chairs
- lounge chairs
- sofas/settees

OH&S requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- safe operating procedures

Materials to be used may include but not limited to:

- timber
- manufactured board
- adhesives
- screws
- nails
- bolts
- dowels
- metal fasteners
- steel
- plastics

Tools and equipment may include, but are not limited to:

- measuring tapes or rulers
- hammers
- mallets
- squares
- bevels
- chisels
- planes
- hand saws
- power saws
- cordless drills/screwdrivers
- power drills
- fixing and joining devices
- jigs
- clamping devices pincers

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet
- goggle

Information and procedures

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

Competency may be demonstrated in workplaces involved in the manufacture of:

- domestic furniture
- commercial furniture
- furniture components

Machines may include, but are not limited to:

- band saws
- cross cut saws
- docking saws
- mitre saws
- panel and rip saws
- surface planers (buzzers)
- panel planers (thicknessers)
- lacey sanders
- horizontal borers
- vertical drill presses
- edge sanders
- pedestal grinders
- wood turning lathes presses

Checking of constructed product is to cover:

- squareness
- alignment
- winding
- hardware fittings and attachments

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical aspects of evidence

Read and interpret cutting lists and job specifications to prepare for work.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Identify materials used in the work process .

Follow work instructions, operating procedures and inspection practices to:

- minimise the risk of injury to self or others
- prevent damage and wastage of goods, equipment and products
- maintain required production output and product quality

Construct at least three significant chairs and couch frames .

Work effectively with others.

Modify activities to cater for variations in workplace contexts and environment.

(2) Pre-requisite Relationship of units:

Pre-requisites for this unit are:

- LMFFMK0031A: Use furniture making hand and power tools
- LMFFMK0021A: Operate basic woodworking machines

(3) Underpinning knowledge and skills

Knowledge

Knowledge of:

- the interpretation of plan representation of furniture design
- the preparation of drawings/set-outs
- workflow in relation to furniture production
- identification of hand and/or power tools, materials, equipment, processes and procedures
- application of ergonomic principles and guidelines to furniture construction

Underpinning knowledge and skills(Cont'd)**Skills**

The ability to:

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate assembly problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the assembly, including tools, equipment, materials and measuring devices

(4) Resource implications

The following resources should be provided:

- access to plans
- hand and/or power tools
- equipment
- materials
- cauls and jigs
- woodworking machinery
- work area

(5) Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

(6) Context of assessment

Assessment may occur on the job or in a workplace-simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> • Carries out established processes • Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> • Manages process • Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> • Establishes principles and procedures • Evaluates and reshapes process • Establishes criteria for evaluation

Collect, analyse and organise information	Level	
Communicate ideas and information	Level	
Plan and organise activities	Level	
Work with others and in team	Level	
Use mathematical ideas and techniques	Level	
Solve problems	Level	
Use technology	Level	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFMK0222A: Select timbers for furniture production

Competency Descriptor:

This unit deals with the skills and knowledge required to select timbers for use in furniture production by applying knowledge of timber technology.

Competency Field: Furniture Manufacturing

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1 Workplace health and safety requirements, including personal protection needs, are observed throughout the work.</p> <p>1.2 Structural requirements for timbers are determined from workplace documentation.</p> <p>1.3 Timber is assessed for suitability in accordance with selection criteria.</p> <p>1.4 Where required written report is prepared substantiating selection of timber.</p>
2. Evaluate timber selected	<p>2.1 Other materials, which may be incorporated into furnishing item are identified and compatibility factors to be considered are recorded for inclusion in production plans.</p> <p>2.2 Moisture content of timber selected is determined to ensure compliance with production requirements.</p> <p>2.3 Density and working properties of timber are determined to ensure compliance with production requirements.</p> <p>2.4 Any faults or features in the timber are identified and strategies are suggested to overcome/minimise their effects.</p> <p>2.5 Recommendations on any changes to appropriate finishes and adhesives are recorded for inclusion in production plans.</p>

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is to be carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work involves the selection of appropriate timbers for use in the production of furniture items. Timbers may include indigenous and overseas timbers. The following variables may be present for this particular unit.

Furnishing items

Furnishing items include:

- solid timber furniture
- upholstered furniture
- occasional items

OH&S requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- safe operating procedures

Timbers selection criteria may include:

- aesthetic appeal
- shape
- volumes required
- characteristics

Working properties may include:

- hardness
- strength
- brittleness

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet

Information and procedures

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical aspects of evidence

Read and interpret cutting lists and job specifications to prepare for work.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Identify materials used in the work process.

Follow work instructions, operating procedures and inspection practices to:

- minimise the risk of injury to self or others
- prevent damage and wastage of goods, equipment and products
- maintain required production output and product quality

From a range of six common furniture species samples, identify the species correctly, match it to a specified application and justify the choice.

Correctly identify natural and seasoning faults in selected timbers.

Use a moisture meter to measure the moisture content in a minimum of three samples, including one hard and one soft wood.

Work effectively with others.

Modify activities to cater for variations in workplace contexts and environment.

(2) Pre-requisite Relationship of units:

Pre-requisites for this unit are:

- Nil

(3) Underpinning knowledge and skills

Knowledge

Knowledge of:

- characteristics and uses of a range of available indigenous and overseas timber
- commonly used complementary materials and their compatibility when used in conjunction with others
- impact of climate change and workshop conditions on timbers
- timber seasoning methods, techniques and faults
- solid timber conversion techniques

Skills

The ability to:

- collect, organise and understand information related to work orders, basic plans and safety procedures
 - communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
 - plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
 - work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
 - use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
-
- use pre-checking and inspection techniques to anticipate assembly problems, avoid reworking and avoid wastage
 - use the limited workplace technology related to the assembly, including tools, equipment, materials and measuring devices

(4) Resource implications

The following resources should be provided:

- timber
- moisture content measuring devices

(5) Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

(6) Context of assessment

Assessment may occur on the job or in a workplace-simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 2	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 2	
Work with others and in team	Level 2	
Use mathematical ideas and techniques	Level 2	
Solve problems	Level 2	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFMK0182A: Produce angled and curved furniture using solid timber

Competency Descriptor:

This unit deals with the skills and knowledge required to construct and assemble solid timber furniture using angular construction methods.

Competency Field: Timber Furniture Manufacturing

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1 Work instructions are used to determine job requirements, including design, quality, materials, equipment, and quantities.</p> <p>1.2 Workplace health and safety requirements, including personal protection needs, are observed throughout the work.</p> <p>1.3 Construction and assembly sequence is planned.</p> <p>1.4 Procedures are determined for checking quality at each stage of the process.</p> <p>1.5 Suitable work area is selected for the task.</p> <p>1.6 Preparatory drawings/set-outs for tasks are completed.</p> <p>1.7 Cutting list for components is developed.</p> <p>1.8 Materials are selected following work instructions.</p> <p>1.9 Tools and equipment suitable for construction are identified and checked for safe and effective operation.</p>
2. Complete construction	<p>1.2 Materials are set out and prepared according to work instructions and components are marked according to industry practices.</p> <p>2.2 Tools, machines and equipment are used in accordance with safety requirements and manufacturers' specifications.</p> <p>2.3 Materials are bent and formed in accordance with the plan.</p> <p>2.4 Components are manufactured and checked against set out for tolerances, fit and accuracy.</p>

- 2.5 Components are assembled and checked against set out for accuracy, fit, twist and distortion.
- 2.6 Doors, drawers and shelves are assembled and fitted.
- 2.7 Product is prepared for final finish, including the removal of bruises, scratches, dents and marks.
- 2.8 Product is checked against plans at identified checkpoints.
- 3. Finalise operation and maintain equipment
 - 3.1 Faulty and/or defective equipment is tagged and reported in accordance with workplace practices.
 - 3.2 Work area is cleaned; hand and/or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures.
 - 3.3 Off-cuts and unused materials are collected and stored for reuse or disposed following workplace procedures.
 - 3.4 Waste and scrap materials are dealt with following workplace procedures.

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is to be carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work involves reading and interpreting plans, developing set out, preparing and using jigs, templates and shaped cauls, using hand and/or power tools and equipment and operating woodworking machinery.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set-up, operation and maintenance of machines.

Manufactured solid timber furniture is to include, at a minimum, angular structures and curved cabinets incorporating an oval design.

The following variables may be present for this particular unit.

Material bending and forming techniques are to include:

- steam/heat and bend
- groove and bend

Competency may be demonstrated in workplaces involved in the manufacture of:

- domestic furniture
- commercial furniture
- furniture components

Tools and equipment may include, but are not limited to:

- measuring tapes or rulers
- hammers
- mallets
- squares
- bevels
- chisels
- plane
- hand saws
- power saws
- power drills/screwdrivers
- pneumatic tools
- clamps
- screwdrivers
- pincers

OH&S requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- safe operating procedures

Materials to be used may include but are not limited to:

- timber
- adhesives
- screws
- nails
- dowels
- knockdown fittings
- glass
- decorative finishes
- abrasive paper
- finishing materials

Machines may include, but are not limited to:

- band saws
- cross cut saws
- mitre saws
- panel and rip saws
- surface planers
- panel planers
- belt sanders
- horizontal borers
- vertical drill presses
- for dovetails
- grinders
- wood turning lathes
- veneer guillotines and presses

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet
- goggles

Information and procedures

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical aspects of evidence

Read and interpret cutting lists and job specifications to prepare for work.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Identify materials used in the work process.

Follow work instructions, operating procedures and inspection practices to:

- minimise the risk of injury to self or others
- prevent damage and wastage of goods, equipment and products
- maintain required production output and product quality

Produce a minimum of two significant timber products which must include:

- one curved cabinet with rails
- one item involving oval design
- using traditional construction methods and jointing

Conduct operator maintenance on machines and related tools and equipment.
Work effectively with others.

Modify activities to cater for variations in workplace contexts and environment.

(2) Pre-requisite Relationship of units:

Pre-requisites for this unit are:

- LMFFMK0031A: Use furniture making hand and power tools
- LMFFMK0021A: Operate basic woodworking machines

(3) Underpinning knowledge and skillsKnowledge

Knowledge of:

- the types, characteristics, uses and limitations of solid timbers most common to furniture production
- the interpretation of plan representation of furniture design
- the preparation of drawings/set-outs/rods and geometrical concepts
- identification of hand and/or power tools, materials, equipment, processes and procedures.
- workflow in relation to furniture production

Skills

The ability to:

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate assembly problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the assembly, including tools, equipment, materials and measuring devices

(4) Resource implications

The following resources should be provided:

- access to plans
- hand and/or power tools
- equipment
- cauls and jigs
- materials
- woodworking machinery
- work area

((5) Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

(6) Context of assessment

Assessment may occur on the job or in a workplace-simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 2	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFMK0262A: Set up, operate and maintain sawing machines

Competency Descriptor:

This unit deals with the skills and knowledge required to set up, operate and maintain sawing machines using their full technical capabilities and capacities. It encompasses and builds on the machines and tasks covered in unit LMFFM0122A - Set up, operate and maintain basic static machines.

Competency Field: Timber Furniture Manufacturing

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Prepare for work	1.1 Work instructions are used to identify job requirements, including quality, materials, equipment and quantities. 1.2 Cutting list and job specifications are read and interpreted. 1.3 Workplace health and safety requirements, including ventilation requirements and personal protection needs, are observed throughout the work. 1.4 Material for machining is selected and inspected for quality 1.5 Sawing machines, cutting tools and jigs are identified and checked for safe and effective operation. 1.6 Procedures are determined for minimising waste material 1.7 Procedures are identified for maximising energy efficiency while completing the job.
2. Set up machines	2.1 Safety equipment, including emergency stops, gauges, guards and controls are checked. 2.2 Saw settings and adjustments are made in accordance with job requirements and machine and tool manufacturer instructions. 2.3 Trial runs are conducted to check saw operation, accuracy and quality of finished work. 2.4 Necessary adjustments are made to saw settings.
3. Operate machines	31 Saw start-up procedure is carried out in accordance with manufacturers' instructions.

- 3.2 Material to be sawed is positioned in accordance with manufacturers' instructions, tooling requirements, safe handling procedures and standard workplace operating procedures.
 - 3.3 Saw is operated in accordance with its designed capacity and purpose, and to manufacturers' recommendations.
 - 3.4 Saw operation is monitored to ensure product quality and output.
 - 3.5 Waste quantities are checked and minimised.
 - 3.6 Items that do not meet quality requirements are recycled or discarded according to workplace procedures.
 - 3.7 Problems with the required work and/or the operation of the saw are identified and reported to appropriate persons.
4. Clean up work area and maintain machine
 - 4.1 Material that can be reused is collected and stored.
 - 4.2 Waste and scrap are removed following workplace procedures.
 - 4.3 Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures.
 - 4.4 Unserviceable equipment is tagged and faults identified in accordance with workplace.
 - 4.5 Operator maintenance is completed in accordance with manufacturers' specifications and site procedures.
 - 4.6 Tooling is maintained in accordance with workplace procedures.

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is to be carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of sawing machines.

The following variables may be present for this particular unit.

Sawing machines are to include:

- cross-cut saws
- circular rip saws
- sliding table panel saws and scroll-band saws, and may include:
- NC beam saws
- wall saws
- band re-saws
- straight line edger

Material to be machined is to include solid timber and manufactured board, and may include:

- laminates
- plastics
- acrylics
- synthetic solids

Work involves:

- reading and interpreting plans
- deep ripping
- cutting angles and compound angles
- trenching flat panel components
- shaping components
- using jigs and fixtures
- breaking down boards
- maintaining machine parts and saw blades

Work to be carried out in workplaces involved in the manufacture of:

- domestic furniture
- commercial furniture
- kitchen and bathroom cabinets
- furniture components

OH&S requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- safe operating procedures

Tools and equipment are to include machine-specific tools, and may include:

- screwdrivers
- hammers
- spanners
- jigs and fixtures

Materials are to include:

- sawing machine consumables
- oils and lubricants
- trial materials

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet
- goggles

Information and procedures

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical aspects of evidence

Interpret work order and locate and apply relevant information.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Read and interpret cutting lists and job specifications to prepare for work.

Identify materials used in the work process.

Follow work instructions, operating procedures and inspection practices to:

- minimise the risk of injury to self or others
- prevent damage to goods, equipment and products
- maintain required production output and product quality

Identify, set up, operate and maintain at least four different types of saws, which must include those stipulated in the Range Statement and cover the use of safety cut-outs and guards.

Conduct operator maintenance on the machines and related equipment.

Work effectively with others.

Modify activities to cater for variations in workplace context and environment.

(2) Pre-requisite Relationship of units:

Pre-requisites for this unit are:

- LMFFMK0122A: Set up, operate and maintain basic static machines.

(3) Underpinning knowledge and skillsKnowledge

Knowledge of:

- the types, characteristics, uses and limitations of sawing machines
- sawing processes and techniques
- characteristics of materials and uses of products produced
- workplace guidelines regarding acceptable tolerance levels
- workplace safety policies and procedures
- procedures for reporting machinery faults and material defects

Skills

The ability to:

- collect, organise and understand information related to sawing operations, work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate saw depths and estimate material requirements
- use pre-checking and inspection techniques to anticipate sawing problems, avoid reworking and avoid wastage
- use the limited workplace technology related to sawing, including tools, equipment, calculators and measuring devices

(4) Resource implications

- access to sawing machinery as identified in the Range Statement
- standard operating procedures
- and unprocessed materials

(5) Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

(6) Context of assessment

Assessment may occur on the job or in a workplace-simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 2	
Use technology	Level 2	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFMK0061A: Apply sheet laminates by hand

Competency Descriptor:

This unit deals with the skills and knowledge required to apply laminates by hand, including the preparation, layout, application and finalisation processes.

Competency Field: Wood Furniture Manufacturing

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Prepare the work	1.1 Work instructions are used to determine job requirements, including: process, materials, finish and quantity. 1.2 Application sequence is planned. 1.3 Procedures are determined for checking quality at each stage of the process. 1.4 Workplace health and safety requirements, including personal protection needs, are observed throughout the work. 1.5 Suitable work area is selected for the task. 1.6 Tools and equipment suitable for application are identified and checked for safe and effective operation.
2. Layout and prepare materials	2.1 Laminates are selected and checked for flaws following work instructions. 2.2 Laminates are prepared for application and laid out. 2.3 Suitable joining processes are selected and prepared.
3. Fit/apply and finish laminate	3.1 Laminates are measured, marked and cut to size and applied to the base material. 3.2 Tools and equipment are used in accordance with workplace procedures, including use of personal protective equipment. 3.3 Adhesives are applied according to workplace procedures and/or manufacturers' instructions. 3.4 Final trim and finishing are completed to specifications. 3.5 Work is checked against required quality standards.

- | | | | |
|----|---|-----|--|
| 4. | Finalise operation and maintain equipment | 4.1 | Work area cleaned, hand and/or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures. |
| | | 4.2 | Faulty and/or defective equipment is tagged and reported in accordance with workplace practices. |
| | | 4.3 | Off-cuts and unused materials are collected and stored for reuse or disposal following workplace procedures. |
| | | 4.4 | Waste and scrap materials are dealt with following workplace procedures. |

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills in applying laminates by hand.

The following variables may be present for this particular unit.

OH&S requirements include:

- Relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods code
- safe operating procedures

Work to be carried out in workplaces involved in the manufacture of:

- domestic furniture
- commercial furniture
- kitchen and bathroom cabinets, and/or
- furniture components

Tools and equipment may include, but are not limited to:

- measuring tapes or rulers
- mallets
- squares
- bevels
- chisels
- planes
- hand saws
- power saws
- power drills/screwdrivers
- pneumatic tools
- clamps
- screwdrivers
- rollers
- laminate trimmers and cutters
- hand routers
- compressed air

Information and procedures

- workplace procedures relating to use and operation of tools and equipment
- work instructions, including job sheets, plans, drawings and designs
- workplace procedures relating to reporting and communications
- manufacturers' instructions for the use of equipment and materials

Materials to be used may include but are not limited to:

- timber
- manufactured board
- laminates
- timber strips
- adhesives
- cleaning materials

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical aspects of evidence

Interpret work order and locate relevant information.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Follow work instructions, operating procedures and inspection practices to:

- prevent damage to goods, equipment and products
- maintain required production output and product quality
- minimise the risk of injury to self or others

Apply and finish laminates to at least three different surfaces, including at least two requiring laminate edging.

Work effectively with others.

Modify activities to cater for variations in workplace context and environment.

(2) Pre-requisite Relationship of units:

Pre-requisites for this unit are:

- LMFFMK0031A: Use furniture making hand and power tools

(3) Underpinning knowledge and skillsKnowledge

knowledge of:

- types, characteristics, uses and limitations of laminates
- the interpretation of plan representation of furniture design
- the preparation of drawings/set-outs
- identification of hand and/or power tools, materials, equipment, processes and procedures workflow in relation to furniture production

Skills

The ability to:

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate application problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the application, including tools, equipment, calculators and measuring devices

(4) Resource implications

The following resources should be provided access to:

- plans, hand and/or power tools, equipment
- laminates and finishing materials
- woodworking machinery
- work area

(5) Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other relevant units of competency.

(6) Context of assessment

Assessment may occur on the job or in a workplace-simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFMK0101A: Bend and form cane

Competency Descriptor:

This unit deals with the skills and knowledge required to bend and form cane for use in furniture construction.

Competency Field: Wicker Furniture Manufacturing

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Prepare for work	1.1 Workplace health and safety requirements, including personal protection needs, are observed throughout the work. 1.2 Tools, machines and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition. 1.3 Furniture design, tolerances, process, materials and quantities are determined from work instructions. 1.4 Work sequence is planned. 1.5 Procedures are determined for checking quality at each stage of the process. 1.6 Suitable work area is selected for the task. 1.7 Preparatory drawings/set-outs for tasks are completed where required.
2. Complete bending and forming process	2.1 Tools, machines and equipment are used in accordance with safety requirements and manufacturers' specifications. 2.2 Materials are visually inspected for flaws and faults. 2.3 Cane is machine sanded to remove exterior blemishes, flaws or faults. 2.4 Cane is prepared by straightening where required and marked for bending. 2.5 Cane is prepared by straightening where required and marked for bending. 2.6 Cane is bent in accordance with design/pattern requirements.

- 2.7 Product is checked against plans at identified checkpoints to ensure compliance with specifications.
- 2.8 Non-conformity with the required quality standards is rectified.
- 3. Finalise operation
 - 3.1 Faulty and/or defective equipment is tagged and reported in accordance with workplace practices.
 - 3.2 Work area is cleaned, hand and/or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures.
 - 3.3 Off-cuts and unused materials are collected and stored for reuse or disposed of following workplace procedures.
 - 3.4 Waste and scrap materials are dealt with following workplace procedures.

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is to be carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the assembly of furniture.

Competency may be demonstrated in workplaces involved in the manufacture of cane furniture.

Work involves reading and interpreting plans, developing set outs, using hand and/or power tools, equipment and operating machinery.

The following variables may be present for this particular unit.

Cane furniture may include:

- lounge chairs
- dining chairs
- tables
- side tables
- coffee tables
- entertainment units
- bookcases

OH&S requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- safe operating procedures

Tools and equipment may include, but are not limited to:

- hand sanders
- planers

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet

Materials

- appropriate size and quantity wicker cane and binder

Machines may include, but are not limited to:

- bench saws
- drop saws
- stationary sanding machines
- ovens
- bending presses

Information and procedures

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical aspects of evidence

Interpret work order and locate and apply relevant information.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Follow work instructions, operating procedures and inspection practices to:

- minimise the risk of injury to self or others
- prevent damage to goods, equipment and products
- maintain required production output and product quality

Bend and form cane for a minimum of three furniture items including:

- two or three seater lounge
- oval dining table
- dining chair

Work effectively with others.

Modify activities to cater for variations in workplace context and environment.

(2) Pre-requisite Relationship of units:

Pre-requisites for this unit are:

- LMFFMK0031A: Use furniture making Hand and power tools

(3) Underpinning knowledge and skills

Knowledge

Knowledge of:

- the interpretation of plan representation of cane furniture design
- the preparation of drawings/set-outs
- identification of hand and/or power tools, materials, equipment, processes and procedures
- workflow in relation to cane bending and forming

Skills

The ability to:

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate assembly problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the assembly, including tools, equipment, materials and measuring devices

(4) Resource implications

The following resources should be provided

- access to plans, hand and/or power tools, equipment, machines, cane binding materials and a work area

((5) Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

(6) Context of assessment

Assessment may occur on the job or in a workplace-simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFMK0111A Construct cane (wicker) furniture

Competency Descriptor:

This unit deals with the skills and knowledge required to construct and assemble cane (wicker) furniture.

Competency Field: Wicker Furniture Manufacturing

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1 Workplace health and safety requirements, including personal protection needs, are observed throughout the work.</p> <p>1.2 Tools, machines and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition.</p> <p>1.3 Furniture design, tolerances, process, materials and quantities are determined from work instructions.</p> <p>1.4 Construction and assembly sequence is planned.</p> <p>1.5 Procedures are determined for checking quality at each stage of the process.</p> <p>1.6 Suitable work area is selected for the task.</p> <p>1.7 Preparatory drawings/set-outs for tasks are completed.</p> <p>1.8 Cutting list for components is interpreted.</p> <p>1.9 Materials are selected according to work instructions.</p>
2. Complete construction	<p>2.1 Material is set out and prepared according to work instructions and components are marked according to workplace procedures.</p> <p>2.2 Tools, machines and equipment are used in accordance with safety requirements and manufacturers' specifications.</p> <p>2.3 Components are manufactured, including any specified shapes, angles or curves, and checked against set out and job requirements.</p> <p>2.4 Components are assembled using jigs and/or clamps and fastenings.</p>

- 2.5 Adhesives are applied according to workplace procedures and/or manufacturers' instructions.
 - 2.6 Joining process is undertaken according to workplace procedures.
 - 2.7 Assembled furniture is checked for compliance with specifications.
 - 2.8 Any non-conformity with the required quality standards is rectified.
3. Finalise operation
- 3.1 Faulty and/or defective equipment is tagged and reported in accordance with workplace practices.
 - 3.2 Work area is cleaned, hand and/or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures.
 - 3.3 Off-cuts and unused materials are collected and stored for reuse or disposed following workplace procedures.
 - 3.4 Waste and scrap materials are dealt with following workplace procedures.

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is to be carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the assembly of furniture.

Competency may be demonstrated in workplaces involved in the manufacture of cane furniture.

The following variables may be present for this particular unit.

Cane furniture may include:

- lounge chairs
- dining chairs
- tables
- side tables
- coffee tables
- entertainment units
- bookcases

OH&S requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- safe operating procedures

Preparation for finishing includes the application of binding cane/peel and the sanding of the furniture.

Work involves:

- reading and interpreting plans
- developing set-outs
- using hand and power tools and equipment, and operating woodworking machinery

Machines may include, but are not limited to:

- band saws
- docking saws
- jig saws
- bench saws
- vertical drill presses
- presses

Tools and equipment may include, but are not limited to:

- measuring tapes or rulers
- hammers
- mallets
- squares
- bevels
- chisels
- hand saws
- power saws
- power drills/screwdrivers
- pneumatic tools
- clamps
- screwdrivers
- pincers
- nail guns
- pin nailers
- glue guns

Checking process of constructed product is to cover:

- squareness
- parallel
- twist
- distortion

Materials to be used may include but are not limited to:

- cane
- timber
- manufactured board
- adhesives
- screws
- nails
- binding cane
- steel bars
- metal recliner actions

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet
- goggles

Information and procedures

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical aspects of evidence

Interpret work order and locate and apply relevant information.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Follow work instructions, operating procedures and inspection practices to:

- minimise the risk of injury to self or others
- prevent damage to goods, equipment and products
- maintain required production output and product quality

Construct a minimum of three furniture items including:

- two or three seater lounge
- oval dining table
- dining chair

Work effectively with others.

Modify activities to cater for variations in workplace context and environment.

(2) Pre-requisite Relationship of units:

Pre-requisites for this unit are:

- LMFFKM0021A: Operating basic woodworking machines
- LMFFMK0031A: Use furniture making hand and power tools
- LMFFMK0101A: Bend and form cane (wicker)

(3) Underpinning knowledge and skillsKnowledge

Knowledge of:

- the interpretation of plan representation of cane furniture design
- the preparation of drawings/set-outs
- identification of hand and/or power tools, materials, equipment, processes and procedures
- workflow in relation to cane furniture production

Skills

The ability to:

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate assembly problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the assembly, including tools, equipment, materials and measuring devices

(4) Resource implications

The following resources should be provided

- access to plans, hand and/or power tools, equipment, machines, cane and a work area

((5) Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

(6) Context of assessment

Assessment may occur on the job or in a workplace-simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 2	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFIN0391A: Finish a basic furniture finishing product

Competency Descriptor:

This unit deals with the skills and knowledge required to carry out planning, preparation and completion of a basic furniture finishing project involving the coating of surfaces by either hand or spray application.

Competency Field:

Timber Furniture Manufacture

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
1.	Plan and prepare for work	1.1	Work requirements are correctly identified from drawings/ specifications/instructions.
		1.2	Quality assurance requirements are recognised and adhered to in accordance with enterprise operation.
		1.3	Occupational Health & Safety (OH&S) requirements, including personal protection needs, are observed throughout the work.
		1.4	Tools, equipment and materials selected are consistent with job requirements and work instructions, checked for safety and serviceability and any faults reported to supervisor.
2.	Prepare surface and materials for finishing process	2.1	Surfaces are checked for contamination and correct preparation according to workplace procedures and standards.
		2.2	Products with surface or other faults are identified and faults are reported or repaired according to workplace procedures and standards.
		2.3	Techniques for application of materials for finishing process are identified and used according to workplace procedures.
		2.4	Materials suitable for basic surface finishing are prepared.
		2.5	Wood filler applied to surface if necessary or specified.
3.	Colour is applied to timber surface	3.1	Stain is applied to timber surfaces in accordance with manufacturers' specifications and workplace procedures and standards.
		3.2	Stained surface is sealed with sanding sealer using mop brush, swooge, or spray gun.

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|----|--|--|---|
| | 3.3 | Sealed surface is lightly sanded to make smooth. | |
| | 3.4 | Second coat of sanding sealer is applied in accordance with manufacturers' specifications /workplace procedures and standards. | |
| | 3.5 | Sealed surface is lightly sanded to make smooth. | |
| 4. | Finishing material is applied to surface | 4.1 | Finishing material is applied in accordance with manufacturers' specifications until required build is achieved. |
| | | 4.2 | Finishing material is cut back to remove surface defects and/or foreign material in accordance with workplace procedures. |
| | | 4.3 | Where required surface is burnished with fine steel wool and lubricating oil to achieve even sheen. |
| 5. | Clean up | 5.1 | Workplace is cleared of debris and unused materials . |
| | | 5.2 | Wood filler and lubricating oil rags are disposed of safely having regard for spontaneous combustion. |
| | | 5.3 | Tools and equipment are cleaned, maintained and stored. |

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school shop and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work requires individual to demonstrate some discretion, judgement and problem solving skills in the accurate application of polish.

The following variables may be present for this particular unit

OH&S requirements may include:

- relevant legislation
- material safety management systems
- hazardous and dangerous goods codes, and
- safe operating procedures

A basic project may include:

- the coating of tables (occasional, coffee)
- chairs or stools and other furnishing items

Stains may include but are not limited to:

- water stain
- pigment oil stain
- lacquer-based wiping stain

Finishing materials may include but are not limited to:

- oil varnish
- marine varnish
- lacquer
- sanding sealer

Surface faults may include:

- machine marks
- bruising
- pencil marks
- grease
- cross-sanding marks
- scratches
- glue marks
- dirt marks
- insect and termite holes
- holes
- knots
- blisters

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet
- respirator

Wood grain filler may include but is not limited to:

- oil-based filler
- polyurethane (plastic) filler
- water-based filler

Lubricating oil may include but is not limited to:

- linseed oil
- paraffin oil
- 'teak' oil

Tools and equipment may include:

- filler blades
- brushes
- spray equipment
- sandpapers
- bodying up and spiriting out rubbers
- mop brush
- swooge
- scrapers

Information and procedures:

- manufacturers' specifications and operational procedures
- work instructions, including job sheets, plans, drawings and designs
- workplace procedures relating to reporting and communication

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical Aspects of Evidence

Locate, interpret and apply information relevant to polishing.

Follow work instructions, operating procedures and inspection practices to:

- minimise the risk of injury to self and others
- prevent damage to goods, equipment or products
- maintain required product quality

Complete an approved project to apply coatings to surfaces within the criteria listed in the Range Statement.

Work effectively with others.

Modify activities to cater for variations in workplace contexts.

(2) Pre-requisite Relationship of Units

Pre-requisite for this unit is

- LMFFIN0391A: Use furniture finishing hand and power tools

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- characteristics, limitations and uses of coating materials required for the project
- coating application equipment, techniques and safe working procedures
- basic repair techniques to defects in timber surfaces
- safe handling of materials associated with applying coatings

Skills

The ability to:

- collect, organise and understand information related to materials, work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate coating problems, avoid reworking and avoid wastage
- use limited workplace technology related to coating

(4) Resource Implications

- safe work area, coating materials, timber components/furnishings requiring finishing and cleaning materials

(5) Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

(6) Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFIN0431A: Prepare surface for finishing

Competency Descriptor:

This unit deals with the skills and knowledge required to prepare surfaces for the application of surface coatings by hand or machine operations.

Competency Field:

Timber Furniture Manufacture

ELEMENT OF COMPETENCY PERFORMANCE CRITERIA

1. Prepare for surface preparation	1.1	Characteristics of the surface and the required surface coating materials are identified.
	1.2	Occupational Health & Safety (OH&S) requirements, including personal protection needs, are observed throughout the work.
	1.3	Tools and equipment required, related engineering controls identified and set up.
	1.4	Sources of contamination in work area are identified and excluded.
	1.5	Workplace procedures for surface preparation are identified and followed according to the surface and surface coating materials being used.
2. Prepare surfaces	2.1	Surfaces are prepared according to workplace procedures and specification.
	2.2	Surface preparation is checked for conformity with workplace specifications throughout the process.
	2.3	Rectification of surface preparation faults are made as required.
	2.4	Products are inspected and approved for suitability for further processing.
	2.5	Defects are rectified and/or reported in accordance with workplace procedures.

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| 3. | Clean work area and maintain equipment | 3.1 | Prepared products are packed, stored and labelled ready for next process. |
| | | 3.2 | Equipment used is cleaned and inspected for serviceable condition and stored appropriately. |
| | | 3.3 | Unserviceable equipment is tagged, faults are identified and appropriate personnel are informed. |
| | | 3.4 | Chemicals used are stored or disposed of correctly according to regulations. |
| | | 3.5 | Work area is cleaned ready for next process or task. |

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school shop and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the preparation of surfaces.

The following variables may be present for this particular unit.

Surfaces to be prepared may include but are not limited to:

- solid timber
- manufactured board
- metal

OH&S requirements may include:

- relevant legislation
- material safety management systems
- hazardous and dangerous goods codes, and
- safe operating procedures

Tools and equipment are to include:

- measuring tapes and rulers
- squares
- hammer
- nail punch
- liquid containers
- brushes
- cabinet scrapers
- fixed belt/stroke sander
- oil stone
- steel wool/scourers
- sanding blocks
- steam iron
- chisels
- power sanders
- air compressor and hoses
- file

Tools and equipment may also include:

- plane
- spanners
- screwdrivers
- clamps
- drill
- mallet
- vice
- saw

Materials to be used may include but are not limited to:

- abrasive papers
- oxalic acid
- thinners
- turpentine
- menthylated spirits
- putties
- hot water
- glues

Information and procedures:

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

Personal protective equipment to include:

- overall
- safety boots
- gloves
- dust mask
- safety helmet

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical Aspects of Evidence

Interpret work order and locate and apply relevant information.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Follow work instructions, operating procedures and inspection practices to:

- minimise the risk of injury to self or others
- prevent damage to goods, equipment and products
- maintain required production output and product quality

Prepare surfaces on a minimum of four occasions, including:

- horizontal surface
- vertical surface
- internal surface
- curved surface (moulding)
- Surfaces are to include:
 - solid hardwood
 - solid softwood
 - veneered board

Work effectively with others.

Modify activities to cater for variations in workplace context and environment.

(2) Pre-requisite Relationship of Units

Pre-requisite for this unit is:

- LMFFIN0401A: Use furniture finishing hand and power tools

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- the types, properties and characteristics of coatings
- surface preparation techniques and equipment/ materials
- hazardous substances and materials used in surface preparation
- workflow in relation to the application and removal of surface coatings

Skills

The ability to:

- collect, organise and understand information related to work orders, basic plans, hazardous substances and materials and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate surface preparation problems, avoid reworking and avoid wastage
- use the workplace technology related to the preparation of surfaces, including manual and pressure tools, equipment and measuring devices

(4) Resource Implications

- range of surfaces to be prepared, preparation tools, equipment and consumables

(5) Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other relevant units of competency.

(6) Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFIN0461A: Apply stains, fillers and bleach

Competency Descriptor:

This unit deals with the skills and knowledge required to apply stains, fillers and bleach to timber surfaces.

Competency Field:

Timber Furniture Manufacture

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Prepare for work	1.1 Workplace information, including materials application and safety information, material safety data sheets, is used to inform work practices. 1.2 Characteristics of the surface and the required surface treatment are identified from work orders or instructions. 1.3 Processing and application techniques, time and safety requirements are identified and used for work planning. 1.4 Occupational Health & Safety (OH&S) requirements, including ventilation requirements and personal protection needs, are observed throughout the work. 1.5 Tools, equipment and accessories are identified and checked for safe and effective operation for the staining, filling or bleaching task.
2. Prepare for application of materials	2.1 Surfaces are checked for contamination and correct preparation according to workplace procedures and standards. 2.2 Products with surface or other faults are identified and faults repaired as appropriate. 2.3 Materials required to stain and fill in are identified and prepared for the task. 2.4 Trial applications of stains and or fillers are made to check equipment operation, materials consistency, viscosity and specified colour. 2.5 Faults and or inconsistencies in colour are identified and workplace procedures for rectification and adjustment are followed. 2.6 Materials required for bleaching are identified and labelled to prevent cross-contamination of bulk material during application.

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| 3. Apply finishing materials | 3.1 Techniques for application of stain, filler or bleach are identified. |
| | 3.2 Materials are applied according to job instructions, material manufacturers' specifications and workplace procedures. |
| | 3.3 Bleached items are appropriately stored for drying. |
| | 3.4 Finished products are inspected and approved for suitability for further processing. |
| | 3.5 Products, which do not meet quality specifications are restrained, filled, bleached or tagged for further investigation. |
| 4. Clean work area and maintain equipment | 4.1 Equipment used is cleaned and inspected for serviceable condition and stored appropriately. |
| | 4.2 Unserviceable equipment is tagged, faults are identified and appropriate personnel are informed. |
| | 4.3 Bleaching materials are disposed of in accordance with environmental concerns and workplace procedures. Unused material must not be returned to bulk stock. |
| | 4.4 Work area is cleaned and returned to approved condition, all areas used for bleaching are washed down with water. |
| | 4.5 Workplace records are completed. |

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school shop and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the application of stains, fillers and bleach.

The following variables may be present for this particular unit.

Stains are to include:

- lacquer-based
- wiping stain and spirit-based
- may include water and oil-based

Fillers are to include:

- oil-based
- water-based
- plastic (one-pot) filler

Bleach to include:

- two-solution bleach
- may include oxalic acid bleach

Surfaces include:

- solid timber
- manufactured board

OH&S requirements may include:

- relevant legislation
- material safety management systems
- hazardous and dangerous goods codes
- safe operating procedures

Materials to be applied may include but are not limited to:

- stains
- fillers
- bleaches
- water
- abrasive papers
- cotton rags
- hessian

Tools and equipment may include, but are not limited to:

- liquid containers
- rubber gloves
- face masks
- spray booths
- spray guns
- compressor
- air lines
- brushes
- sanding block

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet

Information and procedures:

- workplace procedures relating to the use of tools and equipment.
- work instructions, including job sheets, plans, drawings and designs.
- workplace procedures relating to reporting and communication.
- manufacturers' specifications and operational procedures

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be determined to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical Aspects of Evidence

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Follow work instructions, operating procedures and inspection practices to:

- prevent damage to goods, equipment and products
- prevent damage to goods, equipment or products
- maintain required production output and product quality

Select and apply a minimum of three types of stains, including:

- lacquer-based
- spirit-based
- apply fillers to a minimum of a flat surface and a curved surface
- bleach two different types of timber
- maintain application equipment
- work effectively with others
- modify activities to cater for variations in workplace contexts and environment

(2) Pre-requisite Relationship of Units

Pre-requisite for this unit is:

- LMFFIN0401A: Use furniture finishing hand and power tools.
- LMFFIN0431A: Prepare surface for finishing.

(3) Underpinning Knowledge and Skills

Knowledge

Knowledge of:

- identification of application techniques
- characteristics of stains, fillers and bleaches in terms of toxicity, reactivity, flammability, viscosity
- the methods to prevent contamination of surfaces during and after processing
- workflow in relation to the application stains, fillers and bleach

Skills

The ability to:

- collect, organise and understand information related to coating materials, cleaning materials, work orders and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with shop supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the workshop and the obtaining of coating equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate coating problems, avoid reworking and avoid wastage
- use the limited workplace technology related to coating, including tools, equipment and measuring devices

(4) Resource Implications

- hand application equipment, stains, fillers and bleaches

(5) Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other relevant units of competency.

(6) Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFIN0471A: Apply surface coatings by hand

Competency Descriptor:

This unit deals with the skills and knowledge required to apply brush application coatings, including one-pot polyurethane, enamels, acrylics and polish, by hand.

Competency Field:

Timber Furniture Manufacture

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Prepare for work	1.1 Workplace information, including materials application and safety information, material safety data sheets is used to inform work practices. 1.2 Characteristics of the surface and the required surface finish are identified from work orders or instructions. 1.3 Processing and application techniques, time and safety requirements are identified and used for work planning. 1.4 Occupational Health & Safety (OH&S) requirements, including ventilation requirements and personal protection needs, are observed throughout the work. 1.5 Tools, equipment and accessories are identified and checked for safe and effective operation for the surface coating task.
2. Prepare for application of materials	2.1 Surfaces are checked for contamination and correct preparation according to workplace procedures and standards. 2.2 Products with surface or other faults are identified and faults repaired as appropriate. 2.3 Finishing materials required are identified and prepared for the task. 2.4 Trial applications of surface materials are made to check equipment operation, materials consistency and specified surface finish. 2.5 Faults are identified and workplace procedures for rectification are followed.

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| 3. | Apply finishing materials | 3.1 | Techniques for hand application of materials are identified. |
| | | 3.2 | Finishing materials are applied according to job instructions, material manufacturers' specifications and workplace procedures. |
| | | 3.3 | Finished products are inspected and approved for suitability for further processing. |
| | | 3.4 | Products, which do not meet quality specifications are refinished or tagged for further investigation. |
| 4. | Clean work area and maintain equipment | 4.1 | Equipment used is cleaned and inspected for serviceable condition and stored appropriately. |
| | | 4.2 | Unserviceable equipment is tagged, faults are identified and appropriate personnel are informed. |
| | | 4.3 | Work area is cleaned and returned to approve condition. |
| | | 4.4 | Workplace records are completed. |

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is to be carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, and organisation insurance requirements.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the application of surface coatings.

The following variables may be present for this particular unit.

Coatings are to include:

- one-pot polyurethane
- enamel
- acrylic
- polish

Surfaces may include but are not limited to:

- solid timber
- manufactured board
- metal

Application methods are to include

- brush and swooge

OH&S requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- safe operating procedures.

Tools and equipment may include, but are not limited to:

- sanders
- pneumatic or low-voltage electric buff
- rubber sanding block
- brushes, and
- swooges

Materials may include but are not limited to:

- water
- detergent
- wax
- oil
- enamel
- acrylic
- one-pot polyurethane
- polish
- mentholated spirits
- turpentine
- terebine
- abrasive papers
- cotton rags
- steel wool

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet

Information and procedures:

- workplace procedures relating to the use and operation of tools and equipment.
- workplace instructions, including job sheets, plans, drawings and designs.
- workplace procedures relating to reporting and communications.
- manufacturers' specifications and operational procedures

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical Aspects of Evidence

Interpret work order and locate and apply relevant information.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Follow work instructions, operating procedures and inspection practices to:

- minimise the risk of injury to self and others
- prevent damage to goods, equipment and products
- maintain required production output and product quality
-

Prepare for and apply coatings by hand on a minimum of five occasions covering:

- the three surface types
- the four coatings detailed in the Range Statement
-

Maintain application equipment.

Work effectively with others.

Modify activities to cater for variations in workplace contexts and environment.

(2) Pre-requisite Relationship of Units

Pre-requisites for this unit are:

- LMFFIN0031A: Use furniture finishing hand and power tools
- LMFFIN0431A: Prepare surface for finishing

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- identification of hand application techniques
- characteristics of coatings, waxes and oils in terms of toxicity, reactivity, flammability, required viscosity
- the methods to prevent contamination of surfaces during and after finishing workflow in relation to the application of finishing material

Skills

The ability to:

- collect, organise and understand information related to coating materials, cleaning materials, work orders and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the workshop and the obtaining of coating equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area, estimate paint requirements and other material requirements
- use pre-checking and inspection techniques to anticipate coating problems, avoid reworking and avoid wastage
- use the limited workplace technology related to coating, including tools, equipment and measuring devices

(4) Resource Implications

- hand finishing application equipment, coating materials, waxes and oils and surfaces to be coated

(5) Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment may be in conjunction with assessment of other relevant units of competency.

(6) Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFPTF0871A: Frame a simple art work

Competency Descriptor:

This unit deals with the skills and knowledge required to design, fabricate components and assemble a simple artwork package.

Competency Field: Picture Framing

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Design package	1.1 Artwork to be framed is identified and its qualities and framing requirements assessed. 1.2 A provisional design package is developed. 1.3 Design is modified as required and approved in accordance with workplace procedures. 1.4 Work sequence is planned to suit the job.
2. Cut and join mouldings	2.1 Workplace health and safety requirements, including personal protection needs, are observed throughout the work. 2.2 Tools, equipment and materials required for cutting and joining of mouldings are selected and checked prior to use to ensure that they are appropriate for the work. 2.3 Material is set out for cutting to length according to work instructions and workplace procedures. 2.4 Tools, machines and equipment are used in accordance with safety requirements and manufacturers' specifications. 2.5 Mouldings are cut to length and checked for quality and fit in accordance with workplace practices. 2.6 Components are laid out and fixed in preparation for joining according to work instructions and workplace procedures. 2.7 Components are joined and checked for quality, alignment and finish according to workplace practices.

3. Cut mat board
 - 3.1 Tools, equipment and materials required for cutting mat board are selected and checked prior to use to ensure that they are appropriate for the work.
 - 3.2 Mat board material is set out for cutting according to work instructions and workplace procedures.
 - 3.3 Tools, machines and equipment are used in accordance with safety requirements and manufacturers' specifications.
 - 3.4 Mat boards are cut and checked for quality in accordance with workplace practices.
4. Cut glass for framing
 - 4.1 Tools, equipment and materials required for cutting glass are selected and checked prior to use to ensure that they are selected and checked are appropriate for the work in terms of quality, serviceability and safety.
 - 4.2 Glass is set out for cutting according to work instructions and workplace procedures.
 - 4.3 Tools, machines and equipment are used in accordance with safety requirements and manufacturers' specifications.
 - 4.4 Glass is cut and checked for quality in accordance with workplace practices.
5. Mount artwork
 - 5.1 Method of mounting is determined.
 - 5.2 Mounting equipment is set up according to operating procedures and workplace practice.
 - 5.3 Artwork is positioned on substrate according to job requirements and placed in mounting equipment.
 - 5.4 Mounting equipment is operated in accordance with manufacturers' instructions and workplace procedures.
 - 5.5 Assembled artwork is removed from equipment, inspected for quality in accordance with workplace procedures.

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| 6. | Assemble artwork package | 6.1 | Fabricated components are cleaned and laid out for assembly in accordance with workplace procedures. |
| | | 6.2 | Artwork is attached to backing material using the selected method. |
| | | 6.3 | Frame components are assembled, adjusted as required to fit and fixed. |
| | | 6.4 | Frame is fitted over package and the backing is fixed in accordance with workplace procedures. |
| | | 6.5 | Fittings, attachments and hanging aids are attached in accordance with workplace procedures. |
| | | 6.6 | Package is inspected for quality and processed in accordance with workplace procedures. |
| 7 | Complete work | 7.1 | Work area is cleaned; hand and/or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures. |
| | | 7.2 | Off-cuts and unused materials are collected and stored for reuse or disposed following workplace procedures. |
| | | 7.3 | Waste and scrap materials are dealt with following workplace procedures. |

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school-shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

The following variables may be present for this particular unit.

Simple artwork is flat paper-based artwork not requiring any conservation measures.

Project and design is to be determined in consultation with supervisor/teacher.

Work is conducted under supervision and guidance.

Workplace health and safety requirements include:

- OH&S requirements:
- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods codes
- safe operating procedures

Work involves:

- reading and interpreting plans
- developing set-outs
- using hand and power tools
- operating basic machinery
- applying quality requirements, and
- applying product finishing techniques and materials

Tools and equipment to include but are not limited to:

- guillotines
- static mounted circular saws
- drop saws
- docking saws
- mitre saws
- underpinners (V-nailers)
- screwdrivers
- hand-operated tools, including cutting blades, clamps, and marking out tools

- mat cutters
- appropriate mounting tools and equipment
- flat felt-covered cutting table
- glass cutters
- squares
- tape measures
- marking pens/pencils

Personal protective equipment is to include:

- gloves
- safety glasses
- gauntlets
- footwear
- earmuffs
- aprons
- overalls

Materials to be used may include but not limited to:

- timber
- touch-up materials
- glues
- sandpaper
- standard mat board material
- appropriate mounting materials
- glass

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical Aspects of Evidence

Interpret work instructions and locate and apply relevant information.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Follow work instructions, operating procedures and inspection practices to:

- minimise the risk of injury to self or others
- prevent damage to goods, equipment or products
- achieve required production output and product quality
- adapt or vary glass and glazing designs

As a minimum, design, prepare, fabricate and assemble at least one item of simple artwork work effectively with others.

Modify activities to cater for variations in workplace contexts and environment.

(2) Pre-requisite Relationship of Units

Pre-requisite for this unit is:

- LMFPTF0881A: Use picture framing sector hand and power tools

(3) Underpinning Knowledge and Skills**Knowledge**

Knowledge of:

- design requirements for simple artwork
- the preparation of plans/drawings/set-outs
- workflow and steps in relation to framing simple artwork
- identification of hand and basic picture framing processing tools, materials, equipment, processes and procedures

Skills

The ability to:

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination with work supervisor, other workers and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate working problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the framing of simple artwork, including tools, equipment, materials and measuring devices

(4) Resource Implications

- access to plans/designs
- picture framing hand tools and/or basic processing machines
- equipment
- materials
- work area
- a specified project

(4) Method of Assessment

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment may be conducted in conjunction with assessment of the other sector specialist unit of competency where appropriate.

(6) Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFPTF0881A: Use picture framing sector hand and power tools

Competency Descriptor:

This unit deals with the skills and knowledge required to carryout work involving the use of hand and power tools in applications relating to the picture- framing sector of the furnishing industry.

Competency Field: Picture Framing

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
1.	Identify hand and power tools	1.1	Types of hand and power tools and their functions identified.
		1.2	Sources of, and access to power supply recognised.
		1.3	OH&S requirements for using hand and power tools recognised and implemented.
2.	Select appropriate hand tools	2.1	Hand tools selected consistent with needs of job.
		2.2	Hand tools are checked for serviceability and safety and any faults reported to supervisor in accordance with enterprise procedures.
		2.3	Equipment selected to hold position or support material for power tools application where applicable.
3.	Use appropriate hand tools	3.1	Material located and held in position for hand tool application.
		3.2	Hand tools safely and effectively used according to their intended use.
		3.3	Hand tools safely located when not in immediate use.
4.	Select appropriate power tools	4.1	Appropriate personal protective equipment selected, correctly fitted and used.
		4.2	Power tools selected consistent with needs of job in accordance with conventional work practice.
		4.3	Power tools visually checked for serviceability/safety in accordance with OH&S requirements and any faults reported to supervisor in accordance with enterprise procedures.

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| | 4.4 | Equipment selected to hold position or support materials for power tool application where applicable. |
| 5. | Use appropriate power tools | 5.1 Material located and held in position for power tool application where applicable. |
| | | 5.2 Power tools safely and effectively used in application processes. |
| | | 5.3 Power tools safely switched and located when not in use. |
| 6. | Clean up work area and tools | 6.1 All tools cleaned, maintained and stored. |
| | | 6.2 Equipment cleaned, maintained and stored. |
| | | 6.3 Documentation completed in accordance with enterprise procedures. |
| | | 6.4 Work area cleaned and waste removed. |

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school-shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is carried out in accordance with statutory requirements, OH&S legislation, environmental legislation, manual handling procedures, relevant health regulations and organisation insurance requirements.

This unit covers work involving the use of hand and power tools in applications relating to the picture-framing sector of the furnishing industry.

Work requires individuals to demonstrate skill, accuracy and dexterity in the application of tools to work.

The following variables may be present for this particular unit.

Hand tools used in the picture-framing sector include:

- hand saws
- chisels
- underpinners
- screwdrivers
- marking out tools
- pincers
- pliers (including stretching pliers)
- guillotine
- cutting blades
- clamps
- needles
- knives
- scissors
- plane

Hand tools used in the picture-framing sector include: (Cont'd)

- files
- glass cutters
- square
- measures
- hammers
- spirit level
- glass pliers
- scoring tool
- framer's points gun
- ATG dispenser
- nail punch

Power tools used in the picture framing sector are to include:

- power saws (circular, drop, docking and mitre)
- power drills
- guillotine
- V-nailers
- compressor and air guns, (including tackers, staplers, flexi point)
- hand power saw and power screwdriver

OH&S requirements may include:

- safe working practices
- use of tools and equipment
- use of power tools
- safe handling, and
- storage of materials in accordance with enterprise procedures

Workplace environment:

- work may be conducted in large, medium or small workplaces

Reporting of faults in the operation of hand and power tools may be:

- verbal or written

Information and procedures

- hand and power tool manufacturers' specifications and operational procedures
- workplace procedures relating to OH&S, tool handling and operation, reporting and communication
- work instructions, including job sheets, plans, drawings and designs

Personal protective equipment to include:

- gloves
- safety glasses
- ear protection
- safety footwear
- aprons
- overalls

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical Aspects of Evidence

Demonstrate compliance with Occupational Health and Safety regulations applicable to workplace operations.

Adopt and carry out correct procedures prior to, during and after use of hand and power tools.

Critical aspects of evidence (Cont'd)

Follow work instructions, operating procedures and inspection practices to:

- prevent damage to goods, tools, equipment or products
- maintain required production output and product quality
- minimise the risk of injury to self or others

Demonstrate the safe and effective use of the listed hand and power tools required by the picture framing sector in performing tasks for which they are to be used.

Work effectively with others.

Modify activities to cater for variations in workplace contexts and environment.

Indicate compliance with organisational policies and procedures, including quality assurance requirements.

(2) Pre-requisite Relationship of Units

Pre-requisite for this unit is:

- Nil

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- workflow within the workplace
- workplace safety requirements and OH&S legislation
- types, function and purpose of hand and power tools used in picture framing operation

Skills

The ability to:

- correctly and safely select, use and maintain hand and power tools
- meet quality standards of finish
- communicate effectively with supervisors and other workers

(4) Resource Implications

- picture framing sector hand and power tools
- materials used in the manufacturing and/or processing of picture framing products
- operating procedures
- work area and workplace requirements

(5) Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency, which together form a part of the job role.

(6) Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

ITICOR0011A: Carry out data entry and retrieval procedures

Competency Descriptor:

This unit deals with the skills and knowledge required to operate computer, to enter, manipulate and retrieve data and to access information and communicate via the Internet.

Competency Field:

Information Technology and Communications - Operations

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
1.	Initiate computer system	1.1	Equipment and work environment are correctly checked for readiness to perform scheduled tasks.
		1.2	The hardware components of the computer and their functions are correctly identified.
		1.3	Equipment is powered up correctly.
		1.4	Access codes are correctly applied.
		1.5	Appropriate software is selected or loaded from the menu.
2.	Enter data	2.1	Types of data for entry correctly identified and collected.
		2.2	Input devices selected and used are appropriate for the intended operations.
		2.3	Manipulative procedures of Input device conform to established practices.
		2.4	Keyboard/mouse is operated within the designated speed and accuracy requirements.
		2.5	Computer files are correctly located or new files are created, named and saved.
		2.6	Data is accurately entered in the appropriate files using specified procedure and format.
		2.7	Data entered is validated in accordance with specified procedures.

- 2.8 Anomalous results are corrected or reported in accordance with specified procedures.
- 2.9 Back-up made in accordance with operating procedures.
- 3. Retrieve data
 - 3.1 The identity and source of information are established.
 - 3.2 Authority to access data is obtained where required.
 - 3.3 Files and data are correctly located and accessed.
 - 3.4 Integrity and confidentiality of data are maintained.
 - 3.5 The relevant reports or information is retrieved, using approved procedure.
 - 3.6 Formats to retrieved report or information conform to requirements.
 - 3.7 Copy of the data is printed where required.
- 4. Amend data
 - 4.1 Source of data/information for amendment is established.
 - 4.2 Data to be amended is correctly located within the file.
 - 4.3 The correct data/Information is entered, changed or deleted using appropriate input device and approved procedures.
 - 4.4 The Integrity of data is maintained.
- 5. Use document layout and data format facilities
 - 5.1 Requirements for document are verified where necessary.
 - 5.2 The given format and layout are appropriately applied.
 - 5.3 Facilities to achieve the desired format and layout are correctly identified, accessed and used.
 - 5.4 Data manipulating facilities are used correctly.
 - 5.5 Format reflects accuracy and completeness.

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| 6. | Monitor the operation of equipment | 6.1 | The system is monitored to ensure correct operation of tasks. |
| | | 6.2 | Routine system messages are promptly and correctly dealt with. |
| | | 6.3 | Non-routine messages are promptly referred in accordance with operating requirements. |
| | | 6.4 | Error conditions within level of authority are dealt with promptly, and uncorrected errors are promptly reported. |
| | | 6.5 | Output devices and materials are monitored for quality. |
| 7. | Access and transmit information via the Internet | 7.1 | Access to the Internet is gained in accordance with the provider's operating procedures. |
| | | 7.2 | Evidence of the ability to negotiate web sites to locate and access specified information and other services is efficiently demonstrated. |
| | | 7.3 | E-Mail is sent and retrieved competently. |
| 8. | Close down computer system | 8.1 | The correct shut down sequence is followed. |
| | | 8.2 | Problem with shutting down computer is reported promptly. |
| | | 8.3 | All safety and protective procedures are observed. |
| | | 8.4 | The system integrity and security are preserved. |
| 9. | Maintain computer equipment | 9.1 | Cleaning materials and/or solutions used meet specified recommendation. |
| | | 9.2 | The equipment is cleaned as directed. |
| | | 9.3 | Wear and faults identified are promptly reported to the appropriate personnel. |

RANGE STATEMENT

This unit applies to activities associated with essential operations linked to using and maintaining basic computer equipment.

Equipment:

- install supplied computer
- install supplied peripherals

Work environment:

- equipment
- furniture
- cabling
- power supply

Input devices:

- keyboard
- mouse
- scanner
- microphone
- camera

Data:

- textual
- numerical
- graphical

Software systems to include for:

- word processing
- spread sheet
- internet access

File operations:

Naming, updating, archiving, traversing field and records in database, use of search, sort, print

Files save on:

- network
- magnetic media
- personal PC

Maintenance:

- cleaning: enclosures, screen, input devices, output devices
- checking cables, etc

EVIDENCE GUIDE

Competency is to be demonstrated by the ability to accurately carry out basic data entry and retrieval operations on a computer system in accordance with the performance criteria and the range listed within the range of variables statement.

(1) Critical Aspects and Evidence

It is essential that competence be observed in the following aspects:

- Initiate the use on the equipment.
- Use document layout and data format facilities.
- Locate and access data.
- Use file operations.
- Manipulate input devices.
- Key-in and format reports.
- Access to the internet.

(2) Pre-requisite Relationship of Units

- Nil

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- safety for working with and around computers
- computer hardware and software systems
- procedure for initiating and closing down computer
- the operation of the data entry
 - management system
- methods of locating files
- organisation's standards applicable to
 - accessing files
- files operations and their applications
- file operation in database setting
- creating, locating and saving files
- using input devices
- using data checking devices
- formatting functions of software
- layout function of software
- graphic productions and manipulation
- regard for accuracy and security of
 - information
- functions on the internet

Skills

The ability to:

- identify computer hardware
- manipulate data input devices
- access data
- use file operations
- key-in and format reports and letters
- retrieve data
- amend data
- print data
- save data
- search and receive data from the internet
- send and receive E-Mail

(4) Resource Implications

Files saved on network, magnetic media, and personal Computer

Input devices: Keyboard, mouse, other selection devices

(5) Method of Assessment

Competency shall be assessed while work is undertaken under direct supervision with regular checks, but may include some autonomy when working as part of a team.

Competencies in this unit may be determined concurrently. Assessment must be in accordance with the performance criteria.

(6) Context of Assessment

This unit may be assessed on or off the job. Assessment should include practical demonstration either in the workplace or through a simulation. A range of methods to assess underpinning knowledge should support this

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualification Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level -	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level -	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFWHC0012A: **Develop design, prepare and transfer patterns**

Competency Descriptor:

This unit deals with the skills and knowledge required to develop design, prepare and transfer patterns.

Competency Field: Wood Carving

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
1.	Design package	1.1	Design to be developed and identified from sketches.
		1.2	A provisional design package is developed.
		1.3	Design is modified as required and approved in accordance with workplace procedures.
2.	Develop design	2.1	Workplace health and safety requirements, including personal protection needs, are observed throughout the work.
		2.2	Tools, equipment and materials required to develop design, prepare and transfer patterns are selected and checked prior to use to ensure that they are appropriate for the work.
		2.3	Design idea selected from sketch book.
		2.4	Drawing instruments and materials are used according to workplace and standards drawing practices.
		2.5	Drawing paper fixed to drawing board according to standard drawing practices.
		2.6	Drawing made from selected sketch includes as many details as required.
3.	Transfer pattern from drawing	3.1	Tools, equipment and materials required to transfer pattern are selected and checked prior to use to ensure that they are appropriate for the work.
		3.2	Scale drawing is prepared using standard drawing practices.
		3.3	Carbon paper we placed on the wood to be carved with inked side down.
		3.4	Scale drawing is placed on carbon with one edge secured to the wood with masking tape.

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| | | 3.5 | Pattern is transferred to the wood by retracing over the outlines. |
| 4. | Transfer patterns from books | 4.1 | Pattern to be transferred is selected from book. |
| | | 4.2 | Thin sheet of tracing paper is laid over the pattern and outlines traced with pencil. |
| | | 4.3 | One edge of the pattern is secured to the wood with masking tape. |
| | | 4.4 | Carbon paper is placed on wood with inked side down and the traced pattern is placed on top of it. |
| | | 4.5 | Pattern is transferred to the wood by retracing over the outlines. |
| 5 | Complete work | 5.1 | Transferred pattern is checked to ensure that all outline and detail lines are reproduced from drawing. |
| | | 5.2 | Unused materials are collected and stored for reuse or disposed following workplace procedures. |

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school-shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements

The following variables may be present for this particular unit.

Wood carving design can be simple sketch or drawing and copied from book.

Project and design are to be determined in consultation with supervisor/teacher.

Work is conducted under supervision and guidance.

Workplace health and safety requirements include: Work involves:

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|--|---|
| <ul style="list-style-type: none"> • OH&S requirements: • relevant statutory requirements • material safety management systems • hazardous substances and dangerous goods codes • safe operating procedures | <ul style="list-style-type: none"> • reading and interpreting plans • developing set-outs • using drawing instruments • applying quality requirements |
|--|---|

Tools and equipment to include but are not limited to:

- | | |
|--|--|
| <ul style="list-style-type: none"> • drawing board • clip • pencil • rubber • set squares | <ul style="list-style-type: none"> • rulers • French curves • tape measures • marking pens/pencils |
|--|--|

Types of patterns to include:

- chips carving
- relief carving
- intaglio carving
- architectural carving

Materials to be used may include but not limited to:

- timber
- tracing paper
- carbon paper
- drawing paper
- masking tape

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical Aspects of Evidence

Interpret work instructions and locate and apply relevant information.

Follow work instructions, operating procedures and inspection practices to:

- minimise the risk of injury to self or others
- prevent damage to goods, equipment or products
- achieve required production output and product quality
- as a minimum, design, prepare, and transfer at least two wood carving design work effectively with others

Modify activities to cater for variations in workplace contexts and environment.

(2) Pre-requisite Relationship of Units

- Nil
-

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- design requirements for wood carving
- the preparation of plans/drawings/set-outs
- workflow and steps in relation to wood carving
- identification of wood carving tools, materials, equipment, processes and procedures

Skills

The ability to:

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination with work supervisor, other workers and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate working problems, avoid reworking and avoid wastage
- use the limited workplace technology related to woodcarving, including tools, equipment, materials and measuring devices

(4) Resource Implications

- access to plans/designs, book and magazines
- Wood carving tools and/or basic processing machines
- equipment
- materials
- work area
- a specified project

(4) Method of Assessment

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment may be conducted in conjunction with assessment of the other sector specialist unit of competency where appropriate.

(6) Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> • Carries out established processes • Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> • Manages process • Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> • Establishes principles and procedures • Evaluates and reshapes process • Establishes criteria for evaluation

Collect, analyse and organise information	Level 2	
Communicate ideas and information	Level 2	
Plan and organise activities	Level 2	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 2	
Use technology	Level 2	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFWHC0022A: Perform wood carving

Competency Descriptor:

This unit deals with the skills and knowledge required to carry out work involving wood carving in furnish industry.

Competency Field: Picture Framing

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
1.	Prepare for carving	1.1	Work is inspected to ensure that pattern is clearly and accurately transferred to wood
		1.2	Workplace health and safety requirements including personal protection needs are observed throughout the work.
2.	Select appropriate hand tools	2.1	Hand tools selected consistent with needs of job.
		2.2	Hand tools are checked for serviceability and safety and any faults reported to supervisor in accordance with enterprise procedures.
		2.3	Equipment selected to hold position or support material for hand and power tools application where applicable.
3.	Use appropriate hand tools	3.1	Material located and held in position for hand tool application.
		3.2	Hand tools safely and effectively used according to their intended use.
		3.3	Hand tools safely located when not in immediate use.
4.	Select appropriate power tools	4.1	Appropriate personal protective equipment selected, correctly fitted and used.
		4.2	Power tools selected consistent with needs of job in accordance with conventional work practice.
		4.3	Power tools visually checked for serviceability/safety in accordance with OH&S requirements and any faults reported to supervisor in accordance with enterprise procedures.
		4.4	Equipment selected to hold position or support materials for power tool application where applicable.

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| 5. | Use appropriate power tools | 5.1 | Material located and held in position for power tool application where applicable. |
| | | 5.2 | Power tools safely and effectively used in application processes. |
| | | 5.3 | Power tools safely switched and located when not in use. |
| 6. | Clean up work area and tools | 6.1 | All tools cleaned, maintained and stored. |
| | | 6.2 | Equipment cleaned, maintained and stored. |
| | | 6.3 | Documentation completed in accordance with enterprise procedures. |
| | | 6.4 | Work area cleaned and waste removed. |

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school -shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is carried out in accordance with statutory requirements, OH&S legislation, environmental legislation, manual handling procedures, relevant health regulations and organisation insurance requirements.

This unit covers work involving the use of hand and power tools in applications relating to Wood carving of the furnishing industry.

Work requires individuals to demonstrate skill, accuracy and dexterity in the application of tools to work

The following variables may be present for this particular unit.

Hand tools used in the wood carving 'sector include:

- | | |
|---------------|-------------------|
| • Oil stones | • Copying saws |
| • Gauges | • Spokeshaves |
| • Chisels | • Files and rasps |
| • Knives | • Stamps |
| • Slip stones | • Holdfast |
| • Mallets | • vices |
| • Handsaws | |

Types of material to be carved maybe:

- Solid timber
- Medium density Fibreboard (MDF)
- Plywood
- Veneered panelling

OH&S requirements may include:

- safe working practices
- use of tools and equipment
- use of power tools
- safe handling, and
- storage of materials in accordance with enterprise procedures

Workplace environment:

- work may be conducted in large, medium or small workplaces

Information and procedures

- hand and power tool manufacturers' specifications and operational procedures
- workplace procedures relating to OH&S, tool handling and operation, reporting and communication
- work instructions, including job sheets, plans, drawings and designs

Types of carving:

- Chips
- Relief

Power tools used in the wood carving sector are to include:

- power saws (circular, drop, docking and mitre)
- power drills
- bandsaws
- jigs saw

Reporting of faults in the operation of hand and power tools may be:

- verbal or written

Personal protective equipment to include:

- gloves
- safety glasses
- ear protection
- safety footwear
- aprons
- overalls

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical Aspects of Evidence

Demonstrate compliance with Occupational Health and Safety regulations applicable to workplace operations.

Adopt and carry out correct procedures prior to, during and after use of hand and power tools.

Follow work instructions, operating procedures and inspection practices to:

- prevent damage to goods, tools, equipment or products
- maintain required production output and product quality
- minimise the risk of injury to self or others

Critical Aspects of Evidence (Cont'd0

Demonstrate the safe and effective use of the listed hand and power tools required by the picture framing sector in performing tasks for which they are to be used.

Work effectively with others.

Modify activities to cater for variations in workplace contexts and environment.

Indicate compliance with organisational policies and procedures, including quality assurance requirements.

(2) Pre-requisite Relationship of Units

Pre-requisite for this unit is:

- LMFWHC0012A Develop design, prepare and transfer patterns

(3) Underpinning Knowledge and Skills

Knowledge

Knowledge of:

- workflow within the workplace
- workplace safety requirements and OH&S legislation
- types, function and purpose of hand and power tools used in wood carving operation

Skills

The ability to:

- correctly and safely select, use and maintain hand and power tools
- meet quality standards of finish
- communicate effectively with supervisors and other workers

(4) Resource Implications

- wood carving sector hand and power tools
- materials used in the manufacturing and/or processing of wood carving products
- operating procedures
- work area and workplace requirements

(5) Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency, which together form a part of the job role.

(6) Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes 1Makes judgement of quality using given criteria	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 2	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFMK0132A: Apply manufactured board conversion techniques

Competency Descriptor:

This unit deals with the skills and knowledge required to apply manufactured board conversion techniques to produce furnishing component parts and panel doors

Competency Field: Furniture Manufacturing

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Prepare for work	1.1 Work instructions are used to determine job requirements, including design, quality, materials, equipment, and quantities. 1.2 Cutting list and job specifications are read and interpreted. 1.3 Workplace health and safety requirements, including ventilation requirements and personal protection needs, are observed throughout the work. 1.4 Material for machining is selected and inspected for quality. 1.5 Cutting patterns are applied to minimise waste material. 1.5 Procedures are identified for maximising energy efficiency while completing the job.
2. Set up machines	2.1 Safety equipment, including emergency stops, gauges, guards and controls are checked. 2.2 Machine settings and adjustments are made in accordance with job requirements and machine and tool manufacturers' instructions. 2.3 Machines, cutting tools and jigs are identified and checked for safe and effective operation. 2.4 Trial runs are conducted to check machine operation, accuracy and quality of finished work. 2.5 Necessary adjustments are made to machine settings
3. Apply conversion techniques	3.1 Machine start-up procedure is carried out in accordance with manufacturers' instructions.

- 3.2 Material is fed/placed into machine in accordance with manufacturers' instructions, safe handling procedures and standard workplace operating procedures.
- 3.3 Machine is operated in accordance with its designed capacity and purpose, tooling requirements and to manufacturers' recommendations.
- 3.4 Machine operation is monitored to ensure product quality and output.
- 3.5 Waste quantities are checked and minimised.
- 3.6 Items that do not meet quality requirements are repaired, recycled or discarded according to workplace procedures.
- 3.7 Problems with the required work and/or the operation of the machine are identified and reported to appropriate persons.
- 4. Clean up work area and maintain equipment
 - 4.1 Material that can be reused is collected and stored.
 - 4.2 Waste and scrap are removed according to workplace procedures.
 - 4.3 Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures.
 - 4.4 Operator maintenance is completed in accordance with manufacturers' specifications and workshop procedures.
 - 4.5 Unserviceable equipment is tagged and faults identified in accordance with workplace procedures.
 - 4.6 Equipment and tooling are maintained in accordance with workplace procedures.

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is to be carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set-up, operation and maintenance of machines.

The following variables may be present for this particular unit.

Products of conversion techniques are to include:

- end panels
- shelving
- bench tops
- backs
- bottoms
- doors
- fixing rails

Machines are to include:

- panel saw
- scoring saw
- NC beam saw
- wall saw

OH&S requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- safe operating procedures

Competency may be demonstrated in workplaces involved in the production of:

- manufactured board domestic furniture
- commercial furniture
- kitchen and bathroom cabinets and/or components

Tools and equipment are to include but are not limited to:

- measuring devices
- relevant machine associated tools
- relevant materials handling equipment/lifting devices

Manufactured board may include:

- raw board
- melamine surfaces
- veneered board
- plywood
- hard board

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet
- goggles

Information and procedures:

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical aspects of evidence

Read and interpret cutting lists and job specifications to prepare for work.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Identify materials used in the work process.

Follow work instructions, operating procedures and inspection practices to:

- minimise the risk of injury to self or others
- prevent damage to goods, equipment and products
- maintain required production output and product quality

Apply at least five different conversion techniques/operations covering the:

- preparation of cutting plans to minimise waste
- selection of the correct materials
- application of conversion techniques including at least one surfaced board requiring
- the use of a scoring saw

Work effectively with others.

Modify activities to cater for variations in workplace context and environment.

(2) Pre-requisite Relationship of units:

Pre-requisites for this unit are:

- LMFFMK0122A: Set up, operate and maintain basic static machines

(3) Underpinning knowledge and skills**Knowledge**

Knowledge of:

- types, characteristics, uses and limitations of manufactured board
- the range, characteristics, uses and limitations of panel-saw, scoring saw, NC beam saw and wall saw
- general workplace quality standards and procedures
- workplace guidelines regarding acceptable tolerance levels
- workplace safety policies and procedures
- procedures for reporting machinery faults and material defects

Skills

The ability to:

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements.
- use pre-checking and inspection techniques to anticipate assembly problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the assembly, including tools, equipment, materials and measuring devices

(4) Resource implications

The following resources should be provided

- access to conversion machinery as identified in the Range Statement
- standard operating procedures
- unprocessed materials

((5) Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

(6) Context of assessment

Assessment may occur on the job or in a workplace-simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level	
Communicate ideas and information	Level	
Plan and organise activities	Level	
Work with others and in team	Level	
Use mathematical ideas and techniques	Level	
Solve problems	Level	
Use technology	Level	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

BSBSBM0012A: Craft personal entrepreneurial strategy

Competency Descriptor:

This unit deals with the skills and knowledge required to craft an entrepreneurial strategy that fits with the attitudes, behaviours, management competencies and experience necessary for entrepreneurs to meet the requirements and demands of a specific opportunity.

Competency Field:

Small Business Operations

ELEMENT OF COMPETENCY PERFORMANCE CRITERIA

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Demonstrate knowledge of the nature of entrepreneurship	1.1 Concepts associated with entrepreneurship are clearly defined. 1.2 Factors, which influence entrepreneurship in and outside of Jamaica, are correctly identified and explained. 1.3 The importance of entrepreneurship to economic development and employment is explained clearly. 1.4 The findings of research conducted on entrepreneurial ventures and successes in the Caribbean region are clearly presented in an appropriate format. 1.5 Differences between wage employment and entrepreneurial ventures are correctly stated.
2. Identify and assess entrepreneurial characteristics	2.1 Relevant research is carried out and required entrepreneurial characteristics identified. 2.2 Entrepreneurial characteristics identified are assessed and ranked. 2.3 An understanding of the process and discipline that enable an individual to evaluate and shape choices and to initiate effective action is correctly demonstrated. 2.4 Factors that will help an entrepreneur to manage the risk and uncertainties of the future, while maintaining a future orientated frame of mind, are identified.
3. Develop self-assessment profile	3.1 Self-assessment tools/methods to identify personal entrepreneurial potential are identified and properly used. 3.2 The ability to apply creativity, problem-solving techniques and principles to solve business related problems are demonstrated.

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- 3.3 Feedback from others for the purpose of becoming aware of blind spots and for reinforcing or changing existing perceptions of strengths/ weaknesses is appropriately obtained.
4. Craft an entrepreneurial strategy
- 4.1 A profile of the past that includes accomplishments and preferences in terms of life and work styles, coupled with a look into the future and an identification of what one would like to do is developed.
- 4.2 Commitment, determination and perseverance; orientation towards goals; taking initiative and accepting personal responsibility; recognizing management competencies and identifying areas for development are determined.
- 4.3 Written guidelines to obtain feedback that is solicited, honest, straightforward, and helpful but not all positive or negative are developed to facilitate reviews.
- 4.4 Framework and process for setting goals which demand time, self-discipline, commitment, dedication and practice are developed.
- 4.5 Goals established are specific and concrete, measurable, relate to time, realistic and attainable.
- 4.6 Priorities, including identifying conflicts and trade-offs and how these may be resolved are established.
- 4.7 Potential problems, obstacles and risks in meeting goals are identified.
- 4.8 Specified action steps that are to be performed in order to accomplish goals are identified.
- 4.9 The method by which results will be measured is indicated.
- 4.10 Milestones for reviewing progress and tying these to specific dates on a calendar are established.
- 4.11 Sources of help to obtain resources are identified.
- 4.12 Evidence of the ability to review process and periodically revise goals is demonstrated.

RANGE STATEMENT

At this stage of the entrepreneurial process the entrepreneur must be able to conduct a self-assessment profile, examine the frame work for self assessment, develop a personal entrepreneurial strategy, identify data to be collected in the self-assessment process and learn about receiving feedback and setting goals.

Concepts associated to include:

- risk
- entrepreneurship
- macro-screening
- micro-screening
- competition
- wage employment

The entrepreneur must be able to:

- understand the extreme complexity in predicting or aligning him/herself to specific careers in an environment of constant change
- determine the kind of entrepreneur he or she wants to become based on attitudes, behaviours, competencies, experience and how these fit with the requirements and demands for a specific opportunity
- evaluate thoroughly his or her attraction to entrepreneurship
- effectively develop personal plan
- utilize available information that will enhance his or her ability to achieve success

Influencing factors to include:

- market conditions
- markets – demand/supply
- global trends
- level of economic activities
- funding
- economic stability
- social stability
- resources availability

The entrepreneur may encounter setbacks if the planning process is not effectively pursued.

Pitfalls may include:

- proceeding without effective planning which may result in commitment to uncertainty
- personal plans fail for the same reasons as business plans including frustration if the plan appears not to be working immediately and the challenges of changing behaviour from an activity-oriented routine to one that is goal oriented
- developing plans that fail to anticipate obstacles, and those that lack progress commitment to a premature path with the desirability of flexibility can lead to disaster
- milestones and reviews

EVIDENCE GUIDE

Competency is to be demonstrated when the entrepreneur is able to undertake a personal entrepreneurial assessment exercise to determine if he or she possesses the necessary credentials to be a successful entrepreneur. This stage of the entrepreneurial process is critical since experience has shown that the founder is one of the deciding forces if the venture is to succeed and prosper.

(1) Critical Aspects of Evidence

The entrepreneur will be assessed by his/her action in developing an orchestrated plan in order to effectively pursue the business concept.

(2) Pre-requisite Relationship of Units

- Nil

(3) Underpinning Knowledge and Skills

Knowledge

Knowledge of:

- personal entrepreneurial profile systems
- effective management systems: marketing, operations/productions, finance, administration, law
- how to measure feedback
- the method of developing a personal plan
 - and a business plan
- understanding the difference between entrepreneurial culture and management culture

Skills

The ability to:

- determine barriers to entrepreneurship
- minimize exposure to risk
- exploit any available resource pool
- tailor reward systems to meet a particular situation
- effectively plan and execute activities
- use computer technology to undertake assessments

(4) Resource Implications

The following resources should be made available:

Personal computer with access to the Internet and appropriate software that will enable one to conduct the necessary analysis using the Internet.

(5) Method of Assessment

A useful method of assessment is to determine if the venture can stand up to the test of critical evaluation.

(6) Context of Assessment

This stage of the entrepreneurial process is assessed when comparisons are made between actual outcomes and plans/projections.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1	Level 2	Level 3
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFMK0142A: Set up, operate and maintain pressure clamping machines

Competency Descriptor:

This unit deals with the skills and knowledge required to set up, operate and maintain pressure clamping machines using their full potential and capacities in the production of furniture.

Competency Field: Timber Furniture Manufacturing

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
1.	Prepare for work	1.1	Work instructions are used to determine job requirements, including design, quality, materials, equipment, and quantities.
		1.2	Workplace health and safety requirements, including personal protection needs, are observed throughout the work.
		1.3	Material for machining is selected and inspected for quality.
		1.4	Pressure clamping machines, cutting tools and jigs are identified and checked for safe and effective operation.
		1.5	Procedures are determined for minimising waste material.
2.	Set up machine	1.5	Procedures are identified for maximising energy efficiency while completing the job.
		2.1	Safety equipment including emergency stops, gauges, guards and controls are checked.
		2.2	Pressure clamping machine settings and adjustments are made in accordance with job requirements and machine and tool manufacturer instructions.
		2.3	Trial runs are conducted to check machine operation, accuracy and quality of finished work.
3.	Operate machines	2.4	Necessary adjustments are made to machine settings.
		3.1	Machine start-up procedure is carried out in accordance with manufacturers' instructions.
		3.2	Material is placed into machine in accordance with manufacturers' instructions, tooling requirements, safe handling procedures and standard workplace operating procedures.

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|----|-----|---|
| | 3.3 | Machine is operated in accordance with its designed capacity and purpose, and to manufacturers' recommendations. |
| | 3.4 | Machine operation is monitored to ensure product quality and output. |
| | 3.5 | Items that do not meet quality requirements are recycled or discarded according to workplace procedures. |
| | 3.6 | Problems with the required work and/or the operation of the machine are identified and reported to appropriate persons. |
| 4. | 4.1 | Clean up work area and maintain equipment
Material that can be reused is collected and stored. |
| | 4.2 | Waste and scrap are removed according to workplace procedures. |
| | 4.3 | Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures. |
| | 4.4 | Operator maintenance is completed in accordance with manufacturers' specifications and workshop procedures. |
| | 4.5 | Unserviceable equipment is tagged and faults identified in accordance with workplace procedures. |
| | 4.6 | Equipment and tooling are maintained in accordance with workplace procedures. |

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is to be carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set-up, operation and maintenance of machines.

The following variables may be present for this particular unit.

Pressure clamping machines are to include:

- manual clamps and presses
- hydraulic vacuum presses
- hydraulic vacuum clamping machines
- post forming machines and presses
- pneumatic clamps

Material to be pressed/clamped may include:

- manufactured board
- decorative treatments
- including laminates

Work requires individuals to:

- read and interpret production instructions
- complete adjustments to machine configurations and settings, using jigs and fixtures
- select and apply adhesives
- operate machines to finish products

Products may include:

- vacuum formed doors
- framed construction
- drawers
- laminating veneers

OH&S requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- safe operating procedures

Competency may be demonstrated in workplaces involved in the production of:

- manufactured board domestic furniture
- commercial furniture
- kitchen and bathroom cabinets and/or components

Tools and equipment may include, but are not limited to:

- screwdrivers
- hammers
- spanners

Materials are to include:

- pressure clamping machine consumables
- oils and lubricants
- trial materials

Information and procedures

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet
- goggles

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical aspects of evidence

Read and interpret cutting lists and job specifications to prepare for work.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Identify materials used in the work process.

Follow work instructions, operating procedures and inspection practices to:

- minimise the risk of injury to self or others
- prevent damage and wastage of goods, equipment and products
- maintain required production output and product quality

Identify, set up, operate and maintain at least one pneumatically/hydraulically operated pressure clamping machine to perform a significant production function covering three variable and different set up situations.

(2) Pre-requisite Relationship of units:

Pre-requisites for this unit are:

- Nil

(3) Underpinning knowledge and skillsKnowledge

Knowledge of:

- the types, characteristics, uses and limitations of pressure and clamping machines
- pressure clamping processes and techniques
- characteristics of materials and uses of products produced
- workplace guidelines regarding acceptable tolerance levels
- workplace safety policies and procedures
- procedures for reporting machinery faults and material defects

Skills

The ability to:

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate assembly problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the assembly, including tools, equipment, materials and measuring devices

(4) Resource implications

The following resources should be provided

- access to pressure clamping machinery as identified in the Range Statement
- standard operating procedures
- unprocessed materials

((5) Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

(6) Context of assessment

Assessment may occur on the job or in a workplace-simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 2	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFMK0202A: Install furnishing products

Competency Descriptor:

This unit deals with the skills and knowledge required to install furnishing products to a given plan.

Competency Field: Timber Furniture Manufacturing

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
1.	Prepare the work	1.1	Work instructions are used to determine job requirements, including design, quality, materials, equipment, and quantities.
		1.2	Workplace health and safety requirements, including personal protection needs, are observed throughout the work.
		1.3	Installation location and sequence are planned .
		1.4	Procedures are determined for checking quality at each stage of the process.
		1.5	Hardware, fittings and attachments are collected .
		1.6	Tools and equipment suitable for installation are identified and checked for safe and effective operation.
		1.7	Fixing and joining devices are selected in line with work instructions and types of materials.
		1.8	Required installation aids are selected and checked for suitability for purpose.
2.	Complete installation	2.1	Location is prepared for the installation.
		2.2	Furnishing products are prepared to job requirements.
		2.3	Hand and/or power tools and equipment are used in accordance with workplace requirements, including use of personal protective equipment.
		2.4	Fixing methods are carried out according to site conditions .
		2.5	Installed furniture product is checked for compliance with specification.

	2.6	Tops and/or appliances are installed in accordance with plans and specifications.
	2.7	Hardware and decorative accessories are installed.
	2.8	Work is checked against required quality standards.
3.	Finalise operation and clean worksite	3.1 Work site is cleaned; hand and/or power tools are checked for serviceable condition, returned and stored in accordance with workplace procedures.
	3.2	Unused materials are returned and/or stored.
	3.3	Waste and scrap materials are dealt with following workplace procedures.

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is to be carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the installation of furnishing products.

Furnishing products for installation may include but are not limited to:

- kitchen cabinets
- bathroom cabinets
- wall units
- desks
- counters
- wardrobes
- dressing tables
- entertainment units
- laundry cabinets

OH&S requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- safe operating procedures

Appliances to be installed may include but are not limited to:

- ovens
- range hoods
- sinks
- basins
- cook-tops
- refrigerators

Competency may be demonstrated in workplaces involved in the manufacture of:

- domestic furniture
- commercial furniture
- furniture components

Tools and equipment may include but not be limited to:

- measuring tapes or rulers
- hammers
- mallets
- squares
- bevels
- chisels
- levels
- plumb bobs
- planes
- hand saws
- power saws
- power planers
- cordless drills
- screwdrivers
- power drills
- explosive fixing gun
- clamps
- supporting devices
- screwdrivers

Materials to be used may include but are not limited to:

- timber
- manufactured board
- laminates
- granite
- marble
- stainless steel
- adhesives
- screws
- nails
- masonry anchors
- dowels
- cavity wall fixing

Product checking is to cover:

- level
- plumb
- wind
- alignment of doors and/or drawers
- clearance
- abutment

Information and procedures:

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet
- goggles

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical aspects of evidence

Read and interpret cutting lists and job specifications to prepare for work.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Identify materials used in the work process.

Follow work instructions, operating procedures and inspection practices to:

- minimise the risk of injury to self or others
- prevent damage and wastage of goods, equipment and products
- maintain required production output and product quality

Install four different and significant furnishing products, including at least:

- one floor mounted
- one wall mounted

Work effectively with others.

Modify activities to cater for variations in workplace context and environment.

(2) Pre-requisite Relationship of units:

Pre-requisites for this unit are:

- LMFFMK0031A: Use furniture making hand and power tools

(3) Underpinning knowledge and skills

Knowledge

Knowledge of:

- the interpretation of plan representation of furniture design
- the preparation of drawings/set-outs
- workflow in relation to furniture production
- identification of hand and/or power tools, materials, equipment, processes and procedures

Underpinning knowledge and skills(Cont'd)

Skills

The ability to:

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate assembly problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the assembly, including tools, equipment, materials and measuring devices

(4) Resource implications

The following resources should be provided:

- access to plans, hand and/or power tools, equipment, materials, furnishing products and a work area

((5) Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

(6) Context of assessment

Assessment may occur on the job or in a workplace-simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 2	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 2	
Work with others and in team	Level 2	
Use mathematical ideas and techniques	Level 2	
Solve problems	Level 2	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFMK0212A: Prepare and apply furniture decorative finishes

Competency Descriptor:

This unit deals with the skills and knowledge required to prepare, construct and apply veneers and inlays.

Competency Field: Timber Furniture Manufacturing

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Prepare for work	1.1 Work instructions are used to determine job requirements, including design, quality, materials, equipment, and quantities. 1.2 Workplace health and safety requirements, including personal protection needs, are observed throughout the work. 1.3 Construction sequence is planned. 1.4 Procedures are determined for checking quality at each stage of the process. 1.5 Suitable work area is selected for the task. 1.6 Tools and equipment suitable for construction are identified and checked for safe and effective operation.
2. Layout and prepare materials	2.1 Materials are selected and checked for flaws following work instructions. 2.2 Materials are laid out to requirements. 2.3 Suitable joining points are selected. 2.4 Material is prepared for cutting.
3. Construct and apply decorative surfaces	3.1 Material is cut to size and required thickness. 3.2 Materials are laid out in the required design. 3.3 Machinery is used in accordance with workplace procedures, including use of personal protective equipment. 3.4 Items are cut to requirements.

- 3.5 Joining process is undertaken according to workplace procedures.
- 3.6 Adhesives are applied according to workplace procedures and/or manufacturers' instructions.
- 3.7 Work is checked against required quality standards.
- 3.8 Any non-conformity with the required quality standards is rectified.
- 4. Finalise operation and maintain equipment
 - 4.1 Work area is cleaned, hand and/or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures.
 - 4.2 Machinery is cleaned and left in a safe mode.
 - 4.3 Faulty and/or defective equipment is tagged and reported in accordance with workplace practices.
 - 4.4 Off-cuts and unused materials are collected and stored for reuse or disposal following workplace procedures.
 - 4.5 Waste and scrap materials are dealt with following workplace procedures.

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is to be carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills in preparation and application of decorative surfaces.

The following variables may be present for this particular unit.

Decorative surfaces are to include veneers and inlays.

OH&S requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- safe operating procedures

Tools and equipment may include, but are not limited to:

- measuring tapes or rulers
- knives
- mallets
- squares
- bevels
- chisels
- planes
- clamps
- portable vacuum presses

Materials to be used may include but are not limited to:

- timber
- manufactured board
- veneer
- brass
- other alloys
- adhesives
- perspex
- decorative laminates

Competency may be demonstrated in workplaces involved in the manufacture of:

- domestic furniture
- commercial furniture
- kitchen and bathroom cabinets
- furniture components

Machines may include, but are not limited to:

- band saws
- mitre saws
- panel saws
- sanders
- presses and veneer guillotines
- trimmers

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet
- goggles

Information and procedures

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical aspects of evidence

Read and interpret cutting lists and job specifications to prepare for work.
Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.
Identify materials used in the work process

Follow work instructions, operating procedures and inspection practices to:

- minimise the risk of injury to self or others
- prevent damage and wastage of goods, equipment and products
- maintain required production output and product quality
- Prepare and apply a minimum of three different decorative surfaces to various substrates.
- Work effectively with others.
- Modify activities to cater for variations in workplace contexts and environment.

(2) Pre-requisite Relationship of units:

Pre-requisites for this unit are:

- LMFFMK0031A: Use furniture making hand and power tools
- LMFFMK0021A: Operate basic woodworking machines

(3) Underpinning knowledge and skills

Knowledge
Knowledge of:

- types, characteristics, uses and limitations of decorative surfaces
- the interpretation of plan representation of furniture design
- the preparation of drawings/set-outs
- identification of hand and/or power tools, materials, equipment, processes and procedures
- workflow in relation to furniture production

Skills

The ability to:

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate assembly problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the assembly, including tools, equipment, materials and measuring devices

(4) Resource implications

The following resources should be provided:

- access to plans
- hand and/or power tools
- equipment
- cauls and jigs
- materials
- woodworking machinery
- work area

((5) Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

(6) Context of assessment

Assessment may occur on the job or in a workplace-simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation
Collect, analyse and organise information	Level 2	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 2	
Work with others and in team	Level 2	
Use mathematical ideas and techniques	Level 2	
Solve problems	Level 2	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFMK0272A: Set up, operate and maintain drilling machines

Competency Descriptor:

This unit deals with the skills and knowledge required to set up, operate and maintain drilling machines using their full technical capabilities and capacities. It encompasses and builds on the drilling machines and tasks covered in unit LMFFM0122A - Set up, operate and maintain basic static machines.

Competency Field: Timber Furniture Manufacturing

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
1.	Prepare for work	1.1	Work instructions are used to identify job requirements, including quality, materials, equipment and quantities.
		1.2	Cutting list and job specifications are read and interpreted.
		1.3	Workplace health and safety requirements, including ventilation requirements and personal protection needs, are observed throughout the work.
		1.4	Material for drilling is selected and inspected for quality.
		1.5	Drilling machines, cutting tools and jigs are identified and checked for safe and effective operation.
		1.6	Procedures are determined for minimising waste material.
		1.7	Procedures are identified for maximising energy efficiency while completing the job.
2.	Set up machines	2.1	Safety equipment, including emergency stops, gauges, guards and controls are checked.
		2.2	Drill settings and adjustments are made in accordance with job requirements and machine and tool manufacturer instructions.
		2.3	Trial runs are conducted to check saw operation, accuracy and quality of finished work.
		2.4	Necessary adjustments are made to drill settings.

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|----|---|-----|--|
| 3. | Operate machines | 3.1 | Drill start-up procedure is carried out in accordance with manufacturers' instructions. |
| | | 3.2 | Material to be drilled is positioned in accordance with manufacturers' instructions, tooling requirements, safe handling procedures and standard workplace operating procedures. |
| | | 3.3 | Drill is operated in accordance with its designed capacity and purpose, and to manufacturers' recommendations. |
| | | 3.4 | Drill operation is monitored to ensure product quality and output. |
| | | 3.5 | Waste quantities are checked and minimised. |
| | | 3.6 | Items that do not meet quality requirements are recycled or discarded according to workplace procedures |
| | | 3.7 | Problems with the required work and/or the operation of the drill are identified and reported to appropriate persons. |
| 4. | Clean up work area and maintain machine | 4.1 | Material that can be reused is collected and stored. |
| | | 4.2 | Waste and scrap are removed following workplace procedures. |
| | | 4.3 | Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures. |
| | | 4.4 | Unserviceable equipment is tagged and faults identified in accordance with workplace. |
| | | 4.5 | Operator maintenance is completed in accordance with manufacturers' specifications and site procedures. |
| | | 4.6 | Tooling is maintained in accordance with workplace procedures. |

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is to be carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work involves reading and interpreting working drawing and manufacturers' hardware specification, drilling pattern selection, cutter fitting to meet job specification and the adjustment and use of pressures and stops.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of drilling machines.

The following variables may be present for this particular unit.

Drilling machines are to include single-head multi-spindle machines, and may include:

- single-head
- single-spindle vertical and horizontal machines
- multi-head multi-spindle machines

OH&S requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- safe operating procedures

Tools and equipment are to include machine-specific tools, and may include:

- screwdrivers
- hammers
- spanners
- jigs
- fixtures

Material to be machined may include but is not limited to:

- solid timber
- manufactured board
- metal
- glass

Work to be carried out in workplaces involved in the manufacture of:

- domestic furniture
- commercial furniture
- kitchen and bathroom cabinets
- furniture components

Materials are to include:

- drilling machine consumables
- oils and lubricants
- trial materials

Information and procedures

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet
- goggle

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical aspects of evidence

Interpret work order and locate and apply relevant information.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Read and interpret cutting lists and job specifications to prepare for work.

Identify materials used in the work process.

Follow work instructions, operating procedures and inspection practices to:

- minimise the risk of injury to self or others
- prevent damage to goods, equipment and products
- maintain required production output and product quality

Identify, set up and operate at least two different types of drills, a single-head multi-spindle machine and at least one other from the Range Statement (including the use of safety cut-outs and guards), and their application to a variety of materials.

Conduct operator maintenance on the machines and associated equipment.

Work effectively with others.

Modify activities to cater for variations in workplace context and environment.

(2) Pre-requisite Relationship of units:

Pre-requisites for this unit are:

- LMFFMK0122A: Set up, operate and maintain basic static machines.

(3) Underpinning knowledge and skillsKnowledge

Knowledge of:

- the types, characteristics, uses and limitations of drilling machines
- drilling processes and techniques
- characteristics of materials and uses of products produced
- workplace guidelines regarding acceptable tolerance levels
- workplace safety policies and procedures
- procedures for reporting machinery faults and material defects

Skills

The ability to:

- collect, organise and understand information related to drilling operations, work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate drill depths and estimate material requirements
- use pre-checking and inspection techniques to anticipate drilling problems, avoid reworking and avoid wastage
- use the workplace technology related to drilling, including tools, equipment, calculators and measuring devices

(4) Resource implications

- access to drilling machinery as identified in the Range Statement
- standard operating procedures
- and unprocessed materials

(5) Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

(6) Context of assessment

Assessment may occur on the job or in a workplace-simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 2	
Use technology	Level 2	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFMK0282A: Set up, operate and maintain jointing machines

Competency Descriptor:

This unit deals with the skills and knowledge required to set up, operate and maintain jointing machines using their full potential and capacities in the production of furniture.

Competency Field: Timber Furniture Manufacturing

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1 Work instructions are used to determine job requirements, including design, quality, materials, equipment, and quantities.</p> <p>1.2 Cutting list and job specifications are read and interpreted.</p> <p>1.3 Workplace health and safety requirements, including personal protection needs, are observed throughout the work.</p> <p>1.4 Material for machining is selected and inspected for quality.</p> <p>1.5 Jointing machines, cutting tools and jigs are identified and checked for safe and effective operation.</p> <p>1.6 Procedures are determined for minimising waste material.</p> <p>1.7 Procedures are identified for maximising energy efficiency while completing the job.</p>
2. Set up machines	<p>2.1 Safety equipment including emergency stops, gauges, guards and controls are checked.</p> <p>2.2 Jointing machine settings and adjustments are made in accordance with job requirements and machine and tool manufacturer instructions.</p> <p>2.3 Trial runs are conducted to check machine operation, accuracy and quality of finished work.</p> <p>2.4 Necessary adjustments are made to machine settings.</p>

- 3. Operate machines
 - 3.1 Machine start-up procedure is carried out in accordance with manufacturers' instructions.
 - 3.2 Material is fed into machine in accordance with manufacturers' instructions, tooling requirements, safe handling procedures and standard workplace operating procedures.
 - 3.3 Machine is operated in accordance with its designed capacity and purpose, and to manufacturers' recommendations.
 - 3.4 Machine operation is monitored to ensure product quality and output.
 - 3.5 Waste quantities are checked and minimised.
 - 3.6 Items that do not meet quality requirements are recycled or discarded according to workplace procedures.
 - 3.7 Problems with the required work and/or the operation of the machine are identified and reported to appropriate persons.
- 4. Clean up work area and maintain equipment
 - 4.1 Material that can be reused is collected and stored.
 - 4.2 Waste and scrap are removed following workplace procedures.
 - 4.3 Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures.
 - 4.4 Unserviceable equipment is tagged and faults identified in accordance with workplace.
 - 4.5 Operator maintenance is completed in accordance with manufacturers' specifications and site procedures.
 - 4.6 Tooling is maintained in accordance with workplace procedures.

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is to be carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of machines.

The following variables may be present for this particular unit.

Joining machines are to include for:

- mortise and tenon (either joinery or furniture)
- dovetail (single or multi-pin)
- and may include dowelling and inserting machines

Material to be machined may include but is not limited to:

- solid timber
- manufactured board

Work involves:

- reading and interpreting working drawings
- machining mortise and tenon joints
- dovetailing
- scribed joints
- angle joints and compound angle joints
- the maintenance of tools and cutters

OH&S requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- code
- safe operating procedures

Tools and equipment are to include machine-specific tools and tension wrenches, and may include:

- screwdrivers
- hammers
- spanners
- jigs
- fixtures

Competency may be demonstrated in workplaces involved in the manufacture of:

- domestic furniture
- commercial furniture
- kitchen and bathroom cabinets, and/or
- furniture components

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet
- goggles

Materials are to include:

- joining machine consumables
- oils and lubricants
- trial materials

Information and procedures:

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical Aspects of Evidence

Interpret work order and locate and apply relevant information.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Read and interpret cutting lists and job specifications to prepare for work.
Identify materials used in the work process.

Follow work instructions, operating procedures and inspection processes to:

- minimise the risk of injury to self or others
- prevent damage and wastage of goods, equipment and products
- maintain required production output and product quality

Identify, set up, operate to their full capacities at least two different types of jointing machines (for mortise and tenon and dovetail), including the use of safety cut-outs and guards and their application of the machines to a variety of materials.

Conduct operator maintenance on the machines and related equipment.

Work effectively with others.

Modify activities to cater for variations in workplace context and environment.

(2) Pre-requisite Relationship of Units

Pre-requisite for this unit is:

- LMFFMK0031A: Use furniture making hand and power tools

(3) Underpinning Knowledge and SkillKnowledge

Knowledge of:

- the types, characteristics, uses and limitations of jointing machines
- jointing processes and techniques
- characteristics of materials and uses of products produced
- workplace guidelines regarding acceptable tolerance levels
- workplace safety policies and procedures
- procedures for reporting machinery faults and material defects

Skills

The ability to:

- collect, organise and understand information related to jointing operations, work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with workshop supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate jointing problems, avoid reworking and avoid wastage
- use the workplace technology related to jointing, including tools, equipment, calculators and measuring devices

(4) Resource Implications

- access to jointing machinery as identified in the Range Statement
- standard operating procedures
- unprocessed materials

(5) Method of Assessment

- Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.
- Assessment should be by direct observation of tasks and questioning on underpinning knowledge.
- Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

(6) Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFMK0312A: Set up, operate and maintain routing and shaping machines

Competency Descriptor:

This unit deals with the skills and knowledge required to set up, operate and maintain routing and shaping machines using their full capabilities and capacities in the production of furniture.

Competency Field: Timber Furniture Manufacture

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
1.	Prepare for work	1.1	Work instructions are used to determine job requirements, including design, quality, materials, equipment, and quantities.
		1.2	Cutting list and job specifications are read and interpreted
		1.3	Workplace health and safety requirements, including personal protection needs, are observed throughout the work.
		1.4	Material for machining is selected and inspected for quality.
		1.5	Routing and shaping machines, cutting tools and jigs are identified and checked for safe and effective operation.
		1.6	Procedures are determined for minimising waste material.
		1.7	Procedures are identified for maximising energy efficiency while completing the job.
2.	Set up machines	2.1	Safety equipment including emergency stops, gauges, guards and controls are checked.
		2.2	Routing and shaping machine settings and adjustments are made in accordance with job requirements and machine and tool manufacturer instructions.
		2.2	Trial runs are conducted to check machine operation, accuracy and quality of finished work.
		2.4	Necessary adjustments are made to machine settings.
3.	Operate machines	3.1	Machine start-up procedure is carried out in accordance with manufacturers' instructions.
		3.2	Material is fed into machine in accordance with manufacturers' instructions, tooling requirements, safe handling procedures and standard workplace operating procedures.

- 3.3 Machine is operated in accordance with its designed capacity and purpose, and to manufacturers' recommendations.
- 3.4 Machine operation is monitored to ensure product quality and output.
- 3.5 Items that do not meet quality requirements are recycled or discarded according to workplace procedures.
- 3.6 Problems with the required work and/or the operation of the machine are identified and reported to appropriate persons
- 4. Clean up work area and maintain equipment
 - 4.1 Material that can be reused is collected and stored.
 - 4.2 Waste and scrap are removed following workplace procedures.
 - 4.3 Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures.
 - 4.4 Unserviceable equipment is tagged and faults identified in accordance with workplace.
 - 4.5 Operator maintenance is completed in accordance with manufacturers' specifications and site procedures.
 - 4.6 Tooling is maintained in accordance with workplace procedures.

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is to be carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of machines.

The following variables may be present for this particular unit.

Material to be routed and shaped may include:

- solid timber
- manufactured board
- plastics
- laminates

Work involves:

- setting up fences and guides
- setting and maintaining cutters
- selecting feed and spindle speeds
- the use of feed unit
- safety pressure devices/ guards
- linear, convex and concave shaping
- rebating, moulding and grooving material
- and using jigs and fixtures

Tools and equipment are to include machine-specific tools, and may include:

- screwdrivers
- hammers
- spanners
- jigs
- fixtures

Information and procedures:

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

Materials are to include:

- routing and shaping machine consumables
- oils and lubricants
- trial materials

Routing and shaping machines are to include:

- spindle moulding machine
- overhead or inverted pin routing machine

OH&S requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- code
- safe operating procedures

Competency may be demonstrated in workplaces involved in the manufacture of:

- domestic furniture
- commercial furniture
- kitchen and bathroom cabinets, and/or
- furniture components

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet
- goggles

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical Aspects of Evidence

Interpret work order and locate and apply relevant information.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Read and interpret cutting lists and job specifications to prepare for work.

Identify materials used in the work process.

Follow work instructions, operating procedures and inspection processes to:

- minimise the risk of injury to self or others
- prevent damage and wastage of goods, equipment and products
- maintain required production output and product quality

Identify, set up and operate to their full capabilities, at least two different types of routing and shaping machines, as specified in the Range Statement, including the use of safety cut-outs and guards.

Conduct operator maintenance on the machines and related equipment/material.

Work effectively with others.

Modify activities to cater for variations in workplace context and environment.

(2) Pre-requisite Relationship of Units

Pre-requisite for this unit is:

- LMFFMK0031A: Use furniture making hand and power tools

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- the types, characteristics, uses and limitations of routing and shaping machines
- routing and shaping processes and techniques
- characteristics of materials and uses of products produced
- workplace guidelines regarding acceptable tolerance levels
- workplace safety policies and procedures
- procedures for reporting machinery faults and material defects

Skills

The ability to:

- collect, organise and understand information related to routing and shaping operations, work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with shop supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate fabrication problems, avoid reworking and avoid wastage
- use the limited workplace technology related to fabrication, including tools, equipment, and measuring devices

(4) Resource Implications

- access to routing and shaping machinery as identified in the Range Statement, standard operating procedures, and unprocessed materials

(5) Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

(6) Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 2	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 2	
Use technology	Level 2	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFMK0322A: Set up, operate and maintain mechanical wood turning lathes

Competency Descriptor:

This unit deals with the skills and knowledge required to set up, operate and maintain mechanical wood turning lathes used in the production of furniture.

Competency Field: Timber Furniture Manufacture

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
1.	Prepare for work	1.1	Work instructions are used to determine job requirements, including design, quality, materials, equipment, and quantities.
		1.2	Workplace health and safety requirements, including personal protection needs, are observed throughout the work.
		1.3	Material for turning is selected and inspected for quality.
		1.4	Machines, cutting tools and templates are identified and checked for safe and effective operation.
		1.5	Procedures are determined for minimising waste material.
		1.6	Procedures are identified for maximising energy efficiency while completing the job.
2.	Set up machines	2.1	Machine settings and adjustments are made in accordance with job requirements and machine and tool manufacturer instructions.
		2.2	Trial runs are conducted to check machine operation, accuracy and quality of finished work.
		2.3	Necessary adjustments are made to machine settings.
3.	Operate machines	3.1	Machine start-up procedure is carried out in accordance with manufacturers' instructions.
		3.2	Material is fed into machine in accordance with manufacturers' instructions, tooling requirements, safe handling procedures and standard workplace operating procedures.

- 3.3 Machine is operated in accordance with its designed capacity and purpose, and to manufacturers' recommendations.
- 3.4 Machine operation is monitored to ensure product quality and output.
- 3.5 Waste quantities are checked and minimised.
- 3.6 Items that do not meet quality requirements are repaired, recycled or discarded according to workplace procedures.
- 3.7 Problems with the required work and/or the operation of the machine are identified and reported to appropriate persons.
- 4. Clean up work area and maintain equipment
 - 4.1 Material that can be reused is collected and stored.
 - 4.2 Waste and scrap are removed following workplace procedures.
 - 4.3 Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures
 - 4.4 Unserviceable equipment is tagged and faults identified in accordance with workplace.
 - 4.5 Operator maintenance is completed in accordance with manufacturers' specifications and site procedures.

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is to be carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of machines.

The following variables may be present for this particular unit.

Lathes are to include:

- two of fixed knife
- rotary knife
- copying lathe

Work involves:

- reading the plans and specifications
- the manufacture of templates
- the free-hand grinding of cutters
- the application of cutting tools
- the set-up and operation of lathes to produce turned components

OH&S requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- code, and
- safe operating procedures

Competency may be demonstrated in workplaces involved in the manufacture of:

- domestic furniture
- commercial furniture
- kitchen and bathroom cabinets
- furniture components

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet
- goggles

Tools are to include machine-specific tools, and may include:

- tension wrench
- pedestal grinder, or
- bench grinder
- turning chisels set

Information and procedures:

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and design
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical Aspects of Evidence

Interpret work order and locate and apply relevant information.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Read and interpret cutting lists and job specifications to prepare for work.

Identify materials used in the work process.

Follow work instructions, operating procedures and inspection processes to:

- minimise the risk of injury to self or others
- prevent damage to goods, equipment and products
- maintain required production output and product quality

Identify, set up, operate and maintain at least two different lathes, including the use of safety cut-outs and guards, to complete the following:

- off-hand grind a range of cutters
- manufacture and apply a template
- complete a minimum of two detailed turnings which are to include fillets, beads, covers and square shoulder

Conduct operator maintenance on the lathes.

Work effectively with others.

Modify activities to cater for variations in workplace context and environment.

(2) Pre-requisite Relationship of Units

Pre-requisites for this unit are:

- LMFFMK0031A: Use furniture making hand and power tools

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- the types, characteristics, uses and limitations of lathes
- characteristics of materials and uses of products produced
- workplace guidelines regarding acceptable tolerance levels
- workplace safety policies and procedures
- procedures for reporting machinery faults and material defects

Skills

The ability to:

- collect, organise and understand information related to lathe operations, work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with workshop supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the workshop and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate set-up, operating and maintenance problems, avoid reworking and avoid wastage
- use the limited workplace technology related to lathe operations, including tools, equipment, calculators and measuring devices

(4) Resource Implications

- access to the lathes as identified in the Range Statement
- standard operating procedures
- unprocessed materials

(5) Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

(6) Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 2	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFMK0342A: Fabricate synthetic solid surface products

Competency Descriptor:

This unit deals with the skills and knowledge required to fabricate synthetic solid surface furniture and furnishing products.

Competency Field: Timber Furniture Manufacture

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Prepare for work	1.1 Work instructions are used to determine job requirements, including design, tolerances, process, materials, finish and quantity. 1.2 Fabrication sequence is correctly planned. 1.3 Procedures are determined for checking quality at each stage of the process. 1.4 Workplace health and safety requirements, including personal protection needs, observed throughout the work. 1.5 Suitable work area is selected for the task. 1.6 Preparatory drawings and set out for tasks are completed. 1.7 Cutting list for components is developed. 1.8 Materials are selected following work instructions. 1.9 Tools and equipment suitable for fabrication are identified and checked for safe and effective operation.
2. Complete fabrication	2.1 Materials are set out and prepared according to work instructions and components are marked according to industry practices. 2.2 Tools, machines and equipment are used in accordance with safety requirements and manufacturers' specifications. 2.3 Components are fabricated and checked against set outs for accuracy tolerances, fit and distortion. 2.4 Doors, drawers, shelves or decorative treatments are fitted as required.

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| | 2.5 | Product is prepared for final finish, including the removal of bruises, scratches, dents and marks. |
| | 2.6 | Product is checked against plans at identified checkpoints. |
| 3. | Finalise operation | |
| | 3.1 | Faulty and/or defective equipment is tagged and reported in accordance with workplace practices. |
| | 3.2 | Work area is cleaned, hand and/or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures. |
| | 3.3 | Off-cuts and unused materials are collected and stored for reuse or disposed following workplace procedures. |
| | 3.4 | Waste and scrap materials are dealt with following workplace procedures. |

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Synthetic solid surface products are generally acrylic or polyester sheet based materials. There are a range of commercial products, including Corian, Aztec, Trezzini and others.

Work is to be carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the fabrication processes.

The following variables may be present for this particular unit.

Synthetic solid surface products are to include bench tops, and may include:

- edges
- sinks
- bowls
- other containers
- waterproof wall treatments

OH&S requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- code
- safe operating procedures

Machines may include, but are not limited to:

- panel saws
- routers
- edge moulders
- point to point
- heat applicators
- sending and buffing machines

Tools and equipment may include, but are not limited to:

- measuring tapes or rulers
- hammers
- mallets
- squares
- bevels
- chisels
- planes
- hand saws
- power saws
- power drills/screwdrivers
- air compressor and hoses
- clamps
- screwdrivers
- pincers

Materials to be used may include but are not limited to:

- synthetic solid surface materials
- timber
- manufactured board
- glues
- screws
- nails
- dowels
- knockdown fittings

Work involves:

- reading and interpreting plans
- developing set-outs
- using hand and/or power tools equipment
- operating machinery

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet
- goggles

Information and procedures:

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical Aspects of Evidence

Interpret work order and locate and apply relevant information.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Follow work instructions, operating procedures and inspection processes to:

- minimise the risk of injury to self or others
- prevent damage to goods, equipment or products
- maintain required production output and product quality

Fabricate a minimum of one synthetic solid surface material product, including at least one full bench top.

Work effectively with others.

Modify activities to cater for variations in workplace context and environment.

(2) Pre-requisite Relationship of Units

Pre-requisites for this unit are:

- LMFFMK0031A: Use furniture making Hand and power tools
- LMFFMK0021A: Operate basic woodworking machines

(3) Underpinning Knowledge and Skills

Knowledge

Knowledge of:

- the types, characteristics, uses and limitations of synthetic solid surface materials
- the interpretation of plan representation of furniture design
- the preparation of drawings and set-outs
- identification of hand and/or power tools, materials, machines, equipment, processes and procedures
- workflow in relation to furniture production

Underpinning Knowledge and Skills (Cont'd)

Skills

The ability to:

- collect, organise and understand information related to synthetic solid surface materials, work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with shop supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate fabrication problems, avoid reworking and avoid wastage
- use the limited workplace technology related to fabrication, including tools, equipment and measuring devices

(4) Resource Implications

- access to plans, hand and/or power tools, machines, equipment, materials, and a work area

(5) Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

(6) Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 2	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 2	
Work with others and in team	Level 2	
Use mathematical ideas and techniques	Level 2	
Solve problems	Level 2	
Use technology	Level 2	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skill

LMFGGL1892A: Prepare and install mirrors

Competency Descriptor:

This unit deals with the skills and knowledge required to prepare and install mirrors

Competency Field: Furnishing – Glass & Glazing

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Identify and plan work requirement	<p>1.1 Work requirements in the form of type, pattern/plan and quantity of mirrors to be prepared and installed are identified from work instructions.</p> <p>1.2 Workplace health and safety requirements for fabrication and installation of mirrors, including personal protection needs, are observed throughout the work.</p> <p>1.3 Work sequence is planned in a logical order to suit the job.</p> <p>1.4 Quantities of materials required are calculated from plans or work instructions or by measuring the installation site.</p> <p>1.5 Fixing and joining devices or materials are selected in line with specifications or type of materials to be joined and the surface on which the mirror is to be installed</p> <p>1.6 Tools and equipment suitable to the work method are identified.</p>
2. Prepare for work	<p>2.1 Materials, fixings, tools and equipment needed to complete the work are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition.</p> <p>2.2 Components of the mirror are checked against specifications or job order for: size, quantity, finish and profile.</p>
3. Fabricate and install mirror	<p>3.1 Frame, if required, is fabricated in accordance with workplace procedures or industry practice.</p> <p>3.2 Mirror glass, if required, is cut to size in accordance with workplace procedures or industry practice.</p> <p>3.3 Mirror is edge-worked, if required, in accordance with workplace procedures or industry practice.</p>

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| | 3.4 | Holes, if required, are drilled in frame or mirror in accordance with workplace procedures or industry practice. |
| | 3.4 | Mirror is installed using appropriate fixing method in accordance with workplace procedures or industry practice. |
| 4. Complete work | 4.1 | Installed mirror is inspected for quality of work and repaired, re-fabricated or reinstalled as required in accordance with workplace procedures. |
| | 4.2 | Waste, unused and scrap material is removed for disposal or recycling as required. |
| | 4.3 | Work area is cleaned and rubbish disposed of as appropriate. |
| | 4.4 | Tools, equipment and unused materials are removed and stored appropriately according to workplace requirements |
| | 4.5 | Workplace documentation is completed in accordance with workplace procedures |

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is to be carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work requires individuals to demonstrate discretion, judgement and problem solving skills in the planning, fabrication and installation of mirrors. This may be demonstrated either individually or in a team environment.

Work is generally performed individually, with general supervision and may be part of a production process.

Prepare and install mirrors involves the fabrication and installation of mirrors to satisfy customer/work orders.

The following variables may be present for this particular unit.

Mirrors may include:

- framed
- frameless
- wall
- return
- safety and security mirrors

OH&S requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- safe operating procedures

Tools and equipment may include:

- tungsten wheel glass cutters
- speed cutters
- straight edges and squares
- plate and running pliers
- glass lifting
- handling and personal safety equipment
- glass edging equipment
- diamond drills and saws
- water
- spirit, dumpy and laser levels
- plumb bobs
- chalk lines
- tape measures
- portable drills
- general hand tools

Fixings and fasteners include:

- adhesive tapes
- screws and rosettes
- mirror and spring clips
- hollow wall fasteners
- rawl plugs
- cloth and glues, and
- non-acidic silicones

Materials are to include but are not limited to:

- timber and metal framing materials
- J-mould
- float and vinyl backed mirrors
- fixings and fasteners

Information and procedures

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

Personal protective equipment may include:

- gauntlets
- gloves
- safety glasses
- hard hats
- safety footwear
- aprons, and
- overalls

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical aspects of evidence

Interpret work order/job instruction and locate and apply relevant information to fabricate and install mirrors.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Follow work instructions, operating procedures and inspection practices to:

- minimise the risk of injury to self and others
- prevent damage to glass, equipment and products
- maintain required production output and product quality

To complete a minimum of:

- measuring for mirror installations
- cutting and float mirror up to 6in including vinyl backed
- edge-working and drilling holes in mirrors
- wall preparation
- construction and fitting of mirror frames and J-mould
- identification and use of water, spirit, dumpy and laser levels
- set plumb and level lines
- fit framed, wall, safety and security mirrors including return mirrors with minimal deflection
- clean and present finished mirrors
- calculate the cost of mirrors, edgework, materials and labour
- Work effectively with others.
- Modify activities to cater for variations in workplace contexts and environment.

(2) Pre-requisite Relationship of units:

Pre-requisites for this unit are:

- LMFGGL1662A: Use glass and glazing hand and power tools

(3) Underpinning knowledge and skillsKnowledge

Knowledge of:

- workflow in relation to the fabrication and installation of mirrors
- workplace safety system requirements related to the fabrication and installation of mirrors
- characteristics of materials used and uses of products produced
- identification of equipment, processes and procedures related to the fabrication and installation of mirrors
- relevant safety standards

Skills

The ability to:

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate work requirements, optimise glass sizes for economical cutting and assemble required materials
- use pre-checking and inspection techniques to plan work, avoiding reworking and wastage
- use the limited workplace technology related to the fabrication and installation of mirrors

(4) Resource implications

- mirrors
- aluminium framing material
- fixing/fasteners
- workplace operating procedures
- personal protective equipment
- an appropriate work area

(5) Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment may be in conjunction with assessment of other relevant units of competency.

(6) Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant fabrication and installation equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFMK0193A: Fabricate custom furniture

Competency Descriptor:

This unit deals with the skills and knowledge required to plan, construct and assemble custom furniture in response to specific orders and job requests .

Competency Field: Timber Furniture Manufacturing

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1 Work instructions are used to determine job requirements, including design, quality, materials, equipment, and quantities.</p> <p>1.2 Workplace health and safety requirements, including personal protection needs, are observed throughout the work.</p> <p>1.3 Construction and assembly sequence is planned.</p> <p>1.4 Procedures are determined for checking quality at each stage of the process.</p> <p>1.5 Suitable work area is selected for the task.</p> <p>1.6 Preparatory drawings/set-outs for tasks are completed.</p> <p>1.7 Cutting list for components is developed.</p> <p>1.8 Materials are selected following work instructions.</p> <p>1.9 Tools and equipment suitable for construction are identified and checked for safe and effective operation.</p>
2. Complete construction	<p>1.2 Materials are set out and prepared according to work instructions and components are marked according to industry practices.</p> <p>2.2 Tools, machines and equipment are used in accordance with safety requirements and manufacturers' specifications.</p> <p>2.3 Materials are cut/bent/formed in accordance with job specifications.</p> <p>2.4 Components are manufactured and checked against set out for tolerances, fit and accuracy.</p>

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| 3. | Assemble custom furniture | 3.1 | Components are assembled and checked against set out for accuracy, fit, twist and distortion. |
| | | 3.2 | Doors, drawers and shelves are assembled and fitted. |
| | | 3.3 | Hardware and decorative accessories are applied to specification. |
| | | 3.4 | Product is prepared for final finish, including the removal of bruises, scratches, dents and marks. |
| | | 3.5 | Product is checked against plans at identified checkpoints . |
| 4. | Clean up and maintain equipment | 4.1 | Faulty and/or defective equipment is tagged and reported in accordance with workplace procedures. |
| | | 4.1 | Waste and scrap are removed following workplace procedures. |
| | | 4.3 | Tools and equipment used are cleaned, inspected for serviceable condition, maintained and stored appropriately in accordance with workplace procedures. |
| | | 4.4 | Equipment and work area clean-up is maintained in accordance with workplace procedures. |

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is to be carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work involves reading and interpreting plans, customer liaison, developing set - outs, using hand and/or power tools, equipment and operating woodworking machinery.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set-up, operation and maintenance of machines.

Custom furniture

Custom furniture is defined as one -off manufacture in response to specific customer requirements. It does not include variations or modification to a production line item.

The following variables may be present for this particular unit.

Materials to be used may include but are not limited to:

- timber
- adhesives
- screws
- nails
- dowels
- metal fasteners
- knockdown fittings
- glass
- decorative finishes
- abrasive paper

Competency may be demonstrated in workplaces involved in the manufacture of:

- domestic furniture
- commercial furniture
- kitchen and bathroom cabinets
- furniture components

Tools and equipment may include, but are not limited to:

- measuring tapes or rulers
- hammers
- mallets
- squares
- bevels
- chisels
- planes
- hand saws
- power saws
- portable routers and trimmers
- power drills/screwdrivers
- pneumatic tools
- hoses
- clamps
- screwdrivers
- pincers

Custom furniture may include, but is not limited to:

- wall units
- vanity units
- kitchen cabinets
- side-boards/buffets
- drawer units
- display cabinets
- counters
- tables
- beds

OH&S requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- safe operating procedures

Machines may include, but are not limited to:

- band saws
- cross cut saws
- mitre saws
- panel and rip saws
- surface planers
- panel planers
- shaping machines and jigs
- sanders
- horizontal borers
- vertical drill presses
- for dovetail
- grinders
- wood turning lathes

Information and procedures

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet
- goggles

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement .

(1) Critical aspects of evidence

Read and interpret cutting lists and job specifications to prepare for work.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Identify materials used in the work process.

Follow work instructions, operating procedures and inspection practices to:

- minimise the risk of injury to self or others
- prevent damage and wastage of goods, equipment and products
- maintain required production output and product quality

Produce a minimum of two significant timber products which must include:

- one curved cabinet
- one item involving oval design
- using traditional construction methods and jointing

Produce one significant furniture item:

- custom developed machining processes and outcomes
- custom development and completion of assembly techniques and processes
- the satisfaction of customer specifications in terms of dimensions, materials, function and aesthetics

Work effectively with others.

Modify activities to cater for variations in workplace contexts and environment.

(2) Pre-requisite Relationship of units:

Pre-requisites for this unit are:

- LMFFMK0031A: Use furniture making hand and power tools
- LMFFMK0021A: Operate basic woodworking machines

(3) Underpinning knowledge and skillsKnowledge

Knowledge of:

- the types, characteristics, uses and limitations of solid timbers most common to furniture production
- the interpretation of plan representation of furniture design
- the preparation of drawings/set-outs/rods
- identification of hand and/or power tools, materials, equipment, processes and procedures
- workflow in relation to furniture production

Skills

The ability to:

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate assembly problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the assembly, including tools, equipment, materials and measuring devices

(4) Resource implications

The following resources should be provided:

- access to plans
- hand and/or power tools
- equipment
- cauls and jigs
- materials
- woodworking machinery
- work area

(5) Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

(6) Context of assessment

Assessment may occur on the job or in a workplace-simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 2	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 2	
Work with others and in team	Level 2	
Use mathematical ideas and techniques	Level 2	
Solve problems	Level 2	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFMK0233A: Produce manual and computer-aided production drawings

Competency Descriptor:

This unit deals with the skills and knowledge required to produce production drawings using both manual and computer-aided methods.

Competency Field: Furniture Manufacturing

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
1.	Identify object to draw	1.1	The purposes and any operational characteristics of object to be drawn are identified.
		1.2	Production materials and method are identified.
2.	Establish drawing criteria and limitations	2.1	Type of drawing to be completed is identified.
		2.2	Drawing requirements are established and documented identifying dimensions, angles, shapes and finished sizes.
		2.3	Drawing conventions and specifications to be noted on the drawing are identified.
		2.4	Appropriate medium for drawings is identified and selected.
3.	Quantify and draft initial drawings	3.1	Dimensions are plotted from criteria and documented specifications.
		3.2	Dimensional points are connected to match appropriate drawing views.
		3.3	Any production notes or special requirements are noted.
		3.4	Drawing conventions and specifications are noted on the documentation.
4.	Complete drawing	4.1	Angles, shapes and dimensions are checked against specifications and sample.
		4.2	Adjustments are made to the drawing within scope of authority.
		4.3	Drawing is checked for compliance with workplace documentation requirements.

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is to be carried out in accordance with statutory obligations, environmental legislation, relevant health regulations and organisation insurance requirements.

Drawing is to be limited to that used for manufacture/ production purposes and is not to encompass original design concepts.

Drawing is to be completed using both manual and computer -aided design techniques and processes.

Drawings are to be in metric scale and cover all dimensions of the furniture and furnishings.

Calculations are to be performed both manually and with the aid of a calculator.

Workplace health and safety requirements may include: Information and procedures

- relevant statutory requirements
- OH&S legislation
- material safety management systems
- hazardous substances and dangerous goods
- safe operating procedures
- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical aspects of evidence

Identify the factors and criteria relevant to the drawings.

Apply safety requirements throughout the work sequence, including the use of personal protective clothing and equipment.

Communicate effectively to enable accurate drawings.

Prepare production drawings of furniture/furnishings:

- covering a scope of at least three products
- applying both manual and computer -aided techniques and processes

(2) Pre-requisite Relationship of units:

Pre-requisites for this unit are:

- Nil

(3) Underpinning knowledge and skillsKnowledge

Knowledge of:

- furniture design and planning criteria
- structural geometry
- measurement techniques and equipment/tools
- the theory and practice of calculations (addition, subtraction, multiplication, division)
- the types, techniques and processes of manual production drawing
- the types of computer -aided drawing equipment, software, techniques and processes
- conventional signs and markings for drawings

Skills

The ability to:

- collect, organise and understand information related to drawings work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications and the reporting of drawing outcomes and problems
- plan and organise activities to avoid any back tracking or workflow interruptions
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow
- use mathematical ideas and techniques to correctly complete measurements,
- calculate area, perimeter, volume, mass, scales and ratios, and estimate material requirements use pre-checking techniques to anticipate drawing problems and avoid reworking use of technology
- Use the limited workplace technology related to drawing tools, equipment, calculators and measuring devices

(4) Resource implications

The following resources should be provided:

- information on the subjects for drawing
- suitable work area appropriate to the activity
- computer-aided drawing systems, measuring, calculating and recording devices

((5) Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

(6) Context of assessment

Assessment may occur on the job or in a workplace-simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 2	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 2	
Work with others and in team	Level 2	
Use mathematical ideas and techniques	Level 2	
Solve problems	Level 2	
Use technology	Level 2	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFMK0243A: Prepare cutting list from plans and job specifications

Competency Descriptor:

This unit deals with the skills and knowledge required to read plans and job specifications, and to prepare cutting lists and processing data for subsequent processing operations.

Competency Field: Furniture Manufacturing

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
1.	Read plan and job specifications	1.1	Job specifications, set-out rods and plans are used to determine the job requirements, including cutting list, dimension, design, quality materials and processes.
		1.2	Job components are established according to job specification and workplace procedures.
		1.3	Geometry of components established according to specifications.
2.	Prepare cutting lists	2.1	Workplace health and safety requirements, including personal protection needs, are observed throughout the work.
		2.2	Cutting list is checked and set out in accordance with workplace procedures and the plans and specifications.
		2.3	Components are identified and described using common workplace terminology.
		2.4	Sizes and tolerance of components are established and documented in accordance with workplace procedures.
		2.5	Processing requirements are identified and documented.
		2.6	Dimensional allowances for further processing are identified and documented.
3.	Read and interpret cutting lists	3.1	Cutting list is read and interpreted in accordance with the job requirements.
		3.2	Quantities and dimensions are interpreted.

- 3.3 Quality standards and waste factors are considered.
- 3.4 Processing methods are established.
- 3.5 Processing time is identified.

EVIDENCE GUIDE

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is to be carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the reading of plans and specifications and the preparation of cutting lists.

This unit covers work involved in the reading of plans and specifications and the preparation of cutting lists for the production of furniture components.

Preparation of cutting lists may be completed by both manual and computer assisted/generated means.

The following variables may be present for this particular unit.

OH&S requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- safe operating procedures

Competency may be determined in workplaces involved in the manufacture of:

- domestic furniture
- commercial furniture
- kitchen and bathroom cabinets
- furniture components

Materials to be considered may include but are not limited to:

- solid timber
- manufactured board
- metal
- plastics
- glass

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet

Information and procedures

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical aspects of evidence

Read and interpret cutting lists and job specifications to prepare for work.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Identify materials used in the work process.

Follow work instructions, operating procedures and inspection practices to:

- minimise the risk of injury to self or others
- prevent damage and wastage of goods, equipment and products
- maintain required production output and product quality

Interpret production plans and prepare cutting lists on a minimum of four occasions with lists each having at least six different components and, overall, the lists incorporating three different types of material.

Work effectively with others.

Modify activities to cater for variations in workplace contexts and environment.

(2) Pre-requisite Relationship of units:

Pre-requisites for this unit are:

- LMFFMK0222A: Select timbers for furniture production

(3) Underpinning knowledge and skillsKnowledge

A knowledge of:

- characteristics of materials and tooling used and use of products prescribed
- identification of equipment, processes and procedures
- pattern techniques for optimising materials

Skills

The ability to:

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area, estimate cutting requirements and material requirements
- use pre-checking and inspection techniques to anticipate preparation problems, avoid reworking and avoid wastage
- use the workplace technology related to the cutting lists, including aids, tools, equipment, calculators and measuring devices

(4) Resource implications

The following resources should be provided:

- access to plans and specifications
- standard cutting list formats
- workplace standard processing procedures

((5) Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

(6) Context of assessment

Assessment may occur on the job or in a workplace-simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 2	
Communicate ideas and information	Level 2	
Plan and organise activities	Level 2	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 2	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

LMFFMK0353A: Set up, operate and maintain CNC sizing machines

Competency Descriptor:

This unit deals with the skills and knowledge required to set up, operate and maintain CNC sizing machines to produce furniture or components.

Competency Field: Timber Furniture Manufacturing

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Prepare for work	1.1 Work instructions are used to determine job requirements, including: design, quality, materials, equipment and quantities. 1.2 Workplace health and safety requirements, including personal protection needs, are observed throughout the work. 1.3 Material for machining is selected and inspected for appropriate quality. 1.4 Procedures are determined for minimising waste material. 1.5 Procedures are identified for maximising energy efficiency while completing the job.
2. Set up machines	2.1 CNC programme is set to job requirements. 2.2 Safety equipment including emergency stops, gauges, guards and controls are checked. 2.3 Machine settings and adjustments are made in accordance with job requirements and manufacturers' instructions. 2.4 Machines, cutting tools and jigs are checked for safe and effective operation. 2.5 Trial runs are conducted to check machine operation and quality of finished work. 2.6 Final adjustments are made to CNC programmes and equipment according to workplace procedures.
3. Operate machines	3.1 Machines are operated and monitored to ensure product quality and output. 3.2 Waste quantities are checked and minimised.

- 3.3 Problems with the required work are identified and reported to appropriate persons.
- 3.4 Items that do not meet quality requirements are repaired, recycled or discarded according to workplace procedures.
- 3.5 Any authorised changes in working procedures are followed.
- 4. Clean up work area and maintain equipment
 - 4.1 Material that can be reused is collected and stored.
 - 4.2 Waste and scrap are removed following workplace procedures.
 - 4.3 Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures.
 - 4.4 Operator maintenance is completed in accordance with manufacturers' specifications and site procedures.
 - 4.5 Unserviceable equipment is tagged and faults identified in accordance with workplace.
 - 4.6 Equipment and tooling is maintained in accordance with workplace procedures.

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is to be carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of machining.

The following variables may be present for this particular unit.

Work involves:

- computer programming skills
- reading and interpreting drawings
- stock control
- setting cutting speeds
- computer-aided machining operations
- saw and tool maintenance

Material to be sized is to include:

- solid timber
- manufactured board
- laminate
- solid synthetic materials
- plastics

Competency may be demonstrated in workplaces involved in the manufacture of:

- domestic furniture
- commercial furniture
- kitchen and bathroom cabinets
- furniture components

Information and procedures:

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

CNC sizing machines are to include:

- CNC beam saws, and may include double end profiling machines

Occupational Health and Safety (OH&S) requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- safe operating procedures

Tools are to include:

- machine-specific tools, and may include:
- screwdrivers
- hammers
- spanners

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet
- goggles

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical Aspects of Evidence

Locate, interpret and apply relevant information.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Identify materials used in the work process.

Follow work instructions, operating procedures and inspection practices to:

- minimise the risk of injury to self or others
- prevent damage to goods, equipment or products
- maintain required production output and product quality

Identify, set up and operate CNC sizing equipment, including the use of safety cut -outs and guards, to produce a range of complex cutting patterns to its full potential.

Conduct operator maintenance on the machine and related equipment.

Work effectively with others.

Modify activities to cater for variations in workplace contexts and environment.

(2) Pre-requisite Relationship of Units

Pre-requisite for this unit is:

- Nil

(3) Underpinning Knowledge and SkillKnowledge

Knowledge of:

- types, characteristics, uses and limitations of CNC sizing machines
- CNC theory, practices and techniques
- characteristics of materials used and uses of products produced
- workflow processes
- procedures for reporting materials, product or equipment faults

Skills

The ability to:

- collect, organise and understand information related to CNC sizing operations, work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with workshop supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the workshop and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, compute input data and estimate material requirements
- use pre-checking and inspection techniques to anticipate CNC sizing problems, avoid reworking and avoid wastage
- use the workplace technology related to CNC sizing, including machinery, tools, equipment and measuring devices

(4) Resource Implications

- CNC controlled equipment, standard operating procedures, unprocessed materials.

(5) Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

(6) Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 2	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 2	
Work with others and in team	Level 2	
Use mathematical ideas and techniques	Level 2	
Solve problems	Level 2	
Use technology	Level 2	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skill.

LMFFMK0373A: Produce and maintain cutting tools

Competency Descriptor:

This unit deals with the skills and knowledge required to select and machine materials, to produce and maintain profile knives, and to maintain router cutters, straight knives and profile cutter heads used in woodworking machinery.

Competency Field: Timber Furniture Manufacturing

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Prepare for work	1.1 Work instructions are used to determine job requirements, including development, quality, materials, equipment, and quantities. 1.2 Workplace health and safety requirements, including personal protection needs, are observed throughout the work. 1.3 Material for machining is selected and inspected for quality. 1.4 Machines, grinding tools and accessories are identified and checked for safe and effective operation. 1.5 Procedures are determined for minimising waste material. 1.6 Procedures are identified for maximising energy efficiency while completing the job.
2. Set up machines	2.1 Machine settings and adjustments are made in accordance with job requirements and machine and tool manufacturer instructions. 2.2 Grinding operations are checked for accuracy and quality of finished. 2.3 Necessary adjustments are made to machine settings.
3. Operate machines	3.1 Machine start-up procedure is carried out in accordance with manufacturers' instructions. 3.2 Tooling is machined in accordance with manufacturers' instructions, safe handling procedures and standard workplace operating procedures. 3.3 Machine is operated in accordance with its designed capacity and purpose, and to manufacturers' recommendations.

- 3.4 Machine operation is monitored to ensure product quality and output.
- 3.5 Waste quantities are checked and minimised.
- 3.6 Items that do not meet quality requirements are repaired, recycled or discarded according to workplace procedures.
- 3.7 Problems with the required work and/or the operation of the machine are identified and reported to appropriate persons.
- 3.8 Daily routine lubrication and adjustments to the machines are made.
- 4. Clean up work area and maintain equipment
 - 4.1 Material that can be reused is collected and stored.
 - 4.2 Waste and scrap are removed following workplace procedures.
 - 4.3 Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures.
 - 4.4 Unserviceable equipment is tagged and faults identified in accordance with workplace.
 - 4.5 Operator maintenance is completed in accordance with manufacturers' specifications and site procedures.

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is to be carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of machines.

The following variables may be present for this particular unit.

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet
- goggles

OH&S requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- safe operating procedures

The work involves:

- the identification of cutter design requirements
- the geometrical development of cutter profiles
- the inspection and identification of maintenance requirements
- the selection and matching of abrasives for job requirements
- the production of templates
- the production and maintenance of detailed cutter profiles
- the maintenance of straight cutters for a range of woodworking machines

Information and procedures:

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

Materials are to include:

- high speed steel
- tungsten carbide
- may include other combination materials

Machines to include either:

- a tool and cutter grinder or
- a profile grinder

May also include:

- a straight knife grinder
- a bench or pedestal grinder

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical Aspects of Evidence

Interpret work order and locate and apply relevant information.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Read and interpret cutting lists and job specifications to prepare for work.

Identify materials used in the work process.

Follow work instructions, operating procedures and inspection processes to:

- minimise the risk of injury to self or others
- prevent damage to goods, equipment and products
- maintain required production output and product quality

Complete the following:

- develop and produce a set of two matching profile cutters, and produce a set of profile cutters from a template the candidate has manufactured, or maintain a router cutter and solid profile cutter head

Conduct operator maintenance on the machines/ equipment

Work effectively with others.

Modify activities to cater for variations in workplace context and environment.

(2) Pre-requisite Relationship of Units

Pre-requisites for this unit are:

- LMFFMK0021A: Operate basic woodworking machines
- LMFFMK0031A: Use furniture making sector hand and power tools

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- the types, characteristics, uses and limitations of grinding machines
- cutter development geometry and principles
- characteristics, properties and limitations of cutter steels
- grinding practices and techniques
- types, characteristics and limitations of grinding adhesives and processes
- workplace guidelines regarding acceptable tolerance levels
- workplace safety policies and procedures
- procedures for reporting machinery faults and material defects

Skills

The ability to:

- organise and understand information related to cutting tool operations, work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with workshop supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the workshop and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate production and maintenance problems, avoid reworking and avoid wastage
- use the limited workplace technology related to cutting tool operations, including tools, equipment and measuring devices

(4) Resource Implications

- access to grinding machinery as identified in the Range Statement
- standard operating procedures
- unprocessed materials

(5) Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency

(6) Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 2	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 2	
Solve problems	Level 2	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skill.

LMFFMK0383A: Construct jigs and fixtures

Competency Descriptor:

This unit deals with the skills and knowledge required to prepare and construct jigs and fixtures to produce furniture components.

Competency Field: Timber Furniture Manufacturing

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
1.	Identify the purpose of the jig or fixture	1.1	Purpose of the jig or fixture and the equipment it is to be used on is established.
		1.2	Proposed service life of jig or fixture is established.
		1.3	Tolerances allowed are identified.
		1.4	Materials for jig construction are established.
		1.5	Quality requirements for each stage of the construction process are identified.
2.	Plan jig or fixture construction	2.1	Plan of proposed jig or fixture is produced.
		2.2	Approval of design is gained through workplace procedures.
		2.3	Steps or stages in production are planned, noting check points for measurements and tests.
3.	Collect materials and equipment	3.1	Workplace health and safety requirements, including personal protection needs, are observed throughout the work.
		3.2	Sufficient materials to complete the project are assembled ready for use
		3.3	Suitable work area is selected.
		3.4	Hand and/or power tools are identified and checked for serviceability and assembled in work area.
		3.5	Appropriate equipment required is identified and checked for serviceability.
4.	Construct the jig or fixture	4.1	Production plan is followed to construct the jig or fixture.
		4.2	Tools and equipment are used in accordance with workplace procedures.

- | | | |
|----|-----|--|
| | 4.3 | Quality checks are conducted at the identified points. |
| | 4.4 | Modifications are identified and recommended within workplace procedures. |
| | 4.5 | Modifications to the plan are documented and followed. |
| | 4.6 | Jig or fixture is checked for fitness for purpose. |
| 5. | | Clean up work area and maintain equipment |
| | 5.1 | Any faulty and/or defective equipment is isolated and reported to appropriate persons. |
| | 5.2 | Material, which can be reused is collected and stored. |
| | 5.3 | Waste and scrap are removed following workplace procedures. |
| | 5.4 | All tools, equipment and personal protective equipment are cleaned, maintained and appropriately stored. |
| | 5.5 | Work area is cleaned in accordance with workplace procedures. |

RANGE STATEMENT

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is to be carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements.

Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of machines.

The following variables may be present for this particular unit.

Competency may be demonstrated in workplaces involved in the manufacture of:

- domestic furniture
- commercial furniture
- kitchen and bathroom cabinets
- furniture components
- surface planers
- horizontal borers
- vertical drill presses
- mortisers
- tenoners
- spindle moulders
- overhead and inverted pin routing machines

The uses for jigs and fixtures may include, but are not limited to:

- holding
- shaping
- drilling
- cutting
- routing

Tools and equipment may include, but are not limited to:

- measuring tapes or rulers
- hammers
- mallets
- squares
- bevels
- chisels
- planes
- hand saws
- power saws
- power drills/screwdrivers
- pneumatic tools
- clamps
- screwdrivers
- pincers

Material used in the construction of jigs and fixtures may include, but is not limited to:

- solid timber
- manufactured board
- metal
- plastics
- synthetic solids
- laminates
- non-ferrous materials

Jigs and fixtures are used in the production of, but are not limited to:

- chair legs
- shaping curved components
- end panels
- trenching
grooving

OH&S requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- safe operating procedures

Personal protective equipment to include:

- coverall
- safety boots
- gloves
- dust mask
- safety helmet
- goggles

Information and procedures:

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturers' specifications and operational procedures

Machines for which jigs and fixtures are made may include, but are not limited to:

- band saws
- cross cut saws
- jig saws
- mitre saws
- panel and rip saws
- belt sanders
- panel planers

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement

(1) Critical Aspects of Evidence

Interpret work order and locate and apply information.

Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment.

Identify materials used in the work process.

Follow work instructions, operating procedures and inspection practices to:

- minimise the risk of injury to self or others
- prevent damage to goods, tools, equipment or products
- maintain required production output and product quality

The selection of materials and the construction of a minimum of three different types of jigs/fixtures, including one for a shaping machine and one which is adjustable.

Work effectively with others.

Modify activities to cater for variations in workplace contexts and environment.

(2) Pre-requisite Relationship of Units

Pre-requisites for this unit are:

- LMFFMK0021A: Operate basic woodworking machines
- LMFFMK0031A: Use furniture making sector hand and power tools

(3) Underpinning Knowledge and SkillsKnowledge

Knowledge of:

- types, characteristics, uses and limitations of jigs and fixtures
- criteria for selecting material for use in jigs and fixtures
- requirements for cutting, shaping and joining materials
- identification of equipment, processes and procedures
- workflow in relation to the use of jigs and fixtures

Skills

The ability to:

- collect, organise and understand information related to work orders, jig and fixtures design/drawings, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with workshop supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the workshop and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise
- workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate construction problems, avoid reworking and avoid wastage
- use workplace technology related to jig and fixtures construction, including tools, equipment and measuring devices

(4) Resource Implications

- job context, materials and equipment for jig or fixture construction

(5) Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency

(6) Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 2	
Communicate ideas and information	Level 2	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 2	
Solve problems	Level 2	
Use technology	Level 2	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skill.

LMFCOR1353A: Estimate and cost job

Competency Descriptor:

This unit deals with the skills and knowledge required to estimate materials, labour and time requirements and establish costs for provision of services or products.

Competency Field:

Timber Furniture Manufacturing

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Gather information	1.1 Details of customer requirements are obtained through discussion with customer or from information supplied. 1.2 Details of products and/or services to be provided are developed. 1.3 Details are recorded in accordance with enterprise practice.
2. Estimate materials, time and labour	2.1 Types and quantities of materials required for product manufacture are estimated. 2.2 Labour requirements to achieve product manufacture and perform required services are estimated. 2.3 Time requirements to manufacture and/or install item and perform required services are estimated.
3. Calculate costs	3.1 Total materials, labour and overhead costs are calculated in accordance with organisational procedures. 3.2 Total job cost is calculated, including overheads and mark-up percentages and statutory deductions. 3.3 Final cost to customer is calculated.
4. Document details and verify where necessary	4.1 Details of costs and charges are documented in accordance with organisational practice. 4.2 Costs, calculations or other details are verified in accordance with organisational practice. 4.3 Customer quotation is prepared. 4.4 Details are documented for future reference in accordance with organisational practice.

EVIDENCE GUIDE

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between school shops and workplaces. It relates to the unit as a whole and facilitates holistic assessment.

Work is to be carried out in accordance with statutory obligations, environmental legislation, relevant health regulations, and organisation insurance requirements.

The estimation and job costing covered here is to be that undertaken by a craft-person in relation to a furniture product for a single client or customer.

The client or customer may be external or internal.

The following variables may be present for this particular unit.

Estimation and costing is to include:

- overheads
- labour
- materials
- government/taxes

OH&S requirements include:

- relevant statutory requirements
- material safety management systems
- hazardous substances and dangerous goods
- safe operating procedures

Work organisation procedures and practices relating to the:

- provision of information
- preparation of quotations

Reporting actions, which may include:

- verbal and written communication in accordance with enterprise policies and procedures

Oral, written or visual communication including:

- completion of standard forms
- interpretation of information and instructions associated with workplace activities
- recording and reporting of work outcomes
- use of calculators and/or computers running appropriate software for estimating and calculating necessary details

Information and procedures

- organisation's work orders and instructions
- industry codes and symbols
- product designs, patterns and prototype.
- building/architectural plans
- relevant statutory quality standards and procedures
- work scheduling documentation
- job procedures

EVIDENCE GUIDE

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

(1) Critical aspects of evidence

- interpret specifications and instructions for products and materials to be used
- interpret work orders
- document and communicate work-related information including: customer requirements, products, materials and labour required, costing calculations for products, materials and labour, and special conditions
- use of calculators, computer programs and other aids in the estimation and cost calculation processes
- estimate and cost three varied jobs including:
 - estimate quantities of material required
 - determine the types and amount of labour required to complete the work
 - estimate time required to complete the work
 - estimate overheads associated with the job

(2) Pre-requisite Relationship of units:

Pre-requisites for this unit are:

- Nil

(3) Underpinning knowledge and skills

Knowledge

Knowledge of:

- range of products and services offered by the enterprise
- enterprise or equivalent costing procedures
- components of overheads costs
- components of labour costs
- labour rates and approximate costs of products and materials
- basic mathematical processes

Skills

The ability to:

- collect, organise and understand information related to work orders, costs and government charges
- communicate ideas and information to enable confirmation of work requirements and specifications and the reporting of work outcomes and problems
- complete an outline plan of activities including the preparation and layout of the worksite, the obtaining of equipment and materials, and the avoidance of back tracking, work flow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use mathematical ideas and techniques to correctly complete measurements, estimate material, labour and overhead requirements and accurately cost the product/service
- use checking techniques to anticipate and overcome costing problems
- use workplace technology related to the estimation and validation of job costs.

(4) Resource implications

- access is required to real or appropriately simulated situations involving estimation and costing of products and services
- access is required to specifications and costs of relevant products, equipment and materials and information on labour costs and availability, safety procedures, regulations, quality standards, and enterprise procedures
- access is required to all necessary facilities and associated equipment including calculators, computers and relevant software

(5) Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

(6) Context of Assessment

Assessment may occur on the job or in a workplace-simulated facility with relevant process, equipment, materials, work instructions and deadlines.

CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> Carries out established processes Makes judgement of quality using given criteria 	<ul style="list-style-type: none"> Manages process Selects the criteria for the evaluation process 	<ul style="list-style-type: none"> Establishes principles and procedures Evaluates and reshapes process Establishes criteria for evaluation

Collect, analyse and organise information	Level 3	
Communicate ideas and information	Level 2	
Plan and organise activities	Level 2	
Work with others and in team	Level 2	
Use mathematical ideas and techniques	Level 2	
Solve problems	Level 2	
Use technology	Level 2	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.