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| LMFFM3002B | Construct furniture using leg and rail method |
| Unit descriptor | This unit covers the competency to follow plans to construct and assemble furniture using leg and rail construction. |
| Employability skills | This unit contains employability skills. |
| Unit sector | Furniture Making |

| ELEMENT | PERFORMANCE CRITERIA |
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| Elements describe the essential outcomes of a unit of competency. | Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide. |
| 1. Prepare for work | <ul style="list-style-type: none"> 1.1. Work instructions are used to determine job requirements, including design, tolerances, process, materials, finish and quantity 1.2. Construction and assembly sequence are 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. Preparatory drawings/set-outs/rods 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 | <ul style="list-style-type: none"> 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 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. Furniture is finished to suitable state for surface preparation 2.9. Any non-conformity with the required quality standards is rectified |
| 3. Finalise operation | <ul style="list-style-type: none"> 3.1. Faulty and/or defective equipment is tagged and reported in accordance with workplace practices |

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| | <p>3.2. Work area is cleaned, hand and/or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures</p> <p>3.3. Off-cuts and unused materials are collected and stored for reuse or disposed following workplace procedures</p> <p>3.4. Waste and scrap materials are dealt with following workplace procedures</p> |
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REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- 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, coordination 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, 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 the construction, including tools, equipment and measuring devices

Required knowledge

- 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

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

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

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

Unit context

- OH&S requirements include legislation, building codes, material safety management systems,

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| | <p>hazardous substances and dangerous goods code and local safe operating procedures</p> <ul style="list-style-type: none"> • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • 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 |
| Unit scope | 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 bridge) |
| Tools and equipment may include, but are not limited to: | <ul style="list-style-type: none"> • 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 and pincers |
| Machines may include, but are not limited to: | <ul style="list-style-type: none"> • band saws • cross cut saws • jig saws • panel and rip saws • surface planers • panel planers • belt sanders • horizontal borers • vertical drill presses • furniture mortise and tenoner • dovetailers • pedestal grinders • wood turning lathes • veneer guillotines and presses |
| Materials to be used may include but are not limited to: | <ul style="list-style-type: none"> • timber • manufactured board • adhesives • screws • nails |

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| | <ul style="list-style-type: none"> • dowels • knock down fittings |
| Checking of constructed product is to cover: | <ul style="list-style-type: none"> • squareness • parallel • twist • and distortion and product faults |
| Personal protective equipment | Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices |
| Information and procedures | <ul style="list-style-type: none"> • 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 provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

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| Critical Aspects of Evidence | <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> ◦ 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 two furniture products which are to include: <ul style="list-style-type: none"> ◦ a table with a drawer, and ◦ 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 context and environment |
| Resource Implications | Access to plans, hand and/or power tools, equipment, woodworking machinery, materials, and a work area. |
| Method of Assessment | Assessment methods must confirm consistency of performance over time and in a range of workplace |

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| | <p>relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.</p> |
| Context of Assessment | <p>Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.</p> |