



Australian Government

MSFFT4006 Construct prototypes and samples

Release: 1

MSFFT4006 Construct prototypes and samples

Modification History

Release 1 - New unit of competency

Application

This unit of competency covers the construction of prototypes and samples in accordance with established plans, drawings or specifications using hand and power tools, basic static and specialised machines, and applying joinery, construction and finishing techniques.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Competency Field

Unit Sector

Furnishing Technology

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1	Establish the work requirements	1.1	Purpose of the prototype or sample is identified from plans and drawings
		1.2	Materials specifications for the item are identified from workplace documentation
		1.3	Ergonomic requirements are identified, clarified and satisfied throughout the work process
		1.4	Construction requirements and methods are identified appropriate for the materials used
2	Plan prototype or sample construction	2.1	Work plan for the item construction is drafted
		2.2	Work health and safety (WHS) requirements, including personal protection needs, are observed throughout the work

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| | 2.3 | Compatibility of materials in specifications is checked and any discrepancies reported |
| | 2.4 | Steps or stages in construction are identified, noting checkpoints for measurements and tests |
| | 2.5 | Suitable work area is located and cleared ready for work |
| 3 | Obtain materials and equipment | |
| | 3.1 | Materials are selected according to specifications and assembled ready for use |
| | 3.2 | Compatibility of materials with specifications is checked and any discrepancies reported |
| | 3.3 | Equipment and accessories suitable for working the specified material are assembled |
| | 3.4 | Appropriate jigs and other construction aids are identified and, where required, adjusted to suit the work |
| 4 | Construct the prototype or sample | |
| | 4.1 | Work plan is followed to construct the item |
| | 4.2 | Checks are conducted at the identified points |
| | 4.3 | Modifications to designs and plans are identified and recommended within workplace procedures |
| | 4.4 | Modifications to the plan are documented and followed |
| | 4.5 | Prototype or sample is checked for fitness for purpose |
| 5 | Finalise the work sequence | |
| | 5.1 | The product is prepared for finishing in accordance with the design specification |
| | 5.2 | Tools and equipment are cleaned, maintained and stored in accordance with manufacturer specification |
| | 5.3 | Work area is cleared and waste removed |
| | 5.4 | Workplace documentation and/or reports are completed |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency. Detail on appropriate performance levels for each furnishing unit of competency in reading, writing, oral communication and numeracy utilising the Australian Core Skills Framework (ACSF) are provided in the Furnishing Training Package Implementation Guide.

Range of Conditions

Specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included. Range is restricted to essential operating conditions and any other variables essential to the work environment.

- Unit context includes:**
- WHS requirements, including legislation, building codes, material safety management systems, hazardous and dangerous goods codes, and local safe operating procedures or equivalent
 - work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
 - work requires individuals to demonstrate analytical and organisational ability, discretion, judgement and problem solving
 - prototypes and samples may be produced by hand, by using appropriate machines, tools and equipment, or by computer-assisted production and will reflect the finished products produced by the enterprise
 - work is performed with little external assistance and with minimal supervision or direction
 - customers may be internal or external
- Machines and equipment include:**
- microprocessor or computer-controlled machines
 - production and facility equipment used in the enterprise
- Materials include:**
- timber
 - metal alloys
 - glass
 - fabrics and textiles
 - plastics
 - leather
 - adhesives
 - fillers and finishes, as appropriate
- Personal protective**
- that prescribed under legislation, regulations and enterprise

equipment includes: policies and practices

**Information and
procedures include:**

- work procedures/instructions
- designer/drawer specifications and instructions
- organisation work specifications and requirements
- legislation/regulations/national or industry codes and practices relevant to the prototype/sample construction
- quality and Australian Standards and procedures

Unit Mapping Information

Supersedes and is equivalent to LMFFT4006B Construct prototypes and samples.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0601ab95-583a-4e93-b2d4-cfb27b03ed73>

Assessment Requirements for MSFFT4006 Construct prototypes and samples

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Performance Evidence

- Collect, organise and understand information related to multi-trade work instructions and work orders, building and structural plans and safety procedures
- 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 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
- Construct a minimum of two (2) different prototypes/samples, and:
 - identify compatibility/incompatibility of materials, adhesives, fittings and fasteners for the application
 - select and apply appropriate joinery, construction and finishing techniques
 - select and use appropriate materials, equipment and processes for the item being constructed
 - demonstrate how the design of the prototype components will influence the working lifetime of the item
 - ensure that the prototype satisfies the original or varied specification
- Use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- Communicate ideas and information to enable confirmation of work requirements and specifications and the reporting of work outcomes and problems, interpret basic plans and follow safety procedures
- Use workplace technology related to the coordination, including communication equipment, time and management aids and other measuring devices
- Avoid backtracking, 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

Knowledge Evidence

- Characteristics of the materials used in relation to the use of the end item
- Design features and requirements for the prototype or sample
- Operation of tools and equipment used and the application of the finished product

- Identification of equipment, processes and procedures

Assessment Conditions

- Assessors must:
 - hold training and assessment competencies as determined by the National Skills Standards Council (NSSC) or its successors
 - have vocational competency in the furnishing industry at least to the level being assessed with broad industry knowledge and experience, usually combined with a relevant industry qualification
 - be familiar with the current skills and knowledge used and have relevant, current experience in the furnishing industry.
- Assessment methods must confirm consistency of performance over time rather than a single assessment event and in a range of workplace relevant contexts.
- Assessment must be by observation of relevant tasks with questioning on underpinning knowledge and, where applicable, multimedia evidence, supervisor's reports, projects and work samples.
- Assessment is to be conducted on single units of competency or in conjunction with other related units of competency. Foundation skills are integral to competent performance in the unit and should not be assessed separately.
- Assessment must occur on the job or in a workplace simulated facility with relevant process, equipment, materials, work instructions and deadlines.
- Access is required to materials, work order, specifications, plans, tools, equipment and consumables.

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