



Australian Government

MSFFT5008 Develop, trial and evaluate prototypes

Release: 1

MSFFT5008 Develop, trial and evaluate prototypes

Modification History

Release 1 - New unit of competency

Application

This unit of competency covers developing specifications, identifying and selecting materials and processes, production trialling of prototypes and completing evaluation documentation. Prototypes may be produced by hand, by using appropriate machines, tools and equipment or by computer-assisted production.

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	Develop prototype specifications	1.1	The purpose and outline requirements for the prototype are identified from design concepts and/or customer requirements
		1.2	Materials are identified following detailed analysis of the options
		1.3	Detailed prototype design specifications are prepared and documented
		1.4	Construction requirements and methods are identified appropriate for the materials to be used
		1.5	Ergonomic requirements are identified, clarified and satisfied throughout the work process
2	Plan and prepare	2.1	Work plan for the prototype construction is drafted

prototype construction	2.2	Work health and safety (WHS) requirements, including personal protection needs, are observed throughout the work
	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 quality checks
	2.5	Suitable work area is located and cleared ready for work
	2.6	Materials and consumables to meet specifications are prepared for use
	2.7	Equipment and accessories suitable for working the specified material are prepared for use
	2.8	Appropriate jigs and other construction aids are identified and where required adjusted to suit the work
3 Produce the prototype	3.1	Work plan is followed to produce the prototype
	3.2	Checks are conducted at the identified points
	3.3	Modifications to designs and plans are identified and recommended and managed within workplace procedures
	3.4	Modifications to the plan are documented and followed
	3.5	Prototype or sample is checked for compliance with specifications
4 Trial and evaluate the prototype	4.1	Trial objectives and processes are developed, specified and documented
	4.2	Personnel involved in the trial and evaluation are prepared for their responsibilities and functions
	4.3	Trial equipment, tools and materials are prepared and certified prior to use
	4.4	Prototype trials are conducted and results captured and recorded in accordance with the trial specification
	4.5	Results of trials are evaluated and evaluation records and recommendations are processed in accordance with enterprise procedures

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.

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| Unit context includes: | <ul style="list-style-type: none">• 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 conceptual and analytical ability, discretion, judgement and problem solving and may be carried out on a team basis or with the support of dedicated specialist personnel• customers or suppliers may be internal or external |
| Machines and equipment include: | <ul style="list-style-type: none">• microprocessor or computer-controlled machines• production and facility equipment used in the enterprise |
| Materials for prototypes include: | <ul style="list-style-type: none">• timber• metal alloys• glass• fabrics and textiles• plastics• leather• cardboard and paper• adhesives• fillers and finishes as appropriate |
| Personal protective equipment includes: | <ul style="list-style-type: none">• that prescribed under legislation, regulations and enterprise policies and practices |
| Information and | <ul style="list-style-type: none">• design concepts/customer requirements |

procedures include:

- designer/drawer specifications and instructions
- work procedures/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 LMFFT5011B Develop, trial and evaluate prototypes.

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 MSFFT5008 Develop, trial and evaluate prototypes

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Performance Evidence

- Collect, organise and understand information related to furnishing work instructions and work orders 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
- Develop and evaluate a minimum of two (2) different prototypes, and:
 - develop the prototype specification
 - identify compatibility/incompatibility of materials, adhesives, fittings and fasteners for the application
 - 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
 - prepare for and conduct evaluation trials
 - record outcomes and make recommendations for future activities
- Use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- Lead others and work effectively to improve production quality and outcomes
- 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 and encourage participation of employees in the planning of work activities and changes

Knowledge Evidence

- Intellectual property law requirements
- Elements and principles of design
- Trends and detailed knowledge of furniture construction
- Destructive and non-destructive testing techniques and processes
- Use of colour and other features
- Range, properties and characteristics of materials used in the furnishing industry
- Safety and environmental aspects of relevant enterprise activities
- Workplace procedures and reporting process
- Relevant WHS legislation, regulatory requirements and codes of practice

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 information on design concepts, customer requirements, quality standards and organisation procedures.

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