



Australian Government

Department of Education, Employment and Workplace Relations

CUVACD508A Refine model making skills

Release: 1

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Modification History

Version	Comments
CUVACD508A	This version first released with <i>CUV11 Visual Arts, Craft and Design Training Package version 1.0</i>

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to refine techniques for the development of three-dimensional (3-D) physical models.

Application of the Unit

Designers and artists working across a range of media and industry contexts use well-developed technical and creative skills to build 3-D models. At this level, the artist or designer may also be the person who conceives the idea for the model and develops its specifications, either independently or as part of a team. The model could be used as a way of testing or presenting ideas. In some cases the model may be a finished work or artistic piece. Work may be collaborative or independent, with mentoring or guidance available as required.

Licensing/Regulatory Information

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

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>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.</i>

Elements and Performance Criteria

1. Maintain professional practice	1.1 Apply a professional work ethic to activities 1.2 Keep informed of creative approaches, techniques, materials and equipment relevant to model making 1.3 Identify techniques from other industries that could be applied to the development of scale models and make connections in own work 1.4 Source new ideas and trends through regular review of the work of others 1.4 Use feedback from others to improve own skills in design 1.5 Seek opportunities to develop technical and conceptual skills
2. Refine and consolidate own technique	2.1 Experiment and play with new techniques, materials and equipment when developing model making ideas 2.2 Identify strengths and weaknesses of various approaches through practice and play 2.3 Identify and select approaches best suited to own practice 2.4 Develop and document a design language that reflects own style and approach
3. Make models to professional standard	3.1 Interpret ideas, problem-solving tasks or briefs with creativity, accuracy and efficiency 3.2 Develop clear plan and schedule for model making work 3.3 Select and assemble appropriate model making materials, tools, techniques and equipment consistent with specifications 3.4 Develop precise and accurate scale models as required 3.5 Identify opportunities for refinement and re-thinking and make adjustments as required 3.6 Articulate the design process and the final solution through effective documentation of work 3.7 Present maquettes and models that meet project requirements to key people

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to complete design documentation
- initiative and problem-solving skills to:
 - generate a range of ideas and options for visually representing a concept, idea or brief
 - construct models that best respond to specifications
 - develop creative solutions to a brief or project
- learning skills to:
 - research new model making techniques, materials and equipment
 - improve own skills in constructing scale models through ongoing practice
 - respond to feedback from others on own work
- literacy skills to interpret specifications and briefs for models
- numeracy skills to interpret and correctly apply calculations and measurements required for the production of scale models
- planning and organising skills to:
 - plan work tasks in a logical sequence
 - organise resources
- self-management skills to:
 - manage own work and priorities
 - adopt a professional work ethic
- technical skills to apply a range of techniques to construct scale models using a range of materials and equipment appropriate to the model being constructed.

Required knowledge

- ways in which model making is used in specific industry contexts
- principles of model making
- physical properties and capabilities of the range of materials, tools and equipment used for model making
- ways in which to present finished models
- work space requirements for the production of models, including set-up of work space for particular types of model making work
- issues and challenges that arise in the context of making scale models
- design registration, intellectual property issues and legislation associated with making models
- sustainability issues associated with materials, tools and equipment used in model making
- organisational and legislative OHS procedures in relation to model making.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Evidence of the ability to: • create models that meet professional specifications • integrate new techniques, resources and materials into model making • apply professional practice to model making work.
Context of and specific resources for assessment	Assessment must ensure access to: • projects that require the construction of models • tools, equipment and other resources required for constructing models.
Method of assessment	A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit: • direct observation of the construction of models by the candidate • evaluation of models made by the candidate • oral or written questioning to assess knowledge of model making techniques • review of portfolios of evidence • review of third-party reports from experienced practitioners. Assessment methods should closely reflect workplace demands and the needs of particular groups (e.g. people with disabilities, and people who may have literacy or numeracy difficulties, such as speakers of languages other than English, remote communities and those with interrupted schooling).
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

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, if used in the performance criteria, is detailed below. 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) may also be included.

Professional work ethic may include:	• attentive behaviour in creative practice • following organisational and legislative OHS procedures • following organisational storage and inventory procedures • punctuality and reliability • recognition of intellectual property issues • responding appropriately to feedback • working creatively with individual differences.
Techniques may relate to:	• carpentry • ceramics • fabricating metal and wood • glasswork • jewellery • lighting: • laser • spot • ambient • carving • casting • folding, twisting, hinging and bending • modelling • sculpture • shaping • working with fibres and textiles • mould making and casting • painting and other surface treatments • projection • sketching • wood design • cabinet making • treen • working with flexible materials.
Materials may include:	• clays • drawing and illustration materials, such as pencils, crayons, pastels, inks, charcoal and paints

	• fasteners, such as nails, screws, hooks and bolts • found objects and materials • glass • laminates • latex • metals, such as: • metal wire • sheet metal • materials for cleaning, priming and finishing: • extenders and binders • lacquers • specialised primers • turps • manufactured plastics • polyurethane and polyester resins • sheet plastics • silicones • thermoset and thermoplastic elastomers • natural and synthetic fibres • paper pulp • plaster products, such as: • dental plaster • gypsum cement • pottery plaster • recycled materials • sheet materials, such as: • cardboard • foamcore • paper perspex and other plastic sheet materials • polystyrene • sheet metal • string • tape waxes, such as: • jewellery wax • microcrystalline wax • water and oil-based paints • materials to represent particular surfaces, such as rock, earth and water • wood and timber products:
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	• balsa wood • MDF board • wooden skewers.
Equipment may include:	• buckets • clamps and pliers • containers • digital cameras • digital technology, such as design software and photo imaging software • hand and power tools: • compressors • drills • sanders • saws • lighting, such as spot lights • measuring tools and equipment for volume, mass and length • painting tools and equipment, such as brushes • personal protective equipment (PPE) • rapid prototyping equipment • scrapers • shaping tools • carving tools • modelling tools, such as planers • spatulas • specialised equipment for ceramic work • specialised equipment for sculpture work • spray gun.
Industries may include:	• architecture • automotive • construction • fashion design • food industry, including confectionary and baking • furniture design • interior design and decorating • landscape design • live entertainment • manufacturing • metals and engineering • screen and media • ship building • visual arts.

Scale models may be required for a wide range of work situations, such as:	• event design • foyer design • lighting plots • object or product design • open space environment • room, site and stage layouts • set design for: • theatre • screen and media productions • visual artworks and projects, such as: • community installations • public art • performance art • sculpture • architectural elements, such as windows • one-off public and private commissions • domestic ware • corporate awards • architectural fittings.
Design language refers to:	• overarching scheme or style that guides the design of a complement of products or settings.
Specifications may include:	• background information about clients • budget • clients' needs • considerations, such as: • contractual • copyright • design registration • ethical • legal • creative objectives • drawings and maquettes indicating, for example: • colours • measurements • scale • style • materials • personnel involved in the project • purpose • relevant statutory requirements, e.g. health and safety

	considerations • requirements for development or building consent • scope for making adjustments • sponsorship • technical objectives • technology • timeframe • visual representation of scale model.
Key people may include:	• art department • audience • client • creative director • designer • director • head of department • manager • mentor • other technical and specialist personnel • producer • production manager • project manager • representative of organisation commissioning the work • supervisor • teacher • technical director.

Unit Sector(s)

Visual communication – art, craft and design

Custom Content Section

Not applicable.