



Australian Government

MSL914002 Prepare practical science classes and demonstrations

Release: 1

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Modification History

Release	Comments
Release 1	This version was released in <i>MSL Laboratory Operations Training Package Release 2.0</i>. Supersedes and equivalent to MSL914001 Prepare practical science classes and demonstrations. Range of conditions removed. Assessment requirements amended.

Application

This unit of competency describes the skills and knowledge to manage the day-to-day running of science teaching laboratories and the preparation of practical experiments, demonstrations and field trips.

This unit of competency applies to technical assistants and technical officers working in the secondary and tertiary education sectors. It also applies to zoos, aquariums and museums that run education programs. Personnel are required to assess and treat risks associated with practical activities. Some personnel may have the additional role of fire warden, first aid officer or work health and safety (WHS) representative. They may also have other skills, such as maritime, SCUBA diving or trade qualifications. They may work autonomously but are required to liaise closely with teaching staff about the design and scheduling of practical activities.

No licensing or certification requirements exist at the time of publication. However, regulations and/or external accreditation requirements for laboratory operations exist, so local requirements should be checked. Relevant legislation, industry standards and codes of practice within Australia must also be applied.

Pre-requisite Unit

Nil

Competency Field

Communication/organisation

Elements and Performance Criteria

Elements describe the essential outcomes.

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

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1 Ensure safe work practices	1.1 Organise and perform risk assessments to identify hazards and analyse risks associated with planned practical activities 1.2 Select and implement appropriate controls for identified risks and monitor their effectiveness 1.3 Ensure preparation and conduct of practical activities are performed in accordance with relevant regulations, codes, guidelines and workplace procedures 1.4 Select, fit and use personal protective equipment (PPE) and ensure that it is used by students and teachers 1.5 Ensure materials and equipment are handled, prepared, stored and disposed of safely 1.6 Address incidents and emergencies as they arise
2 Plan work schedule	2.1 Plan schedule of classes and demonstrations in consultation with teaching staff to ensure timely delivery 2.2 Communicate effectively with staff and students using appropriate negotiation and conflict resolution skills 2.3 Prioritise work activities and manage time to meet deadlines 2.4 Modify work plan to deal with contingencies as they arise
3 Organise experiments and demonstrations	3.1 Collect materials and equipment from appropriate sources 3.2 Perform pre-use checks, prepare material and equipment and organise ready for use 3.3 Demonstrate practical skills, techniques and use of materials and equipment 3.4 Organise clean-up operations and recycling or disposal of waste

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3.5 Trial experiments and demonstrations and recommend variations or alternatives

4 **Manage resources**

4.1 Operate practical activities within approved budgets

4.2 Maintain and control stocks of materials and equipment

4.3 Maintain storerooms, preparation areas and laboratories fit for purpose

4.4 Evaluate and select materials and equipment and make recommendations for purchase

4.5 Order, receive and store materials and equipment using workplace procedures

4.6 Organise quotes and bookings for services

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Equivalent to MSL914001 Prepare practical science classes and demonstrations, Release 1.

Links

MSL Laboratory Operations Companion Volume Implementation Guide is available from VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa>

Assessment Requirements for MSL914002 Prepare practical science classes and demonstrations

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Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and:

- effectively planned and prepared 2 different practical science classes including:
 - conducting laboratory experiments and demonstrations with the correct materials and equipment
 - working effectively with students and staff who may have diverse work styles, cultures and perspectives
- managed resources for science classes and demonstrations.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- principles of risk assessment, risk management and hierarchy of control
- typical hazards and risk assessments associated with practical science classes and demonstrations
- risk control methods for typical hazards
- principles of small scale budgeting, operational planning and efficient resource use
- scientific terminology and technical details of sampling, testing, equipment and instrumentation used in the education program's practical activities
- principles of good laboratory practice (GLP)
- awareness of environmental sustainability issues as they relate to the work task
- legal, ethical and work health and safety (WHS) requirements specific to the work task.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - laboratory/field work environment, equipment and materials
 - personal protective equipment (PPE) and safety equipment
 - WHS management system, policies and procedures
- modelling of industry operating conditions, including:
 - access to staff and students.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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