# Knowledge Assessment

**Assessment event 1 of 2**

## Criteria

### Unit code, name and release number

MSL943004 - Participate in laboratory or field workplace safety (1)

### Qualification/Course code, name and release number

MSL30118 - Certificate III in Laboratory Skills (1)

MSS50218 - Diploma of Environmental Monitoring and Technology (1)

\*\*Amend the qualification box before distributing to the student. The information here should only contain the qualification the student is enrolled in\*\*

## Student details

### Student number

### Student name

## Assessment Declaration

* This assessment is my original work and no part of it has been copied from any other source except where due acknowledgement is made.
* No part of this assessment has been written for me by any other person except where such collaboration has been authorised by the assessor concerned.
* I understand that plagiarism is the presentation of the work, idea or creation of another person as though it is my own. Plagiarism occurs when the origin of the material used is not appropriately cited. No part of this assessment is plagiarised.

### Student signature and Date

Version: 1.0

Date created: 15/07/2019

Date modified: 23/01/2020

For queries, please contact:

Innovative Manufacturing, Robotics and Science SkillsPoint

Hamilton Campus

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RTO Provider Number 90003 | CRICOS Provider Code: 00591E

This assessment can be found in the: [Learning Bank](https://share.tafensw.edu.au/share/access/searching.do?doc=%3Cxml%2F%3E&in=P7ac4831b-430a-4b8d-8b56-f7b32ed5b9cf&q=&type=standard&sort=rank&dr=AFTER)

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## Assessment instructions

Table 1 Assessment instructions

| Assessment details | Instructions |
| --- | --- |
| **Assessment overview** | The objective of this assessment is to assess your knowledge as would be required to:   * Follow work health and safety policies and procedures * Deal with the identification and control of hazards * Work safely at all times * Follow emergency response procedures and contribute to the maintenance of workplace safety |
| **Assessment Event number** | 1 of 2 |
| **Instructions for this assessment** | This is a written assessment and it will be assessing you on your knowledge of the unit.  This assessment is in 4 parts:   1. Multiple choice questions (Questions 1-10) 2. True or False questions (Questions 11-20) 3. Short answer questions (Questions 21-30) 4. Assessment feedback   The task should be completed over time as you become more experienced in a laboratory/simulated laboratory/field environment. |
| **Submission instructions** | On completion of this assessment, you are required to upload it or hand it to your trainer for marking. It is important that you keep a copy of all electronic and hardcopy assessments submitted to TAFE and complete the assessment declaration when submitting the assessment. |
| **What do I need to do to achieve a satisfactory result?** | To achieve a satisfactory result for this assessment all questions must be answered correctly. |
| **What do I need to provide?** | Pens |
| **Due date/time allowed** | This is a take-home assessment.  It is to be issued after week 2 of the unit of competence commences.  Completed assessment to be submitted 3 weeks prior to the Skills Assessment. |
| **Assessment feedback, review or appeals** | In accordance with the TAFE NSW policy *Manage Assessment Appeals,* all students have the right to appeal an assessment decision in relation to how the assessment was conducted and the outcome of the assessment. Appeals must be lodged within **14 working days** of the formal notification of the result of the assessment.  If you would like to request a review of your results or if you have any concerns about your results, contact your Teacher or Head Teacher. If they are unavailable, contact the Student Administration Officer.  Contact your Head Teacher for the assessment appeals procedures at your college/campus. |

## Part 1: Multiple choice (Questions 1-10)

1. The safety responsibilities, under the Work Health and Safety Act 2011 (WHS Act 2011), of any employee at work include:

Table 2 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. taking reasonable care of themselves |  |
| 1. not doing anything that would affect the health and safety of others in the workplace |  |
| 1. following any reasonable health and safety instructions from the employer |  |
| 1. all of the above |  |

1. With regard to the WHS Act 2011, the employer must provide which of the following?

Table 3 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. A safe and healthy workplace, including psychological and physical health |  |
| 1. Safe equipment, structures and systems of work |  |
| 1. Induction information, training and supervision and provisions for the employee to discuss WHS |  |
| 1. All of the above |  |

1. In Australia, the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals is supported by:

Table 4 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. the model Code of Practice: Labelling of Workplace Hazardous Chemicals |  |
| 1. the model Code of Practice: Preparation of Safety Data Sheets for Hazardous Chemicals |  |
| 1. various guidance documents on the Classification of Hazardous Chemicals under the Work Health and Safety (WHS) Regulations |  |
| 1. all of the above |  |

1. You discover a large chemical spill in a Laboratory Preparation room. The spill is giving off pungent odours. Which of the following should be your first action?

Table 5 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. Rush in to check there is no one in the room |  |
| 1. Ensure you can remain safe, raise the initial alarm but do not put yourself in danger |  |
| 1. Obtain the spill kit and commence the clean-up |  |
| 1. Close door and go looking for the supervisor |  |

1. If you witness a breach of WHS and/or environmental policy what should you do?

Table 6 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. Complete an incident report (either manually or electronically) as soon as possible |  |
| 1. Notify the supervisor |  |
| 1. Raise the alarm if it appears people, equipment or the environment could be injured/damaged |  |
| 1. All of the above |  |

1. Under the principles of the hierarchy of hazard control, training on hazards and correct procedures falls under which category?

Table 7 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. Engineering |  |
| 1. PPE |  |
| 1. Administrative |  |
| 1. Substitution |  |

1. Which of the following is **not** a way of identifying workplace hazards?

Table 8 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. Examining injury and illness records |  |
| 1. Controlling the risks |  |
| 1. Conducting a safety audit |  |
| 1. Examining complaints or issues raised by workers |  |

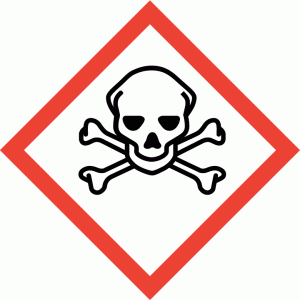
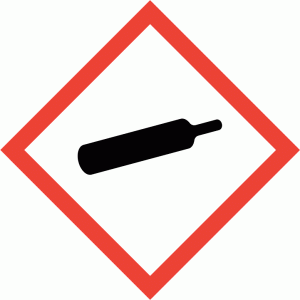
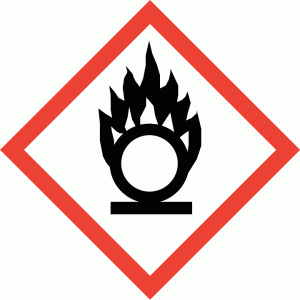
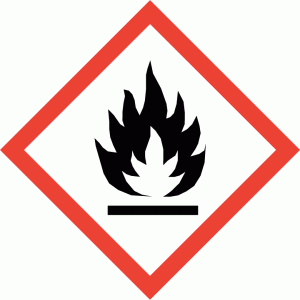
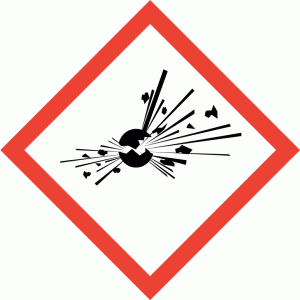
1. Flammable substances in the laboratory should be stored:

Table 9 Multiple choice

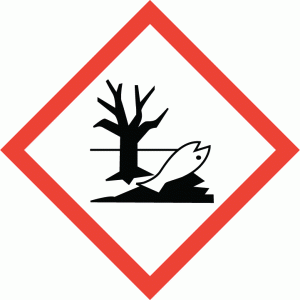
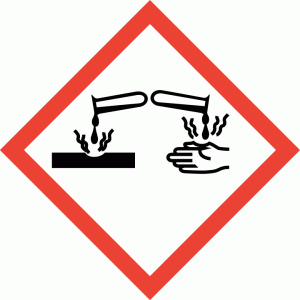
| Answer choices | Put X next to your answer |
| --- | --- |
| 1. in a flameproof cupboard |  |
| 1. on the laboratory bench |  |
| 1. in a laboratory cupboard |  |
| 1. in a fume cupboard |  |

1. There are 9 pictograms in the GHS classification system as shown below.

https://www.safeworkaustralia.gov.au/classifying-chemicals



**A B C D E**



**F G H I**

The four pictograms that represent, in order:

* flammable material
* the environment
* corrosive substances
* health hazard

are:

Table 10 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. H, G, E, D |  |
| 1. B, I, G, H |  |
| 1. B, I, F, A |  |
| 1. C, G, D, H |  |

1. Information on workplace standards of personal hygiene would include:

Table 11 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. illnesses/bandages and risk of infectious disease or condition |  |
| 1. eating/chewing/drinking in the laboratory |  |
| 1. hand washing when leaving the laboratory |  |
| 1. all of the above |  |

## Part 2: True or false (Questions 11-20)

Table 12 True or false

| Question | Write *True* or *False* |
| --- | --- |
| 1. A worker must follow any reasonable health and safety instructions from their employer. |  |
| 1. GHS classification and labelling of hazardous chemicals also applies to non-hazardous chemicals in the workplace. |  |
| 1. An employer does not need to consult with the employee to make changes that may affect worker safety. |  |
| 1. An employee should routinely check the work area for hazards immediately before commencing any task. |  |
| 1. All incidents and accidents in the laboratory/field should be reported at the end of the shift. |  |
| 1. The use of PPE is sufficient to prevent injuries. |  |
| 1. It is necessary to report all incidents and near-misses. |  |
| 1. Good Laboratory Practice is to keep your work area clean and tidy at all times, not just the end of the task. |  |
| 1. You should ask if you are not sure of the particular task you have been directed to complete. |  |
| 1. A Safety Data Sheet (SDS) provides storage, transport and disposal information on chemicals identified as hazardous by Safe Work Australia. |  |

## Part 3: Short answer (Questions 21-30)

Read the question carefully. Your answer should be no longer than 75 words for any individual part to a question. In some cases just a single word would be sufficient.

1. Australian Standard AS1319-1997 (reconfirmed 2018) *Safety signs for the occupational environment* identified safety signs that could be applicable for laboratory situations. Complete the table below indicating:

* What the sign/symbol is indicating.
* The sign category as:
* Mandatory instructions
* Hazard Warning
* Emergency information
* Fire red
* Where you would typically find the sign or a similar sign (label)?

Table Short answer

| Sign | Indicating | Category | Location |
| --- | --- | --- | --- |
|  |  |  |  |
|  |  |  |  |
| T:\ADMINISTRATION OH&S UNIT\Safety Symbols\%OH&S Safety Symbols Australian\Mandatory symbols\Eye.jpg |  |  |  |
| FIRE EXTINGUISHER |  |  |  |
|  |  |  |  |
|  |  |  |  |
| T:\ADMINISTRATION OH&S UNIT\Safety Symbols\%OH&S Safety Symbols Australian\Mandatory symbols\Foot.jpg |  |  |  |

1. The hierarchy of control for managing hazards, is often drawn as a triangle standing on its point as below.
2. ELIMINATION

2. SUBSTITUTION

3. ENGINEERING CONTROLS

4. ADMINISTRATION

5. PPE

Complete the table below by providing:

* an explanation of each step in the triangle
* an example of a hazard and its impact that could be addressed by the step ie how the risk is reduced.

The first one has been done as an example of what is required.

Table Short answer

| Step | Step explanation | Example |
| --- | --- | --- |
| 1 | *Elimination is to totally remove the hazard. It is the ideal method to reduce a hazard.* | *Historically Bunsen burner mats contained asbestos.*  *Asbestos is a known carcinogen.*  *These have now been removed and replaced with burner mats that are asbestos free.* |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |
| 5 |  |  |

1. There are many different types of fire extinguishers available for use on small fires that could occur in the laboratory. Below are a selection of fire extinguishers and some fire types. Complete the table by:

* identifying the type of extinguisher
* providing the distinguishing features of the extinguisher
* identifying the class(es) of fire it is suitable for
* providing an example of the type of fire that the extinguisher could be used for.

Table Short answer

|  | Extinguisher name | Distinguishing features | Class | Example |
| --- | --- | --- | --- | --- |
| Carbon dioxide fire extinguisher | Carbon dioxide |  |  |  |
| Foam fire extinguishers | Foam |  |  |  |
| Wet chemical fire extinguisher | Wet chemical |  |  |  |
| Water fire extinguisher | Water |  |  |  |
| https://www.firesys.com.au/rs/7/sites/846/cart_product_images/cpi_39115_large.jpg | Dry powder |  |  |  |
| 4.5kg ABE Dry Chemical Powder Extinguisher | Dry chemical |  |  |  |

1. A laboratory may have many different hazards. These may be classified by category. Complete the table below by placing each of the hazards listed below, against the appropriate Hazard classification and indicating a hierarchy of control measure (**Note:** some may overlap between categories, choose the most applicable). For one of the examples indicate the impact of the hazard if no control is put in place.

*Stress, radiation, chemical spills, bacteria, power tools, noise, violence, corrosive material, flammable substance, insects, magnetic fields, fatigue, animals, X-ray exposure, snakes, poisons, waste from medical facilities involving radioactive, broken glass.*

Table Short answer

| Hazard classification | Example | Impact (if no control) | Hierarchy of Control measure |
| --- | --- | --- | --- |
| Biological |  |  |  |
| Chemical |  |  |  |
| Environmental |  |  |  |
| Physical |  |  |  |
| Psychosocial |  |  |  |
| Mechanical and electrical |  |  |  |
| Nuclear |  |  |  |
| Radiological |  |  |  |

1. Draw a schematic map of your laboratory area and show where the items identified below are located.
2. 1. Emergency exits 2. Safety alarms 3. Emergency response system 3. Emergency/hazard control equipment 4. Storage areas for PPE 5. Specialised storage areas 6. Waste disposal systems 7. Services shut-down controls 8. WHS Personnel
3. Draw a generalised site map for your laboratory/simulated laboratory (or provide a copy of the worksite map) and show:

* Designated evacuation route
* Location of meeting point

(If your work is in the field, provide a schematic for one site).

1. Using a laboratory/field site you are familiar with, answer each of the following:
2. How are emergency alarms raised?
3. How is safety information conveyed?
4. Who are the designated WHS personnel for the area?
5. Provide examples of two possible emergencies that could arise and how you would respond to these.
6. What is the signal for an incident requiring evacuation of the laboratory?
7. How is the emergency/hazard control equipment maintained in the laboratory?
8. Explain the laboratory procedures for reporting and recording incident and emergency procedures in your laboratory.
9. The following question relates to the information sources that are available in a laboratory in relation to WHS. You should use specific examples that relate to laboratory tasks.
10. A SDS is an important source of information in any work area, particularly a laboratory. Provide responses to each of the following:

What information does a SDS provide?

Where can the SDS’s be found in a laboratory?

Why is it important to consult an SDS before using any new chemical?

From your experience, who is responsible, for maintaining the currency of the SDS register?

List five (5) SDS’s that relate to tasks you complete in the laboratory/field and indicate when the SDS expires.

1. Standard Operating Procedures (SOPs) provide information to the worker regarding how a particular task should be undertaken. For two (2) SOPs you are familiar with complete the table below by providing the information requested.

Table Short answer

|  |  |  |
| --- | --- | --- |
| **Information requested** | **SOP 1** | **SOP 2** |
| SOP Name and number |  |  |
| Where the SOP is located |  |  |
| PPE required for the task |  |  |
| Identified hazards in the task |  |  |
| How are the identified hazards controlled? |  |  |
| Person responsible for maintaining the SOP. |  |  |
| What equipment/technique is advised to reduce any manual handling issues? |  |  |

## Laboratory information that is important to consider will be available in many formats. Complete the table below indicating the type of information available and where you would expect it to be located for the situations provided.

Table Short answer

| Situation | Information available and location |
| --- | --- |
| WHS personnel with specific laboratory knowledge |  |
| Possible environmental issues related to laboratory tasks |  |
| Disposal of hazardous waste generated by the laboratory/field workplace |  |
| Emergency alarms (fire, bomb threat or lock down) |  |
| Legal issues that relate specifically to the laboratory |  |
| Ethical issues that relate specifically to the laboratory |  |
| Instructions that relate to how an employee is to conduct themselves when in the laboratory/field (including personal hygiene standards) |  |
| Requirements and procedures for reporting:   * Incidents/near misses of any type * Illness |  |

## Hazard identification in any work area is important. The following section relates to hazard identification and control in a laboratory/simulated laboratory/field location familiar to you. Complete the Table below by providing the information requested as it relates to WHS in the laboratory.

Table Short answer

| Information requested | Information responses |
| --- | --- |
| What checks are you required to complete **before** commencing tasks in the laboratory? |  |
| What routine checks are you required to complete **during** tasks? |  |
| If you find a hazard in the laboratory/field what actions are required? |  |
| How are hazards reported? |  |
| Identify equipment that is available to lower the risk of a hazard in the laboratory/field |  |
| Why is it important to monitor for hazards during the entire shift? |  |
| List three (3) examples of hazard warnings or safety signs that may be displayed in the laboratory/field. |  |
| Explain why it is important to leave the laboratory/field clean and tidy when tasks are completed. |  |
| Provide an example of a potential environmental issue that could occur if correct procedures are not followed closely. |  |

1. Personal protective equipment (PPE) is regarded as the last step on the hierarchy of control. It is important that it is correctly fitted and maintained. Complete the table below by providing the information required relating to PPE for tasks you complete routinely.

Table Short answer

| Information required | Responses |
| --- | --- |
| How are you informed of PPE required? |  |
| What PPE is required routinely for general laboratory/field tasks? |  |
| Examples of task specific PPE that may be required. |  |
| Why should PPE be carefully maintained? |  |
| Who is responsible for ensuring the PPE is fit for use? |  |
| What is the laboratory procedure for issuing and storing PPE? |  |
| Provide three (3) examples of safety equipment other than personal protective equipment available. |  |
| List two examples of emergency equipment available in the laboratory and indicate:   * how it is maintained in good order. * how it is used and stored |  |

1. Situations may arise that require immediate action. It is important that possible causes are identified and plans put in place for quick response if there is a problem. Complete the table below with the information required. Where possible indicate what specific training you may have received regarding the identified situation.

Table Short answer

| What if? | Responses |
| --- | --- |
| A fire alarm is activated in your immediate area. |  |
| A gas leak is detected in your work area. |  |
| A large unidentified chemical spill is found. |  |
| An uncontained biohazard is identified in an area adjacent to your location. |  |

## Explain the processes involved, for a laboratory/field area that you are familiar with, for each of the items identified in the table below.

Table Short answer

| Item | Process |
| --- | --- |
| Storage and disposal of hazardous waste. |  |
| Labelling of hazardous materials. |  |
| A small spill of organic solvent in the laboratory. |  |
| You find a work colleague collapsed at their desk. |  |
| You notice a pungent electrical smell. |  |

## Part 4: Assessment Feedback

*NOTE: This section* ***must*** *have the assessor signature and student signature to complete the feedback.*

### Assessment outcome

Satisfactory

Unsatisfactory

### Assessor Feedback

Was the assessment event successfully completed?

If no, was the resubmission/re-assessment successfully completed?

Was reasonable adjustment in place for this assessment event?  
*If yes, ensure it is detailed on the assessment document.*

Comments:

### Assessor name, signature and date:

### Student acknowledgement of assessment outcome

Would you like to make any comments about this assessment?

### Student name, signature and date

***NOTE: Make sure you have written your name at the bottom of each page of your submission before attaching the cover sheet and submitting to your assessor for marking.***