# Assessment Mapping (for streamlined units from new Training Packages)

*This document is used to demonstrate content validity of the assessment tool*

Table 1 Main details

| Details | Unique description |
| --- | --- |
| **Unit Code, name and release number** | MSL974021 - Perform biological procedures (1) |
| **Skills Team** |  |
| **Region/Campus** |  |
| **SkillsPoint (owned by)** | Innovative Manufacturing Robotics and Science |

*NOTES:*

* *Event columns can be added or deleted as required*
* *Rows for elements and performance criteria, etc. can be added or deleted as required*
* *Each component of the unit must be mapped to at least* ***one assessment criteria*** *or* ***question*** *in one or more assessment events*
* *Do NOT delete the section labelled Foundation Skills. If the Foundation skills ARE EXPLICIT in the performance criteria, they do not need to be listed. However, if the Foundation skills ARE NOT incorporated in the performance criteria they must be listed and mapped.*
* *Dimensions of Competency must be considered when selecting assessment types to ensure that the range of tasks you have chosen cover the following:*
  + *Task Skills*
  + *Task Management Skills*
  + *Contingency Planning Skills*
  + *Job Role Environment Skills*

## Unit component mapping to assessment event/s

Table 2 Unit component mapping to assessment event/s

| Element number | Element name | Performance criteria number | Performance criteria description | Learning resources | Knowledge assessment 1  1 of 6 | Knowledge assessment 2  2 of 6 | Knowledge assessment 3  3 of 6 | Skills assessment 1  4 of 6 | Skills assessment 2  5 of 6 | Skills assessment 3  6 of 6 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | Interpret and schedule work requirements | 1.1 | Review work request to identify samples, required procedures and materials / equipment / instruments involved |  |  |  | P1: Table 1, Q2, Q3a, Q3b |  |  |  |
|  |  | 1.2 | Identify hazards and workplace control measures associated with the sample, preparation methods, reagents and/or equipment |  |  |  | P2: Table |  |  |  |
|  |  | 1.3 | Plan parallel work sequences to optimise throughput of multiple sets of samples |  |  |  | P1: Q1a, Q1b |  |  |  |
| 2 | Receive and prepare biological samples | 2.1 | Log samples using standard operating procedures (SOPs) |  |  |  | Appendix sheet 1 |  |  |  |
|  |  | 2.2 | Record sample description, compare with specification and note and report discrepancies |  |  |  | P1: Table 1  Appendix sheet 1 |  |  |  |
|  |  | 2.3 | Prepare samples in accordance with testing requirements |  |  |  |  | P2: a-e | Item 2: a-e | P2: a-c |
| 3 | Perform techniques that assist in the classification of organisms | 3.1 | Identify characteristics used to classify organisms |  |  |  |  | P2: a-e  P4: a-b |  |  |
|  |  | 3.2 | Use dichotomous keys to identify organisms |  | P3: Q12, Q13 |  |  |  |  |  |
| 4 | Perform biological procedures | 4.1 | Set up and use equipment and reagents in accordance with the method |  |  |  |  | P2: a-e | Item 2: a-e | P2: a-c |
|  |  | 4.2 | Perform techniques in accordance with the standard operating procedures |  |  |  |  | P2: a-e | Item 2: a-e | P2: a-d |
| 5 | Maintain a safe work environment | 5.1 | Use established safe work practices and personal protective equipment (PPE) to ensure personal safety and that of other laboratory personnel |  |  |  |  | P1: a | Item 1: a | P1: a |
|  |  | 5.2 | Minimise the generation of waste |  |  |  | P1: Q4 |  |  |  |
|  |  | 5.3 | Safely dispose of biohazardous wastes |  |  |  |  | P3: a | Item 3: a | P3: a |
|  |  | 5.4 | Clean, care for and store equipment and reagents as required |  |  |  |  | P3: b | Item 3: b-c | P3: b |
| 6 | Maintain laboratory records | 6.1 | Record entries on report forms or into a laboratory information management system, accurately calculating, recording or transcribing data as required |  |  |  | P1: Table 1, Q1a, Q1b  Form F400 |  |  |  |
|  |  | 6.2 | Ensure traceability of sample from receipt to reporting of results |  |  |  | Form F400 |  |  |  |

## Foundation skills NOT explicit in the performance criteria

Table 3 Foundation skills NOT explicit in the performance criteria

| Foundation skills | Description | Learning resources | Knowledge assessment 1  1 of 6 | Knowledge assessment 2  2 of 6 | Knowledge assessment 3  3 of 6 | Skills assessment 1  4 of 6 | Skills assessment 2  5 of 6 | Skills assessment 3  6 of 6 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| All foundation skills are explicit in the performance criteria | | | | | | | | |

## Performance evidence

Table 4 Performance evidence

| Performance evidence | Description | Learning resources | Knowledge assessment 1  1 of 6 | Knowledge assessment 2  2 of 6 | Knowledge assessment 3  3 of 6 | Skills assessment 1  4 of 6 | Skills assessment 2  5 of 6 | Skills assessment 3  6 of 6 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and: |  |  |  |  |  |  |  |
| PE1 | Classify 2 organisms from 2 different kingdoms to species level using a dichotomous approach |  | P3: Q12, Q13 |  |  |  |  |  |
| PE2 | Safely and accurately performed 3 multistep biological procedures, using a minimum of 2 different techniques from the following list: |  |  |  |  |  |  |  |
| PE2.1 | * multistep staining: |  |  |  |  | P2: a-f |  |  |
|  | haematological |  |  |  |  |  |  |  |
|  | histological |  |  |  |  |  |  |  |
|  | microbiological |  |  |  |  | P2: b |  |  |
| PE2.2 | * preparation and examination of samples to demonstrate mitosis microscopically |  |  |  |  |  |  |  |
| PE2.3 | * preparation and enumeration of microscopic samples |  |  |  |  |  |  | P2: a-c |
| PE2.4 | * colorimetry |  |  |  |  |  |  |  |
| PE2.5 | * spectrophotometry |  |  |  |  |  | Item 2: a-e |  |
| PE2.6 | * chromotography |  |  |  |  |  |  |  |
| PE2.7 | * electrophoresis |  |  |  |  |  |  |  |
| PE2.8 | * electrochemistry |  |  |  |  |  |  |  |
| PE2.9 | * multistep molecular technique |  |  |  |  |  |  |  |
| PE2.10 | * multistep immunological technique. |  |  |  |  |  |  |  |

## Knowledge evidence

Table 5 Knowledge evidence

| Knowledge evidence | Description | Learning resources | Knowledge assessment 1  1 of 6 | Knowledge assessment 2  2 of 6 | Knowledge assessment 3  3 of 6 | Skills assessment 1  4 of 6 | Skills assessment 2  5 of 6 | Skills assessment 3  6 of 6 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | There must be evidence the candidate has knowledge of: |  |  |  |  |  |  |  |
| KE1 | Biological principles and concepts underpinning tests and procedures associated with job role: |  |  |  |  |  |  |  |
| KE1.1 | * basic classification and taxonomy of organisms including prokaryotes and eukaryotes, bacteria, viruses, fungi, plants, animals, parasites and prions |  | P1: Q1  P2: Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8  P3: Q4, Q5, Q6, Q12, Q13 |  |  |  |  |  |
| KE1.2 | * interrelationships of biological systems including the carbon cycle and energy cycle |  | P3: Q1, Q2, Q3 |  |  |  |  |  |
| KE1.3 | * basic structure and function of a plant and animal cell and the respective organelles (plant and animal) |  |  | P1: Q3  P2: Q5  P3: Q10, Q11, Q13, Q14 |  |  |  |  |
| KE1.4 | * cell membrane activity, including diffusion (passive, facilitated and active), osmosis, tonicity and plasmolysis |  |  | P2: Q1, Q2  P3: Q1, Q2, Q3 |  |  |  |  |
| KE1.5 | * plant and animal tissue types |  |  | P2: Q3, Q4  P3: Q4, Q5 |  |  |  |  |
| KE1.6 | * phases of the cell cycle including phases of mitosis |  |  | P1: Q1, Q2  P3: Q12 |  |  |  |  |
| KE1.7 | * mendelian genetics including inheritance, meiosis, karyotypes, dominant and recessive traits, genotypes, phenotypes, and pedigrees |  | P1: Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9  P2: Q7, Q8, Q9, Q10  P3: Q11 |  |  |  |  |  |
| KE1.8 | * basic structure and function of chromosomes, nucleic acids and proteins |  |  | P1: Q12, Q13, Q14  P2: Q11  P3: Q6, Q7, Q8, Q16 |  |  |  |  |
| KE1.9 | * chemical and physical characteristics of organic molecules |  |  | P1: Q6, Q7  P2: Q7, Q12, Q13, Q14, Q15  P3: Q9 |  |  |  |  |
| KE1.10 | * basic structure and function of including carbohydrates, fats and amino acids |  |  | P1: Q8, Q9, Q10, Q11  P2: Q8, Q9, Q10  P3: Q9, Q15 |  |  |  |  |
| KE1.11 | * basic role of biologically significance of ions, including calcium, iron, magnesium, sodium, potassium, chloride and phosphate |  |  | P3: Q16, 17 |  |  |  |  |
| KE2 | Purpose of procedures implemented (why they are used and what they demonstrate) |  |  | P1: Q4, Q5  P2: Q6 |  |  |  |  |
| KE3 | Calculation steps to give results in appropriate units and precision |  | P3: Q7 |  |  |  |  |  |
| KE4 | Importance and appropriate use of controls and certified reference materials |  | P3: Q8, Q9 |  |  |  |  |  |
| KE5 | Awareness of environmental sustainability issues as they relate to the work task |  | P3: Q10 |  |  |  |  |  |
| KE6 | Legal, ethical and work health and safety (WHS) requirements specific to the work task including traceability, confidentiality and security requirements of all clinical information, and laboratory data and records. |  |  | P1: Q15, Q16, Q17, Q18 |  |  |  |  |

## Assessment conditions

Table 6 Assessment conditions

| Assessment conditions | Description |
| --- | --- |
|  | 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:  a standard laboratory equipped with appropriate test equipment and instruments, safety equipment, reagents and materials  standard operating procedures (SOPs) and testing methods  records, including:  test calibration results  equipment use, maintenance and servicing history  faulty or unsafe equipment  batch number, catalogue number and use-by-date for analytical kits.  Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors. |