

## PERFORM TAXONOMIC STUDIES

**UNIT CODE:** APB/OS/AB/CR/03/6/A

### UNIT DESCRIPTION

This unit specifies the competencies required to perform taxonomic studies. It involves applying principles of classification, carrying out kingdom monera survey, carrying out kingdom protista survey and carrying out kingdom fungi survey. It also involves carrying out kingdom animalia survey, carrying out kingdom plantae survey and carrying out construction of a dichotomous key.

### ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA
<p>These describe the <b>key outcomes</b> which make up workplace function (to be stated in active)</p>	<p>These are <b>assessable statements</b> which specify the required level of performance for each of the elements (to be stated in passive voice)</p> <p><b><i>Bold and italicized terms are elaborated in the Range</i></b></p>
<p>1 Apply principles of classification</p>	<p>1.1 Specimens are collected as per laboratory procedures</p> <p>1.2 Specimens are classified according to binomial nomenclature</p>
<p>2 Carry out kingdom monera survey</p>	<p>2.1 General characteristics of organisms are identified as per taxonomic classification system.</p> <p>2.2 Sub groups of kingdom monera are identified as per taxonomic classification system.</p> <p>2.3 <b><i>Classification of kingdom monera</i></b> is carried out based on taxonomic classification system.</p> <p>2.4 Prepared slides are observed under the microscope as per laboratory procedures</p> <p>2.5 <b><i>Economic importance</i></b> of kingdom monera is determined as per their uses</p>
<p>3 Carry out kingdom protista survey</p>	<p>3.1 General characteristics of organisms are identified as per taxonomic classification system</p> <p>3.2 Sub groups of kingdom protista are identified as per taxonomic classification system</p> <p>3.3 Specimens are collected, classified and identified according to taxonomic classification system.</p> <p>3.4 Prepared slides are observed under the microscope as per taxonomic classification system</p>

	3.5 Economic importance of kingdom protista is determined as per their uses.
4 Carry out kingdom fungi survey	4.1 General characteristics of organisms are identified as per taxonomic classification system 4.2 Sub groups of kingdom fungi are identified as per taxonomic classification system 4.3 Specimens are collected, classified and identified according to taxonomic classification system. 4.4 Economic importance of kingdom fungi is determined as per their uses.
5 Carry out kingdom animalia survey	5.1 General characteristics of organisms are identified as per taxonomic classification system. 5.2 Sub groups of kingdom animalia are identified as per taxonomic classification system. 5.3 Specimens are collected, classified and identified according to taxonomic classification system.
6 Carry out kingdom plantae survey	6.1 General characteristics of organisms are identified as per taxonomic procedures 6.2 Sub groups of kingdom plantae are identified as per taxonomic procedures 6.3 Specimens are collected, classified and identified according to taxonomic classification system.
7 Carry out construction of a dichotomous key	7.1 Dichotomous keys are constructed based on observable characteristics 7.2 Organisms are identified using dichotomous keys

## RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

VARIABLE	RANGE
Classification of kingdom monera includes but not limited to:	Classified according to <ul style="list-style-type: none"> <li>• Morphology</li> <li>• Air requirements</li> <li>• pH requirements</li> <li>• Temperature requirements</li> <li>• Nutrients requirements</li> </ul>

Economic importance includes but not limited to:	<ul style="list-style-type: none"> <li>• Clinical</li> <li>• Industrial</li> <li>• Food</li> <li>• Water</li> </ul>
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## REQUIRED SKILLS AND KNOWLEDGE

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

### Required Skills

The individual needs to demonstrate the following skill

- Maintenance
- Communication
- Interpersonal
- Analytical
- Observation
- Critical thinking
- Problem solving
- First aid
- Innovation
- Creativity

### Required Knowledge

The individual needs to demonstrate knowledge of:

- Microscopy
- Binomial nomenclature
- Classification systems
- Hierarchy of classification

## EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1 Critical Aspects of Competency	Assessment requires evidence that the candidate: <ul style="list-style-type: none"> <li>1.1 Collected and classified specimens</li> <li>1.2 Carried out kingdom monera survey</li> <li>1.3 Carried out kingdom protista survey</li> </ul>
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	<p>1.4 Carried out kingdom fungi survey</p> <p>1.5 Carried out kingdom animalia survey</p> <p>1.6 Carried out kingdom plantae survey</p> <p>1.7 Identified general characteristics of organisms</p> <p>1.8 Determined economic importance of kingdom monera, kingdom Protista and kingdom fungi</p> <p>1.9 Constructed a dichotomous key</p>
2 Resource Implications	<p>The following resources should be provided:</p> <p>2.1 Well-equipped biology laboratory</p> <p>2.2 Biology laboratory procedures manual</p> <p>2.3 Laboratory reagents and chemicals</p> <p>2.4 PPEs</p>
3 Methods of Assessment	<p>Competency in this unit may be assessed through:</p> <p>3.1 Oral</p> <p>3.2 Written</p> <p>3.3 Observation</p> <p>3.4 Third party</p> <p>3.5 Practical test</p>
4 Context of Assessment	<p>Competency may be assessed on the job, off the job or a combination of these. Off the job assessment must be undertaken in a closely simulated workplace environment.</p>
5 Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.</p>