

# COMPETENCY STANDARDS

## ZOO ANIMAL WELFARE LEVEL II



### AGRICULTURE, FORESTRY AND FISHERY SECTOR

**TECHNICAL EDUCATION AND SKILLS DEVELOPMENT AUTHORITY**

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# COMPETENCY STANDARDS FOR ZOO ANIMAL WELFARE LEVEL II

## SECTION 1 DEFINITION OF QUALIFICATION

The **ZOO ANIMAL WELFARE LEVEL II** qualification consists of competencies that a person must achieve to ensure that the animals receive comprehensive practical care and live healthy, enriched lives in the zoo environment.

The units of competency comprising this qualification include the following:

### Unit Code

### BASIC COMPETENCIES

400311210	Participate in workplace communication
400311211	Work in a team environment
400311212	Solve/address general workplace problems
400311213	Develop career and life decisions
400311214	Contribute to workplace innovation
400311215	Present relevant information
400311216	Practice occupational safety and health policies and procedures
400311217	Exercise efficient and effective sustainable practices in the workplace
400311218	Practice entrepreneurial skills in the workplace

### Unit Code

### COMMON COMPETENCIES

AFF314201	Apply safety measures in zoo operations
AFF314202	Use zoo tools and equipment
AFF314203	Process zoo waste
AFF321203	Perform estimation and basic calculation

### Unit Code

### CORE COMPETENCIES

AB-AFF0405808324301	Perform daily zoo animal care
AB-AFF0405808324302	Provide appropriate environment to zoo animal
AB-AFF0405808324303	Handle, restraint, move and transport zoo animal
AB-AFF0405808324304	Assist in zoo animal health monitoring and procedures

**A person who has achieved this Qualification is competent to be:**

- Animal Caretaker
- Animal Handler
- Animal Keeper
- Zookeeper

## SECTION 2 COMPETENCY STANDARDS

This section gives the details of the contents of the units of competency required in ZOO ANIMAL WELFARE LEVEL II.

### BASIC COMPETENCIES

**UNIT OF COMPETENCY :** PARTICIPATE IN WORKPLACE COMMUNICATION

**UNIT CODE :** 400311210

**UNIT DESCRIPTOR :** This unit covers the knowledge, skills and attitudes required to gather, interpret and convey information in response to workplace requirements.

ELEMENT	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Obtain and convey workplace information	<p>1.1 Specific and relevant information is accessed from <b><i>appropriate sources</i></b>.</p> <p>1.2 Effective questioning, active listening and speaking skills are used to gather and convey information.</p> <p>1.3 Appropriate <b><i>medium</i></b> is used to transfer information and ideas.</p> <p>1.4 Appropriate non-verbal communication is used.</p> <p>1.5 Appropriate lines of communication with supervisors and colleagues are identified and followed.</p> <p>1.6 Defined workplace procedures for the location and <b><i>storage</i></b> of information are used.</p>	<p>1.1 Effective verbal and nonverbal communication</p> <p>1.2 Different modes of communication</p> <p>1.3 Medium of communication in the workplace</p> <p>1.4 Organizational policies</p> <p>1.5 Communication procedures and systems</p> <p>1.6 Lines of Communication</p> <p>1.7 Technology relevant to the enterprise and the individual's work responsibilities</p> <p>1.8 Workplace etiquette</p>	<p>1.1 Following simple spoken language</p> <p>1.2 Performing routine workplace duties following simple written notices</p> <p>1.3 Participating in workplace meetings and discussions</p> <p>1.4 Preparing work-related documents</p> <p>1.5 Estimating, calculating and recording routine workplace measures</p> <p>1.6 Relating/ Interacting with people of various levels in the workplace</p> <p>1.7 Gathering and providing basic information in response to</p>

	1.7 Personal interaction is carried out clearly and concisely.		workplace requirements 1.8 Basic business writing skills 1.9 Interpersonal skills in the workplace 1.10 Active listening skills
2. Perform duties following workplace instructions	<p>2.1 Written notices and instructions are read and interpreted in accordance with organizational guidelines.</p> <p>2.2 Routine written instruction is followed based on established procedures.</p> <p>2.3 Feedback is given to workplace supervisor-based instructions/ information received.</p> <p>2.4 <b>Workplace interactions</b> are conducted in a courteous manner.</p> <p>2.5 Where necessary, clarifications about routine workplace procedures and matters concerning conditions of employment are sought and asked from <b>appropriate sources</b>.</p> <p>2.6 Meetings outcomes are interpreted and implemented.</p>	<p>2.1 Effective verbal and non-verbal communication</p> <p>2.2 Different modes of communication</p> <p>2.3 Medium of communication in the workplace</p> <p>2.4 Organizational/ Workplace policies</p> <p>2.5 Communication procedures and systems</p> <p>2.6 Lines of communication</p> <p>2.7 Technology relevant to the enterprise and the individual's work responsibilities</p> <p>2.8 Effective questioning techniques (clarifying and probing)</p> <p>2.9 Workplace etiquette</p>	<p>2.1 Following simple spoken instructions</p> <p>2.2 Performing routine workplace duties following simple written notices</p> <p>2.3 Participating in workplace meetings and discussions</p> <p>2.4 Completing work-related documents</p> <p>2.5 Estimating, calculating and recording routine workplace measures</p> <p>2.6 Relating/ Responding to people of various levels in the workplace</p> <p>2.7 Gathering and providing information in response to workplace requirements</p> <p>2.8 Basic questioning/ querying</p> <p>2.9 Skills in reading for information</p> <p>2.10 Skills in locating</p>

<p>3. Complete relevant work-related documents</p>	<p>3.1 Range of forms relating to conditions of employment are completed accurately and legibly.</p> <p>3.2 Workplace data is recorded on standard workplace forms and documents.</p> <p>3.3 Errors in recording information on forms/ documents are identified and acted upon.</p> <p>3.4 Reporting requirements to supervisor are completed according to organizational guidelines.</p>	<p>3.1 Effective verbal and non-verbal communication</p> <p>3.2 Different modes of communication</p> <p>3.3 Workplace forms and documents</p> <p>3.4 Organizational/ Workplace policies</p> <p>3.5 Communication procedures and systems</p> <p>3.6 Technology relevant to the enterprise and the individual's work responsibilities</p>	<p>3.1 Completing work-related documents</p> <p>3.2 Applying operations of addition, subtraction, division and multiplication</p> <p>3.3 Gathering and providing information in response to workplace requirements</p> <p>3.4 Effective record keeping skills</p>
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## RANGE OF VARIABLES

VARIABLE	RANGE
1. Appropriate sources	May include: 1.1 Team members 1.2 Supervisor/Department Head 1.3 Suppliers 1.4 Trade personnel 1.5 Local government 1.6 Industry bodies
2. Medium	May include: 2.1 Memorandum 2.2 Circular 2.3 Notice 2.4 Information dissemination 2.5 Follow-up or verbal instructions 2.6 Face-to-face communication 2.7 Electronic media (disk files, cyberspace)
3. Storage	May include: 3.1 Manual filing system 3.2 Computer-based filing system
4. Workplace interactions	May include: 4.1 Face-to-face 4.2 Telephone 4.3 Electronic and two-way radio 4.4 Written including electronic means, memos, instruction and forms 4.5 Non-verbal including gestures, signals, signs and diagrams
5. Forms	May include: 5.1. HR/Personnel forms, telephone message forms, safety reports

## EVIDENCE GUIDE

1. Critical aspects of Competency	Assessment requires evidence that the candidate: 1.1 Prepared written communication following standard format of the organization 1.2 Accessed information using workplace communication equipment/systems 1.3 Made use of relevant terms as an aid to transfer information effectively 1.4 Conveyed information effectively adopting formal or informal communication
2. Resource Implications	The following resources should be provided: 2.1 Fax machine 2.2 Telephone 2.3 Notebook 2.4 Writing materials 2.5 Computer with Internet connection
3. Methods of Assessment	Competency in this unit may be assessed through: 3.1 Demonstration with oral questioning 3.2 Interview 3.3 Written test 3.4 Third-party report
4. Context for Assessment	4.1 Competency may be assessed individually in the actual workplace or through an accredited institution

**UNIT OF COMPETENCY : WORK IN A TEAM ENVIRONMENT**

**UNIT CODE : 400311211**

**UNIT DESCRIPTOR :** This unit covers the skills, knowledge and attitudes to identify one's roles and responsibilities as a member of a team.

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Describe team role and scope	1.1 The <b>role and objective of the team</b> is identified from available <b>sources of information</b> .  1.2 Team parameters, reporting relationships and responsibilities are identified from team discussions and appropriate external sources.	1.1 Group structure 1.2 Group development 1.3 Sources of information	1.1 Communicating with others, appropriately consistent with the culture of the workplace  1.2 Developing ways in improving work structure and performing respective roles in the group or organization
2. Identify one's role and responsibility within a team	2.1 Individual roles and responsibilities within the team environment is identified.  2.2 Roles and objectives of the team is identified from available <b>sources of information</b> .  2.3 Team parameters, reporting relationships and responsibilities are identified based on team discussions and appropriate external sources.	2.1 Team roles and objectives 2.2 Team structure and parameters 2.3 Team development 2.4 Sources of information	2.1 Team roles and objectives 2.2 Team structure and parameters 2.3 Team development 2.4 Sources of information Instructional planning and delivery skills 2.5 Monitoring and evaluation skills 2.6 Mentoring and coaching skills

<p>3. Work as a team member</p>	<p>3.1 Effective and appropriate forms of communications are used and interactions undertaken with team members based on company practices.</p> <p>3.2 Effective and appropriate contributions made to complement team activities and objectives, based on <b>workplace context</b>.</p> <p>3.3 Protocols in reporting are observed based on standard company practices.</p> <p>3.4 Contribute to the development of team work plans based on an understanding of team's role and objectives.</p>	<p>3.1 Communication Process</p> <p>3.2 Workplace communication protocol</p> <p>3.3 Team planning and decision making</p> <p>3.4 Team thinking</p> <p>3.5 Team roles</p> <p>3.6 Process of team development</p> <p>3.7 Workplace context</p>	<p>3.1 Communicating appropriately, consistent with the culture of the workplace</p> <p>3.2 Interacting effectively with others</p> <p>3.3 Deciding as an individual and as a group using group think strategies and techniques</p> <p>3.4 Contributing to Resolution of issues and concerns</p>
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## RANGE OF VARIABLES

VARIABLE	RANGE
1. Role and objective of team	<p>May include:</p> <ul style="list-style-type: none"> <li>1.1 Work activities in a team environment with enterprise or specific sector</li> <li>1.2 Limited discretion, initiative and judgment maybe demonstrated on the job, either individually or in a team environment</li> </ul>
2. Sources of information	<p>May include:</p> <ul style="list-style-type: none"> <li>2.1 Standard operating and/or other workplace procedures</li> <li>2.2 Job procedures</li> <li>2.3 Machine/equipment manufacturer's specifications and instructions</li> <li>2.4 Organizational or external personnel</li> <li>2.5 Client/supplier instructions</li> <li>2.6 Quality standards</li> <li>2.7 OHS and environmental standards</li> </ul>
3. Workplace context	<p>May include:</p> <ul style="list-style-type: none"> <li>3.1 Work procedures and practices</li> <li>3.2 Conditions of work environments</li> <li>3.3 Legislation and industrial agreements</li> <li>3.4 Standard work practice including the storage, safe handling and disposal of chemicals</li> <li>3.5 Safety, environmental, housekeeping and quality guidelines</li> </ul>

## EVIDENCE GUIDE

1. Critical aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1. Worked in a team to complete workplace activity</li> <li>1.2. Worked effectively with others</li> <li>1.3. Conveyed information in written or oral form</li> <li>1.4. Selected and used appropriate workplace language</li> <li>1.5. Followed designated work plan for the job</li> </ul>
2. Resource Implications	<p>The following resources should be provided:</p> <ul style="list-style-type: none"> <li>2.1. Access to relevant workplace or appropriately simulated environment where assessment can take place</li> <li>2.2. Materials relevant to the proposed activity or tasks</li> </ul>
3. Methods of Assessment	<p>Competency in this unit may be assessed through:</p> <ul style="list-style-type: none"> <li>3.1. Role play involving the participation of individual member to the attainment of organizational goal</li> <li>3.2. Case studies and scenarios as a basis for discussion of issues and strategies in teamwork</li> <li>3.3. Socio-drama and socio-metric methods</li> <li>3.4. Sensitivity techniques</li> <li>3.5. Written Test</li> </ul>
4. Context for Assessment	<ul style="list-style-type: none"> <li>4.1. Competency may be assessed in workplace or in a simulated workplace setting</li> <li>4.2. Assessment shall be observed while task are being undertaken whether individually or in group</li> </ul>

**UNIT OF COMPETENCY : SOLVE/ADDRESS GENERAL WORKPLACE PROBLEMS**

**UNIT CODE : 400311212**

**UNIT DESCRIPTOR :** This unit covers the knowledge, skills and attitudes required to apply problem-solving techniques to determine the origin of problems and plan for their resolution. It also includes addressing procedural problems through documentation, and referral.

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Identify routine problems	1.1 Routine <b><i>problems or procedural problem</i></b> areas are identified. 1.2 Problems to be investigated are defined and determined. 1.3 Current conditions of the problem are identified and documented.	1.1 Current industry hardware and software products and services 1.2 Industry maintenance, service and helpdesk practices, processes and procedures 1.3 Industry standard diagnostic tools 1.4 Malfunctions and resolutions	1.1 Identifying current industry hardware and software products and services 1.2 Identifying current industry maintenance, services and help desk practices, processes and procedures. 1.3 Identifying current industry standard diagnostic tools 1.4 Describing common malfunctions and resolutions. 1.5 Determining the root cause of a routine malfunction

<p>2. Look for solutions to routine problems</p>	<p>2.1 Potential solutions to problem are identified.</p> <p>2.2 Recommendations about possible solutions are developed, <b>documented</b>, ranked and presented to <b>appropriate person</b> for decision.</p>	<p>2.1 Current industry hardware and software products and services</p> <p>2.2 Industry service and helpdesk practices, processes and procedures</p> <p>2.3 Operating systems</p> <p>2.4 Industry standard diagnostic tools</p> <p>2.5 Malfunctions and resolutions.</p> <p>2.6 Root cause analysis</p>	<p>2.1 Identifying current industry hardware and software products and services</p> <p>2.2 Identifying services and helpdesk practices, processes and procedures.</p> <p>2.3 Identifying operating system</p> <p>2.4 Identifying current industry standard diagnostic tools</p> <p>2.5 Describing common malfunctions and resolutions</p> <p>2.6 Determining the root cause of a routine malfunction</p>
<p>3. Recommend solutions to problems</p>	<p>3.1 Implementation of solutions are <b>planned</b>.</p> <p>3.2 Evaluation of implemented solutions are planned.</p> <p>3.3 Recommended solutions are documented and submit to appropriate person for confirmation.</p>	<p>3.1 Standard procedures</p> <p>3.2 Documentation produce</p>	<p>3.1 Producing documentation that recommends solutions to problems</p> <p>3.2 Following established procedures</p>

## RANGE OF VARIABLES

VARIABLE	RANGE
1. Problems/Procedural Problem	May include but not limited to: 1.1 Routine/non – routine processes and quality problems 1.2 Equipment selection, availability and failure 1.3 Teamwork and work allocation problem 1.4 Safety and emergency situations and incidents 1.5 Work-related problems outside of own work area
2. Appropriate person	May include but not limited to: 2.1 Supervisor or manager 2.2 Peers/work colleagues 2.3 Other members of the organization
3. Document	May include but not limited to: 3.1 Electronic mail 3.2 Briefing notes 3.3 Written report 3.4 Evaluation report
4. Plan	May include but not limited to: 4.1 Priority requirements 4.2 Co-ordination and feedback requirements 4.3 Safety requirements 4.4 Risk assessment 4.5 Environmental requirements

## EVIDENCE GUIDE

1. Critical Aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1 Determined the root cause of a routine problem</li> <li>1.2 Identified solutions to procedural problems.</li> <li>1.3 Produced documentation that recommends solutions to problems.</li> <li>1.4 Followed established procedures.</li> <li>1.5 Referred unresolved problems to support persons.</li> </ul>
2. Resource Implications	<ul style="list-style-type: none"> <li>2.1. Assessment will require access to a workplace over an extended period, or a suitable method of gathering evidence of operating ability over a range of situations.</li> </ul>
3. Methods of Assessment	<p>Competency in this unit may be assessed through:</p> <ul style="list-style-type: none"> <li>3.1 Case Formulation</li> <li>3.2 Life Narrative Inquiry</li> <li>3.3 Standardized test</li> </ul> <p>The unit will be assessed in a holistic manner as is practical and may be integrated with the assessment of other relevant units of competency. Assessment will occur over a range of situations, which will include disruptions to normal, smooth operation. Simulation may be required to allow for timely assessment of parts of this unit of competency. Simulation should be based on the actual workplace and will include walk through of the relevant competency components.</p>
4. Context for Assessment	<ul style="list-style-type: none"> <li>4.1 Competency may be assessed individually in the actual workplace or simulation environment in TESDA accredited institutions.</li> </ul>

**UNIT OF COMPETENCY : DEVELOP CAREER AND LIFE DECISIONS**

**UNIT CODE : 400311213**

**UNIT DESCRIPTOR :** This unit covers the knowledge, skills, and attitudes in managing one's emotions, developing reflective practice, and boosting self-confidence and developing self-regulation.

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Manage one's emotion	1.1 <b>Self-management strategies</b> are identified. 1.2 Skills to work independently and to show initiative, to be conscientious, and persevering in the face of setbacks and frustrations are developed. 1.3 Techniques for effectively handling negative emotions and <b>unpleasant situation</b> in the workplace are examined.	1.1 Self-management strategies that assist in regulating behavior and achieving personal and learning goals (e.g. Nine self-management strategies according to Robert Kelley) 1.2 Enablers and barriers in achieving personal and career goals 1.3 Techniques in handling negative emotions and unpleasant situation in the workplace such as frustration, anger, worry, anxiety, etc.	1.1 Managing properly, one's emotions and recognizing situations that cannot be changed and accept them and remain professional 1.2 Developing self-discipline, working independently and showing initiative to achieve personal and career goals 1.3 Showing confidence, and resilience in the face of setback and frustrations and other negative emotions and unpleasant situations in the workplace
2. Develop reflective practice	2.1 Personal strengths and achievements, based on self-assessment strategies and teacher feedback are contemplated. 2.2 Progress when seeking and responding to	2.1 Basic SWOT analysis 2.2 Strategies to improve one's attitude in the workplace 2.3 Gibbs' Reflective Cycle/Model (Description, Feelings,	2.1 Using the basic SWOT analysis as self-assessment strategy 2.2 Developing reflective practice through realization of limitations, likes/

ELEMENT	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	<p>feedback from teachers to assist them in consolidating strengths, addressing weaknesses and fulfilling their potential are monitored.</p> <p>2.3 Outcomes of personal and academic challenges by reflecting on previous problem solving and decision-making strategies and feedback from peers and teachers are predicted.</p>	Evaluation, Analysis, Conclusion, and Action plan)	<p>dislikes; through showing of self-confidence</p> <p>2.3 Demonstrating self-acceptance and being able to accept challenges</p>
3. Boost self-confidence and develop self-regulation	<p>3.1 Efforts for continuous self-improvement are demonstrated.</p> <p>3.2 Counter-productive tendencies at work are eliminated.</p> <p>3.3 Positive outlook in life are maintained.</p>	<p>3.1 Four components of self-regulation based on Self-Regulation Theory (SRT)</p> <p>3.2 Personality development concepts</p> <p>3.3 Self-help concepts (e. g., 7 Habits by Stephen Covey, transactional analysis, psycho-spiritual concepts)</p>	<p>3.1 Performing effective communication skills – reading, writing, conversing skills</p> <p>3.2 Showing affective skills – flexibility, adaptability, etc.</p> <p>3.3 Self-assessment for determining one's strengths and weaknesses</p>

## RANGE OF VARIABLES

VARIABLE	RANGE
1. Self-management strategies	<p>May include but not limited to:</p> <ul style="list-style-type: none"> <li>1.1 Seeking assistance in the form of job coaching or mentoring</li> <li>1.2 Continuing dialogue to tackle workplace grievances</li> <li>1.3 Collective negotiation/bargaining for better working conditions</li> <li>1.4 Share your goals to improve with a trusted co-worker or supervisor</li> <li>1.5 Make a negativity log of every instance when you catch yourself complaining to others</li> <li>1.6 Make lists and schedules for necessary activities</li> </ul>
2. Unpleasant situation	<p>May include but not limited to:</p> <ul style="list-style-type: none"> <li>2.1 Job burn-out</li> <li>2.2 Drug dependence</li> <li>2.3 Sulking</li> </ul>

## EVIDENCE GUIDE

1. Critical Aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1 Express emotions appropriately</li> <li>1.2 Work independently and show initiative</li> <li>1.3 Consistently demonstrate self-confidence and self-discipline</li> </ul>
2. Resource Implications	<p>The following resources should be provided:</p> <ul style="list-style-type: none"> <li>2.1. Access to workplace and resource s</li> <li>2.2. Case studies</li> </ul>
3. Methods of Assessment	<p>Competency in this unit may be assessed through:</p> <ul style="list-style-type: none"> <li>3.1. Demonstration or simulation with oral questioning</li> <li>3.2. Case problems involving work improvement and sustainability issues</li> <li>3.3. Third-party report</li> </ul>
4. Context for Assessment	<ul style="list-style-type: none"> <li>4.1. Competency assessment may occur in workplace or any appropriately simulated environment</li> </ul>

**UNIT OF COMPETENCY : CONTRIBUTE TO WORKPLACE INNOVATION**

**UNIT CODE : 400311214**

**UNIT DESCRIPTOR :** This unit covers the knowledge, skills, and attitudes required to make a pro-active and positive contribution to workplace innovation.

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Identify opportunities to do things better	1.1 <b>Opportunities for improvement</b> are identified proactively in own area of work 1.2 <b>Information</b> is gathered and reviewed which may be relevant to ideas and which might assist in gaining support for idea	1.1 Roles of individuals in suggesting and making improvements 1.2 Positive impacts and challenges in innovation 1.3 Types of changes and responsibility. 1.4 Seven habits of highly effective people	1.1 Identifying opportunities to improve and to do things better involvement 1.2 Identifying the positive impacts and the challenges of change and innovation 1.3 Identifying examples of the types of changes that are within and outside own scope of responsibility
2. Discuss and develop ideas with others	2.1 <b>People who could provide input</b> to ideas for improvements are identified 2.2 Ways of approaching people to begin sharing ideas are selected 2.3 Meeting is set with relevant people 2.4 Ideas for follow up are review and selected based on feedback 2.5 <b>Critical inquiry method</b> is used to discuss and develop ideas with others	2.1 Roles of individuals in suggesting and making improvements. 2.2 Positive impacts and challenges in innovation 2.3 Types of changes and responsibility 2.4 Seven habits of highly effective people	2.1 Identifying opportunities to improve and to do things better involvement 2.2 Identifying the positive impacts and the challenges of change and innovation 2.3 Providing examples of the types of changes that are within and outside own scope of responsibility 2.4 Communicating ideas for change

ELEMENT	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
			through small group discussions and meetings
3. Integrate ideas for change in the workplace	3.1 Critical inquiry method is used to integrate different ideas for change of key people  3.2 Summarizing, analyzing and generalizing skills are used to extract salient points in the pool of ideas  3.3 <b>Reporting skills</b> are likewise used to communicate results  3.4 <b>Current Issues and concerns</b> on the systems, processes and procedures, as well as the need for simple innovative practices are identified	3.1 Roles of individuals in suggesting and making improvements  3.2 Positive impacts and challenges in innovation  3.3 Types of changes and responsibility  3.4 Seven habits of highly effective people  3.5 Basic research skills	3.1 Identifying opportunities to improve and to do things better Involvement.  3.2 Identifying the positive impacts and the challenges of change and innovation  3.3 Providing examples of the types of changes that are within and outside own scope of responsibility  3.4 Communicating ideas for change through small group discussions and meetings  3.5 Demonstrating skills in analysis and interpretation of data

## RANGE OF VARIABLES

VARIABLE	RANGE
1. Opportunities for improvement	May include: 1.1 Systems 1.2 Processes 1.3 Procedures 1.4 Protocols 1.5 Codes 1.6 Practices
2. Information	May include: 2.1 Workplace communication problems 2.2 Performance evaluation results 2.3 Team dynamics issues and concerns 2.4 Challenges on return of investment 2.5 New tools, processes and procedures 2.6 New people in the organization
3. People who could provide input	May include: 3.1 Leaders 3.2 Managers 3.3 Specialists 3.4 Associates 3.5 Researchers 3.6 Supervisors 3.7 Staff 3.8 Consultants (external) 3.9 People outside the organization in the same field or similar expertise/industry 3.10 Clients

VARIABLE	RANGE
4. Critical inquiry method	May include: 4.1 Preparation 4.2 Discussion 4.3 Clarification of goals 4.4 Negotiate towards a Win-Win outcome 4.5 Agreement 4.6 Implementation of a course of action 4.7 Effective verbal communication. See our pages Verbal Communication and Effective Speaking 4.8 Listening 4.9 Reducing misunderstandings is a key part of effective negotiation 4.10 Rapport Building 4.11 Problem Solving 4.12 Decision Making 4.13 Assertiveness 4.14 Dealing with Difficult Situations
5. Reporting skills	May include: 5.1 Data management 5.2 Coding 5.3 Data analysis and interpretation 5.4 Coherent writing 5.5 Speaking

## EVIDENCE GUIDE

1. Critical Aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1 Identified opportunities to do things better</li> <li>1.2 Discussed and developed ideas with others on how to contribute to workplace innovation</li> <li>1.3 Integrated ideas for change in the workplace</li> <li>1.4 Analyzed and reported rooms for innovation and learning in the workplace</li> </ul>
2. Resource Implications	<p>The following resources should be provided:</p> <ul style="list-style-type: none"> <li>2.1 Pens, papers and writing implements</li> <li>2.2 White board</li> <li>2.3 Manila papers</li> </ul>
3. Methods of Assessment	<p>Competency in this unit may be assessed through:</p> <ul style="list-style-type: none"> <li>3.1 Psychological and behavioral Interviews</li> <li>3.2 Performance Evaluation</li> <li>3.3 Life Narrative Inquiry</li> <li>3.4 Review of portfolios of evidence and third-party workplace reports of on-the-job performance</li> <li>3.5 Sensitivity analysis</li> <li>3.6 Organizational analysis</li> <li>3.7 Standardized assessment of character strengths and virtues applied</li> </ul>
4. Context for Assessment	<ul style="list-style-type: none"> <li>4.1 Competency may be assessed individually in the actual workplace or simulation environment in TESDA accredited institutions</li> </ul>

**UNIT OF COMPETENCY** : **PRESENT RELEVANT INFORMATION**

**UNIT CODE** : **400311215**

**UNIT DESCRIPTOR** : This unit covers the knowledge, skills, and attitudes required to present data/information appropriately.

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Gather data/information	1.1 Evidence, facts and information are collected 1.2 Evaluation, terms of reference and conditions are reviewed to determine whether data/information falls within project scope	1.1 Organisational protocols 1.2 Confidentiality 1.3 Accuracy 1.4 Business mathematics and statistics 1.5 Data analysis techniques/procedures 1.6 Reporting requirements to a range of audiences 1.7 Legislation, policy and procedures relating to the conduct of evaluations 1.8 Organisational values, ethics and codes of conduct	1.1 Describing organisational protocols relating to client liaison 1.2 Protecting confidentiality 1.3 Describing accuracy 1.4 Computing business mathematics and statistics 1.5 Describing data analysis techniques/procedures 1.6 Reporting requirements to a range of audiences 1.7 Stating legislation, policy and procedures relating to the conduct of evaluations 1.8 Stating organisational values, ethics and codes of conduct

ELEMENT	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
2. Assess gathered data/ information	2.1 Validity of data/ information is assessed 2.2 Analysis techniques are applied to assess data/ information 2.3 Trends and anomalies are identified 2.4 <b><i>Data analysis techniques</i></b> and procedures are documented 2.5 Recommendations are made on areas of possible improvement	2.1 Business mathematics and statistics 2.2 Data analysis techniques/ procedures 2.3 Reporting requirements to a range of audiences 2.4 Legislation, policy and procedures relating to the conduct of evaluations 2.5 Organisational values, ethics and codes of conduct	2.1 Computing business mathematics and statistics 2.2 Describing data analysis techniques/ procedures 2.3 Reporting requirements to a range of audiences 2.4 Stating legislation, policy and procedures relating to the conduct of evaluations 2.5 Stating organisational values, ethics and codes of conduct
3. Record and present information	3.1 Studied data/information are recorded 3.2 Recommendations are analysed for action to ensure they are compatible with the project's scope and terms of reference 3.3 Interim and final reports are analysed and outcomes are compared to the criteria established at the outset 3.4 Findings are presented to stakeholders	3.1 Data analysis techniques/ procedures 3.2 Reporting requirements to a range of audiences 3.3 Legislation, policy and procedures relating to the conduct of evaluations 3.4 Organisational values, ethics and codes of conduct	3.1 Describing data analysis techniques/ procedures 3.2 Reporting requirements to a range of audiences 3.3 Stating legislation, policy and procedures relating to the conduct of evaluations 3.4 Stating organisational values, ethics and codes of conduct practices

## RANGE OF VARIABLES

VARIABLE	RANGE
1. Data analysis techniques	May include but not limited to: 1.1. Domain analysis 1.2. Content analysis 1.3. Comparison technique

## EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Determine data / information 1.2 Studied and applied gathered data/information 1.3 Recorded and studied data/information These aspects may be best assessed using a range of scenarios what ifs as a stimulus with a walk-through forming part of the response. These assessment activities should include a range of problems, including new, unusual and improbable situations that may have happened.
2. Resource Implications	Specific resources for assessment 2.1 Evidence of competent performance should be obtained by observing an individual in an information management role within the workplace or operational or simulated environment.
3. Methods of Assessment	Competency in this unit may be assessed through: 3.1 Written Test 3.2 Interview 3.3 Portfolio The unit will be assessed in a holistic manner as is practical and may be integrated with the assessment of other relevant units of competency. Assessment will occur over a range of situations, which will include disruptions to normal, smooth operation. Simulation may be required to allow for timely assessment of parts of this unit of competency. Simulation should be based on the actual workplace and will include walk through of the relevant competency components.
4. Context for Assessment	4.1 In all workplace, it may be appropriate to assess this unit concurrently with relevant teamwork or operation units.

**UNIT OF COMPETENCY : PRACTICE OCCUPATIONAL SAFETY AND HEALTH POLICIES AND PROCEDURES**

**UNIT CODE : 400311216**

**UNIT DESCRIPTOR :** This unit covers the knowledge, skills and attitudes required to identify OSH compliance requirements, prepare OSH requirements for compliance, perform tasks in accordance with relevant OSH policies and procedures.

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Identify OSH compliance requirements	<p>1.1 Relevant <b>OSH requirements, regulations, policies and procedures</b> are identified in accordance with workplace policies and procedures.</p> <p>1.2 OSH activity non-conformities are conveyed to <b>appropriate personnel</b>.</p> <p>1.3 <b>OSH preventive and control requirements</b> are identified in accordance with OSH work policies and procedures.</p>	<p>1.1 OSH preventive and control requirements</p> <p>1.2 Hierarchy of Controls</p> <p>1.3 Hazard Prevention and Control</p> <p>1.4 General OSH principles</p> <p>1.5 Work standards and procedures</p> <p>1.6 Safe handling procedures of tools, equipment and materials</p> <p>1.7 Standard emergency plan and procedures in the workplace</p>	<p>1.1 Applying communication skills</p> <p>1.2 Applying interpersonal skills</p> <p>1.3 Applying critical thinking skills</p> <p>1.4 Applying observation skills</p>
2. Prepare OSH requirements for compliance	<p>2.1 OSH work activity material, tools and equipment requirements are identified in accordance with workplace policies and procedures.</p> <p>2.2 Required OSH materials, tools and equipment are acquired in</p>	<p>2.1 Resources necessary to execute hierarchy of controls</p> <p>2.2 General OSH principles</p> <p>2.3 Work standards and procedures</p> <p>2.4 Safe handling procedures of</p>	<p>2.1 Applying Communication skills</p> <p>2.2 Applying estimation skills</p> <p>2.3 Applying interpersonal skills</p> <p>2.4 Applying critical thinking skills</p>

	<p>accordance with workplace policies and procedures.</p> <p>2.3 Required OSH materials, tools and equipment are arranged/ placed in accordance with OSH work standards.</p>	<p>tools, equipment and materials</p> <p>2.5 Different OSH control measures</p>	<p>2.5 Applying observation skills</p> <p>2.6 Identifying material, tool and equipment</p>
3. Perform tasks in accordance with relevant OSH policies and procedures	<p>3.1 Relevant OSH work procedures are identified in accordance with workplace policies and procedures.</p> <p>3.2 Work Activities are executed in accordance with OSH work standards.</p> <p>3.3 <b>Non-compliance work activities</b> are reported to <b>appropriate personnel.</b></p>	<p>3.1 OSH work standards</p> <p>3.2 Industry related work activities</p> <p>3.3 General OSH principles</p> <p>3.4 OSH Violations</p> <p>3.5 Non-compliance work activities</p>	<p>3.1 Applying communication skills</p> <p>3.2 Applying interpersonal skills</p> <p>3.3 Applying troubleshooting skills</p> <p>3.4 Applying critical thinking skills</p> <p>3.5 Applying observation skills</p>

## RANGE OF VARIABLES

VARIABLE	RANGE
1. OSH Requirements, Regulations, Policies and Procedures	May include: 1.1 Clean Air Act 1.2 Building code 1.3 National Electrical and Fire Safety Codes 1.4 Waste management statutes and rules 1.5 Permit to Operate 1.6 Philippine Occupational Safety and Health Standards 1.7 Department Order No. 13 (Construction Safety and Health) 1.8 ECC regulations
2. Appropriate Personnel	May include: 2.1 Manager 2.2 Safety Officer 2.3 EHS Offices 2.4 Supervisors 2.5 Team Leaders 2.6 Administrators 2.7 Stakeholders 2.8 Government Official 2.9 Key Personnel 2.10 Specialists 2.11 Himself
3. OSH Preventive and Control Requirements	May include: 3.1 Resources needed for removing hazard effectively 3.2 Resources needed for substitution or replacement 3.3 Resources needed to establishing engineering controls 3.4 Resources needed for enforcing administrative controls 3.5 Personal Protective equipment
4. Non-OSH Compliance Work Activities	May include non-compliance or observance of the following safety measures: 4.1 Violations that may lead to serious physical harm or death 4.2 Fall Protection 4.3 Hazard Communication 4.4 Respiratory Protection 4.5 Power Industrial Trucks 4.6 Lockout/Tag-out 4.7 Working at heights (use of ladder, scaffolding) 4.8 Electrical Wiring Methods 4.9 Machine Guarding 4.10 Electrical General Requirements 4.11 Asbestos work requirements 4.12 Excavations work requirements

## EVIDENCE GUIDE

1. Critical Aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1. Conveyed OSH work non-conformities to appropriate personnel</li> <li>1.2. Identified OSH preventive and control requirements</li> <li>1.3. Identified OSH work activity material, tools and equipment requirements in accordance with workplace policies and procedures</li> <li>1.4. Arranged/Placed required OSH materials, tools and equipment</li> <li>1.5. Executed work activities in accordance with OSH work standards</li> <li>1.6. Reported OSH activity non-compliance work activities to appropriate personnel</li> </ul>
2. Resource Implications	<p>The following resources should be provided:</p> <ul style="list-style-type: none"> <li>2.1 Facilities, materials tools and equipment necessary for the activity</li> </ul>
3. Methods of Assessment	<p>Competency in this unit may be assessed through:</p> <ul style="list-style-type: none"> <li>3.1 Observation/Demonstration with oral questioning</li> <li>3.2 Third party report</li> </ul>
4. Context for Assessment	<ul style="list-style-type: none"> <li>4.1 Competency may be assessed in the work place or in a simulated work place setting</li> </ul>

**UNIT OF COMPETENCY : EXERCISE EFFICIENT AND EFFECTIVE SUSTAINABLE PRACTICES IN THE WORKPLACE**

**UNIT CODE : 400311217**

**UNIT DESCRIPTOR :** This unit covers knowledge, skills and attitude to identify the efficiency and effectiveness of resource utilization, determine causes of inefficiency and/or ineffectiveness of resource utilization and convey inefficient and ineffective environmental practices.

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Identify the efficiency and effectiveness of resource utilization	1.1 Required resource utilization in the workplace is measured using appropriate techniques. 1.2 Data are recorded in accordance with workplace protocol. 1.3 Recorded data are compared to determine the efficiency and effectiveness of resource utilization according to established <b><i>environmental work procedures.</i></b>	1.1 Importance of Environmental Literacy 1.2 Environmental Work Procedures 1.3 Waste Minimization 1.4 Efficient Energy Consumptions	1.1 Recording Skills 1.2 Writing Skills 1.3 Applying innovation Skills
2. Determine causes of inefficiency and/or ineffectiveness of resource utilization	2.1 Potential causes of inefficiency and/or ineffectiveness are listed. 2.2 Causes of inefficiency and/or ineffectiveness are identified through deductive reasoning. 2.3 Identified causes of inefficiency and/or ineffectiveness are validated thru established environmental procedures.	2.1 Causes of environmental inefficiencies and ineffectiveness	2.1 Applying deductive reasoning skills 2.2 Applying critical thinking 2.3 Applying problem solving skills 2.4 Applying observation Skills

ELEMENT	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
3. Convey inefficient and ineffective environmental practices	3.1 Efficiency and effectiveness of resource utilization are reported to <b><i>appropriate personnel.</i></b>  3.2 Concerns related resource utilization are discussed with appropriate personnel.  3.3 Feedback on information/ concerns raised are clarified with appropriate personnel.	3.1 Appropriate Personnel to address the environmental hazards  3.2 Environmental corrective actions	3.1 Applying written and oral communication skills  3.2 Applying critical thinking  3.3 Applying problem solving  3.4 Applying observation Skills  3.5 Practicing Environmental Awareness

## RANGE OF VARIABLES

VARIABLE	RANGE
1. Environmental Work Procedures	May include: 1.1 Utilization of Energy, Water, Fuel Procedures 1.2 Waster Segregation Procedures 1.3 Waste Disposal and Reuse Procedures 1.4 Waste Collection Procedures 1.5 Usage of Hazardous Materials Procedures 1.6 Chemical Application Procedures 1.7 Labeling Procedures
2. Appropriate Personnel	May include: 2.1 Manager 2.2 Safety Officer 2.3 EHS Offices 2.4 Supervisors 2.5 Team Leaders 2.6 Administrators 2.7 Stakeholders 2.8 Government Official 2.9 Key Personnel 2.10 Specialists 2.11 Himself

## EVIDENCE GUIDE

1. Critical Aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1 Measured required resource utilization in the workplace using appropriate techniques</li> <li>1.2 Recorded data in accordance with workplace protocol</li> <li>1.3 Identified causes of inefficiency and/or ineffectiveness through deductive reasoning</li> <li>1.4 Validated the identified causes of inefficiency and/or ineffectiveness thru established environmental procedures</li> <li>1.5 Reported efficiency and effectiveness of resource utilization to appropriate personnel</li> <li>1.6 Clarified feedback on information/concerns raised with appropriate personnel</li> </ul>
2. Resource Implications	<p>The following resources should be provided:</p> <ul style="list-style-type: none"> <li>2.1 Workplace</li> <li>2.2 Tools, materials and equipment relevant to the tasks</li> <li>2.3 PPE</li> <li>2.4 Manuals and references</li> </ul>
3. Methods of Assessment	<p>Competency in this unit may be assessed through:</p> <ul style="list-style-type: none"> <li>3.1 Demonstration</li> <li>3.2 Oral questioning</li> <li>3.3 Written examination</li> </ul>
4. Context for Assessment	<ul style="list-style-type: none"> <li>4.1 Competency assessment may occur in workplace or any appropriately simulated environment</li> <li>4.2 Assessment shall be observed while task are being undertaken whether individually or in-group</li> </ul>

**UNIT OF COMPETENCY : PRACTICE ENTREPRENEURIAL SKILLS IN THE WORKPLACE**

**UNIT CODE : 400311218**

**UNIT DESCRIPTOR :** This unit covers the outcomes required to apply entrepreneurial workplace best practices and implement cost-effective operations.

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Apply entrepreneurial workplace best practices	1.1 <b>Good practices</b> relating to workplace operations are observed and selected following workplace policies. 1.2 Quality procedures and practices are complied with according to workplace requirements. 1.3 Cost-conscious habits in <b>resource utilization</b> are applied based on industry standards.	1.1 Workplace best practices, policies and criteria 1.2 Resource utilization 1.3 Ways in fostering entrepreneurial attitudes: 1.3.1 Patience 1.3.2 Honesty 1.3.3 Quality-consciousness 1.3.4 Safety-consciousness 1.3.5 Resourcefulness	1.1 Applying communication skills 1.2 Complying with quality procedures
2. Communicate entrepreneurial workplace best practices	2.1 Observed good practices relating to workplace operations are communicated to <b>appropriate person</b> . 2.2 Observed quality procedures and practices are communicated to appropriate person. 2.3 Cost-conscious habits in resource utilization are communicated based on industry standards.	2.1 Workplace best practices, policies and criteria 2.2 Resource utilization 2.3 Ways in fostering entrepreneurial attitudes: 2.3.1 Patience 2.3.2 Honesty 2.3.3 Quality-consciousness 2.3.4 Safety-consciousness 2.3.5 Resourcefulness	2.1 Applying communication skills 2.2 Complying with quality procedures 2.3 Following workplace communication protocol

<p>3. Implement cost-effective operations</p>	<p>3.1 Preservation and optimization of workplace resources is implemented in accordance with enterprise policies.</p> <p>3.2 Judicious use of workplace tools, equipment and materials are observed according to manual and work requirements.</p> <p>3.3 Constructive contributions to office operations are made according to enterprise requirements.</p> <p>3.4 Ability to work within one's allotted time and finances is sustained.</p>	<p>3.1 Optimization of workplace resources</p> <p>3.2 5S procedures and concepts</p> <p>3.3 Criteria for cost-effectiveness</p> <p>3.4 Workplace productivity</p> <p>3.5 Impact of entrepreneurial mindset to workplace productivity</p> <p>3.6 Ways in fostering entrepreneurial attitudes:</p> <p>3.6.1 Quality-consciousness</p> <p>3.6.2 Safety-consciousness</p>	<p>3.1 Implementing preservation and optimizing workplace resources</p> <p>3.2 Observing judicious use of workplace tools, equipment and materials</p> <p>3.3 Making constructive contributions to office operations</p> <p>3.4 Sustaining ability to work within allotted time and finances</p>
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## RANGE OF VARIABLES

VARIABLE	RANGE
1. Good practices	May include: 1.1 Economy in use of resources 1.2 Documentation of quality practices
2. Resources utilization	May include: 2.1 Consumption/ use of consumables 2.2 Use/Maintenance of assigned equipment and furniture 2.3 Optimum use of allotted /available time

## EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Demonstrated ability to identify and sustain cost-effective activities in the workplace 1.2 Demonstrated ability to practice entrepreneurial knowledge, skills and attitudes in the workplace.
2. Resource Implications	The following resources should be provided: 2.1 Simulated or actual workplace 2.2 Tools, materials and supplies needed to demonstrate the required tasks 2.3 References and manuals 2.3.1 Enterprise procedures manuals 2.3.2 Company quality policy
3. Methods of Assessment	Competency in this unit should be assessed through: 3.1 Interview 3.2 Third-party report
4. Context of Assessment	4.1 Competency may be assessed in workplace or in a simulated workplace setting 4.2 Assessment shall be observed while tasks are being undertaken whether individually or in-group

## COMMON COMPETENCIES

**UNIT OF COMPETENCY : APPLY SAFETY MEASURES IN ZOO OPERATIONS**

**UNIT CODE : AFF314201**

**UNIT DESCRIPTOR :** This unit covers the knowledge, skills and attitudes required to perform safety measures effectively and efficiently during zoo operations including identifying areas, time and place in performing safety measures and proper storing and disposal of tools, materials and personal protective equipment.

ELEMENT	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Determine areas of concern for safety measures	<p>1.1 <b>Work tasks</b> are identified according to zoo operation policies and guidelines.</p> <p>1.2 Place for safety measures is determined according to zoo operation policies and guidelines.</p> <p>1.3 <b>Time</b> for safety measures is determined according to zoo operation policies and guidelines.</p> <p>1.4 Appropriate <b>tools, materials, equipment and PPE</b> are prepared in accordance with job requirements.</p> <p>1.5 Tools, materials, equipment and PPE are regularly checked, documented, reported and discarded, when necessary, in accordance with zoo</p>	<p>1.1 Different work tasks in zoo operations</p> <p>1.2 Place and time for implementation of safety measures</p> <p>1.3 Different hazards in the workplace</p> <p>1.4 Types of tools, materials and equipment used in zoo operations</p> <p>1.5 Personal Protective Equipment (PPE)</p> <p>1.6 Preparation of tools, materials, equipment and PPE</p> <p>1.7 Communication techniques</p>	<p>1.1 Identifying work tasks in zoo operations</p> <p>1.2 Determining place and time for implementation of safety measures</p> <p>1.3 Reading labels, manuals and other basic safety information</p> <p>1.4 Identifying effective/ functional tools, materials, equipment and PPE</p> <p>1.5 Preparing and checking tools, materials, equipment and PPE</p> <p>1.6 Discarding defective tools, materials and equipment</p> <p>1.7 Critical thinking</p>

	<p>operation policies and guidelines.</p> <p>1.6 Areas within the zoo are regularly checked, documented, reported, when necessary, in accordance with zoo operation policies and guidelines.</p>		1.8 Communication skills
2. Apply appropriate safety measures	<p>2.1 Tools, materials and equipment are used according to task specifications and procedures.</p> <p>2.2 Appropriate PPE are worn according to zoo operation policies and guidelines.</p> <p>2.3 Effectivity/shelf life/expiration of materials are strictly observed according to manufacturer's instructions.</p> <p>2.4 Emergency procedures are understood and followed.</p> <p>2.5 <b>Hazards</b> in the workplace are identified and reported in accordance with zoo operation protocols and guidelines.</p>	<p>2.1 Uses and functions of tools and equipment</p> <p>2.2 Types and Usage of PPE</p> <p>2.3 Expiration/shelf life of materials</p> <p>2.4 Proper disposal of expired materials</p> <p>2.5 Environmental rules and regulations</p> <p>2.6 Emergency procedures</p> <p>2.7 Hazards identification and reporting</p> <p>2.8 Communication techniques</p> <p>2.9 Occupational Safety and Health Standards (OSHS)</p> <p>2.10 Relevant sanitation and environmental protection laws and regulations</p>	<p>2.1 Using tools, materials and equipment in the workplace</p> <p>2.2 Wearing of appropriate PPE</p> <p>2.3 Observing expiration/shelf life of materials</p> <p>2.4 Disposing of expired materials</p> <p>2.5 Following emergency procedures</p> <p>2.6 Identifying and reporting of hazards in workplace area</p> <p>2.7 Communication skills</p>
3. Monitor safe keeping and disposal of tools, materials,	3.1 Used tools, equipment and PPE are cleaned and stored in designated areas.	<p>3.1 Procedures of cleaning used tools, equipment and PPE</p> <p>3.2 Labelling and storage of</p>	<p>3.1 Cleaning used tools, equipment and PPE</p> <p>3.2 Labelling and storing unused materials</p>

equipment and PPE	<p>3.2 Unused materials are properly labeled and stored according to manufacturer's recommendations and zoo operation protocols and guidelines.</p> <p>3.3 Waste materials are disposed according to manufacturer's instructions, government regulations and zoo operation protocols and guidelines.</p>	<p>unused materials</p> <p>3.3 Disposal of waste materials</p> <p>3.4 Manufacturers' recommendation on storing and disposing materials</p> <p>3.5 Occupational Safety and Health Standards (OSHS)</p> <p>3.6 Relevant sanitation and environmental protection laws and regulations</p>	3.3 Disposing waste materials
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## RANGE OF VARIABLES

VARIABLE	RANGE
1. Work tasks	Work task may be selected from any of the subsectors: 1.1 Feed animal 1.2 Housekeeping and maintenance 1.3 Enrichment activities 1.4 Animal handling, training and restraint 1.5 Animal health related procedure
2. Time	May include: 2.1 Feeding time 2.2 Housekeeping and maintenance 2.3 Enrichment activity 2.4 Animal handling, training and restraint
3. Tools, materials, equipment and PPE	May include: 3.1 Cleaning tools 3.2 Feeding Equipment 3.3 Enrichment Activities 3.4 Medical and veterinary tools 3.5 Educational and interpretative tools 3.6 Environmental monitoring tools 3.7 Tools for enclosure maintenance 3.8 Communication devices 3.9 Protective gears 3.10 First aid kits 3.11 Record-keeping tools 3.12 Transportation equipment
4. Hazards	May include: 4.1 Chemical 4.2 Electrical 4.3 Biohazard 4.4 Fall 4.5 Infections from animals

## EVIDENCE GUIDE

1. Critical aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <ol style="list-style-type: none"> <li>1.1 Identified work tasks.</li> <li>1.2 Determined safety measures.</li> <li>1.3 Prepared appropriate tools, materials, equipment and PPE in line with job requirements.</li> <li>1.4 Properly used the tools, materials, and equipment.</li> <li>1.5 Followed emergency procedures to ensure a safe work requirement.</li> <li>1.6 Identified and reported hazards in the workplace.</li> <li>1.7 Waste materials are disposed properly.</li> </ol>
2. Resource Implications	<p>The following resources should be provided:</p> <ol style="list-style-type: none"> <li>2.1 Service/operational manual of zoo tools and equipment</li> <li>2.2 Tools and equipment</li> <li>2.3 Zoo implements</li> </ol>
3. Methods of Assessment	<p>Competency in this unit should be assessed through:</p> <ol style="list-style-type: none"> <li>3.1 Written exam</li> <li>3.2 Practical Demonstration</li> </ol>
4.Context of Assessment	<ol style="list-style-type: none"> <li>4.1 Competency may be assessed in workplace or in a simulated workplace setting</li> <li>4.2 Assessment shall be observed while tasks are being undertaken whether individually or in-group</li> </ol>

**UNIT OF COMPETENCY : USE ZOO TOOLS AND EQUIPMENT**

**UNIT CODE : AFF314202**

**UNIT DESCRIPTOR :** This unit covers the knowledge, skills and attitudes required to use zoo tools and equipment including selection, operation and preventive maintenance of zoo tools and equipment.

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Select and use zoo tools	1.1 Appropriate <b>zoo tools</b> are identified according to task requirements. 1.2 Tools are checked for faults and defective tools reported in accordance with zoo operation procedures and guidelines. 1.3 Appropriate tools are safely used according to task requirements and manufacturer's instructions.	1.1 Types and uses of zoo tools 1.2 Characteristics of functional zoo tools 1.3 Zoo tools faults / defects identification 1.4 Segregation and reporting of defective zoo tools	1.1 Identifying zoo tools appropriate for the task 1.2 Checking the conditions of zoo tools 1.3 Reporting defective zoo tools 1.4 Using zoo tools
2. Select and operate zoo equipment	2.1 Appropriate <b>zoo equipment</b> is identified according to task requirements. 2.2 Instructional manual of equipment is carefully read and understood prior to operation. 2.3 Pre-operation check-up of equipment is conducted following manufacturer's instructional manual. 2.4 Faults in <b>zoo</b> equipment are identified and reported in	2.1 Types of Different zoo equipment 2.2 Standard operating procedures of zoo equipment 2.3 Instructional manual of zoo equipment 2.4 Pre-operation check-up 2.5 Zoo equipment Specification 2.6 Procedures in calibrating and	2.1 Identifying appropriate zoo equipment for the work 2.2 Reading and following instructional manual 2.3 Conducting pre-operation check-up 2.4 Identifying faults/defects of zoo equipment 2.5 Reporting on defective zoo equipment

	<p>accordance with zoo operation procedures and guidelines.</p> <p>2.5 Equipment is operated according to manufacturer's instructional manual.</p> <p>2.6 Safety precautions and procedures are followed throughout the operation.</p>	<p>use of zoo equipment</p> <p>2.7 Zoo equipment faults identification</p> <p>2.8 Segregation and reporting of defective zoo equipment</p> <p>2.9 Operation of zoo equipment</p> <p>2.10 Codes and Regulations on environmental protection</p> <p>2.11 Safety and keeping of equipment every after use</p> <p>2.12 Safety measures</p>	<p>2.6 Operating zoo equipment</p> <p>2.7 Following safety procedures</p>
3. Maintain zoo tools and equipment	<p>3.1 Zoo tools and equipment are cleaned immediately after use in accordance with zoo operation procedures and guidelines.</p> <p>3.2 Minor faults and defects are fixed in accordance with manufacturer's instructional manual.</p> <p>3.3 Major faults and defects are reported to supervisor in accordance with zoo operation protocols and guidelines.</p> <p>3.4 Zoo tools and equipment are stored in designated areas in accordance with zoo operation procedures and guidelines.</p>	<p>3.1 Cleaning procedures of zoo tools and equipment</p> <p>3.2 Maintenance procedures of zoo equipment</p> <p>3.3 Storage of zoo tools and equipment</p> <p>3.4 Designated storage areas</p> <p>3.5 Oral and verbal communication techniques</p> <p>3.6 Record-keeping and preparation of report</p>	<p>3.1 Cleaning zoo tools and equipment</p> <p>3.2 Performing routinely check-up of zoo tools and equipment</p> <p>3.3 Maintaining zoo tools and equipment by fixing minor faults and defects</p> <p>3.4 Recognizing and reporting major faults and defects in zoo tools and equipment</p> <p>3.5 Storing zoo tools and equipment</p>

## RANGE OF VARIABLES

VARIABLE	RANGE
1. Zoo Tools	May include: 1.1. Cleaning tools 1.2. Medical and veterinary tools 1.3. Educational and interpretative tools 1.4. Environmental monitoring tools 1.5. Tools for enclosure maintenance 1.6. First aid kits 1.7. Record-keeping tools
2. Zoo Equipment	May include: 2.1 Feeding Equipment 2.2 Communication devices 2.3 Protective gears 2.4 Transportation equipment

## EVIDENCE GUIDE

1. Critical aspects of Competency	Assessment requires evidence that the candidate: 1.1 Correctly used appropriate zoo tools and equipment. 1.2 Stored zoo tools and equipment in designated areas in line with zoo procedures. 1.3 Performed preventive maintenance. 1.4 Followed safety procedures.
2. Resource Implications	The following resources should be provided: 2.1 Service/operational manual of zoo tools and equipment 2.2 Tools and equipment 2.3 Zoo implements
3. Methods of Assessment	Competency in this unit should be assessed through: 3.1 Written exam 3.2 Practical Demonstration
4.Context of Assessment	4.1 Competency may be assessed in workplace or in a simulated workplace setting 4.2 Assessment shall be observed while tasks are being undertaken whether individually or in-group

**UNIT OF COMPETENCY : PROCESS ZOO WASTE**

**UNIT CODE : AFF314203**

**UNIT DESCRIPTOR :** This unit covers the knowledge, skills and attitudes required to process zoo wastes. It comprises functions such as collecting zoo wastes, conducting waste identification and segregation, treating and processing zoo wastes and performing housekeeping duties

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Collect zoo wastes	<p>1.1 Tools and materials are prepared for collection of <b>zoo wastes</b>.</p> <p>1.2 Appropriate personal protective equipment (PPE) are worn as prescribed by Occupational Safety and Health Standards (OSHS).</p> <p>1.3 Zoo wastes are collected following OSHS and zoo operation procedures and waste collection plan.</p> <p>1.4 Dangerous and hazardous zoo wastes are collected following the HAZMAT (hazardous material) protocol.</p> <p>1.5 Untoward incidents during the procedure is reported to supervisor.</p>	<p>SCIENCE</p> <p>1.1 tools and materials in zoo wastes management</p> <p>1.2 Categories of zoo wastes</p> <p>1.3 Zoo wastes collection and segregation procedures</p> <p>1.4 Zoo wastes handling, storage and disposal procedures</p> <p>1.5 Dangerous and hazardous wastes and hazardous materials (hazmat) protocols</p> <p>1.6 Principles of 5S and 3R</p> <p>1.7 Personal Protective Equipment (PPE)</p> <p>1.8 Material Safety Data Sheets(MSDS)</p> <p>TECHNOLOGY</p>	<p>1.1 Using appropriate PPE</p> <p>1.2 Collecting zoo wastes including hazardous wastes</p> <p>1.3 Basic mathematical skills</p> <p>1.4 Effective communication skills</p>

		<p>1.9 Uses and specifications of tools and materials in zoo wastes management</p> <p>MATHEMATICS</p> <p>1.10 Volume of farm wastes</p> <p>COMMUNICATIONS</p> <p>1.11 Preparation of inventory reports and production records</p> <p>1.12 Report on untoward incidence in the area</p> <p>LAWS AND REGULATIONS</p> <p>1.13 Relevant laws, regulations and government offices on animal, environment and sanitary waste management</p> <p>1.14 Occupational Safety and Health Standards (OSHS)</p> <p>VALUES</p> <ul style="list-style-type: none"> <li>• Safety and health consciousness</li> <li>• Resourcefulness</li> <li>• Diligence</li> <li>• Time consciousness</li> <li>• Cost-consciousness</li> <li>• Personal integrity</li> <li>• Perseverance</li> <li>• Ability to work with others</li> </ul>	
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<p>2. Identify and segregate zoo wastes</p>	<p>2.1 Zoo wastes are identified by categories according to industry standards and environmental and sanitary laws and regulations.</p> <p>2.2 Zoo wastes are segregated according to organization's protocols and guidelines and environmental and sanitary laws and regulations.</p> <p>2.3 Sorted waste is placed into labelled container to avoid littering and prevent cross-contamination.</p> <p>2.4 Information on waste is obtained by asking authority to ensure correct identification.</p> <p>2.5 Untoward incidents during the procedure is reported to supervisor.</p>	<p>SCIENCE</p> <p>2.1 Tools and materials in zoo wastes management</p> <p>2.2 Categories of zoo wastes</p> <p>2.3 Zoo wastes collection and segregation procedures</p> <p>2.4 Zoo waste handling, storage and disposal procedures</p> <p>2.5 Dangerous and hazardous wastes, hazardous materials (hazmat) protocols</p> <p>2.6 Principles of 5S and 3R</p> <p>2.7 Personal Protective Equipment (PPE)</p> <p>2.8 Material Safety Data Sheets(MSDS)</p> <p>TECHNOLOGY</p> <p>2.9 Uses and specifications of tools and materials in zoo wastes management</p> <p>MATHEMATICS</p> <p>2.10 Volume of farm wastes</p> <p>COMMUNICATION</p> <p>2.11 Preparation of inventory reports and production records</p> <p>2.12 Report on untoward incidence in the area</p>	<p>2.1 Using appropriate PPE</p> <p>2.2 Identifying zoo wastes by categories</p> <p>2.3 Segregating zoo wastes</p> <p>2.4 Able to obtain information on zoo wastes</p> <p>2.5 Basic mathematical skills</p> <p>2.6 Effective communication skills</p>
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		<p><b>LAWS AND REGULATIONS</b></p> <p>2.13 Relevant laws, regulations and government offices on animal, environment and sanitary waste management</p> <p>2.14 Occupational Safety and Health Standards (OSHS)</p> <p><b>VALUES</b></p> <ul style="list-style-type: none"> <li>• Safety and health consciousness</li> <li>• Resourcefulness</li> <li>• Diligence</li> <li>• Time consciousness</li> <li>• Cost-consciousness</li> <li>• Personal integrity</li> <li>• Perseverance</li> <li>• Ability to work with others</li> </ul>	
3. Treat and process zoo wastes	<p>3.1 <b><i>Dangerous and hazardous zoo wastes</i></b> are handled according to organization's protocols and guidelines and relevant environmental and sanitary laws and regulations and OSHS procedures.</p> <p>3.2 Processing of zoo wastes is done following environmental and sanitary laws and regulations.</p> <p>3.3 Principles of 3Rs (reduce, reuse and recycle) are applied accordingly.</p> <p>3.4 Zoo wastes are disposed of according</p>	<p><b>SCIENCE</b></p> <p>3.1 Tools and materials in zoo wastes management</p> <p>3.2 Categories of zoo wastes</p> <p>3.3 Zoo wastes collection and segregation procedures</p> <p>3.4 Zoo waste handling, storage and disposal procedures</p> <p>3.5 Dangerous and hazardous wastes, hazardous materials (hazmat) protocols</p>	<p>3.1 Using appropriate PPE</p> <p>3.2 Handling dangerous and hazardous zoo wastes</p> <p>3.3 Processing zoo wastes</p> <p>3.4 Disposing zoo wastes</p> <p>3.5 Applying 3Rs</p> <p>3.6 Basic mathematical skills</p> <p>3.7 Effective communication skills</p>

	<p>to environmental and sanitary laws and regulations.</p> <p>3.5 Untoward incidents during the procedure is reported to supervisor.</p>	<p>3.6 Principles of 5S and 3R</p> <p>3.7 Personal Protective Equipment (PPE)</p> <p>3.8 Material Safety Data Sheets(MSDS)</p> <p>TECHNOLOGY</p> <p>3.9 Uses and specifications of tools and materials in zoo wastes management</p> <p>MATHEMATICS</p> <p>3.10 Volume of farm wastes</p> <p>COMMUNICATION</p> <p>3.11 Preparation of inventory reports and production records</p> <p>3.12 Report on untoward incidence in the area</p> <p>LAWS AND REGULATIONS</p> <p>3.13 Relevant laws, regulations and government offices on animal, environment and sanitary waste management</p> <p>3.14 Occupational Safety and Health Standards (OSHS)</p> <p>VALUES</p> <ul style="list-style-type: none"> <li>• Safety and health consciousness</li> <li>• Resourcefulness</li> <li>• Diligence</li> <li>• Time consciousness</li> </ul>	
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		<ul style="list-style-type: none"> <li>• Cost-consciousness</li> <li>• Personal integrity</li> <li>• Perseverance</li> <li>• Ability to work with others</li> </ul>	
4. Perform housekeeping	<p>4.1 Appropriate warning signs and labels are displayed in conspicuous places around the workplace.</p> <p>4.2 Work area is cleaned according to 5S principles.</p> <p>4.3 Tools are checked, cleaned and stowed according to established industry procedures and following user's manual.</p> <p>4.4 Materials are stored following industry standard procedures and manufacturer's specifications.</p> <p>4.5 PPE is checked for damage prior to ensuring that clean and undamaged equipment is stored.</p> <p>4.6 Storage facility is checked to ensure no contamination in the area according to organizational requirements and legislation and codes.</p> <p>4.7 <b>Record</b> keeping is done according to zoo requirements.</p>	<p>SCIENCE</p> <p>4.1 Tools and materials in zoo wastes management</p> <p>4.2 Categories of zoo wastes</p> <p>4.3 Zoo wastes collection and segregation procedures</p> <p>4.4 Zoo waste handling, storage and disposal procedures</p> <p>4.5 Dangerous and hazardous wastes, hazardous materials (hazmat) protocols</p> <p>4.6 Principles of 5S and 3R</p> <p>4.7 Personal Protective Equipment (PPE)</p> <p>4.8 Material Safety Data Sheets(MSDS)</p> <p>COMMUNICATION</p> <p>4.9 Preparation of inventory reports and production records</p> <p>4.10 Report on untoward incidence in the area</p> <p>LAWS AND REGULATIONS</p> <p>4.11 Occupational Safety and</p>	<p>4.1 Using and checking appropriate PPE</p> <p>4.2 Identifying conspicuous areas and displaying warning signs and labels</p> <p>4.3 Cleaning the area with 5S</p> <p>4.4 Checking, cleaning and stowing away tools</p> <p>4.5 Storing materials</p> <p>4.6 Maintaining storage facility</p> <p>4.7 Record keeping</p> <p>4.8 Effective communication skills</p>

		<p>Health Standards (OSHS)</p> <p>VALUES</p> <ul style="list-style-type: none"> <li>• Safety and health consciousness</li> <li>• Resourcefulness</li> <li>• Diligence</li> <li>• Time consciousness</li> <li>• Cost-consciousness</li> <li>• Personal integrity</li> <li>• Perseverance</li> <li>• Ability to work with others</li> </ul>	
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## RANGE OF VARIABLES

VARIABLE	RANGE
1. Zoo waste	<p>May include but not limited to:</p> <ul style="list-style-type: none"> <li>1.1 Animal waste</li> <li>1.2 Food waste</li> <li>1.3 Horticultural waste</li> <li>1.4 Hazardous waste</li> <li>1.5 Green waste</li> <li>1.6 General waste</li> </ul>
2. Dangerous and hazardous waste	<p>May include but not limited to:</p> <ul style="list-style-type: none"> <li>2.1 Medical waste</li> <li>2.2 Chemical waste</li> <li>2.3 Carcasses and animal tissues</li> <li>2.4 Biological wastes</li> </ul>
3. Record	<p>May include but not limited to:</p> <ul style="list-style-type: none"> <li>3.1 Record of zoo wastes generated and disposed</li> <li>3.2 Record of incidence of infection and accidents</li> <li>3.3 Inventory of tools, materials and equipment</li> </ul>

## EVIDENCE GUIDE

1. Critical aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1 Collected zoo waste</li> <li>1.2 Identified and segregated zoo waste</li> <li>1.3 Processed zoo waste</li> <li>1.4 Performed housekeeping</li> </ul>
2. Resource Implications	<p>The following resources should be provided:</p> <ul style="list-style-type: none"> <li>2.1 Farm area</li> <li>2.2 Different farm wastes</li> <li>2.3 Farm-waste processing area</li> <li>2.4 Tools, supplies and materials use in farm wastes</li> <li>2.5 collection, segregation and processing</li> <li>2.6 Housekeeping tools and supplies</li> <li>2.7 PPE</li> </ul>
3. Methods of Assessment	<p>Competency in this unit should be assessed through:</p> <ul style="list-style-type: none"> <li>3.1 Written exam</li> <li>3.2 Practical Demonstration</li> </ul>
4. Context of Assessment	<ul style="list-style-type: none"> <li>4.1 Competency may be assessed in workplace or in a simulated workplace setting</li> <li>4.2 Assessment shall be observed while tasks are being undertaken whether individually or in-group</li> </ul>

**UNIT OF COMPETENCY : PERFORM ESTIMATION AND BASIC CALCULATION**

**UNIT CODE : AFF321203**

**UNIT DESCRIPTOR :** This unit covers the knowledge, skills and attitudes required to use tools and equipment. It includes selection, operation and preventive maintenance of zoo tools and equipment

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Perform estimation	1.1 Job requirements are identified from written or oral communications. 1.2 Quantities of materials and resources required to complete a work task are estimated. 1.3 The time needed to complete a work activity is estimated. 1.4 Accurate estimate for work completion are made. 1.5 Estimate of materials and resources are reported to appropriate person.	<b>MATHEMATICS</b> 1.1 Basic mathematical operations 1.2 Percentage and ratios 1.3 Unit Conversion 1.4 Systems, Processes and Operations 1.5 Knowledge in different management practices and operational procedures <b>VALUES</b> <ul style="list-style-type: none"><li>• Safety consciousness</li><li>• Time consciousness and management</li><li>• Cost consciousness</li><li>• Precision</li></ul>	1.1 Ability to perform basic calculation 1.2 Communicate effectively
2. Perform basic workplace calculation	2.1 <b>Calculations</b> to be made are identified according to job requirements.	<b>MATHEMATICS</b> 2.1 Basic mathematical operations	2.1 Ability to perform basic calculation 2.2 Communicate effectively

	<p>2.2 Correct <b>method of calculation</b> identified.</p> <p>2.3 <b>System and units of measurement</b> to be followed are ascertained.</p> <p>2.4 Calculation needed to complete work tasks are performed using the four basic process of addition, division, multiplication and subtraction.</p> <p>2.5 Calculate whole fraction, percentage and mixed when are used to complete the instructions.</p> <p>2.6 Number computed in self-checked and completed for alignment.</p>	<p>2.2 Percentage and ratios</p> <p>2.3 Unit Conversion</p> <p>2.4 Systems, Processes and Operations</p> <p>2.5 Knowledge in different management practices and operational procedures</p> <p>VALUES</p> <ul style="list-style-type: none"> <li>• Safety consciousness</li> <li>• Time consciousness and management</li> <li>• Cost consciousness</li> <li>• Precision</li> </ul>	
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## RANGE OF VARIABLES

VARIABLE	RANGE
1. Calculations	<p>May include but not limited to:</p> <p>1.1 Amount of food in the diet plan</p> <p>1.2 Amount of samples to be collected, such as blood and bodily excretions</p> <p>1.3 Measurements of required enclosure</p>
2. Method of calculation	<p>May include but not limited to:</p> <p>2.1 Ratio and proportion</p> <p>2.2 Addition</p> <p>2.3 Subtraction</p> <p>2.4 Multiplication</p> <p>2.5 Division</p>

## EVIDENCE GUIDE

1. Critical aspects of Competency	Assessment requires evidence that the candidate: 1.1 Performed estimation 1.2 Performed basic workplace calculation 1.3 Applied corrective measures as maybe necessary
2. Resource Implications	2.1 Relevant tools and equipment for basic calculation 2.2 Recommended data
3. Methods of Assessment	Competency in this unit should be assessed through: 3.1 Written exam 3.2 Practical Demonstration
4.Context of Assessment	4.1 Competency may be assessed in workplace or in a simulated workplace setting 4.2 Assessment shall be observed while tasks are being undertaken whether individually or in-group

## CORE COMPETENCIES

**UNIT OF COMPETENCY :** PERFORM DAILY ZOO ANIMAL CARE

**UNIT CODE :** AB-AFF0405808324301

**UNIT DESCRIPTOR :** This unit covers the knowledge, skills and attitudes required to feed and hydrate animal and perform housekeeping and maintenance of enclosures.

ELEMENT	PERFORMANCE CRITERIA <i>Italicized terms</i> are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Feed and hydrate animal	<p>1.1 <b><i>Proper uniform</i></b> is used in accordance with organization's protocols and guidelines and Occupational Safety and Health Standards (OSHS).</p> <p>1.2 Food is prepared following the <b><i>diet plan</i></b> according to the <b><i>nutritional needs of the animal</i></b>.</p> <p>1.3 Appropriate food and water are provided according to <b><i>species</i></b>, age and health condition of animal, if diet plan is not available.</p> <p>1.4 Food consumption is documented in the daily report.</p>	<p>1.1 Taxonomy, evolution, and the diversity of animal species</p> <p>1.2 Basics of animal biology, anatomy, and physiology (e.g. avifauna, herpetofauna, mammals)</p> <p>1.3 Basic animal food ratio and proportion per species</p> <p>1.4 Wildlife nutrition and nutritional requirements per species</p> <p>1.5 Safety protocols and guidelines for both animal care and personal safety</p> <p>1.6 Food Hygiene</p> <p>1.7 Diet Plan</p> <p>1.8 Daily Food Consumption Report</p> <p>VALUES</p> <ul style="list-style-type: none"> <li>• Time Management</li> </ul>	<p>1.1 Preparing food according to diet plan</p> <p>1.2 Demonstrating feeding technique</p> <p>1.3 Recording food consumption of animals accurately</p> <p>1.4 Observing proper hygiene of zoo keeper</p> <p>1.5 Observing and assessing animal behavior during feeding</p> <p>1.6 Observation skills</p> <p>1.7 Able to follow instructions</p> <p>1.8 Documentation skills</p>

		<ul style="list-style-type: none"> <li>Physical stamina and fitness</li> </ul>	
2. Perform housekeeping and maintenance of enclosures	<p>2.1 <b>Workplace routine</b> schedules are identified and confirmed with the supervisor.</p> <p>2.2 Personal Protective Equipment (PPE) is used in accordance with Occupational Safety and Health Standards (OSHS).</p> <p>2.3 Zoo animal housing and <b>enclosures</b> are cleaned according to zoo protocols.</p> <p>2.4 Cleaning supplies, tools, materials, and implements are used, cleaned and stored according to instruction and zoo protocols.</p> <p>2.5 Basic and minor maintenance and repair of enclosures are carried out and reported to the supervisor.</p> <p>2.6 Identified major repairs of enclosures are reported to supervisor.</p> <p>2.7 Safety and security of enclosures are maintained at all times.</p> <p>2.8 Complete <b>enclosure hygiene control</b> methods for species-specific animals are identified and practiced.</p> <p>2.9 Complete <b>post-hygiene care</b> of animals is practiced.</p>	<p>2.1 Animal Welfare Act/RA 8485</p> <p>2.2 Biology and natural history per species</p> <p>2.3 Wildlife conservation and ecology</p> <p>2.4 Animal innate and learned behavior</p> <p>2.5 Common types of enclosures for species-specific animals and different enclosure materials</p> <p>2.6 Animal care and hygiene principles based on species-specific needs</p> <p>2.7 Workplace hygiene policies, procedures and requirements including OHS and emergency procedures and protocols</p> <p>2.8 Safe cleaning techniques and proper disinfection of enclosure and equipment</p> <p>2.9 Waste management protocols for the proper disposal of animal waste and other zoo waste</p> <p>2.10 Hazards and risks to both</p>	<p>2.1 Cleaning technique to maintain a hygienic environment</p> <p>2.2 Using cleaning products and cleaning equipment according to the instructions.</p> <p>2.3 Recognizing hazards related to cleaning products and materials</p> <p>2.4 Performing minor repairs on enclosures, such as fixing fences, gates, and other structures</p> <p>2.5 Evaluating and enhancing safety measures, such as barriers and signage, to protect both animals and zookeepers.</p> <p>2.6 Implementing waste management protocols for the proper disposal of animal waste and other zoo waste</p> <p>2.7 Demonstrating compliance to cleaning protocol</p> <p>2.8 Working collaboratively in a team environment</p>

	<p>2.10 Animal waste and other zoo workplace waste are disposed of according to waste management protocols.</p> <p>2.11 Routine maintenance of housekeeping tools and materials are performed</p> <p>2.12 Housekeeping and maintenance activity is documented in the daily report.</p>	<p>animals and zoo keepers during animal handling and cleaning</p> <p>2.11 Safety techniques for handling animals during enclosure cleaning and maintenance.</p> <p>2.12 Maintenance Plan for enclosures</p> <p>VALUES</p> <ul style="list-style-type: none"> <li>• Time Management</li> <li>• Physical stamina and fitness</li> </ul>	<p>2.9 Applying first-aid and emergency procedures</p> <p>2.10 Record keeping and documentation of daily maintenance plan</p> <p>2.11 Maintaining ex-situ habitat and physical environment for species-specific animals</p>
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## RANGE OF VARIABLES

VARIABLE	RANGE
1. Proper uniform	May include: 1.1 Zoo keeper t-shirts and pants / uniform 1.2 Rubber boots 1.3 Gloves
2. Diet plan	May include: 2.1 Common nutritional guidelines per animal species 2.2 Wildlife nutrition including diet composition, and nutrient requirement
3. Nutritional needs of the animals	May include: 3.1 Species 3.2 Age 3.3 Nutritional requirement
4. Species	May include: 4.1 Mammals 4.2 Avian (Birds) 4.3 Reptiles and Amphibians 4.4 Fish 4.5 Invertebrates 4.6 Domesticated Animals
5. Workplace routine	May include: 5.1 Feeding of animals 5.2 Cleaning of enclosures 5.3 Observation of animal's health and behavior 5.4 Workplace procedures 5.5 Occupational Safety and Health Standards (OSHS)
6. Enclosures	May include but not limited to: 6.1 Natural habitat enclosures 6.2 Immersion exhibits 6.3 Mixed-species enclosures 6.4 Aviaries 6.5 Aquatic enclosures 6.6 Nocturnal houses 6.7 Safari parks 6.8 Reptile houses
7. Enclosure hygiene control	May include: 7.1 Regular cleaning and disinfection 7.2 Proper use of cleaning agents 7.3 Proper cleaning of feeding tools
8. Post-hygiene care	May include:

	<ul style="list-style-type: none"> <li>8.1 Moving animals back to enclosures</li> <li>8.2 Cleaning and storing equipment</li> <li>8.3 Checking and cleaning of grooming tools</li> <li>8.4 Conducting inventory of supplies in accordance to workplace procedures</li> <li>8.5 Updating workplace documents</li> </ul>
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## EVIDENCE GUIDE

1. Critical aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1 Confirmed identified schedule and workplace routine from the supervisor.</li> <li>1.2 Observed zookeeper proper hygiene.</li> <li>1.3 Provided appropriate food based on species, age and health condition of animal.</li> <li>1.4 Applied appropriate feeding technique.</li> <li>1.5 Fed animal according to the prepared diet plan.</li> <li>1.6 Provided access to potable water to animals.</li> <li>1.7 Performed proper cleaning and sanitation of enclosures, bedding and substrate based on the species' needs.</li> <li>1.8 Performed minor repair and maintenance of enclosures.</li> <li>1.9 Used appropriate cleaning tools and equipment, supplies and materials.</li> <li>1.10 Secured and maintained enclosures.</li> <li>1.11 Performed post-hygiene care</li> <li>1.12 Cleaned and stored feeding tools and materials according to workplace procedure.</li> <li>1.13 Maintained equipment used in feeding devices and cleaning tools and materials.</li> <li>1.14 Disposed waste following established organization's protocols for waste segregation.</li> <li>1.15 Documented food consumption of animals and reported in the zookeeper's daily report.</li> <li>1.16 Documented housekeeping activities, and basic maintenance in the daily report.</li> </ul>
2. Resource Implication	<p>The following resources MUST be provided:</p> <ul style="list-style-type: none"> <li>2.1 Cleaning tools</li> <li>2.2 Feeding equipment</li> <li>2.3 Communication devices</li> </ul>
3. Methods of Assessment	<p>Competency in this unit may be assessed through:</p> <ul style="list-style-type: none"> <li>3.1 Practical demonstration related to underpinning knowledge, skills and attitudes</li> <li>3.2 Assessment by immediate superiors with regards to the work accomplishment</li> <li>3.3 Interviews with the participants on actual work or training settings</li> <li>3.4 Conduct written examination</li> </ul>
4. Context for Assessment	<ul style="list-style-type: none"> <li>4.1 Competency may be assessed in the actual workplace or simulation environment in TESDA accredited institutions.</li> </ul>

**UNIT OF COMPETENCY : PROVIDE APPROPRIATE ENVIRONMENT FOR ZOO ANIMALS**

**UNIT CODE : AB-AFF0405808324302**

**UNIT DESCRIPTOR :** This unit covers the knowledge, skills and attitudes required to maintain a suitable and stress-free environment of zoo animals, provide enrichment and stimulation activities and perform behavioral training to animals.

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Maintain suitable and stress-free environment	<p>1.1 <b><i>Ex-situ</i></b> habitat and physical environment are maintained according to animal's biology and natural history.</p> <p>1.2 Appropriate space, vegetation, and climate control that mimic the animal's natural habitats are considered and provided.</p> <p>1.3 Innate and learned behavior of animals are observed and identified.</p> <p>1.4 <b><i>Animal actions, interactions and behaviors</i></b> are observed, recorded and reported in accordance with zoo established organization's procedures and protocols.</p> <p>1.5 Inappropriate and negative animal actions are reported to supervisor.</p> <p>1.6 Positive animal welfare is promoted and demonstrated.</p>	<p>1.1 Animal Welfare Act/RA 8485</p> <p>1.2 Biology and natural history per species</p> <p>1.3 Ecology of animals</p> <p>1.4 Ex situ habitat management</p> <p>1.5 Animals Innate and Learned Behavior</p> <p>1.6 Animal husbandry and animal welfare science</p> <p>1.7 Safety protocols and guidelines for both animal care and personal safety associated with working with animals</p> <p>1.8 Communications, teamwork and trust building skills and collaboration with other zookeepers, veterinarians, and support staff</p>	<p>1.1 Identifying ex-situ habitat and physical environment for zoo animals.</p> <p>1.2 Providing appropriate space, vegetation, and climate control in the animal ex-situ habitat</p> <p>1.3 Practicing good animal husbandry and animal welfare</p> <p>1.4 Identifying innate and learned behavior of animals</p> <p>1.5 Demonstrating application of positive animal welfare in daily husbandry.</p> <p>1.6 Identifying potential risks and hazards associated with working with animals</p>

	1.7 Animal behavior observations and inventory are documented in the daily zoo keeper report.	1.9 Risk and hazards associated with working with animals  1.10 Basic record keeping and monitoring  VALUES <ul style="list-style-type: none"> <li>• Time Management</li> <li>• Physical stamina and fitness</li> </ul>	1.7 Managing time and task efficiently  1.8 Demonstrating positive working attitude when handling animals  1.9 Monitoring of observation of animal behavior and reporting of animal inventory
2. Provide enrichment and stimulation activities	2.1 Important <b>stimuli</b> and animal responses are identified and described.  2.2 Observed behavior is interpreted and reported to the supervisor.  2.3 <b>Enrichment methods</b> and stimulation activities are identified and designed according to the animal's biology and natural behavior  2.4 Designed enrichment and stimulation activities are developed and implemented.  2.5 New animal care techniques and updates in zoo protocols are adopted  2.6 Effectiveness of the designed enrichment and stimulation activities are monitored in the daily zoo keepers report	2.1 Animal Welfare Act/RA 8485  2.2 Biology and natural history per species  2.3 Ecology of animals  2.4 Ex situ habitat management  2.5 Animals Innate and Learned Behavior  2.6 Animal husbandry and animal welfare science  2.7 Safety protocols and guidelines for both animal care and personal safety associated with working with animals  2.8 Communications, teamwork and trust building skills and collaboration with other zookeepers, veterinarians, and support staff  2.9 Risk and hazards associated with	2.1 Identifying important stimuli and responses of animals.  2.2 Observing and reporting animal behavior whether innate or learned behavior to the species  2.3 Designing appropriate enrichment activities according to the animal's biology and natural behavior  2.4 Applying appropriate enrichment method and stimulation according to the observed animal behavior  2.5 Implementing the designed enrichment and stimulation activities  2.6 Adapting to new animal care techniques or

		<p>working with animals</p> <p>2.10 New animal care techniques and updated zoo training programs</p> <p>VALUES</p> <ul style="list-style-type: none"> <li>• Time Management</li> <li>• Physical stamina and fitness</li> </ul>	<p>updates in zoo protocols</p> <p>2.7 Demonstrating empathy and compassion toward animals under care</p> <p>2.8 Demonstrating interpersonal skills when working with animals</p> <p>2.9 Implementing sustainable and eco-friendly enrichment initiative when possible</p> <p>2.10 Managing time and task efficiently</p> <p>2.11 Demonstrating positive working attitude when handling animals</p> <p>2.12 Monitoring of observation of animal behavior and reporting of animal inventory</p> <p>2.13 Reporting of observation of animal behavior</p>
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<p>3. Perform behavioral training</p>	<p>3.1 Animal specific responses to specific conditions or stimuli are identified and interpreted.</p> <p>3.2 Behavioral training methods and techniques are defined, identified, and differentiated.</p> <p>3.3 Appropriate <b>animal husbandry</b> and/or training programs to extend behavior and welfare are designed and evaluated.</p> <p>3.4 Basic principles and importance of animal training are summarized and discussed.</p> <p>3.5 Animal training methods and techniques are demonstrated.</p> <p>3.6 Positive reinforcement-based techniques in simple situations are performed.</p> <p>3.7 Consistency and patience are demonstrated.</p> <p>3.8 Safety and welfare of animals and zookeepers are observed.</p> <p>3.9 Effectiveness of the training techniques and activities are monitored in the daily zookeeper's report.</p>	<p>3.1 Animal Welfare Act/RA 8485</p> <p>3.2 Biology and natural history per species</p> <p>3.3 Ecology of animals</p> <p>3.4 Ex situ habitat management</p> <p>3.5 Animals Innate and Learned Behavior</p> <p>3.6 Basic Principles of Animal Training</p> <p>3.7 Importance of animal training and positive reinforcement.</p> <p>3.8 Different animal training methods and techniques</p> <p>3.9 Consequences of incorrect training</p> <p>3.10 Safety protocols and guidelines for both animal care and personal safety associated with working with animals</p> <p>3.11 Communication s, teamwork and trust building skills and collaboration with other zookeepers, veterinarians, and support staff</p> <p>3.12 Risk and hazards associated with working with animals</p>	<p>3.1 Identifying important stimuli and responses of animals.</p> <p>3.2 Observing animal specific responses to specific conditions or stimuli</p> <p>3.3 Identifying appropriate training methods for animal specific responses to specific conditions or stimuli</p> <p>3.4 Designing appropriate training program per species</p> <p>3.5 Applying appropriate training method and techniques according to the observed animal behavior</p> <p>3.6 Implementing the designed training program and techniques</p> <p>3.7 Adapting to new animal care techniques or updates in zoo protocols</p> <p>3.8 Demonstrating empathy and compassion toward animals under care</p> <p>3.9 Demonstrating consistent cues and rewards</p>
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## RANGE OF VARIABLES

VARIABLE	RANGE
1. Ex-situ	May include: <ul style="list-style-type: none"> <li>1.1 Natural habitat enclosures</li> <li>1.2 Immersion exhibits</li> <li>1.3 Mixed-species enclosures</li> <li>1.4 Aviaries</li> <li>1.5 Aquatic enclosures</li> <li>1.6 Nocturnal houses</li> <li>1.7 Safari parks</li> <li>1.8 Reptile houses</li> </ul>
2. Actions, interactions and behaviors of Animals	May include: <ul style="list-style-type: none"> <li>2.1 Signs of stress <ul style="list-style-type: none"> <li>2.1.1 Panting</li> <li>2.1.2 Pacing</li> <li>2.1.3 Excessive salivation</li> <li>2.1.4 Recumbency</li> <li>2.1.5 Increased thirst</li> </ul> </li> <li>2.2 Abnormal behaviors <ul style="list-style-type: none"> <li>2.2.1 Limping</li> <li>2.2.2 Depression</li> <li>2.2.3 Straining</li> <li>2.2.4 Altered appetite</li> <li>2.2.5 Lethargy</li> <li>2.2.6 Seizures</li> <li>2.2.7 Coughing and sneezing</li> <li>2.2.8 Over grooming/preening</li> <li>2.2.9 Aggression and irritability</li> <li>2.2.10 Zoo established organizational procedures and protocols</li> </ul> </li> </ul>
3. Stimuli	Sensory stimulation in the form of: <ul style="list-style-type: none"> <li>3.1 Auditory</li> <li>3.2 Olfactory</li> <li>3.3 Visual cues</li> </ul>
4. Enrichment methods	May include: <ul style="list-style-type: none"> <li>4.1 Food-based enrichment</li> <li>4.2 Sensory enrichment</li> <li>4.3 Social interactions</li> <li>4.4 Environment changes</li> <li>4.5 Physical exercises</li> <li>4.6 Training sessions</li> </ul>
5. Animal husbandry	May include:

	5.1 Social group management 5.2 Environmental enrichment 5.3 Diet and nutrition 5.4 Health monitoring 5.5 Reproductive management 5.6 Life support system
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## EVIDENCE GUIDE

1. Critical Aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1 Provided appropriate ex-situ habitat and physical environment to animals</li> <li>1.2 Identified innate and learned behavior of the animals under care</li> <li>1.3 Reported the animal actions, interactions and behavior to the supervisor</li> <li>1.4 Recorded the inventory of animals and animal behavior observations in the daily zoo keepers report</li> <li>1.5 Identified and described the stimuli and animal responses</li> <li>1.6 Interpreted observed animal behavior</li> <li>1.7 Identified appropriate enrichment method and stimulation activities</li> <li>1.8 Designed appropriate enrichment method and stimulation activities</li> <li>1.9 Implemented the designed enrichment method and stimulation activities</li> <li>1.10 Monitored effectiveness of the designed enrichment method and stimulation activities in the daily report</li> <li>1.11 Identified animal response to condition and stimuli</li> <li>1.12 Identified appropriate training method and technique</li> <li>1.13 Designed training program for animal welfare</li> <li>1.14 Demonstrated animal training methods and techniques</li> <li>1.15 Performed positive reinforcement to animals</li> <li>1.16 Demonstrated interpersonal skills related to training of animals</li> <li>1.17 Observed safety and welfare of animals and zoo keepers</li> <li>1.18 Monitored effectiveness of the training program in the daily zoo keeper's report</li> </ul>
2. Resource Implication	<p>The following resources MUST be provided:</p> <ul style="list-style-type: none"> <li>2.1 Enrichment activities</li> <li>2.2 Educational and interpretative tools and materials</li> <li>2.3 Training equipment, tools and materials</li> <li>2.4 Communication devices</li> <li>2.5 Protective gears and PPE</li> <li>2.6 Basic First-aid kits</li> </ul>
3. Methods of Assessment	<p>Competency in this unit may be assessed through:</p> <ul style="list-style-type: none"> <li>3.1 Practical demonstration related to underpinning knowledge, skills and attitudes</li> <li>3.2 Assessment by immediate superiors with regards to the work accomplishment</li> <li>3.3 Interviews with the participants on actual work or training settings</li> <li>3.4 Conduct written examination</li> </ul>
4. Context for Assessment	<ul style="list-style-type: none"> <li>4.1 Competency may be assessed in the actual workplace or simulation environment in TESDA accredited institutions.</li> </ul>

**UNIT OF COMPETENCY : HANDLE, RESTRAINT, MOVE AND TRANSPORT ZOO ANIMAL**

**UNIT CODE : AB-AFF0405808324303**

**UNIT DESCRIPTOR :** This unit covers the knowledge, skills and attitudes required to perform handling, restraining, moving and transporting of animals.

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Handle and restraint animal	1.1 <b><i>Stress triggers</i></b> and natural behavior of animals are identified. 1.2 Animal reactions to stress or threat are observed. 1.3 Proper handling of <b><i>animal body regions</i></b> is considered. 1.4 Safe capture techniques and handling procedures are employed to reduce the risks of escape and injury to animals and zoo keepers. 1.5 Appropriate restraining tools and equipment are used according to species needs, size and condition. 1.6 Appropriate <b><i>restraint techniques</i></b> are performed according to species needs, size and condition. 1.7 Injuries of both animals and zoo keepers are prevented. 1.8 Post restraint care is implemented.	1.1 Animal Welfare Act / RA 8485 1.2 Biology and natural history per species 1.3 Natural behaviors, instincts, and body language of the animal 1.4 Handling techniques, restraint methodologies and procedures. 1.5 Appropriate tools and equipment for animal handling and restraint 1.6 Safety protocols and guidelines for both animal care and personal safety associated with working with animals 1.7 Communications, teamwork and trust building skills and collaboration with other zookeepers, veterinarians, and support staff 1.8 Risk and hazards associated with working with animals	1.1 Identifying stress trigger factors according to animal behavior 1.2 Identifying sensitive animal body regions that should be handled with care. 1.3 Demonstrating empathy to animals and awareness of animal's body language, stress signals and behavioral cues. 1.4 Using appropriate tools and equipment to aid in handling and restraint 1.5 Identifying appropriate restraint methods and techniques according to species needs, size and condition 1.6 Employing identified restraint methods and techniques 1.7 Collaborating and communicating with teams during

	1.9 Detailed records of restraint and handling procedures are maintained.	1.9 Legal and ethical issues related to zoo management and conservation  1.10 Basic first-aid treatment	the implementation of animal restraint.  1.8 Preventing the risk of escape of animals  1.9 Preventing injury to animals and zoo keeper during animal handling and restraint  1.10 Implementing post restraint care  1.11 Maintaining and recording of detailed records of restraint and handling procedures
2. Move and transport animal	2.1 Proper approach and handling of animals are planned.  2.2 Appropriate mode of transportation is used based on the animal's needs and condition.  2.3 Transportation methods and approach are determined and coordinated.  2.4 Handling and transportation equipment are identified and selected.  2.5 Appropriate <b>transportation containers and enclosures</b> are selected and used.  2.6 Correct and safe handling and transportation is demonstrated.  2.7 Animal health and condition is prepared	2.1 Animal Welfare Act/RA 8485  2.2 Animal Transport Procedures and regulations  2.3 Basic knowledge of animal biology and taxonomy  2.4 Natural behaviors, instincts, and body language of the animal  2.5 Appropriate tools and equipment for animal handling and transportation.  2.6 Safety protocols and guidelines for both animal care and personal safety associated with working with animals  2.7 Communications, teamwork and trust building skills and	2.1 Determining the appropriate mode of transportation according to species needs, size and condition.  2.2 Using appropriate handling and transportation tools and materials  2.3 Selecting and using appropriate and safe transportation containers and enclosures.  2.4 Preparing animal health and condition to reduce stress  2.5 Following compliance with relevant movement and transportation of animals according to zoo protocols

	<p>and ensured to reduce stress</p> <p>2.8 Compliance with relevant movement and transportation of animals are observed according to zoo protocols</p> <p>2.9 Post transportation care is implemented.</p> <p>2.10 Detailed records of transportation procedures are maintained.</p>	<p>collaboration with other zookeepers, veterinarians, and support staff</p> <p>2.8 Risk and hazards associated with working with animals</p>	<p>2.6 Demonstrating correct and safe handling and transportation</p> <p>2.7 Implementing post transportation care</p> <p>2.8 Recording and maintaining detailed records of transportation procedures</p>
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## RANGE OF VARIABLES

VARIABLE	RANGE
1. Stress triggers	May include: 1.1 Environment 1.2 Zoo keepers / people 1.3 Handling, restraint and transportation equipment 1.4 Handling, restraint and transportation methods, techniques and procedures
2. Animal body regions	May include: 2.1 Head and neck 2.2 Legs and feet 2.3 Groin/ perineum 2.4 Abdomen
3. Restraint techniques	May include: 3.1 Physical 3.2 Mechanical 3.3 Chemical 3.4 Psychological
4. Transportation containers and enclosures	May include: 4.1 Custom made transport crates 4.2 Rigid plastic or fiberglass containers 4.3 Bear crates 4.4 Primate cages and banks 4.5 Tempered glass kennels 4.6 Outdoor chain-link kennels 4.7 Horse exercisers or hot walkers 4.8 Custom disposable cardboard pet carriers

## EVIDENCE GUIDE

<p>1. Critical Aspects of Competency</p>	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1 Planned and prepared the animal handling and restraint procedure</li> <li>1.2 Identified stress trigger factors according to animal behavior</li> <li>1.3 Identified sensitive animal body regions that should be handled with care</li> <li>1.4 Observed and interpreted animal's body language, stress signals and behavioral cues</li> <li>1.5 Used appropriate tools and equipment to aid in handling and restraint</li> <li>1.6 Identified appropriate restraint methods and techniques according to species needs, size and condition</li> <li>1.7 Performed identified restraint methods and techniques</li> <li>1.8 Collaborated and communicated with teams during the implementation of animal handling and restraint plans.</li> <li>1.9 Prevented the risk of animal escape</li> <li>1.10 Prevented injury to animals and zoo keeper during animal handling and restraint</li> <li>1.11 Implemented post restraint care</li> <li>1.12 Recorded and maintained detailed procedure of handling and restraint plan</li> <li>1.13 Planned the proper approach and handling of animal transportation</li> <li>1.14 Used the appropriate mode of transportation based on the animal's needs and condition</li> <li>1.15 Determined and coordinated the transportation methods and approaches</li> <li>1.16 Used appropriate handling and transportation equipment</li> <li>1.17 Used appropriate transportation containers and enclosures</li> <li>1.18 Prepared animal health and condition to reduce stress</li> <li>1.19 Demonstrated correct and safe handling and transportation</li> <li>1.20 Followed compliance with relevant movement and transportation of animals according to zoo protocols</li> <li>1.21 Performed post transportation care</li> <li>1.22 Recorded and maintained detailed transportation procedures</li> </ul>
<p>2. Resource Implication</p>	<p>The following resources MUST be provided:</p> <ul style="list-style-type: none"> <li>2.1 Restraining tools and equipment</li> </ul>

	2.2 Crates, cages and other transporting tools and equipment 2.3 Communication devices 2.4 Protective gears and PPE 2.5 First-aid kits
3. Methods of Assessment	Competency in this unit may be assessed through: 3.1 Practical demonstration related to underpinning knowledge, skills and attitudes 3.2 Assessment by immediate superiors with regards to the work accomplishment 3.3 Interviews with the participants on actual work or training settings 3.4 Conduct written examination
4. Context for Assessment	4.1 Competency may be assessed in the actual workplace or simulation environment in TESDA accredited institutions.

**UNIT OF COMPETENCY : ASSIST IN ZOO ANIMAL HEALTH MONITORING AND PROCEDURES**

**UNIT CODE : AB-AFF0405808324304**

**UNIT DESCRIPTOR :** This unit covers the knowledge, skills and attitudes required to assist in minor medical procedures, apply emergency measures and protocols and apply biosecurity measures and protocols.

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms</i> are elaborated in the Range of Variables	<b>REQUIRED KNOWLEDGE</b>	<b>REQUIRED SKILLS</b>
1. Assist in minor medical procedures	<p>1.1 Assistance in <b>minor medical procedures</b> is provided following veterinarian instructions and supervision.</p> <p>1.2 <b>Medical supplementation</b> is provided to animals as per prescribed by veterinarian.</p> <p>1.3 Appropriate tools, <del>and</del> materials and equipment are used in providing minor medical procedures and medical supplementation to animals.</p> <p>1.4 Waste and medical supplies used are disposed following zoo protocols for waste segregation policies and regulations.</p> <p>1.5 Post care and recovery procedure is performed, monitored and documented in the daily zoo keepers report.</p>	<p>1.1 RA 8485 Animal Welfare Act</p> <p>1.2 Biology and natural history</p> <p>1.3 Basic Metric Conversion</p> <p>1.4 Four fundamentals of mathematics</p> <p>1.5 Specimen collection, preparation and storage</p> <p>1.6 Veterinary supplements, drugs and biologics</p> <p>1.7 Wildlife diseases and injuries</p> <p>1.8 Zoo protocols for handling emergencies and potential risks</p> <p>1.9 Veterinary care and medical procedures</p> <p>1.10 Common health issues and administration of medications under veterinary supervision</p> <p>1.11 Behavioral monitoring and</p>	<p>1.1 Demonstrating safe handling of animals</p> <p>1.2 Assisting veterinarian during physical examinations, including holding and supporting the animal</p> <p>1.3 Collecting samples such as blood, and bodily excretions for diagnostic purposes under veterinary supervision</p> <p>1.4 Performing daily supplementation and oral medications to animals</p> <p>1.5 Perform cleaning and disinfection of minor wounds</p> <p>1.6 Providing post-care procedure and monitoring</p> <p>1.7 Compassion and Patience</p> <p>1.8 Flexibility and adaptability</p>

		<p>record keeping of the animals' health, and any observed abnormalities</p> <p>1.12 Communication skills with the veterinary staff</p> <p>1.13 Use of appropriate tools and equipment for health-related procedures</p> <p>1.14 Post- procedure care and monitoring and rehabilitation assistance</p> <p>1.15 Basic first aid knowledge for animals and zoo keepers</p> <p>1.16 Information about new developments, research, and best practices in zoo keeping.</p> <p>1.17 Efficient time and task management</p> <p>1.18 Positive Values for Zoo keepers</p> <p>1.19 Soft skills to establish trust and rapport with animal in care</p>	1.9 Attention to details
2. Apply emergency measures and protocols	<p>2.1 <b>Emergency situations</b> are identified.</p> <p>2.2 Emergency measures and protocols are applied.</p> <p>2.3 First-aid treatment is provided to animal and zoo keeper as applicable.</p>	<p>2.1 RA8485 Animal Welfare Act</p> <p>2.2 Zoo protocols for handling emergencies and potential risks</p> <p>2.3 Communication skills with the veterinary staff</p> <p>2.4 Use of appropriate tools and</p>	<p>2.1 Applying first-aid treatment</p> <p>2.2 Identifying emergency situations</p> <p>2.3 Applying preventive measures and safety practices</p> <p>2.4 Reporting accident report</p>

	<p>2.4 Preventive measures and safety practices are applied.</p> <p>2.5 Accident report is prepared following zoo protocols.</p>	<p>equipment for health-related procedures</p> <p>2.5 Post-procedure care and monitoring and rehabilitation assistance</p> <p>2.6 Basic first aid knowledge for animals and zoo keepers</p> <p>2.7 Information about new developments, research, and best practices in zoo keeping.</p> <p>2.8 Efficient time and task management</p> <p>2.9 Positive Values for Zoo keepers</p> <p>2.10 Soft skills to establish trust and rapport with animal in care</p> <p>2.11 Knowledge on disease transmission</p>	<p>according to zoo protocols</p> <p>2.5 Communication Skills</p> <p>2.6 Interpersonal Skills</p>
3. Apply biosecurity measures and protocols	<p>3.1 Isolation and quarantine protocols are followed.</p> <p>3.2 Emergency response plans for <b>potential risks and emergencies</b> are developed and regularly updated.</p> <p>3.3 Biosecurity measures and protocol are strictly followed.</p> <p>3.4 Personal Protective Equipment (PPE) is used in accordance with Occupational Safety and Health Standards (OSHS).</p>	<p>3.1 Isolation and Quarantine protocols</p> <p>3.2 Emergency response plans</p> <p>3.3 Handling of biological and hazardous items</p> <p>3.4 Biosecurity protocols, biosecurity measures and compliance</p> <p>3.5 Use of Personal Protective Equipment (PPE) in accordance with Occupational</p>	<p>3.1 Identifying animal diseases</p> <p>3.2 Practicing treatment and care for different animals</p> <p>3.3 Practicing proper cleaning, sanitation and hygiene</p> <p>3.4 Applying biosecurity protocols, biosecurity measures and compliance</p> <p>3.5 Responding to emergency, disease</p>

	<p>3.5 Sanitation and disinfection of animal enclosures are applied.</p> <p>3.6 Preventive measures and safety practices are applied.</p> <p>3.7 Proper wastes disposal is observed and followed.</p> <p>3.8 Reports are prepared following zoo protocols.</p>	<p>Safety and Health Standards (OSHS)</p> <p>3.6 Preventive measures and safety practices in zoo settings</p> <p>3.7 Proper wastes disposal and waste segregation</p> <p>3.8 Sanitation and disinfection procedures</p>	<p>outbreaks and other emergencies</p> <p>3.6 Coordination Skills</p> <p>3.7 Problem solving Skills</p> <p>3.8 Communication Skills</p> <p>3.9 Interpersonal Skills</p> <p>3.10 Attention to details</p>
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## RANGE OF VARIABLES

VARIABLE	RANGE
1. Minor medical procedures	May include: <ul style="list-style-type: none"> <li>1.1 Collection of samples</li> <li>1.2 Minor surgery</li> <li>1.3 Cleaning and disinfection of wounds</li> <li>1.4 Wing pinioning</li> <li>1.5 Umbilical cord cutting</li> <li>1.6 Tail docking</li> <li>1.7 Deworming</li> <li>1.8 Vaccination</li> <li>1.9 Vitamin supplementation</li> </ul>
2. Medical supplementation	May include: <ul style="list-style-type: none"> <li>2.1 Water soluble medicine</li> <li>2.2 Tablet and capsule</li> <li>2.3 Vitamins</li> <li>2.4 Oral antibiotic</li> </ul>
3. Emergency situation	May include: <ul style="list-style-type: none"> <li>3.1 Animal:               <ul style="list-style-type: none"> <li>3.1.1 Animal escapes</li> <li>3.1.2 Cage mate aggression</li> <li>3.1.3 Physical injury (falling,</li> <li>3.1.4 Weather related accidents (falling debris, flooding, natural calamities and disasters)</li> </ul> </li> <li>3.2 Zookeeper:               <ul style="list-style-type: none"> <li>3.2.1 Animal bites</li> <li>3.2.2 Animal scratches</li> <li>3.2.3 Physical accidents or injury</li> <li>3.2.4 Inhalation of chemicals</li> </ul> </li> </ul>
4. Potential risks and emergencies	May include: <ul style="list-style-type: none"> <li>4.1 Natural disasters               <ul style="list-style-type: none"> <li>4.1.1 Earthquakes</li> <li>4.1.2 Floods</li> <li>4.1.3 Wildfires</li> </ul> </li> <li>4.2 Animal escapes</li> <li>4.3 Health outbreaks</li> </ul>

## EVIDENCE GUIDE

1. Critical Aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1 Performed collection of samples such as blood, and bodily excretions for diagnostic purposes under veterinary supervision</li> <li>1.2 Performed cleaning and disinfection of minor wounds under veterinary supervision</li> <li>1.3 Provided supplementation or oral medications to animals in care</li> <li>1.4 Performed proper disposal of medical supplies used</li> <li>1.5 Prepared report of animal health during post care procedure and recovery</li> <li>1.6 Identified emergency situations</li> <li>1.7 Applied emergency measures following zoo protocols</li> <li>1.8 Provided first-aid treatment to animal and zoo keeper as applicable</li> <li>1.9 Performed preventive measures and safety practices</li> <li>1.10 Prepared accident report following zoo protocols</li> <li>1.11 Developed emergency response plans</li> <li>1.12 Followed Isolation and quarantine protocols</li> <li>1.13 Applied biosecurity measures and protocol</li> <li>1.14 Used PPE in accordance with OSHS</li> <li>1.15 Performed sanitation and disinfection of animal enclosures</li> <li>1.16 Applied preventive measures and safety practices</li> <li>1.17 Observed and followed proper wastes disposal</li> <li>1.18 Prepared reports following zoo protocols</li> </ul>
2. Resource Implication	<p>The following resources MUST be provided:</p> <ul style="list-style-type: none"> <li>2.1 Restraining tools and equipment</li> <li>2.2 Crates, cages and other transporting tools and equipment</li> <li>2.3 Communication devices</li> <li>2.4 Protective gears and PPE</li> <li>2.5 First-aid kits</li> <li>2.6 Sanitation and hygiene kits</li> </ul>
3. Methods of Assessment	<p>Competency in this unit may be assessed through:</p> <ul style="list-style-type: none"> <li>3.1 Practical demonstration related to underpinning knowledge, skills and attitudes</li> <li>3.2 Assessment by immediate superiors with regards to the work accomplishment</li> <li>3.3 Interviews with the participants on actual work or training settings</li> <li>3.4 Conduct written examination</li> </ul>
4. Context for Assessment	<ul style="list-style-type: none"> <li>4.1 Competency may be assessed in the actual workplace or simulation environment in TESDA accredited institutions.</li> </ul>

## GLOSSARY OF TERMS

<b>Avifauna</b>	The term "avifauna" refers to the collective bird species present in a specific geographic region or habitat during a particular period. The word "avifauna" is derived from the Latin words "avis," meaning "bird," and "fauna," which refers to the animal life in a specific area
<b>Bedding and Substrate</b>	In zoo and animal care terminology, "bedding" and "substrate" refer to materials placed within enclosures to provide a comfortable, clean, and enriching environment for animals. These materials serve various purposes, including supporting the physical and behavioral needs of the animals and facilitating hygiene and maintenance.
<b>Domesticated animals</b>	Domesticated animals are creatures that have been selectively bred and genetically adapted over generations to coexist with humans
<b>Empathy</b>	Empathy is the ability to understand and share the feelings, perspectives, or experiences of another person or living being. It involves the capacity to emotionally connect with others, recognizing and vicariously experiencing their emotions, thoughts, and situations. Empathy goes beyond intellectual understanding and often involves a genuine emotional response to the feelings of others
<b>Enclosures</b>	In zoo terminologies, an "enclosure" refers to a designated and controlled area or space where animals are housed, exhibited, and managed
<b>Enrichment</b>	In zoo terms, "enrichment" refers to a variety of activities, objects, or stimuli designed and provided to animals in captivity to enhance their physical and mental well-being
<b>Ex situ</b>	Ex situ is a Latin term that means "outside the original place" or "off-site?" In the context of conservation and biology, ex situ refers to the conservation or management of species outside their natural habitat.
<b>Herpetofauna</b>	The term "herpetofauna" refers to the collective group of amphibians and reptiles found in a particular region or habitat. The word "herpetofauna" is derived from the Greek

	words "herpeton," meaning "creeping thing," and "fauna," referring to the animal life in a specific area.
<b>Mammals</b>	<p>Mammals are a class of warm-blooded vertebrates belonging to the taxonomic group Mammalia</p> <p>Mammals are members of the group of vertebrate animals in which the young are nourished with milk from special mammary glands of the mother.</p>
<b>Taxa</b>	Taxa (singular: taxon) are the units of classification arranged in a hierarchical structure. The main taxonomic ranks, from broad to specific, are Domain, Kingdom, Phylum, Class, Order, Family, Genus, and Species.
<b>Taxonomy</b>	Taxonomy is the science of classifying and naming living organisms based on shared characteristics and evolutionary relationships
<b>Zoo animal husbandry</b>	Zoo animal husbandry refers to the science and practice of caring for and managing the physical, behavioral, and physiological needs of animals in a zoo or other captive environment. The primary goal of zoo animal husbandry is to ensure the well-being and health of animals under human care while striving to replicate natural behaviors and conditions as much as possible
<b>Zoo Curator</b>	A zoo curator is a professional responsible for overseeing and managing various aspects of a zoo's collection, including the care, well-being, and conservation of the animals. The role of a zoo curator is diverse and involves a combination of administrative, managerial, and animal care responsibilities.
<b>Zoonotics disease</b>	<p>"zoonotic" refers to diseases that can be transmitted between animals and humans</p> <p>Zoonotic diseases can be transmitted through direct contact with animals, consumption of contaminated food or water, or exposure to vectors such as mosquitoes or ticks</p>

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