

BASIC COMPETENCIES

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ENVIRONMENT LITERACY

DEFINITIONS

BASIC COMPETENCIES

Refer to non-technical skills (knowledge, skills and attitudes) that everybody will need in order to perform satisfactorily at work and in society and are considered portable and transferable irrespective of jobs and industrial settings.

ENVIRONMENT LITERACY

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Competency which covers knowledge, skills and attitudes required when exercising, evaluating, developing/enhancing, managing and sustaining effective sustainable development procedures

 UNIT OF COMPETENCY
 : ORIENT ONESELF TO ENVIRONMENTALLY SUSTAINABLE WORK STANDARDS

 UNIT CODE
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 UNIT DESCRIPTOR
 : This unit covers the knowledge skills and attitute

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitude to follow procedures for environmental hazard control, follow procedures for environmental pollution control and comply with workplace sustainability policies.

ELEMENT	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
 Follow procedures for environmental hazard control 	 1.1 Storage methods for environmentally hazardous materials are strictly followed according to environmental regulations and OSHS. 1.2 Disposal methods of hazardous wastes are followed at all times according to environmental regulations and OSHS. 1.3 PPE is used according to OSHS. 	 1.1 Storage methods of environmentally hazardous materials 1.2 Disposal methods of hazardous wastes 1.3 Usage of PPE 1.4 Environmental regulations 1.5 OSHS 	 1.1 Following storage methods of environmentally hazardous materials 1.2 Following disposal methods of hazardous wastes 1.3 Using PPE 1.4 Practicing OSHS
2. Follow procedures for environmental pollution control	 2.1 Environmental pollution control measures are compiled following standard protocol. 2.2 Procedures for solid waste management are observed according Solid Waste Act. 	 2.1 Types of pollution 2.2 Environmental pollution control measures 2.3 Different solid wastes 2.4 Solid waste management 2.5 Different noise pollution 2.6 Methods of minimizing noise 	 2.1 Complying environmental pollution control 2.2 Observing solid waste management 2.3 Complying methods of minimizing noise pollution

	2.3 Methods for minimizing noise pollution complied following environmental regulations.	pollution 2.7 Solid Waste Act	
3. Comply with workplace sustainability policies	 3.1 Methods for minimizing wastage are complied with. 3.2 Waste management procedures are employed following principles of 3Rs. 3.3 Methods for economizing or reducing resource consumption are practiced. 	 3.1 Wastage 3.2 Methods of minimizing wastage 3.3 Waste management procedures 3.4 Economizing of resource consumption 3.5 3Rs principle 	 3.1 Complying methods of minimizing wastage 3.2 Employing waste management procedures 3.3 Economizing resource consumption
FOS			

VARIABLE	RANGE			
1. PPE	1.1. Mask			
	1.2. Gloves			
	1.3. Goggles			
	1.4. Safety hat			
	1.5. Overall			
	1.6. Hearing protector			
2. Environmental pollution control	2.1 Methods for minimizing or stopping			
measures	spread and ingestion of airborne			
	particles			
	2.2 Methods for minimizing or stopping			
	spread and ingestion of gases and			
	fumes			
	2.3 Methods for minimizing or stopping			
	spread and ingestion of liquid wastes			
3. Waste management	3.1 Sorting			
procedures	3.2 Storing of items			
	3.3 Recycling of items			
	3.4 Disposal of items			
EVIDENCE GUIDE	\mathcal{N}			

1. Critical aspects of Competency	Assessment requires evidence that the candidate: 1.1 Followed procedures for environmental hazard control 1.2 Followed procedures for environmental pollution control 1.3 Complied with workplace sustainability policies		
2. Resource Implications	 The following resources should be provided: 2.1. Workplace with storage facilities 2.2. Tools, materials and equipment relevant to the tasks (ex. Cleaning tools, cleaning materials, trash bags, etc.) 2.3. PPE 2.4. Manuals and references 		
 Methods of Assessment 	 Competency in this unit may be assessed through: 3.1. Demonstration 3.2. Oral questioning 3.3. Written examination 		
4. Context for Assessment	 4.1. Competency assessment may occur in workplace or any appropriately simulated environment 4.2. Assessment shall be observed while task are being undertaken whether individually or in-group 		

UNIT OF COMPETENCY : EXERCISE SUSTAINABLE DEVELOPMENT IN THE WORKPLACE UNIT CODE :

UNIT DESCRIPTOR : This unit covers knowledge, skills and attitude to identify current resource use, comply with environmental regulations and seek opportunities to improve resource efficiency.

ELEMENTS	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Identify current resource use	 Resources used in the workplace and potential for environmental improvement are listed following industry procedures. Current usage of resources used in the workplace is measured using appropriate techniques. Data are recorded and stored following workplace protocol. All workplace resource efficiency issues are conveyed to work team and supervisor 	 ypes of resources echniques in measuring current usage of resources alculating current usage of resources ate recording and storage orkplace resource efficiency issues 	 isting of resources used easuring current usage of resources ecording and storing of data onveying workplace resource efficiency issues
2. Comply with environmental regulations	2.1 Workplace environmental hazards are identified and reported to appropriate supervisor.	 ypes of workplace environmental hazards 	 dentifying and reporting workplace environmental

	 2.2 All workplace environmental efficiency issues are conveyed to work team and supervisor. 2.3 Environmental regulations are followed based on industry protocol. 2.4 Work toward meeting efficiency targets are practiced following environmental regulations 	 orkplace environmental efficiency issues nvironmental regulations ethods of meeting efficiency targets 	hazards onveying all environmental issues. ollowing environmental regulations. racticing meeting efficiency targets in complying environmental regulations.
3. Seek opportunities to improve resource efficiency	3.1 Enterprise plans to improve environmental practices and resource efficiency are followed based on industry procedures	 Enterprise plans Improvement environmental practices and resource efficiency 	 Following enterprise plans to improve environmental practices and resource efficiency
FO	 3.2 Suggestions for improvements to workplace practices and resource efficiency are made according to industry protocol 3.3 Clarifications relating to work requirements, efficiency and impact of sustainable practices are sought from team members and/or supervisors. 	 Impact of sustainable practices on work requirements and efficiency Preparation of environmental plan Sustainable practices 	 Making suggestions for improvements to workplace practices and resource efficiency eeking clarifications relating to work requirements and efficiency and impact of sustainable practices

VARIABLE	RANGE	
Resources	Electric	
	Water	
	Fuel	
	Telecommunications	
	Supplies	
	Materials	
Workplace environmental hazards	Biological hazards	
	Chemical and dust hazards	
	Physical hazards	

1. Critical aspects of Competency	Assessment requires evidence that the candidate: 1.1 Identified current resource use
	1.2 Complied with environmental regulations
	1.3 Sought opportunities to improve resource efficiency
2. Resource	The following resources should be provided:
Implications	2.1 Workplace
	2.2 Tools, materials and equipment relevant to the tasks
	2.3 PPE
	2.4 Manuals and references
3. Methods of	Competency in this unit may be assessed through:
Assessment 🔺	3.1 Demonstration
•	3.2 Oral questioning
	3.3 Written examination
4. Context for	4.1 Competency assessment may occur in workplace or any
Assessment	appropriately simulated environment
	4.2 Assessment shall be observed while task are being
	undertaken whether individually or in-group

UNIT OF COMPETENCY : EVALUATE CURRENT SUSTAINABLE DEVELOPMENT EXERCISES IN THE WORKPLACE UNIT CODE :

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitude to investigate current practices in relation to resource usage, set targets for improvements, implement performance improvement strategies and monitor performance.

ELEMENTS	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED
1. Investigate current practices in relation to resource usage.	 1.1 Environmental regulations applying to the enterprise are identified. 1.2 Procedures for assessing compliance with environmental regulations are assessed following environmental protocol. 1.3 Information on environmental and resource efficiency systems and procedures are collected and provided to the work group where appropriate. 1.4 Current resource usage is measured and recorded by members of the work group. 1.5 Current purchasing strategies are analyzed and recorded according to 	 Environmental regulations applying to the enterprise. procedures for assessing compliance with environmental regulations. Collection information on environmental and resource efficiency systems and procedures, Measurement and recording of current resource usage Analysis and recording of current purchasing strategies. Analysis current work processes to access information and data Analysis of data and 	 Identifying environmental regulations Assessing procedures for assessing compliance Collecting information on environmental and resource efficiency systems and procedures, and Providing information to the work group Measuring and recording current resource usage Analysing and recording current purchasing strategies. Analysing current work processes to access information and data and

		industry procedures.		information		
		 1.6 Current work processes to access information and data is analysed following enterprise protocol. 1.7 Assistance in identifying areas for improvement in accessing information is provided based on the result of analysis. 	•	Identification of areas for improvement	•	Assisting identifying areas for improvement
	Set targets for mprovements	 2.1 Inputs from <i>authorized sources</i> are sought following industry procedures. 2.2 External sources of information and data are accessed according to established protocols 2.3 Alternative solutions to workplace environmental issues are evaluated following environmental regulations. 2.4 Efficiency targets are set based on evaluation and objectives. 	• • • • • • •	Inputs from stakeholders, key personnel and specialist. Procedures to access to external sources of information and data Evaluation of alternative solutions to workplace environmental issues Methods of setting efficiency targets		Seeking input from stakeholders, key personnel and specialist. Accessing external sources of information and data. Evaluating alternative solutions Setting efficiency targets.
p ir	mplement performance mprovement strategies.	 3.1 Techniques/tools to assist in achieving targets are sourced according to industry protocol. 3.2 Continuous improvement strategies to own work area of responsibility are applied based on targets 3.3 Ideas and possible solutions are 	•	Sources of techniques/tools Application of continuous improvement strategies Ideas and possible solutions to the work group and management. Integration and implementation of	•	Sourcing techniques/tools Applying continuous improvement strategies Integrating and implementing environmental and resource efficiency improvement plans. Seeking suggestions

	communicated to the work group and	environmental and resource efficiency	and ideas
	 work group and management. 3.4 Environmental and resource efficiency improvement plans for own work group are integrated and implemented with other operational activities according to organizational systems and procedures. 3.5 Suggestions and ideas about environmental and resource efficiency management are sought from stakeholders 3.6 Collected suggestions and ideas are act upon based on work requirements and need. 3.7 Costing strategies are implemented to fully value environmental assets. 	 Methods of seeking suggestions and ideas about environmental and resource efficiency management from stakeholders Action taken for the collected suggestion and ideas Implementation of costing strategies to fully value environmental assets 	 Acting on collected suggestions and ideas Implementing costing strategies
4. Monitor performa	technology are used following industry procedures and manuals.	 Evaluation and monitoring of tools and technology Documentation of outcomes and 	 Using evaluation and monitoring tools and technology Developing evaluation and
	4.2 Evaluation and monitoring, tools and technology are developed following	 communicate reports Evaluation of strategies 	 monitoring tools and technology Documenting and communicating
	industry protocol. 4.3Outcomes to report on efficiency targets are document and	 strategies. Setting of new targets 	communicating outcomes to reportsEvaluating strategies
	communicated to key personnel and	 Investigation and application of new 	Setting new targets

 stakeholders 4.4 Strategies are evaluated according industry protocol. 4.5 New targets are set based on evaluation. 4.6 New tools and strategies are investigated and applied following industry established procedures. 4.7 Successful strategies are promoted. 4.8 Participants are rewarded according to established criteria. 	 tools and strategies. Promotion of successful strategies Compensation through reward giving to participants Compensating participants of successful strategies
RANGE OF VARIABLES	

VARIABLES	RANGE
1. Authorized sources	StakeholdersKey personnelSpecialist
 Organizational systems and procedures. 	 Supply chain, procurement and purchasing Quality assurance Making recommendations and seeking approvals

1.	Critical aspects of Competency	 Assessment requires evidence that the candidate: 1.1 Investigated current practices in relation to resource usage. 1.2 Set targets for improvements 1.3 Implemented performance improvement strategies 1.4 Monitored performance
2.	Resource Implications	 The following resources should be provided: 2.1 Workplace/Assessment location 2.2 Legislation, policies, procedures, protocols and local ordinances relating to environmental protection 2.3 Case studies/scenarios relating to environmental

	protection
3. Methods of Assessment	Competency in this unit may be assessed through: 3.1 Written/ Oral Examination 3.2 Interview/Third Party Reports 3.3 Portfolio (citations/awards from GOs and NGOs, certificate of training – local and abroad) 3.4 Simulations and role-plays
4. Context for Assessment	4.1 Competency may be assessed in actual workplace or at the designated TESDA center.
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UNIT OF COMPETENCY

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DEVELOP AND/OR ENHANCE ENVIRONMENTALLY SUSTAINABLE WORK PROGRAMS IN THE WORKPLACE

UNIT CODE

UNIT DESCRIPTOR

: This unit covers the knowledge, skills and attitudes required in adhering to environmental protection principles, strategies and-guidelines

ELEMENTS	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED
1. Study guidelines for environmental concerns	 1.1 Environmental legislations/conventions and local ordinances are identified according to the different environmental aspects/impact 1.2 Industrial standard/environm ental practices are described according to the different environmental concerns 	 1.1 Features of an environmental management strategy 1.2 Environmental issues/concerns 1.3 International Environmental Protocols (Montreal, Kyoto) 1.4 Waste minimization hierarchy 1.5 Environmental planning/manage ment 1.6 Community needs and expectations 1.7 Resource availability 1.8 Environment-friendly/environm ental advocates 1.9 5S of Good Housekeeping 1.10 3Rs – Reduce, Reuse & Recycle 1.11 Sanitary Code 1.12 Environmental Code of practice 	 1.1 Communicating effectively 1.2 Performing research and analysis 1.3 Reading / interpreting data and information 1.4 Problem solving

2.	Implement specific environmental programs	 2.1 Programs/Activitie s are identified according to organizations policies and guidelines. 2.2 Individual roles/responsibilitie s are determined and performed based on the activities identified. 2.4 Problems/ constraints encountered are resolved in accordance with organizations' policies and guidelines 2.5 Stakeholders are consulted based on company guidelines 	 2.1 Features of an environmental management strategy 2.2 Environmental issues/concerns 2.3 International Environmental Protocols (Montreal, Kyoto) 2.4 Waste minimization hierarchy 2.5 Environmental planning/manage ment 2.6 Community needs and expectations 2.7 Resource availability 2.8 Environment- friendly/environm ental advocates 2.9 5S of Good Housekeeping 2.10 3Rs – Reduce, Reuse & Recycle 2.11 Sanitary Code 2.12 Environmental Code of practice 	 2.1 Communicating effectively 2.2 Performing research and analysis 2.3 Reading / interpreting data and information 2.4 Problem solving
3.	Monitor activities on	3.1 Activities are	3.1 Features of an environmental	3.1 Communicating effectively
	environmental	periodically monitored and	management	3.2 Performing
	protection/	evaluated	strategy	research and
	programs	according to the	3.2 Environmental	analysis
		objectives of the	issues/concerns	3.3 Reading /
		environmental	3.3 International	interpreting data
		program	Environmental	and information
		3.2 Feedback from stakeholders are	Protocols (Montreal, Kyoto)	3.4 Problem solving
		gathered and	3.4 Waste	
		considered in	minimization	
		proposing	hierarchy	
		enhancements to	3.5 Environmental	
		the program based	planning/manage	
		on consultations	ment	
		3.3 Data gathered are	3.6 Community	

	 analyzed based on evaluation requirements 3.4 Recommendations are submitted based on the findings 3.5 Management support systems are set/established to sustain and enhance the program 3.6 Environmental incidents are monitored and reported to concerned/proper authorities 	needs and expectations 3.7 Resource availability 3.8 Environment- friendly/environm ental advocates 3.9 5S of Good Housekeeping 3.10 3Rs – Reduce, Reuse & Recycle 3.11 Sanitary Code 3.12 Environmental Code of practice	
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VARIABLES	RANGE
1. Legislations/Conventions	May include: 1.1 Clean Air act 1.2 Clean Water Act 1.3 Solid Waste Management 1.4 Montreal Protocol 1.5 Kyoto Protocol
2. Environmental aspects/impacts	 2.1 Air pollution 2.2 Water pollution 2.3 Noise pollution 2.4 Solid waste 2.5 Flood control 2.6 Deforestation/Denudation 2.7 Radiation/Nuclear /Radio Frequency/ Microwaves 2.8 Situation 2.9 Soil erosion (e.g. Quarrying, Mining, etc.) 2.10 Coral reef/marine life protection
3. Industrial standards/ Environmental practices	 3.1 ECC standards 3.2 ISO standards 3.3 company environmental management systems (EMS)
4. Periodic	 4.1 hourly 4.2 daily 4.3 weekly 4.4 monthly 4.5 quarterly 4.6 yearly
5. Programs/Activities	 5.1 Waste disposal (on-site and off-site) 5.2 Repair and maintenance of equipment 5.3 Treatment and disposal operations 5.4 Clean-up activities 5.5 Laboratory and analytical test 5.6 Monitoring and evaluation 5.7 Environmental advocacy programs

2. Critical aspects of	Assessment requires evidence that the candidate:
Competency	1.1 Demonstrated knowledge of environmental legislations
	and local ordinances according to the different
	environmental issues/concerns.
	1.2 Described industrial standard environmental practices
	according to the different environmental issues/concerns.
	1.3 Resolved problems/ constraints encountered based on management standard procedures
	1.4 Implemented and monitored environmental practices on a
	periodic basis as per company guidelines
	1.5 Recommended solutions for the improvement of the program
	1.6 Monitored and reported to proper authorities any
	environmental incidents
2. Resource	The following resources should be provided:
Implications	2.1 Workplace/Assessment location
	2.2 Legislation, policies, procedures, protocols and local
	ordinances relating to environmental protection
	2.3 Case studies/scenarios relating to environmental
	protection
3. Methods of	Competency in this unit may be assessed through:
Assessment	3.1 Written/ Oral Examination3.2 Interview/Third Party Reports
	3.3 Portfolio (citations/awards from GOs and NGOs,
	certificate of training – local and abroad)
	3.4 Simulations and role-plays
4. Context for	4.1 Competency may be assessed in actual workplace or
Assessment	at the designated TESDA center.
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UNIT OF COMPETENCY

MANAGE AND EVALUATE WORKPLACE POLICIES AND PROCEDURES RELEVANT TO THE WORKPLACE

UNIT CODE :

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UNIT DESCRIPTOR
 This unit covers the knowledge, skills and attitudes required to analyze resource use, develop resource conservation plans, investigate alternative sources of resource, develop plans for more efficient resource use and implement selected plans.

ELEMENTS	PERFORMANCE CRITERIA Italicized terms are elaborated in the Range of Variables	REQUIRED KNOWLEDGE SKILLS	
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1. Analyze resource use	 1.1. All <i>resource</i> consuming processes are identified 1.2. Quantity and nature of resource consumed is determined 1.3. Resource flow is analyzed through different parts of the process. 1.4. <i>Wastes</i> are classified for possible source of resources. 	 Resource consuming processes Determination of quantity and nature of resource consumed nalysis of resource flow ifferent parts of the resource flow process 	 Identifying all resource consuming processes Determining quantity and nature of resource consumed nalyzing resource flow
2. Develop resource conservation plans	 2.1. Efficiency of use/conversion of resources is determined following industry protocol. 2.2. Causes of low efficiency of use of resources are determined based on industry protocol. 2.3. Plans for increasing the efficiency of resource use are developed based on findings. 2.4. Compliance of resource use plans is checked with regulations/licensing requirements 2.5. Benefit/cost of plans is determined according to 	 Efficiency of use/conversion of resources Causes of low efficiency of use Increasing the efficiency of resource use Inspection of resource use plans regulations/lice nsing requirements enefit/cost of plans 	 Determining efficiency of use/conversion of resources Determining causes of low efficiency of use Developing plans for increasing the efficiency of resource use Checking resource use plans Complying to regulations/ licensing requirements etermining benefit/cost of plans

		enterprise requirements.		
3. Investi alterna source	tive s of	Function of the resource used are determined.	 Determination of the function of the resource used 	Determining the function of the resource used
resourd	ce 3.2.	Specification for function is developed.	 Development of a specification for function 	 Developing specification for function
	3.3.	Range of sources for meeting the function is identified.	 Range of sources Determine benefit/cost for alternative 	 Identifying a range of sources for meeting that function
	3.4.	Benefit/cost for alternative resource sources are determined	resource sources	etermining benefit/cost for alternative resource sources
4. Develo for mor efficien resource	re it	different alternatives developed are compared Proposals are ranked based on benefit/cost compare to limited resources. Proposals are checked to meet regulatory requirements	 Benefit/costs for different alternatives Components of proposals Criteria on ranking proposals Regulatory requirements roposals for improving resource efficiency 	 Comparing benefit/costs for different alternatives developed Ranking proposals based on benefit/cost compare to limited resources Checking proposals meet regulatory requirements ecommending proposals for improving resource efficiency
5. Implem selecte	ed plans re ir e e	Liaising with elevant people to aplement resource fficiency plans is mployed following orkplace protocol. Follow through	 Implementation of resource efficiency plans Procedures in monitor implementation 	 Liaising with relevant people to implement Following through to ensure implementation occurs

are done to ensure implementation occurs 5.3 Implementation is monitored following industry procedures. 5.4 Adjustments are done based on requirements of implementation plan 5.5 New resource usage is checked to	 Adjustments of implementation plan Inspection of new resource usage Making adjustments to plan and implementation hecking new resource usage
ensure improvements have occurred.	

VARIABLES	RANGE
1. Resources	 Resources may include: All raw materials used in the process Water Electricity
2. Wastes	Wastes include: • Unnecessary waste • Necessary waste

1. Critical aspects of Competency	Assessment requires evidence that the candidate: 1.1 Analyzed resource use 1.2 Developed resource conservation plans 1.3 Investigated alternative sources of resource 1.4 Developed plans for more efficient resource use 1.5 Implemented selected plans
2. Resource Implications	 The following resources should be provided: 2.1 Workplace/Assessment location 2.2 Legislation, policies, procedures, protocols and local ordinances relating to environmental protection 2.3 Case studies/scenarios relating to environmental protection

3. Methods of	Competency in this unit may be assessed through:
Assessment	3.1 Written/ Oral Examination
	3.2 Interview/Third Party Reports
	3.3 Portfolio (citations/awards from GOs and NGOs,
	certificate of training – local and abroad)
	3.4 Simulations and role-plays
4. Context for	4.1 Competency may be assessed in actual workplace or
Assessment	at the designated TESDA center.

Glossary of terms:

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Necessary waste is any activity or cost which does not contribute directly to customer benefit/feature in the product, and which **cannot** be avoided (e.g. regulatory compliance and fixed costs). Necessary waste cannot be eliminated but should be managed.

Unnecessary waste is any activity or cost which does not contribute directly to customer benefit/features in the product and **can** be avoided. Unnecessary waste should be eliminated as quickly as practical.