

## ENVIRONMENTAL LITERACY

**UNIT CODE:** MATH/CU/AS/BC/06/6/A

### **Relationship to Occupational Standards:**

This unit addresses the Unit of Competency : Demonstrate Environmental Literacy

**Duration of Unit:** 40 hours

### **Unit Description**

This unit describes the competencies required demonstrate environmental literacy.it involves controlling environmental hazard, controlling environmental pollution, complying with workplace sustainable resource use, evaluating current practices in relation to resource usage, identifying environmental legislations/conventions for environmental concerns, implementing specific environmental programs, monitoring activities on environmental protection/programs, analysing resource use and developing resource conservation plans.

### **Summary of Learning Outcomes**

1. Control environmental hazard
2. Control environmental Pollution
3. Demonstrate sustainable resource use
4. Evaluate current practices in relation to resource usage
5. Identify Environmental legislations/conventions for environmental concerns
6. Implement specific environmental programs
7. Monitor activities on Environmental protection/Programs
8. Analyze resource use
9. Develop resource conservation plans

### **Learning Outcomes, Content and Suggested Assessment Methods**

<b>Learning Outcome</b>	<b>Content</b>	<b>Suggested Assessment Methods</b>
1. Control environmental hazard	<ul style="list-style-type: none"><li>• Purposes and content of Environmental Management and Coordination Act 1999</li><li>• Storage methods for environmentally hazardous materials</li><li>• Disposal methods of hazardous wastes</li></ul>	<ul style="list-style-type: none"><li>• Written questions</li><li>• Oral questions</li></ul>

	<ul style="list-style-type: none"> <li>• Types and uses of PPE in line with environmental regulations</li> <li>• Occupational Safety and Health Standards (OSHS)</li> </ul>	
2. Control environmental Pollution control	<ul style="list-style-type: none"> <li>• Types of pollution</li> <li>• Environmental pollution control measures</li> <li>• Types of solid wastes</li> <li>• Procedures for solid waste management</li> <li>• Different types of noise pollution</li> <li>• Methods for minimizing noise pollution</li> </ul>	<ul style="list-style-type: none"> <li>• Written questions</li> <li>• Oral questions</li> <li>• Role play</li> </ul>
3. Demonstrate sustainable resource use	<ul style="list-style-type: none"> <li>• Types of resources</li> <li>• Techniques in measuring current usage of resources</li> <li>• Calculating current usage of resources</li> <li>• Methods for minimizing wastage</li> <li>• Waste management procedures</li> <li>• Principles of 3Rs (Reduce, Reuse, Recycle)</li> <li>• Methods for economizing or reducing resource consumption</li> </ul>	<ul style="list-style-type: none"> <li>• Written questions</li> <li>• Oral questions</li> <li>• Role play</li> </ul>
4. Evaluate current practices in relation to resource usage	<ul style="list-style-type: none"> <li>• Collection of information on environmental and resource efficiency systems and procedures,</li> <li>• Measurement and recording of current resource usage</li> <li>• Analysis and recording of current purchasing strategies.</li> <li>• Analysis of current work processes to access information and data</li> <li>• Identification of areas for improvement</li> </ul>	<ul style="list-style-type: none"> <li>• Written questions</li> <li>• Oral questions</li> <li>• Role play</li> </ul>
5. Identify Environmental legislations/conventions	<ul style="list-style-type: none"> <li>• Environmental issues/concerns</li> </ul>	<ul style="list-style-type: none"> <li>• Written questions</li> <li>• Oral questions</li> </ul>

for environmental concerns	<ul style="list-style-type: none"> <li>• Environmental legislations /conventions and local ordinances</li> <li>• Industrial standard /environmental practices</li> <li>• International Environmental Protocols (Montreal, Kyoto)</li> <li>• Features of an environmental strategy</li> </ul>	
6. Implement specific environmental programs	<ul style="list-style-type: none"> <li>• Community needs and expectations</li> <li>• Resource availability</li> <li>• 5s of good housekeeping</li> <li>• Identification of programs/Activities</li> <li>• Setting of individual roles /responsibilities</li> <li>• Resolving problems /constraints encountered</li> <li>• Consultation with stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Written questions</li> <li>• Oral questions</li> <li>• Role play</li> </ul>
7. Monitor activities on Environmental protection/Programs	<ul style="list-style-type: none"> <li>• Periodic monitoring and Evaluation of activities</li> <li>• Gathering feedback from stakeholders</li> <li>• Analyzing data gathered</li> <li>• Documentation of recommendations and submission</li> <li>• Setting of management support systems to sustain and enhance the program</li> <li>• Monitoring and reporting of environmental incidents to concerned /proper authorities</li> </ul>	<ul style="list-style-type: none"> <li>• Oral questions</li> <li>• Written tests</li> <li>• Practical test</li> </ul>
8. Analyze resource use	<ul style="list-style-type: none"> <li>• Identification of resource consuming processes</li> <li>• Determination of quantity and nature of resource consumed</li> <li>• Analysis of resource flow through different parts of the process.</li> </ul>	<ul style="list-style-type: none"> <li>• Written tests</li> <li>• Oral questions</li> <li>• Practical test</li> </ul>

	<ul style="list-style-type: none"> <li>• Classification of wastes for possible source of resources.</li> </ul>	
9. Develop resource Conservation plans	<ul style="list-style-type: none"> <li>• Determination of efficiency of use/conversion of resources</li> <li>• Causes of low efficiency of use of resources</li> <li>• Plans for increasing the efficiency of resource use</li> </ul>	<ul style="list-style-type: none"> <li>• Written tests</li> <li>• Oral questions</li> <li>• Practical test</li> </ul>

### **Suggested Methods of Instruction**

- Instructor led facilitation of theory
- Practical demonstration of tasks by trainer
- Practice by trainees
- Observations and comments and corrections by trainers

### **Recommended Resources**

- Standard operating and/or other workplace procedures manuals
- Specific job procedures manuals
- Environmental Management and Coordination Act 1999
- Machine/equipment manufacturer's specifications and instructions
- Personal Protective Equipment (PPE)
- ISO standards
- Company environmental management systems (EMS)
- Montreal Protocol
- Kyoto Protocol