DEMONSTRATE NUMERACY SKILLS

UNIT CODE: ENG/OS/AME/4/BC/02/4/A

UNIT DESCRIPTION

This unit covers the competencies required to perform numerical functions. The person who is competent in this unit shall be able to: Identify and use whole numbers and simple fractions, decimals and percentages; Identify, measure and estimate familiar quantities for work, Read and use familiar maps, plans and diagrams for work, Identify and describe common 2D and some 3D shapes for work, Construct simple tables and graphs for work using familiar data, Identify and interpret information in familiar tables, graphs and charts for work.

ELEMENTS AND PERFORMANCE CRITERIA

Element	Performance criteria
These describe the key outcomes which make up workplace function.	These are assessable statements which specify the required level of performance for each of the elements. ***Bold and italicized terms are elaborated in the range.***
1. Identify and use whole numbers and simple fractions, decimals and percentages for work	1.1 Identify and interpret simple fractions, decimals and percentages 1.2 Demonstrate an understanding of place value by organising numbers from smallest to largest 1.3 Locate required numerical information to solve a defined problem 1.4 Determine appropriate method to solve a problem 1.5 Perform limited range of calculations using addition, subtraction, multiplication and division 1.6 Describe relationships between operations 1.7 Use estimates to check results of problem-solving process 1.8 Record numerical information recorded 1.9 Communicate results using informal and some formal language and symbolism

2. Identify, measure and estimate familiar quantities for work	2.1 Identify and interpret measurement information in workplace tasks and texts
	2.2 Identify appropriate unit of measurement for specific tasks
	2.3 Estimate simple amounts
	2.4 Select appropriate measuring equipment
	2.5 Demonstrate use of simple measuring equipment graduated in familiar units to measure specific quantities
	2.6 Perform calculations using familiar units of measurement
	2.7 Compare measurements and results against estimates
	2.8 Record and report results
	2.9 Communicate results using informal and some formal mathematical and general language
3. Read and use familiar maps, plans and diagrams for work	3.1 Identify items and places in maps, plans and diagrams
	3.2 Recognize common symbols and keys maps, plans and diagrams
	3.3 Demonstrate understanding of direction and location by describing the location of objects, or route to familiar places
	3.4 Explain location of familiar objects or places
	3.5 Demonstrate use of informal and some formal oral mathematical language
4. Identify and describe common 2D and some 3D shapes for work	4.1 Identify common 2d shapes and some common 3d shapes in familiar situations
	4.2 Compare features of common 2d shapes
	4.3 Classify common 2d shapes
	4.4 Describe common 2d and some 3d shapes using informal and some formal language
	4.5 Draw or construct common 2d shapes
	4.6 Match common 3d shapes to their 2d sketches or nets

5. Construct simple tables and graphs for work using familiar data	5.1 Identify common types of graphs 5.2 Determine data to be collected 5.3 Select method to collect data 5.4 Collect simple data 5.5 Determine one or two variables from data collected 5.6 Order and collate data 5.7 Construct table 5.8 Construct graph using data from table 5.9 Report graphic information related to work using informal and some formal mathematical and general language
6. Identify and interpret information in familiar tables, graphs and charts for work	6.1 Identified simple tables in familiar texts and contexts 6.2 Locate title, headings, rows and columns tables 6.3 Identify and interpret information and data in simple tables 6.4 Identify graphs and charts are identified in familiar texts and contexts 6.5 Locate title, labels, axes, scale and key from familiar graphs and charts 6.6 Identify and interpret information and data in familiar graphs and charts

RANGE

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

Variable	Range
1. Simple measuring equipment	May include but not limited to: 1.1 Rulers 1.2 Watches/clocks 1.3 Scales 1.4 Thermometers 1.5 AVO meter

2. Common 2D shapes and common 3D shapes	May include but not limited to: 2.1 Round 2.2 Square 2.3 Rectangular 2.4 Triangle 2.5 Sphere 2.6 Cylinder 2.7 Cube 2.8 Polygons 2.9 Cuboids
3. Visual representation	May include but not limited to: 3.1 Charts 3.2 Maps 3.3 Graphs

REQUIRED SKILLS AND KNOWLEDGE

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

Required Skills

The individual needs to demonstrate the following skills:

- Applying Fundamental operations (addition, subtraction, division, multiplication)
- Using calculator
- Using different measuring tools

Required Knowledge

The individual needs to demonstrate knowledge of:

- Types of common shapes
- Differentiation between two dimensional shapes / objects
- Formulae for calculating area and volume
- Types and purpose of measuring instruments

- Units of measurement and abbreviations
- Fundamental operations (addition, subtraction, division, multiplication)
- Rounding techniques
- Types of fractions
- Different types of tables and graphs
- Meaning of graphs, such as increasing, decreasing, and constant value
- Preparation of basic data, tables & graphs

EVIDENCE GUIDE

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

1. Critical aspects of Competency	Assessment requires evidence that the candidate: 1.1 Identify and interpret simple fractions, decimals and percentages 1.2 Performed a limited range of calculations using addition, subtraction, multiplication and division 1.3 Perform calculations using familiar units of measurement 1.4 Recognize common symbols and keys in familiar maps, plans and diagrams 1.5 Construct simple tables and graphs using familiar data 1.6 Identify and interpret information in familiar tables, graphs and charts
2. Resource Implications	2.1 Calculator 2.2 Basic measuring instruments
3. Methods of Assessment	Competency may be assessed through: 3.1 Written Test 3.2 Interview/Oral Questioning 3.3 Demonstration
4. Context of Assessment	Competency may be assessed in an off the job setting
5. Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.