	Unit ID: 332
Domain	**FOUNDATION NUMERACY SKILLS**
Title:	**Apply basic numeracy skills in different contexts**
Level: 1	**Credits: 8**

Purpose

This unit standard specifies the outcomes required to use numeracy skills to gather and convey basic information in different contexts. It includes using knowledge and conventions of common shapes to represent real life objects, measuring materials or objects, performing basic calculations associated with money and time, using maps to identify locations, giving and following directions, using and creating tables and graphs and applying simple formulae to solve arithmetic problems. This unit standard is intended for people requiring basic counting, calculating, measuring and estimating skills in order to engage in paid employment, other forms of work and/or vocational education and training.

Special Notes

1. *Glossary:*
   'Numeracy' skills refer to the ability to use mathematical terms and functions to perform routine calculations and solve routine problems.

2. This unit standard focuses on the ability to apply numeracy skills in a variety of contexts including family and social settings, workplace and institutional settings, education and training contexts and community settings.

3. *Numeracy* skills must be demonstrated in the following different contexts: family and social settings, workplace and institutional settings, education and training contexts and community settings.

Quality Assurance Requirements

This unit standard and others within the subfield may be awarded by institutions that meet the accreditation requirements set by the Namibia Qualifications Authority and the Namibia Training Authority and which comply with the national assessment and moderation requirements. Details of specific accreditation requirements and the national assessment arrangements are available from the Namibia Qualifications Authority and the Namibia Training Authority on www.nta.com.na

Elements and Performance Criteria

Element 1: Apply knowledge and conventions of common shapes to represent real life objects

Range

Two or three dimensional shapes include rectangle, triangle, sphere, cube, cylinder, pyramid, cuboids, square, polygons and circle.

Terms used to describe two or three dimensional shapes include horizontal, diagonal, vertical, parallel, sides, edges, corners and faces, arc, angles, corresponding, degrees, length, width/breadth, height, straight line, points, diameter and radius.

Conventions of plans and diagrams include border, orientation, legend, title and scale.

Performance Criteria

1.1 Common two and three-dimensional shapes are identified and correctly named.

1.2 Correct terminology is used to describe two and three-dimensional shapes.

1.3 Simple two and three-dimensional shapes and objects are accurately represented in diagrammatic form.

1.4 Plans and diagrams, and the associated conventions, are used for representing familiar real life objects.

1.5 Simple three-dimensional objects are assembled by following construction instructions, plans or diagrams.

1.6 Three-dimensional objects assembled from plans and diagrams are correctly compared and checked for accuracy with construction instructions, plans or diagrams.

Element 2: Measure materials or objects.

Range

Measures include length, area, weight, mass, time, capacity and temperature.

Units of measurement and their abbreviations may include linear measurements i.e.: millimetre, centimetre, meter kilometre; weight i.e.: milligram, gram, kilogram and tonne; time i.e.: seconds, minutes, hours, days, weeks, months, years; capacity i.e.: millilitre, litre, cubic metres; surface area i.e. millimetre squared, centimetre squared, kilometre squared, hectare; and temperature i.e.: degrees in Celsius.

Measurement instruments include rulers, watches/clocks, calibrated small containers thermometers and scales.

Simple formulae include area and volume of regular shapes.

Performance Criteria

2.1 Measuring instruments are identified and correctly selected to perform measuring tasks.

2.2 Measuring instruments are used correctly in line with manufacturer's instructions.

2.3 Simple formulae are applied to calculate area and volume of regular shapes.

2.4 Measured results are accurately recorded and reported using appropriate units of measurement and abbreviations.

2.5 Common units of measurements and their abbreviations are used to convey results orally and in writing.

Element 3: Perform basic calculations associated with money and time

Range

Calculations include using and interpreting whole numbers (including large numbers), simple fractions, decimals and percentages to make decisions about money and time in familiar situations.

Simple calculations involving time may include converting between digital and analogue time and calculating elapsed time.

Common words for ordering and comparing numbers include smaller, bigger, larger, first, second, between, less than, greater than, equal to.

Correct words, phrases and symbols used in performing arithmetical operations include add, total, subtract, minus, take away, times, multiply, share, divide, ten percent of, a quarter of, double etc.

Performance Criteria

3.1 Rounding is used to give rough approximations of numerical calculations.

3.2 Place value concepts for whole numbers and decimals are used to interpret and compare written and spoken numbers involving money.

3.3 Simple calculations involving time are accurately performed.

3.4 Fractions, decimals and percentages are converted to simplify calculations.

3.5 Simple calculations involving money are accurately performed.

3.6 Whole numbers, fractions, decimals and percentages in numerals, words and symbols are read, written and used orally.

3.7 Common words for ordering and comparing numbers are read, written and used orally.

3.8 Correct words, phrases and symbols are identified and used in performing arithmetical operations.

3.9 The meaning of calculation results is explained and results are checked for realism against the original practical situation.

Element 4: Apply numeracy skills to identify locations, give, and follow oral and written directions.

Range

Key features of maps and street directories include border, orientation, legend or key, title and scale, grid lines, list of localities.

Estimates of travelling time may include time taken to walk or travel by car.

Performance Criteria

4.1 Key features of maps or street directories are identified and interpreted to locate particular places of interest.

4.2 Distances on maps or street directories are estimated using the scale.

4.3 Distances on maps or street directories are interpreted in terms of approximate travelling time.

4.4 Familiar maps or directions are used to describe or to follow routes between locations.

4.5 Rough sketch maps of familiar areas are drawn to describe routes or locations of buildings or features of interest.

4.6 Informal language is used to describe position such as over/under, in front/behind, left/right, up/down, through, opposite, on the corner, next to.

4.7 Significant points of interest are identified and located on maps and directories.

4.8 The effectiveness of given directions are checked through the results of them being followed.

Element 5: Use and create tables and graphs to represent and interpret public information.

Range

Graphs may include simple line and bar graphs.

Tables may include simple two and three column tables, tables used in everyday life such as train, bus and airline timetables.

Performance Criteria

5.1 Key features and conventions of everyday tables and graphs are correctly identified and interpreted.

5.2 Whole numbers, percentages, decimals and fractions found on everyday tables and graphs are correctly identified and applied.

5.3 Data in a table is collected, sorted and recorded correctly using simple techniques.

5.4 Simple graphs are constructed and labelled appropriately or according to scale.

5.5 Meaning of tables and graphs such as increasing, decreasing and constant value of what is being measured is correctly identified and interpreted.

5.6 Fairness or bias of data in tables and graphs is correctly identified and explained.

Element 6: Apply simple formulae to solve arithmetic problems in real life contexts

Range

Simple formulae and algebraic expressions related to the area, perimeter and dimensions of regular and irregular shapes.

Performance Criteria

6.1 Simple formulae and algebraic expressions are used to solve basic arithmetic problems.

6.2 Simple worded problems involving unknown quantities are translated into simple algebraic equations.

6.3 Solutions to simple arithmetic problems are checked for realism using informal techniques such as backtracking, or guess, check and improve.

Registration Data

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