2016 regional benchmark for numeracy

PACIFIC DEFINITION OF NUMERACY:

> Knowledge and skills necessary to empower a person to to be able to use mathematical processes, as well as the language of mathematics, for a variety of purposes, with respect to everyday life.

A numerate person is empowered to:

- develop strong number sense through application of knowledge, skills, concepts and processes;

- communicate using the language of mathematics to share information and ideas;

- make connections within and outside of mathematics contexts;

- solve problems by employing creative, strategic and critical thinking to reason mathematically and justify findings; and

- apply knowledge to investigate, interpret, explain and make sense of the world in which they live.

The numeracy status of a person between the ages of 6 to 14 years will be determined nationally and regionally (if necessary) by referencing his/her numeracy skills to the benchmarks indicators outlined below.

However a person is considered numerate if he/she has completed four years of formal education and has met the numeracy benchmark outlined for Year 4.

Numbers strand benchmarks

Year 2	• Recognise and represent groups of objects with numbers and symbols. • Identify and interpret patterns, numbers sequences and relationships. • Recognise the face value of money in the local currency.
Year 4	• Recognise, represent and compare quantities. • Use place value to show an understanding of the number system. • Interpret number sequences using simple rules to solve problems. • Understand equivalence between fractions.

Year 6	• Demonstrate understanding of numbers and their magnitude, properties and relationships. • Interpret relationships and properties of number sequences and fractions expressed in different forms.
Year 8	• Apply and use rational numbers and relationships between them in real life situations. • Identify and demonstrate understanding of number sequences and number patterns to solve problems set in a range of different contexts.

Operations strand benchmarks

Year 2	• Recognise and apply basic arithmetic operations by using a range of countring, grouping and equal sharing strategies with whole numbers.
Year 4	• Use various representation and demonstrate mathematical skills to solve problems involving arithmetic operations.
Year 6	• Demonstrate mathematical skills in linking varioius arithmetic operations to solve problems set in a range of familiar situations.
Year 8	• Apply and express mathematical skills in solving problems involving arithmetic operations using a range of strategies.

Measurement & geometry strand benchmarks

Year 2	• Use mathematical language to represent a range of measurable quantities. • Use spatial knowledge and skills to describe and compare physical attributes of common and familiar objects in real life situations.
Year 4	• Develop awareness of different measurable quantities, units of measure and conversion between them, and measurement tools. • Show spatial and geometric skills by measuring and calculating with physical attributes of common objects and events, and by comparing and working with properties of shapes and figures.
Year 6	• Develop and use patterns and rules to facilitate calculations with measurable quantities. • Work with properties of geometric figures and objects.
Year 8	• Use formulae to represent measurable properties of shapes and figures and relationships between those properties and to perform calculations.

Data strand benchmarks

Year 2	• Collect, classify and represent sets of familiar objects in different ways and interpret the results through discussion.
Year 4	• Collect, organise, represent and interpret data in various ways.
Year 6	• Collect and represent data in tables and graphs. • Interpret and analyse results. • Recognise and use mathematical language related to common and familiar chance events.
Year 8	• Calculate and use different measures of central tendency and dispersion for a dataset. • Represent and interpret variation in data to analyse and make inferences about information represented. • Calculate probability of events from simple experiments and make inferences.