YEAR 7 MATHEMATICS CURRICULUM

Semester 2 - Term 3

Week	Topic	Learning Focus	Substrand
1	Probability	• Construct sample spaces for single step experiments. • Assign probabilities for outcomes of events.	• Construct sample spaces for single-step experiments with equally likely outcomes (VCMSP266) • Assign probabilities to the outcomes of events and determine probabilities for events (VCMSP267)
3- 6	Algebra	• Determine patterns and rules from a sequence. • Apply and determine rules/formulae. • Substitute numbers into formulae. • Determine a formula from a worded question. • Define term, expression, equation, coefficient, variable and constant. • Simplify expressions.	• Introduce the concept of variables as a way of representing numbers using letters (VCMNA251) • Create algebraic expressions and evaluate them by substituting a given value for each variable(VCMNA252) • Extend and apply the laws and properties of arithmetic to algebraic terms and expressions (VCMNA253) • Design and implement mathematical algorithms using a simple general purpose programming language(VCMNA254)
7-10	Fractions	• Explain terms such as fraction, decimal, numerator, denominator and improper fraction. • Simplify and find equivalent fractions. • Order fractions according to size. • Apply the operations +, −, ×, ÷ to fractions.	• Compare fractions using equivalence. Locate and represent positive and negative fractions and mixed numbers on a number line (VCMNA242) • Solve problems involving addition and subtraction of fractions, including those with unrelated denominators(VCMNA243) • Multiply and divide fractions and decimals using efficient written strategies and digital technologies(VCMNA244) • Express one quantity as a fraction of another, with and without the use of digital technologies (VCMNA245)
9-10	Statistics	• Classifying data • Displaying data in tables • Measures of centre • Measures of spread • Representing data graphically	• Identify and investigate issues involving numerical data collected from primary and secondary sources(VCMSP268) • Construct and compare a range of data displays including stem-and-leaf plots and dot plots(VCMSP269) • Calculate mean, median, mode and range for sets of data. Interpret these statistics in the context of data(VCMSP270) • Describe and interpret data displays using median, mean and range (VCMSP271)
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Term 4

Week	Topic	Learning Focus	Substrand
1 - 3	Decimals and Percentages	• Place value and comparing decimals • Rounding decimals. • Apply the operations +, −, ×, ÷ to decimals. • Convert between fractions, decimals and percentages and compare values. • Convert worded questions into fraction, decimal and percentage calculations.	• Round decimals to a specified number of decimal places (VCMNA246) • Connect fractions, decimals and percentages and carry out simple conversions (VCMNA247) • Find percentages of quantities and express one quantity as a percentage of another, with and without digital technologies. (VCMNA248) • Recognise and solve problems involving simple ratios(VCMNA249)
4 - 5	Positive and Negative Numbers	• Integers on the number line and number plane. • Adding, subtracting, multiplying and dividing of integers.	• Compare, order, add and subtract integers(VCMNA241)
6 - 8	Linear Equations and Coordinates	• Using inverse operations • Creating expressions • Solving using backtracking • Balancing equations	• Given coordinates, plot points on the Cartesian plane, and find coordinates for a given point (VCMNA255) • Solve simple linear equations (VCMNA256) • Investigate, interpret and analyse graphs from real life data, including consideration of domain and range(VCMNA257) •
9	Indices	• Write numbers in index notation and expanded form. • Be able to perform index calculations, square roots and cube roots on the calculator and using mental arithmetic.	• Investigate index notation and represent whole numbers as products of powers of prime numbers(VCMNA238) • Investigate and use square roots of perfect square numbers (VCMNA239)
10	Statistics	• Classifying data • Displaying data in tables • Measures of centre • Measures of spread • Representing data graphically	• Identify and investigate issues involving numerical data collected from primary and secondary sources(VCMSP268) • Construct and compare a range of data displays including stem-and-leaf plots and dot plots(VCMSP269) • Calculate mean, median, mode and range for sets of data. Interpret these statistics in the context of data(VCMSP270) • Describe and interpret data displays using median, mean and range (VCMSP271)
11	Geometry	• Measuring angles • Constructing angles • Types of angles and definitions • Properties of triangles and quadrilaterals • Parallel and perpendicular lines	• Identify corresponding, alternate and co-interior angles when two straight lines are crossed by a transversal (VCMMG264) • Investigate conditions for two lines to be parallel and solve simple numerical problems using reasoning(VCMMG265)

			- Demonstrate that the angle sum of a triangle is 180° and use this to find the angle sum of a quadrilateral(VCMMG263) - Classify triangles according to their side and angle properties and describe quadrilaterals (VCMMG262)