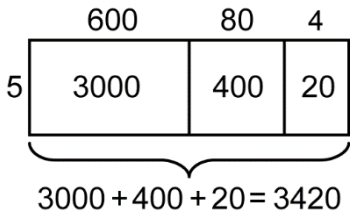
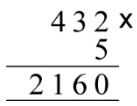
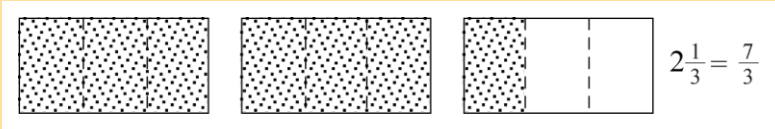
Shell Cove Public School — Mathematics Scope & Sequence — Stage 3 Year 5

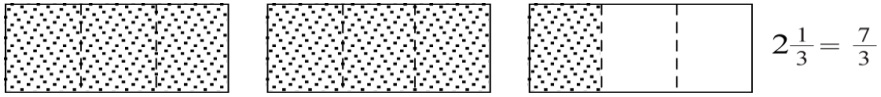
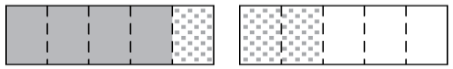
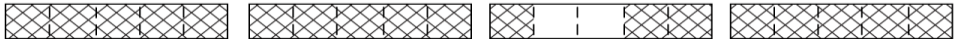
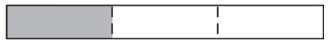
Term	Week	Content Area / Units	Outcomes	Assessment
1	1 and 2	Assessment	SENA 1 – Recording Sheet SENA 1 – Resources/Activities SENA 3 – Recording Sheet SENA 3 – Resources/Activities SENA 2 – Recording Sheet SENA 2 – Resources/Activities SENA 4 – Recording Sheet SENA 4 – Resources/Activities **For required prior knowledge refer back to Stage 2 Year 4 outcomes**	SENA Test class
	3 and 4	Whole Number (1) Data (1)	**MA3-4NA – Orders, reads and represents integers of any size and describes properties of whole numbers** • **Recognise, represent and order numbers to at least tens of millions** - **Applies an understanding of place value and the role of zero to read and write numbers of any size** - **States the place value of digits in numbers of any size** - **Arranges numbers of any size in ascending and descending order** - **Records numbers of any size using expanded notation** - **Partitions numbers of any size in non-standard forms to aid mental calculations** **MA3-1WM -** Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions **MA3-2WM -** Selects and applies appropriate problem-solving strategies, including the use of digital technologies, in undertaking investigations **MA3-3WM -** Gives a valid reason for supporting one possible solution over another **MA3-18SP - Uses appropriate methods to collect data and constructs, interprets and evaluates data displays, including dot plots, line graphs and two-way tables** • **Pose questions and collect categorical or numerical data by observation or survey** • **Construct displays, including column graphs, dot plots and tables, appropriate for data type, with and without the use of digital technologies** - Tabulates collected data - Constructs column and line graphs - Constructs dot plots • **Describe and interpret different data sets in context** **MA3-1WM -** Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions **MA3-3WM -** Gives a valid reason for supporting one possible solution over another	**Pre-Test** **Week 3 and 4 cycle**

	5 and 6	**Addition & Subtraction (1)** **(Addition Focus)** **3D Space (1)**	**MA3-5NA – Selects and applies appropriate strategies for addition and subtraction with counting numbers of any size** **ADDITION FOCUS** • **Use efficient mental, written strategies and apply appropriate digital technologies to solve problems** - Revises addition mental strategies for adding numbers (Stage 2) - Uses the term sum to describe the result of adding two or more numbers - Adds three or more numbers with different number digits - Selects, applies and records efficient mental, written and calculator strategies to solve addition problems - Uses an empty number line to record mental strategies - Compares and discusses/justifies advantages of each strategy for efficiency **MA3-1WM -** Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions **MA3-2WM -** Selects and applies appropriate problem-solving strategies, including the use of digital technologies, in undertaking investigations **MA3-3WM -** Gives a valid reason for supporting one possible solution over another **MS3-14MG identifies three-dimensional objects, including prisms and pyramids, on the basis of their properties, and visualises, sketches and constructs them given drawings of different views** • **Compare, describe and name prisms and pyramids** - Identifies and compares number/type of; faces, vertices, edges, bases, ape - Investigates cross section of three-dimensional objects • **Connect three-dimensional objects with their nets and other two-dimensional representations** **MA3-1WM -** Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions	**Pre-Test** **Week 5 and 6**
	7 and 8	**Multiplication & Division (1)** **(Focus Multiplication)**	**MA3-6NA - Selects and applies appropriate strategies for multiplication and division, and applies the order of operations to calculations involving more than one operation** • **Solve problems involving multiplication of large numbers by one-or two digit numbers using efficient mental and written strategies and appropriate digital technologies** • **Uses mental and written strategies to multiply three and four-digit numbers by one-digit numbers, including;** - multiplying the thousands, then the hundreds, then the tens and then the ones, e.g. $673 \times 4 = (600 \times 4) + (70 \times 4) + (3 \times 4)$ $= 2400 + 280 + 12$ $= 2692$	**Pre-Test** **Week 7 and 8**

	7 and 8	**Angles (1)**	- using an area model, eg 684 × 5  - using the formal algorithm, e.g. 432 × 5  **MA3-1WM -** Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions **MA3-2WM -** Selects and applies appropriate problem-solving strategies, including the use of digital technologies, in undertaking investigations **MA3-3WM -** Gives a valid reason for supporting one possible solution over another **MA3-16MG - Measures and constructs angles, and applies angle relationships to find unknown angles** • **Investigate, with and without the use of technologies, angles on a straight line, angles at a point, and vertically opposite angles; use the results to find unknown angles** - Identifies the arms and vertex of an angle where both arms are invisible, such as for rotations and rebounds - Recognises the need for formal unit of measurement of angles - Records angles using symbol for degrees - Measures angles of up to 360 degrees using a protractor **MA3-1WM -** Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions	**Pre- Test 9 and 10**

	9 and 10	**Fractions & Decimals (1)** **Length (1)**	• **MA3-7NA - Compares, orders and calculates with fractions, decimals and percentages** • **Compare and order common unit fractions and locate and represent them on a number line** - Places fractions with denominators of 2,3,4,5,6,8,10 and 12 on a number line between 0 and 1 - Compares and orders unit fractions with denominators of 2, 3, 4, 5, 6, 8, 10, 12 and 100 - Investigates strategies to solve problems involving addition and subtraction of fractions with the same denominator - Identifies and describes 'proper fractions' as fractions in which the numerator is less than the denominator - Identifies and describes 'improper fractions' as fractions in which the numerator is greater than the denominator - Expresses mixed numerals as improper fractions and vice versa, through the use of diagrams and number lines, leading to a mental strategy, e.g.  **MA3-1WM** - Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions **MA3-2WM** - Selects and applies appropriate problem-solving strategies, including the use of digital technologies, in undertaking investigations **MA3-3WM** - Gives a valid reason for supporting one possible solution over another **MA3-9MG - Selects and uses the appropriate unit and device to measure lengths and distances, calculates perimeters, and converts between units of length** • **Choose appropriate units of measurement for length** - Recognises the need for formal unit longer than the metre - Recognises that there are 1000 metres in one kilometer - Records lengths and distances using combinations of millimetres, centimetres, metres and kilometres, e.g. 1 km 200m - Estimates lengths and distances using appropriate unit and check by measuring **MA3-1WM** - Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions **MA3-2WM** - Selects and applies appropriate problem-solving strategies, including the use of digital technologies, in undertaking investigations **MA3-3WM** - Gives a valid reason for supporting one possible solution over another	**Post Test Weeks 3-10**
	11	**Revisions of Key Concepts Assessment**	**Base this on your class needs**	

Shell Cove Public School	Mathematics Scope & Sequence	Stage 3 Year 5		
Term	**Week**	**Content Area / Units**	**Outcomes**	**Assessment**
2	**1 and 2**	**Whole Number (1)** **Time (1)**	**MA3-4NA – Orders, reads and represents integers of any size and describes properties of whole numbers** • **Identify and describe factors and multiples of whole numbers and use them to solve problems** - Determines all 'factors' of a given whole number, e.g. 36 has factors 1, 2, 3, 4, 6, 9, 12, 18, and 36 - Determines the 'highest common factor' (HCF) of two whole numbers, e.g. HCF of 16 and 24 is 8 - Determines 'multiples' of a given whole number - Determines the 'lowest common multiple' (LCM) of two whole numbers, e.g. the LCM of 21 and 63 is 63 **MA3-1WM -** Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions **MA3-2WM -** Selects and applies appropriate problem-solving strategies, including the use of digital technologies, in undertaking investigations **MA3-3WM -** Gives a valid reason for supporting one possible solution over another **MA3-31MG – uses 24-hour time and am and pm notation in real-life situations, and constructs timelines** • **Compare 12-and 24-hour time systems and convert between them** - Tells time accurately using 24-hour time, eg '2330 is the same as 11:30 pm - Converts between 24-hour time and time given using am or pm notation - Compares the local times in various time zones in Australia, including daylight saving • **Determine and compare the duration of events** - Selects appropriate unit to measure a particular time period - Uses start and finish time to calculate the elapsed time of events **MA3-1WM -** Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions **MA3-2WM -** Selects and applies appropriate problem-solving strategies, including the use of digital technologies, in undertaking investigations	**Pre-Test** **Week 1 and 2**
	3 and 4	**Fractions and Decimals (1)**	**MA3-7NA - Compares, orders and calculates with fractions, decimals and percentages** • **Investigate strategies to solve problems involving addition and subtraction of fractions with the same denominator** • **Identifies and describes 'proper fractions' as fractions in which the numerator is less than the denominator**	**Pre-Test** **Week 3 and 4**

	3 and 4	**2D Space (1)**	• **Identifies and describes 'improper fractions' as fractions in which the numerator is greater than the denominator** - Expresses mixed numerals as improper fractions and vice versa, through the use of diagrams and number lines, leading to a mental strategy, e.g.  $2\frac{1}{3} = \frac{7}{3}$ - Models and represents strategies, including using diagrams, to add proper fractions with the same denominator, where the result may be a mixed numeral, e.g. $\frac{1}{5} + \frac{2}{5} = \frac{3}{5}$  or $\frac{4}{5} + \frac{3}{5} = \frac{7}{5} = 1\frac{2}{5}$  - Models and represents a whole number added to a proper fraction, e.g. $2 + \frac{3}{4} = 2\frac{3}{4}$ - Subtracts a proper fraction from another proper fraction with the same denominator, e.g. $\frac{7}{8} - \frac{2}{8} = \frac{5}{8}$ • **Model and represent strategies, including using diagrams, to add mixed numerals with the same denominator, e.g.** $2\frac{1}{5} + 1\frac{2}{5} = 3\frac{3}{5}$  - Uses diagrams, and mental and written strategies, to subtract a unit fraction from any whole number including 1, e.g. $1 - \frac{1}{3} = \frac{2}{3}$  • **Solve word problems that involve addition and subtraction of fractions with the same denominator, e.g. 'I eat $\frac{1}{5}$ of a block of chocolate and you eat $\frac{3}{5}$ of the same block. How much of the block of chocolate has been eaten?**	

MA3-1WM - Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions

MA3-2WM - Selects and applies appropriate problem-solving strategies, including the use of digital technologies, in undertaking investigations

MA3-3WM - Gives a valid reason for supporting one possible solution over another

MA3-15MG - Manipulates, classifies and draws two-dimensional shapes, including equilateral,

			isosceles and scalene triangles, and describes their properties • **Classify two-dimensional shapes and describes their features** • **Describe translations, reflections and rotations of two-dimensional shapes** **MA3-1WM -** Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions **MA3-2WM -** Selects and applies appropriate problem-solving strategies, including the use of digital technologies, in undertaking investigations	
	5 and 6	**Addition and Subtraction (1) (Subtraction Focus)** **Area (1)**	**MA3-5NA – Selects and applies appropriate strategies for addition and subtraction with counting numbers of any size** **SUBTRACTION FOCUS** • **Use efficient mental, written strategies and apply appropriate digital technologies to solve problems** - Revises subtraction mental strategies for subtracting numbers (stage 2) - Subtracts three or more numbers with different number digits - Selects, applies and records efficient mental, written and calculator strategies to solve subtraction problems - Uses an empty number line to record mental strategies - Compares and discusses/justifies advantages of each strategy for efficiency - Uses estimation and rounding to check reasonableness of answers calculated - Checks solutions to problems, including using the inverse operation **MA3-1WM -** Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions **MA3-2WM -** Selects and applies appropriate problem-solving strategies, including the use of digital technologies, in undertaking investigations **MA3-3WM -** Gives a valid reason for supporting one possible solution over another **MA3-10MG – Selects and uses the appropriate unit to calculate areas, including areas of squares, rectangles and triangles** • **Choose appropriate units of measurement for area** - Recognises the need for formal units larger than the square metre - Records areas using the abbreviations for square kilometre and hectares • **Calculate the areas of rectangles using familiar metric units** **MA3-1WM -** Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions **MA3-2WM -** Selects and applies appropriate problem-solving strategies, including the use of digital technologies, in undertaking investigations	**Pre-Test** **Week 5 and 6** **Post-Test** **Weeks 1-4 (reporting)**

	7 and 8	**Multiplication and Division (1)** **(Focus on Division)**	**MA3-6NA - Selects and applies appropriate strategies for multiplication and division, and applies the order of operations to calculations involving more than one operation** • **Solve problems involving division by a one-digit number, including those that result in a remainder** - Selects and uses the term 'quotient' to describe the result of a division calculation - Recognises and use different notations to indicate division, e.g. 25 ÷ 4, $4\overline{)25}$, $\frac{25}{4}$ - Records remainders as fractions and decimals, e.g. $25 \div 4 = 6\frac{1}{4}$ or 6.25 - Uses mental and written strategies to divide a number with three or more digits by a one-digit divisor where there is no remainder, including: - Dividing the hundreds, then the tens, and then the ones, e.g. 3248 ÷ 4 $3200 \div 4 = 800$ $40 \div 4 = 10$ $8 \div 4 = 2$ so $3248 \div 4 = 812$ - Using the formal algorithm, e.g. 258 ÷ 6 $6\overline{)258}$ (43) - Use mental and written strategies to divide a number with three or more digits by a one-digit divisor where there is a remainder, including: - Dividing the tens and then the ones, e.g. 243 ÷ 4 $240 \div 4 = 60$ $3 \div 4 = \frac{3}{4}$ so $243 \div 4 = 60\frac{3}{4}$ - Using the formal algorithm, e.g. 587 ÷ 6 $6\overline{)587}$ ($97\frac{5}{6}$) - Show the connection between division and multiplication, including where there is a remainder, e.g. 25 ÷ 4 = 6 remainder 1, so 25 = 4 × 6 + 1 - Use digital technologies to divide whole numbers by one- and two-digit divisors **MA3-1WM -** Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions **MA3-2WM -** Selects and applies appropriate problem-solving strategies, including the use of digital technologies, in undertaking investigations	**Pre-Test** **Week 7 and 8**

	7 and 8	**Angles (1)**	**MA3-3WM -** Gives a valid reason for supporting one possible solution over another **MA3-16MG - Measures and constructs angles, and applies angle relationships to find unknown angles** • **Investigate, with and without the use of technologies, angles on a straight line, angles at a point, and vertically opposite angles; use the results to find unknown angles** - Identifies the arms and vertex of an angle where both arms are invisible, such as for rotations and rebounds - Recognises the need for formal unit of measurement of angles - Records angles using symbol for degrees - Measures angles of up to 360 degrees using a protractor • **Construct angles using a protractor** - Identifies, compares and describes angles - Estimates and measures angles in degrees **MA3-1WM -** Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions	**Pre-Test** **Week 9 and 10** Post Test Weeks 5-10
	9 and 10	**Patterns and Algebra (1)**	**MA3-8NA - Analyses and creates geometric and number patterns, constructs and completes number sentences, and locates points on the Cartesian plane** • **Describe, continue and create patterns with fractions, decimals and whole numbers resulting from addition and subtraction** (ACMNA107) - Identifies, continues and creates simple number patterns involving addition and subtraction - Describes patterns using the terms 'increase' and 'decrease', e.g. for the pattern 48, 41, 34, 27, …, 'The terms decrease by seven' - Creates, with materials or digital technologies, a variety of patterns using whole numbers, fractions or decimals, e.g. $\frac{1}{4}, \frac{2}{4}, \frac{3}{4}, \frac{4}{4}, \frac{5}{4}, \frac{6}{4}$, … or 2.2, 2.0, 1.8, 1.6, … - Uses a number line or other diagram to create patterns involving fractions or decimals **MA3-1WM -** Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions **MA3-2WM -** Selects and applies appropriate problem-solving strategies, including the use of digital technologies, in undertaking investigations **MA3-3WM -** Gives a valid reason for supporting one possible solution over another	

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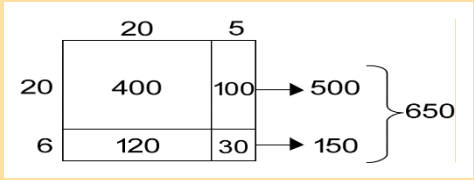
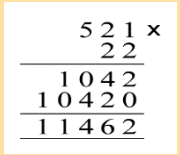
Term	**Week**	**Content Area / Units**	**Outcomes**	**Assessment**
3	**1 and 2**	**Fractions and Decimals (1)** **Mass (1)**	**MA3-7NA - Compares, orders and calculates with fractions, decimals and percentages** • **Recognises that the place value system can be extended beyond hundredths** - Expresses thousandths as decimals - Interprets decimal notation for thousandths, e.g. $0.123 = \frac{123}{1000}$ - States the place value of digits in decimal numbers of up to three decimal places - Compares, orders and represents decimals • **Compare, order and represent decimals** - compare and order decimal numbers of up to three decimal places, e.g. 0.5, 0.125, 0.25 - Interprets zero digit(s) at the end of a decimal, e.g. 0.170 has the same value as 0.17 - Places decimal numbers of up to three decimal places on a number line between 0 and 1 **MA3-1WM -** Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions **MA3-2WM -** Selects and applies appropriate problem-solving strategies, including the use of digital technologies, in undertaking investigations **MA3-12MG - Selects and uses the appropriate unit and device to measure the masses of objects, and converts between units of mass** • **Choose appropriate units of measurement for mass** - Recognises the need for a formal unit larger than the kilogram - Uses the tonne to record large masses, the abbreviation for tonnes (t) - Distinguishes between the 'gross mass' and the 'net mass' of containers holding substances, e.g. cans of soup - Interprets information about mass on commercial packaging - Solves problems involving gross mass and net mass, e.g. find the mass of a container given the gross mass and the net mass - Select and use the appropriate unit and device to measure mass, e.g. electric scales, kitchen scales **MA3-1WM -** Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions **MA3-2WM -** Selects and applies appropriate problem-solving strategies, including the use of digital technologies, in undertaking investigations	**Pre-Test** **Week 1 and 2**

	3 and 4	**Addition and Subtraction (1)** **Volume and Capacity (1)**	**MA3-5NA – Selects and applies appropriate strategies for addition and subtraction with counting numbers of any size** • **Create simple financial plans** - Uses knowledge of addition and subtraction facts to create a financial plan, such as budgets - Records numerical data in a simple spreadsheet - Gives reasons for selecting, prioritising and deleting items when creating a budget **MA3-1WM -** Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions **MA3-2WM -** Selects and applies appropriate problem-solving strategies, including the use of digital technologies, in undertaking investigations **MA3-3WM -** Gives a valid reason for supporting one possible solution over another **MA3-11MG - Selects and uses the appropriate unit to estimate, measure and calculate volumes and capacities, and converts between units of capacity** • **Choose appropriate units of measurement for volume and capacity** - Selects and use appropriate units of measurement - Measures the volumes of rectangular containers by packing them with cubic centimetre blocks - Recognises the need for a formal unit larger than cubic centimetre - Construct and use the cubic metre as a unit to measure larger volumes - Records volumes using abbreviation for cubic metres - Estimates the size of a cubic metre, half a cubic metre and two cubic metres **MA3-1WM -** Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions **MA3-2WM -** Selects and applies appropriate problem-solving strategies, including the use of digital technologies, in undertaking investigations **MA3-3WM -** Gives a valid reason for supporting one possible solution over another	**Pre-Test** **Week 3 and 4**
		Patterns and Algebra (1)	**MA3-8NA - Analyses and creates geometric and number patterns, constructs and completes number sentences, and locates points on the Cartesian plane** • **Use equivalent number sentences involving multiplication and division to find unknown quantities** - Completes number sentences that involve more than one operation by calculating missing numbers, e.g. $5 \times \square = 4 \times 10, 5 \times \square = 30 - 10$ - Describes strategies for completing simple number sentences and justify solutions - Identifies and use inverse operations to assist with the solution of number sentences, e.g. $125 \div 5 = \square$ becomes $\square \times 5 = 125$	**Pre-Test** **Week 5 and 6**

	5 and 6	**Chance (1)**	- Describes how inverse operations can be used to solve a number sentence - Complete number sentences involving multiplication and division, including those involving simple fractions or decimals, e.g. $7 \times \square = 7.7$ - Checks solutions to number sentences by substituting the solution into the original question - Write number sentences to match word problems that require finding a missing number, e.g. 'I am thinking of a number that when I double it and add 5, the answer is 13. What is the number?' **MA3-1WM -** Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions **MA3-2WM -** Selects and applies appropriate problem-solving strategies, including the use of digital technologies, in undertaking investigations **MA3-3WM -** Gives a valid reason for supporting one possible solution over another **MA3-19SP - Conducts chance experiments and assigns probabilities as values between 0 and 1 to describe their outcomes** • **List outcomes of chance experiments involving equally likely outcomes and represent probabilities of those outcomes using fractions** • **Recognises that probabilities range from 0 to 1** - Establishes that the sum of the probabilities of the outcomes of any chance experiment is equal to 1 - Orders commonly used chance words on nan interval from zero ('impossible') to one ('certain'), e.g. 'equally likely' would be placed at half or 0.5 **MA3-1WM -** Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions **MA3-2WM -** Selects and applies appropriate problem-solving strategies, including the use of digital technologies, in undertaking investigations **MA3-3WM -** Gives a valid reason for supporting one possible solution over another	
	7 and 8	**Multiplication and Division (1) (Focus Multiplication)**	**MA3-6NA - Selects and applies appropriate strategies for multiplication and division, and applies the order of operations to calculations involving more than one operation** • **Solves problems involving multiplication of large numbers by one- or two-digit numbers using efficient mental and written strategies and appropriate digital technologies** - Revise using mental and written strategies to multiply three- and four-digit numbers by one-digit numbers (as per term 1) - Use mental and written strategies to multiply two- and three-digit numbers by two-digit numbers, including:	**Pre-Test Week 7 and 8**

			- Using an area model for two-digit by two-digit multiplication, e.g. 25 × 26  – Factorising the numbers, e.g. 12 × 25 = 3 × 4 × 25 = 3 × 100 = 300 – Using the extended form (long multiplication) of the formal algorithm, e.g.  - Use digital technologies to multiply numbers of up to four digits - Apply appropriate mental and written strategies, and digital technologies, to solve multiplication word problems - Records the strategy used to solve multiplication word problems **MA3-1WM -** Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions **MA3-2WM -** Selects and applies appropriate problem-solving strategies, including the use of digital technologies, in undertaking investigations **MA3-3WM -** Gives a valid reason for supporting one possible solution over another	
	Data (1)		**MA3-18SP - Uses appropriate methods to collect data and constructs, interprets and evaluates data displays, including dot plots, line graphs and two-way tables** • **Construct displays, including column graphs, dot plots and tables, appropriate for data type, with and without the use of digital technologies** - Tabulates collected data - Constructs column and line graphs - Constructs dot plots • **Describe and interpret different data sets in context** **MA3-1WM -** Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions **MA3-3WM -** Gives a valid reason for supporting one possible solution over another	
	9	**Whole Number (1)**	**MA3-4NA – Orders, reads and represents integers of any size and describes properties of whole numbers** • **Recognise, represent and order to at least tens of millions** - Use numbers of any size in real-life situations, including money problems - Interprets information from the internet, the media, the environment and other sources	**Pre-Test Week 9**

		Angles (1)	- Round numbers to a specified place value, eg round 5 461 883 to the nearest million **MA3-1WM -** Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions **MA3-2WM -** Selects and applies appropriate problem-solving strategies, including the use of digital technologies, in undertaking investigations **MA3-3WM -** Gives a valid reason for supporting one possible solution over another **MA3-16MG - Measures and constructs angles, and applies angle relationships to find unknown angles** • **Investigate, with and without the use of technologies, angles on a straight line, angles at a point, and vertically opposite angles; use the results to find unknown angles** • **Construct angles using a protractor** - Identifies right angles, straight angles and an angle revolution - Identifies and describes angle size in degrees for each of the classifications acute, obtuse and reflex - Identifies, compares and describes angles - Estimates and measures angles in degrees **MA3-1WM -** Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions	
	10	**Revisions of Key Concepts** **Assessment**	**Base this on your class needs**	**Post-Test** **Weeks 1-9**

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Term	**Week**	**Content Area / Units**	**Outcomes**
4	**1 and 2**	**Fractions and Decimals (1)**	**MA3-7NA - Compares, orders and calculates with fractions, decimals and percentages** • **Investigate strategies to solve problems involving addition and subtraction of fractions with the same denominator** - Revise as needed content in Term 1 – 3 - Identify proper and improper fractions - Compare and order fractions and decimals **MA3-1WM -** Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions **MA3-2WM -** Selects and applies appropriate problem-solving strategies, including the use of digital technologies, in undertaking investigations **MA3-3WM -** Gives a valid reason for supporting one possible solution over another
		Position (1 &2)	**MA3-17MG - Locates and describes position on maps using a grid-reference system** • **Use grid-reference system to describe locations** - Finds and describes locations on maps, given grid reference and using map - legends • **Describe routes using landmarks ad directional language (including compass directions)** - Describes, follows and finds a location on a map that is in a given direction from a - town or land mark, using directional language (including compass directions) **MA3-1WM -** Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions
	3 and 4	**Whole Number (1)**	**MA3-4NA – Orders, reads and represents integers of any size and describes properties of whole numbers** - Recognises, represents and orders number to at least tens of millions - Uses numbers in real life situations, including money problems - Recognises different abbreviations of numbers - Rounds numbers to a specified place value - Identifies and describes factors and multiples of whole number and use them to solve problems - Solves problems using knowledge of factors and multiples **MA3-1WM -** Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions **MA3-2WM -** Selects and applies appropriate problem-solving strategies, including the use of digital technologies, in undertaking investigations **MA3-3WM -** Gives a valid reason for supporting one possible solution over another
		Length (1) /Area (1)	

Assessment
Pre-Test Week 1 and 2
Pre-Test Week 3 and 4 **Post-Test Weeks 1-4 (reporting)**

			- MA3-9MG - Selects and uses the appropriate unit and device to measure lengths and distances, calculates perimeters, and converts between units of length - Calculates the perimeters of rectangles and common two-dimensional shapes using familiar metric units **MA3-10MG selects and uses the appropriate unit to calculate areas, including areas of squares, rectangles and triangles** • **Calculate the area of rectangles using familiar metric units** - Makes comparisons to perimeter of different rectangles with same area. **MA3-1WM -** Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions **MA3-2WM -** Selects and applies appropriate problem-solving strategies, including the use of digital technologies, in undertaking investigations **MA3-3WM -** Gives a valid reason for supporting one possible solution over another	
	5 and 6	**Addition and Subtraction (1)** **<u>Focus on Problem Solving</u>** **2D Space (1)**	**MA3-5NA – Selects and applies appropriate strategies for addition and subtraction with counting numbers of any size** • **Use efficient metal and written strategies and apply appropriate digital technologies to solve problems** - Revise mental and written addition and subtraction strategies as required. - Select and apply efficient metal and written strategies and appropriate digital technologies to solve word problems involving addition and subtraction of any size. **MA3-1WM -** Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions **MA3-2WM -** Selects and applies appropriate problem-solving strategies, including the use of digital technologies, in undertaking investigations **MA3-3WM -** Gives a valid reason for supporting one possible solution over another **MA3-15MG - Manipulates, classifies and draws two-dimensional shapes, including equilateral, isosceles and scalene triangles, and describes their properties** • **Classify two-dimensional shapes and describes their features** - Describe translations, reflections and rotations of two-dimensional shapes • **Identify line and rotational symmetries** - Identify and quantify the total number of lines (axes) of symmetry (if any exist) of two-dimensional shapes - Identify shapes that have rotational symmetry and determine the 'order' of rotational symmetry • **Apply the enlargement transformations to familiar two-dimensional shapes and explore the properties of the resulting image compared with the original**	**Pre-Test** **Week 5 and 6**

			MA3-1WM - Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions **MA3-2WM -** Selects and applies appropriate problem-solving strategies, including the use of digital technologies, in undertaking investigations	
	7 and 8	**Multiplication and Division (1)** **Time (1)**	**MA3-6NA - Selects and applies appropriate strategies for multiplication and division, and applies the order of operations to calculations involving more than one operation** • **Select and apply efficient mental and written strategies, and appropriate digital technologies, to solve word problems involving multiplication and division of whole number** - Record strategy used - Use estimation and rounding to check the reasonableness of answers to calculations - **Revision as needed of mental and written strategies as per term 1-3** **MA3-1WM -** Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions **MA3-2WM -** Selects and applies appropriate problem-solving strategies, including the use of digital technologies, in undertaking investigations **MA3-3WM -** Gives a valid reason for supporting one possible solution over another **MA3-31MG – uses 24-hour time and am and pm notation in real-life situations, and constructs timelines** • **Read and write analog and digital times.** - Compare 12 - and 24 - hour times and convert between them • **Determine and compare the duration of events** **MA3-1WM -** Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions **MA3-2WM -** Selects and applies appropriate problem-solving strategies, including the use of digital technologies, in undertaking investigations	
	9 and 10	**Revisions of Key Concepts**	**Base this on your class needs**	