Surveyors Creek PS

Mathematics Scope & Sequence

Stage Three

*These documents are to be used in conjunction when planning a teaching cycle for each term. The scope and sequences have been colour coded to match the syllabus colour and to match the colour assigned to each stage:
Early Stage 1 = Yellow Stage 1 = Pink Stage 2 = Green Stage 3 = Orange

S3 Mathematics Scope and Sequence

Term 1

NOTE: Working mathematically should be imbedded into all mathematics lesson/activities.

MA1-1WM describes mathematical situations and methods using everyday and some mathematical language, actions, materials, diagrams and symbols
MA1-2WM uses objects, diagrams and technology to explore mathematical problems
MA1-3WM supports conclusions by explaining or demonstrating how answers were

Week	Outcomes	Content	Assessment
1	**Initial Assessment**	SENA 1 –Resources/Activities SENA 1 – Recording Sheet SENA 2 –Resources/Activities SENA 2 – Recording Sheet SENA 3 – Resources/Activities SENA 3 – Recording Sheet SENA 4 – Resources/Activities SENA 4 – Recording Sheet	
2	**Whole Number (1)** **MA3-4NA – Orders, reads and represents integers of any size and describes properties of whole numbers**	○ Read, write and order numbers of any size ○ State the place value of digits in numbers of any size ○ Record numbers of any size using expanded notation	
	Data (1) **(Relate to Whole Number)** **MA3-18SP – Uses appropriate methods to collect data and constructs, interprets and evaluates data displays, including dot plots, line graphs and two-way tables**	○ Collect categorical and numerical data by observation and by survey ○ Construct data displays, including tables, column graphs, dot plots and line graphs, appropriate for the data type	
3	**Addition and Subtraction** **MA3-5NA – Selects and applies appropriate strategies for addition and subtraction with counting numbers of any size**	○ Select and apply efficient mental, written and calculator strategies for addition and subtraction of numbers of any size ○ Use estimation to check answers to calculations	

	3D Space (1) **MA3-14MG – 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**	○ Name prisms and pyramids according to the shape of their 'base' ○ Describe and compare properties of prisms and pyramids in terms of their faces, edges and vertices	
4	**Multiplication and Division (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**	○ Use and record a range of mental and written strategies to multiply by one- and two-digit operators ○ Solve word problems and record the strategy used ○ Use estimation to check answers to calculations	
	Angles (1) **(relate to 3D Space)** **MA3-16MG - Measures and constructs angles, and applies angle relationships to find unknown angles**	○ Recognise the need for formal units to measure angles ○ Measure, compare and estimate angles in degrees (up to 360°)	
5	**Fractions & Decimals (1)** **(Relate to Length)** **MA3-7NA - Compares, orders and calculates with fractions, decimals and percentages**	○ Compare and order unit fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12 and 100 ○ Model and represent strategies to add and subtract fractions with the same denominator ○ Express mixed numerals as improper fractions and vice versa	**Year 5 Assessment** **Year 6 Assessment**
	(Length 1) **MA3-9MG - Selects and uses the appropriate unit and device to measure lengths and distances, calculates perimeters, and converts between units of length**	○ Use the kilometre to measure lengths and distances ○ Select and use appropriate instruments and units to measure lengths ○ Record lengths and distances using the abbreviations km, m, cm and mm	**Week 5: PLAN DATA ENTRY DUE**

6	**Patterns and Algebra (1)** **(relate to Fractions and Decimals)** **MA3-8NA - Analyses and creates geometric and number patterns, constructs and completes number sentences, and locates points on the Cartesian plane**	○ Identify, continue create and describe increasing and decreasing number patterns with fractions, decimals and whole numbers	
	Position **MA3-17MG - Locates and describes position on maps using a grid-reference system**	○ Use grid-referenced maps to locate and describe positions	
7	**Multiplication and 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**	○ Use and record a range of mental and written strategies to multiply by one- and two-digit operators ○ Interpret remainders in division problems	
	Area (1) **(relate to Multiplication and Division)** **MA3-10MG - Selects and uses the appropriate unit to calculate areas, including areas of squares, rectangles and triangles**	○ Recognise the need for square kilometres and hectares to measure area ○ Record areas using the abbreviations km2 and ha ○ Develop a strategy to find areas of rectangles (including squares) and record the strategy in words	
8	**Whole Numbers** **(relate to Multiplication and Division)** **MA3-4NA – Orders, reads and represents integers of any size and describes properties of whole numbers**	○ Determine factors and multiples of whole numbers ○ Identify and describe prime and composite numbers	
	Data (1) **MA3-18SP – Uses appropriate methods to collect data and constructs, interprets and evaluates**	○ Describe and interpret data presented in tables, column graphs, dot plots and line graphs	

	data displays, including dot plots, line graphs and two-way tables		
9	**Addition and Subtraction (1)** **MA3-5NA – Selects and applies appropriate strategies for addition and subtraction with counting numbers of any size**	○ Solve word problems and record the strategy used, including problems involving money ○ Create a simple budget	
	2D Space (1) **(relate to Area)** **MS3-15MG - Manipulates, classifies and draws two-dimensional shapes, including equilateral, isosceles and scalene triangles, and describes their properties**	○ Compare and describe side properties of the special quadrilaterals and special triangles ○ Classify and draw regular and irregular two-dimensional shapes from descriptions of their features	
10	**Fractions and Decimals (1)** **(relate to Addition and Subtraction)** **MA3-7NA - Compares, orders and calculates with fractions, decimals and percentages**	○ Determine, generate and record equivalent fractions ○ Model and represent strategies to add and subtract fractions with the same denominator ○ Add and subtract fractions, included mixed numerals, with the same or related denominators	Year 5 Assessment Year 6 Assessment **Week 10: PLAN Data Entry**
	Time (1) **MA3-13MG – Uses 24-hour time and am and pm notation in real-life situations, and constructs timelines**	○ Convert between 12- and 24-hour time ○ Determine and compare the duration of events	

S3 Mathematics Scope and Sequence	**Term 2**

NOTE: Working mathematically should be imbedded into all mathematics lesson/activities.

MA1-1WM describes mathematical situations and methods using everyday and some mathematical language, actions, materials, diagrams and symbols
MA1-2WM uses objects, diagrams and technology to explore mathematical problems
MA1-3WM supports conclusions by explaining or demonstrating how answers were

Week	Outcomes	Content	Assessment
1	**Addition and Subtraction (1)** **MA3-5NA – Selects and applies appropriate strategies for addition and subtraction with counting numbers of any size**	○ Select and apply efficient mental, written and calculator strategies for addition and subtraction of numbers of any size ○ Use estimation to check answers to calculations	
	3D Space (1) **MA3-14MG – 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**	○ Connect three-dimensional objects with their nets	
2	**Multiplication and Division (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**	○ Use and record a range of mental and written strategies to divide numbers with three or more digits by a one-digit operator, including problems that result in a remainder ○ Use the formal algorithm for multiplication by one- and two-digit operators	

	Volume and Capacity (1) **(relate to Multiplication and Division)** **MA3-11MG - Selects and uses the appropriate unit to estimate, measure and calculate volumes and capacities, and converts between units of capacity**	○ Use cubic centimetres and cubic metres to measure and estimate volumes ○ Select and use appropriate units to measure volume ○ Record volumes using the abbreviations cm3 and m3	
3	**Patterns and Algebra (1)** **(relate to Multiplication and Division)** **MA3-8NA - Analyses and creates geometric and number patterns, constructs and completes number sentences, and locates points on the Cartesian plane**	○ Find missing numbers in number sentences involving multiplication or division on one or both sides of the equals sign	
	2D Space (1) **(relate to 3D Spcae)** **MS3-15MG - Manipulates, classifies and draws two-dimensional shapes, including equilateral, isosceles and scalene triangles, and describes their properties**	○ Identify, name and draw right-angled, equilateral, isosceles and scalene triangles ○ Explore angle properties of the special quadrilaterals and special triangles	
4	**Multiplication and Division (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**	○ Use and record a range of mental and written strategies to multiply by one- and two-digit operators ○ Solve word problems and record the strategy used ○ Use estimation to check answers to calculations	
	Angles (1) **(relate to 3D Space)** **MA3-16MG - Measures and constructs angles, and applies angle relationships to find**	○ Recognise the need for formal units to measure angles ○ Measure, compare and estimate angles in degrees (up to 360°)	

	unknown angles		
5	**Fractions & Decimals (1)** **(Relate to Length)** **MA3-7NA - Compares, orders and calculates with fractions, decimals and percentages**	○ Compare and order unit fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12 and 100 ○ Model and represent strategies to add and subtract fractions with the same denominator ○ Express mixed numerals as improper fractions and vice versa	**Year 5 Assessment** **Year 6 Assessment**
	(Length 1) **MA3-9MG - Selects and uses the appropriate unit and device to measure lengths and distances, calculates perimeters, and converts between units of length**	○ Use the kilometre to measure lengths and distances ○ Select and use appropriate instruments and units to measure lengths ○ Record lengths and distances using the abbreviations km, m, cm and mm	**Week 5: PLAN DATA ENTRY DUE**
6	**Patterns and Algebra (1)** **(relate to Fractions and Decimals)** **MA3-8NA - Analyses and creates geometric and number patterns, constructs and completes number sentences, and locates points on the Cartesian plane**	○ Identify, continue create and describe increasing and decreasing number patterns with fractions, decimals and whole numbers	
	Position **MA3-17MG - Locates and describes position on maps using a grid-reference system**	○ Use grid-referenced maps to locate and describe positions	
7	**Multiplication and 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**	○ Use and record a range of mental and written strategies to multiply by one- and two-digit operators ○ Interpret remainders in division problems	

	Area (1) **(relate to Multiplication and Division)** **MA3-10MG - Selects and uses the appropriate unit to calculate areas, including areas of squares, rectangles and triangles**	○ Recognise the need for square kilometres and hectares to measure area ○ Record areas using the abbreviations km2 and ha ○ Develop a strategy to find areas of rectangles (including squares) and record the strategy in words	
8	**Whole Numbers** **(relate to Multiplication and Division)** **MA3-4NA – Orders, reads and represents integers of any size and describes properties of whole numbers**	○ Determine factors and multiples of whole numbers ○ Identify and describe prime and composite numbers	
	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**	○ Describe and interpret data presented in tables, column graphs, dot plots and line graphs	
9	**Addition and Subtraction (1)** **MA3-5NA – Selects and applies appropriate strategies for addition and subtraction with counting numbers of any size**	○ Solve word problems and record the strategy used, including problems involving money ○ Create a simple budget	
	2D Space (1) **(relate to Area)** **MS3-15MG - Manipulates, classifies and draws two-dimensional shapes, including equilateral, isosceles and scalene triangles, and describes their properties**	○ Compare and describe side properties of the special quadrilaterals and special triangles ○ Classify and draw regular and irregular two-dimensional shapes from descriptions of their features	

10	**Fractions and Decimals (1)** **(relate to Addition and Subtraction)** **MA3-7NA - Compares, orders and calculates with fractions, decimals and percentages**	○ Determine, generate and record equivalent fractions ○ Model and represent strategies to add and subtract fractions with the same denominator ○ Add and subtract fractions, included mixed numerals, with the same or related denominators	Year 5 Assessment Year 6 Assessment **Week 10: PLAN Data Entry** **REPORTS HOME**
	Time (1) **MA3-13MG – Uses 24-hour time and am and pm notation in real-life situations, and constructs timelines**	○ Convert between 12- and 24-hour time ○ Determine and compare the duration of events	

S3 Mathematics Scope and Sequence — **Term 3**

NOTE: Working mathematically should be imbedded into all mathematics lesson/activities.

MA1-1WM describes mathematical situations and methods using everyday and some mathematical language, actions, materials, diagrams and symbols
MA1-2WM uses objects, diagrams and technology to explore mathematical problems
MA1-3WM supports conclusions by explaining or demonstrating how answers were

Week	Outcomes	Content	Assessment
1	**Whole Number (1)** **MA3-4NA – Orders, reads and represents integers of any size and describes properties of whole numbers**	○ Determine factors and multiples of whole numbers ○ Identify and describe prime and composite numbers ○ Model and describe square and triangular numbers	
	Time (2) **(relate to Whole Numbers)** **MA3-31MG – uses 24-hour time and am and pm**	○ Interpret and use timetables ○ Draw and interpret timelines using a given scale	

	notation in real-life situations, and constructs timelines		
2	**Addition and Subtraction (2)** **MA3-5NA – Selects and applies appropriate strategies for addition and subtraction with counting numbers of any size**	○ Select and apply efficient mental, written and calculator strategies to solve word problems and record the strategy used ○ Use estimation to check answers to calculations	
	Angles (2) **MA3-16MG - Measures and constructs angles, and applies angle relationships to find unknown angles**	○ Identify and name angle types formed by the intersection of straight lines, including 'angles on a straight line', 'angles at a point' and 'vertically opposite angles'	
3	**Multiplication and Division (2)** **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 word problems and record the strategy used ○ Interpret remainders in division problems	
	2D Space (2) **(relate to Angles)** **MA3-15MG - Manipulates, classifies and draws two-dimensional shapes, including equilateral, isosceles and scalene triangles, and describes their properties**	○ Make and compare enlargements of shapes/pictures ○ Identify, use and describe combinations of translations, reflections and rotations	
4	**Fractions and Decimals (2)** **(related to Length)** **MA3-7NA - Compares, orders and calculates with fractions, decimals and percentages**	○ Represent, compare and order fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12 and 100 ○ Multiply fractions by whole numbers ○ Find a simple fraction of a quantity ○ Use mental, written and calculator strategies to add and subtract decimals with up to three decimal places	

	Length (2) **MA3-9MG - Selects and uses the appropriate unit and device to measure lengths and distances, calculates perimeters, and converts between units of length**	○ Convert between kilometres, metres, centimetres and millimetres ○ Solve problems involving length and perimeter	
5	**Revisions of Key Concepts** **Assessment** **PLAN Data updated**	**Base this on your class needs**	**Year 5 Assessment** **Year 6 Assessment** **Week 5: PLAN DATA ENTRY DUE**
6	**Patterns and Algebra (2)** **MA3-8NA - Analyses and creates geometric and number patterns, constructs and completes number sentences, and locates points on the Cartesian plane**	○ Continue, create, record and describe geometric and number patterns in words	
	Chance (2) **(relate to Fractions and Decimals)** **MA3-19SP - Conducts chance experiments and assigns probabilities as values between 0 and 1 to describe their outcomes**	○ Compare observed frequencies in chance experiments with expected frequencies ○ Represent probabilities using fractions, decimals and percentages	
7	**Addition and Subtraction (2)** **MA3-5NA – Selects and applies appropriate strategies for addition and subtraction with counting numbers of any size**	○ Select and apply efficient mental, written and calculator strategies to solve word problems and record the strategy used	

	Position (2) **MA3-17MG - Locates and describes position on maps using a grid-reference system**	○ Follow a sequence of directions, including compass directions, to find a particular location on a map ○ Describe routes using landmarks and directional language	
8	**Multiplication and Division (2)** **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, written and calculator strategies to solve word problems and record the strategy used ○ Use estimation to check answers to calculations	
	Data (2) **MA3-18SP – Uses appropriate methods to collect data and constructs, interprets and evaluates data displays, including dot plots, line graphs and two-way tables**	○ Interpret and create two-way tables ○ Interpret side-by-side column graphs	
9	**Fractions and Decimals (2)** **(relate to Multiplication and Division)** **MA3-7NA - Compares, orders and calculates with fractions, decimals and percentages**	○ Use mental, written and calculator strategies to multiply decimals by one- and two-digit whole numbers ○ Use mental, written and calculator strategies to divide decimals by one-digit whole numbers ○ Multiply and divide decimals by 10, 100 and 1000	
	Area (2) **(Relate to Fractions and Decimals)** **MA3-10MG – Selects and uses the appropriate unit to calculate areas, including areas of squares, rectangles and triangles**	○ Develop a strategy to find areas of triangles and record the strategy in words ○ Solve problems involving areas of rectangles (including squares) and triangles	

10	**Patterns and Algebra (2)** **(relate to Whole Numbers)** **MA3-8NA - Analyses and creates geometric and number patterns, constructs and completes number sentences, and locates points on the Cartesian plane**	○ Determine the rule for geometric and number patterns in words and use the rule to calculate values ○ Locate and record the coordinates of points in all four quadrants of the Cartesian plane	Year 5 Assessment Year 6 Assessment **Week 10: PLAN Data Entry**

S3 Mathematics Scope and Sequence — **Term 4**

NOTE: Working mathematically should be imbedded into all mathematics lesson/activities.

MA1-1WM describes mathematical situations and methods using everyday and some mathematical language, actions, materials, diagrams and symbols
MA1-2WM uses objects, diagrams and technology to explore mathematical problems
MA1-3WM supports conclusions by explaining or demonstrating how answers were

Week	Outcomes	Content	Assessment
1	**Whole Number (2)** **MA3-4NA – Orders, reads and represents integers of any size and describes properties of whole numbers**	○ Recognise the location of negative numbers in relation to zero on a number line	
	Data (2) **MA3-18SP – Uses appropriate methods to collect data and constructs, interprets and evaluates data displays, including dot plots, line graphs and two-way tables**	○ Compare a range of data displays to determine the most appropriate display for particular sets of data ○ Interpret and critically evaluate data presented in digital media and elsewhere	

2	**Fractions and Decimals (2)** **(relate to Addition and Subtraction)** **MA3-7NA - Compares, orders and calculates with fractions, decimals and percentages**	○ Solve word problems involving fractions and decimals, including money problems ○ Make connections between equivalent percentages, fractions and decimals ○ Use mental, written and calculator strategies to calculate 10%, 25% and 50% of quantities, including as discounts	
	Volume and Capacity (2) **(relate to Fractions and Decimals)** **MA3-11MG - Selects and uses the appropriate unit to estimate, measure and calculate volumes and capacities, and converts between units of capacity**	○ Connect volume and capacity and their units of measurement ○ Record volumes and capacities using decimal notation to three decimal places ○ Convert between millilitres and litres ○ Develop a strategy to find volumes of rectangular prisms and record the strategy in words	
3	**Multiplication and Division (2)** **MA3-6NA - Selects and applies appropriate strategies for multiplication and division, and applies the order of operations to calculations involving more than one operation**	○ Recognise and use grouping symbols ○ Apply the order of operations in calculations ○ Solve word problems and record the strategy used	
	3D Space **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**	○ Construct prisms and pyramids using a variety of materials, and given drawings from different views	
4	**Fractions & Decimals (2)** **MA3-7NA - Compares, orders and calculates with fractions, decimals and percentages**	○ Compare, order and represent decimals with up to three decimal places ○ Multiply fractions by whole numbers ○ Find a simple fraction of a quantity	

		○ Use mental, written and calculator strategies to add and subtract decimals with up to three decimal places	
	Chance (2) **(relate to Fractions and Decimals)** **MA3-19SP - Conducts chance experiments and assigns probabilities as values between 0 and 1 to describe their outcomes**	○ Conduct chance experiments with both small and large numbers of trials ○ Represent probabilities using fractions Recognise that probabilities range from 0 to 1	
5	**Revision of Key Concepts**	○ **Base this on your class needs**	**Year 5 Assessment** **Year 6 Assessment** **Week 5: PLAN DATA ENTRY DUE**
	Assessment		
6-7	**Addition and Subtraction (2)** **MA3-5NA – Selects and applies appropriate strategies for addition and subtraction with counting numbers of any size**	○ Select and apply efficient mental, written and calculator strategies to solve word problems and record the strategy used	
	Mass (2) **(relate to Fractions and Decimals)** **MA3-12MG - Selects and uses the appropriate unit and device to measure the masses of objects, and converts between units of mass**	○ Record mass using decimal notation to three decimal places ○ Convert between tonnes, kilograms and grams	

	Time (2) **MA3-13MG – Uses 24-hour time and am and pm notation in real-life situations, and constructs timelines**	○ Convert between 12- and 24-hour time ○ Determine and compare the duration of events	
8	**Multiplication and Division (2)** **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, written and calculator strategies to solve word problems and record the strategy used ○ Recognise and use grouping symbols ○ Apply the order of operations in calculations	
9	**2D Space (2)** **MA3-15MG - Manipulates, classifies and draws two-dimensional shapes, including equilateral, isosceles and scalene triangles, and describes their properties**	○ Identify, describe, compare and draw diagonals of two-dimensional shapes ○ Identify and name parts of circles	Year 5 Assessment Year 6 Assessment **REPORTS HOME**
	Angles (related to 2D Space)	○ Identify and name angle types formed by the intersection of straight lines, including 'angles on a straight line', 'angles at a point' and 'vertically opposite angles' ○ Use known angle results to find unknown angles in diagrams	
10	**Revision of Key Concepts**	○ **Base this on your class needs**	**Week 10: PLAN Data Entry DUE**