Surveyors Creek PS

Mathematics Scope & Sequence

Early Stage One

*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

ES1 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

Short, fast, focused, differentiated lessons focused on early arithmetic strategies will occur daily (TEN) covering addition and subtraction (Mae-5NA) and working mathematically (MAe-1WM, MAe-2WM, MAe-3WM) content.	The following **Time (MAe-13MG)** content is covered in short, fast, focused lessons on a daily basis: - use terms such as 'daytime', 'night-time', 'yesterday', 'today','tomorrow', 'before', 'after', 'next', 'morning' and 'afternoon' - sequence events in time - recall that there are seven days in a week - name and order the days of the week - classify weekdays and weekend days - relate events to a particular day or time of day, eg 'Assembly is on Tuesday', 'We come to school in the morning' - identify events that occur every day, eg 'We have news every day'

Week	Outcomes	Content	Assessment
1	**ASSESSMENT** **Kindergarten Best Start**		
2	**Whole Number** **MAe-4NA counts to 30, and orders, reads and represents numbers in the range 0 to 20**	○ Count forwards to 30 ○ Count backwards from a given number in the range of 20-0 ○ Say the number before and after a given number ○ Read numbers to at least 20, including zero and represent these using objects (fingers), pictures, words and numerals.	**ENTER INITIAL PLAN DATA**

3	**Whole Number** **MAe-4NA counts to 30, and orders, reads and represents numbers in the range 0 to 20**	○ Count forwards to 30 ○ Count backwards from a given number in the range of 20-0 ○ Say the number before and after a given number ○ Read numbers to at least 20, including zero and represent these using objects (fingers), pictures, words and numerals.	
4	**Whole Number** **MAe-4NA counts to 30, and orders, reads and represents numbers in the range 0 to 20**	○ Count forwards to 30 ○ Count backwards from a given number in the range of 20-0 ○ Say the number before and after a given number ○ Read numbers to at least 20, including zero and represent these using objects (fingers), pictures, words and numerals.	
5	**Whole Number** **MAe-4NA counts to 30, and orders, reads and represents numbers in the range 0 to 20**	○ Count forwards to 30 from a given number ○ Count backwards from a given number in the range 0 to 20 ○ Describe the number before as 'one less than' and the number after as 'one more than' a given number (Communicating) ○ Identify the number after a given number ○ Identify the number before a given number	**Week 5: PLAN Data Entry Due**
6	**Whole Number** **MAe-4NA counts to 30, and orders, reads and represents numbers in the range 0 to 20**	○ Read numbers to at least 20, including zero, and represent these using objects (such as fingers), pictures, words and numerals ○ Recognise numbers in a variety of contexts, eg classroom charts, cash register, computer keyboard, telephone (Communicating) ○ Communicate the use of numbers through everyday language, actions, materials and informal recordings (Communicating) ○ Estimate the number of objects in a group of up to 20 objects, and count to check ○ Use 5 as a reference in forming numbers from 6 to 10, eg 'Six is one more than five' ○ Use 10 as a reference in forming numbers from 11 to 20, eg 'Thirteen is 1 group of ten and 3 ones'	

7	**Whole Number** **MAe-4NA counts to 30, and orders, reads and represents numbers in the range 0 to 20**	○ Recognise the number of objects or dots in a pattern of objects or dots instantly ○ Recognise dice and domino dot patterns (Communicating) ○ Instantly recognise (subitise) different arrangements for the same number, eg different representations of five ○ Recognise that the way objects are arranged affects how easy it is to subitise (Reasoning)	
8	**Whole Number** **MAe-4NA counts to 30, and orders, reads and represents numbers in the range 0 to 20**	○ Count with one-to-one correspondence ○ Make correspondences between collections, eg 'I have four counters, you have seven counters.So you have more counters than me' ○ Compare and order numbers and groups of objects (Problem Solving, Reasoning) ○ Use the term 'is the same as' to express equality of groups (Communicating, Reasoning)	**Whole Number Assessment**
9	**Length** **MAe-9MG describes and compares lengths and distances using everyday language**	○ Identify the attribute of 'length' as the measure of an object from end to end ○ Use everyday/ comparative language to describe length, eg long, short, high, tall, low, distance, eg near, far, nearer, further, closer (Communicating) ○ Compare lengths directly by placing objects side-by-side and aligning the ends (Communicating, Reasoning) ○ Compare lengths indirectly by copying a length ○ Compare and record length comparisons informally	**Length Assessment**
10	**Patterns and Algebra** **MAe-8NA recognises, describes and continues repeating patterns**	○ Sort and classify familiar objects and explain the basis for these classifications (Communicating, Reasoning) ○ Recognise that a group of objects can be sorted and classified in different ways ○ Recognise, copy and continue repeating patterns using sounds and/or actions	**Week 10: PLAN Data Entry DUE**

11	**Patterns and Algebra** **MAe-8NA recognises, describes and continues repeating patterns**	○ Describe a repeating pattern made from shapes by referring to its distinguishing features, eg 'I have made my pattern from squares. The colours repeat. They go red, blue, red, blue.' ○ Recognise, copy, continue and create repeating patterns using shapes, objects or pictures ○ Create or continue a repeating pattern using simple computer graphics (Problem Solving) ○ Recognise when an error occurs in a pattern and explain what is wrong (Communicating, Reasoning)	**Patterns and Algebra Assessment**

ES1 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

Short, fast, focused, differentiated lessons focused on early arithmetic strategies will occur daily (TEN) covering addition and subtraction (Mae-5NA) and working mathematically (MAe-1WM, MAe-2WM, MAe-3WM) content.	The following **Time (MAe-13MG)** content is covered in short, fast, focused lessons on a daily basis: - use terms such as 'daytime', 'night-time', 'yesterday', 'today','tomorrow', 'before', 'after', 'next', 'morning' and 'afternoon' - sequence events in time - recall that there are seven days in a week - name and order the days of the week - classify weekdays and weekend days - relate events to a particular day or time of day, eg 'Assembly is on Tuesday', 'We come to school in the morning' - identify events that occur every day, eg 'We have news every day'

Week	Outcomes	Content	Assessment
1	**Area** **MAe-10MG describes and compares areas using everyday language**	○ Use direct comparison to decide which shape has a larger area and explain their reasoning using everyday language (Communicating, Reasoning) ○ Identify the attribute of 'area' as the measure of the amount of surface ○ Cover surfaces completely with smaller shapes ○ Compare two areas directly, eg superimposing or super positioning two surfaces	**EAS Assessment** **Area Assessment**
2	**Addition and Subtraction** **MAe-5NA combines, separates and compares collections of objects, describes using everyday language,**	○ Create and recognise combinations for numbers to at least 10 ○ Record addition informally using drawings, words and numerals	

	and records using informal methods		
3	**Addition and Subtraction** **MAe-5NA combines, separates and compares collections of objects, describes using everyday language, and records using informal methods**	○ Create and recognise combinations for numbers to at least 10 ○ Record addition informally using drawings, words and numerals ○ Model subtraction by separating and taking away part of a group of objects	
4	**Addition and Subtraction** **MAe-5NA combines, separates and compares collections of objects, describes using everyday language, and records using informal methods**	○ Use concrete materials or fingers to model and solve simple subtraction problems ○ Use visual representations of numbers to assist with subtraction, eg ten frames	
5	**Addition and Subtraction** **MAe-5NA combines, separates and compares collections of objects, describes using everyday language, and records using informal methods**	○ Count forwards by ones to add and backwards by ones to subtract ○ Record addition and subtraction informally using drawings, words and numerals ○ Investigate different methods of adding and subtracting used in various cultures, eg Aboriginal and Torres Strait Islander methods involving spatial patterns and reasoning, Asian counting tools such as the abacus (Communicating, Problem Solving)	**Week 5: PLAN** **Data Entry Due** **EAS Assessment** **Addition and Subtraction Assessment**
6	**2D Space** **MAe-15MG manipulates, sorts and describes representations of two-dimensional shapes, including circles, triangles, squares and rectangles,**	○ Identify and draw straight and curved lines and describe them using everyday language ○ Identify, represent and name circles, triangles, squares and rectangles in pictures and the environment (Problem Solving) ○ Sort and describe 2D shapes according to their features (Communicating,	**2D Space Assessment**

	using everyday language	Reasoning) ○ Manipulate circles, triangles, squares and rectangles to make pictures and describe their features using everyday language (Problem Solving) ○ Draw closed two-dimensional shapes and recognise the importance of drawing the shapeclosed (Communicating, Reasoning)	
7	**Multiplication and Division** **MAe-6NA groups, shares and counts collections of objects, describes using everyday language, and records using informal methods**	○ Use the term 'group' to describe a collection of objects ○ Model equal groups ○ Label the number of objects in a group ○ Recognise groups that are not equal in size	
8	**Multiplication and Division** **MAe-6NA groups, shares and counts collections of objects, describes using everyday language, and records using informal methods**	○ Recognise, copy, continue, create and describe increasing and decreasing number patterns	
9	**Multiplication and Division** **MAe-6NA groups, shares and counts collections of objects, describes using everyday language, and records using informal methods**	○ Describe a repeating pattern made from shapes by referring to its distinguishing features, eg 'I have made my pattern from squares. The colours repeat. They go red, blue, red, blue.' ○ Recognise, copy, continue and create repeating patterns using shapes, objects or pictures ○ Create or continue a repeating pattern using simple computer graphics (Problem Solving) ○ Recognise when an error occurs in a pattern and explain what is wrong (Communicating, Reasoning)	**Multiplication Division Assessment**
10	**3D Space** **MAe-14MG manipulates, sorts and represents three-dimensional objects and describes them using**	○ Recognise and use informal names for three-dimensional objects, e.g. box, ball. ○ Describe the features of familiar three-dimensional objects using everyday language, e.g. flat, round, curved	**3D Space Assessment** **REPORTS HOME**

	everyday language	○ Predict and describe the movement of objects, e.g. 'This will roll because it is round' (Problem Solving) ○ Manipulate and describe a variety of objects found in the environment (Communicating, Reasoning) ○ Sort three-dimensional objects and explain the attributes used to sort them, e.g. colour, size, shape and function (Communicating, Reasoning) ○ Make models using a variety of three-dimensional objects and describe the models, e.g. 'I made a model of a person using a ball and some blocks'	**Week 10: PLAN Data Entry DUE**

ES1 Mathematics Scope and Sequence	**Term 3**

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Week	Outcomes	Content	Assessment
1	**Addition** **MAe-5NA combines, separates and compares collections of objects, describes using everyday language, and records using informal methods**	○ Combine two or more groups of objects to model addition ○ Count forwards by ones to add ○ Use concrete materials or fingers to model and solve simple addition problems ○ Explain or demonstrate how an answer was obtained (Communicating, Reasoning) ○ Record addition informally using drawings, words and numerals ○ Create and recognise combinations for numbers to at least 10, eg 'How many more make 10?'	**EAS Assessment**

2	**Subtraction** **MAe-5NA combines, separates and compares collections of objects, describes using everyday language, and records using informal methods**	○ Compare two groups of objects to determine 'how many more' ○ Model subtraction by separating and taking away part of a group of objects ○ Count backwards by ones to subtract ○ Use concrete materials or fingers to model and solve simple subtraction problems ○ Explain or demonstrate how an answer was obtained (Communicating, Reasoning) ○ Record subtraction informally using drawings, words and numerals	**Addition Subtraction Assessment**
3	**Multiplication** **MAe-6NA groups, shares and counts collections of objects, describes using everyday language, and records using informal methods**	○ Use the term 'group' to describe a collection of objects and explain how answer was obtained (Communicating, Reasoning) ○ Model groups using concrete resources and label the number of objects in a group ○ Use arrays to represent equal groups as rows of objects ○ Recognise groups that are not equal in size ○ Investigate, model and record equal groups	
4	**Division** **MAe-6NA groups, shares and counts collections of objects, describes using everyday language, and records using informal methods**	○ Understand that sharing involves equal groups ○ Use grouping and sharing mats to help share quantities of objects equally between two groups ○ Share concrete materials to solve problems and record findings	**Multiplication and Division Assessment**
5	**Time** **MAe-13MG sequences events, uses everyday language to describe the durations of events, and reads hour time on clocks**	○ Use terms such as 'daytime', 'night-time', 'yesterday', 'today', 'tomorrow', 'before', 'after', 'next', 'morning' and 'afternoon' sequence events in time ○ Compare the duration of two events using everyday language, eg 'It takes me longer to eat my lunch than it does to clean my	**Week 5: PLAN** **Data Entry Due**

		teeth' (Communicating) ○ Describe events that take 'a long time' and events that take 'a short time' ○ Recall that there are seven days in a week (Communicating) ○ Name and order the days of the week ○ Classify weekdays and weekend days	
6	**Time** **MAe-13MG sequences events, uses everyday language to describe the durations of events, and reads hour time on clocks**	○ Relate events to a particular day or time of day, eg 'Assembly is on Tuesday', 'We come to school in the morning' ○ Identify events that occur every day, eg 'We have news every day' (Communicating) ○ Read analog and digital clocks to the hour using the term 'o'clock' ○ Describe the position of the hands on an analog clock when reading hour time read digital clocks to the hour using the term 'o'clock' ○ Describe the position of the hands on an analog clock when reading hour time	**Time Assessment**
7	**Fractions and Decimals** **MAe-7NA describes two equal parts as halves**	○ Describe how to make equal parts using terms such as sharing, two equal parts, same (Communicating) ○ Use terms such as half, halves, equal when comparing halved objects, ie, these two halves are equal	**Fractions & Decimals Assessment**
8	**Position** **MAe-16MG describes position and gives and follows simple directions using everyday language**	○ Describe the position of an object in relation to themselves using everyday language, suchas 'between', 'next to', 'behind' or 'inside', eg 'The table is behind me' ○ Describe the positions of objects in relation to themselves using the terms 'left' and 'right', eg 'The tree is on my right' ○ Use the terms 'left' and 'right' when referring to familiar tasks, eg 'I hold my pencil in my right hand'	**Position Assessment**

		(Communicating) ○ Give and follow simple directions to position an object or themselves, eg 'Put the blue teddy in the circle' ○ Follow directions to a point or place, including in mazes and games (Reasoning) ○ Direct simple computer-controlled toys and equipment to follow a path (Communicating) ○ Participate in movement games involving turning and direction (Reasoning)	
9	**Data** **MAe-17SP represents data and interprets data displays made from objects**	○ Group objects according to characteristics to form a simple data display and compare the sizes of groups of objects by counting (Reasoning) ○ Arrange objects in rows or columns according to characteristics to form a data display and interpret a simple collection of data (Communicating, Reasoning) ○ Answer yes/no questions to collect information and interpret information presented in a display (Communicating)	**Data Assessment**
10	**Revision of Key Concepts**	○ **Base this on your class needs**	**Week 10: PLAN** **Data Entry DUE**

ES1 Mathematics Scope and Sequence	**Term 4**

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Week	Outcomes	Content	Assessment
1	**Whole Number** **MAe-4NA counts to 30, and orders, reads and represents numbers in the range 0 to 20**	○ Count forwards to 30 from a given number ○ Count backwards from a given number in the range 0 to 20 ○ Identify the number before and after a given number read ○ Use the ordinal names to at least 'tenth' ○ Use 5 as a reference in forming numbers from 6 to 10, eg 'Six is one more than five' ○ Use 10 as a reference in forming numbers from 11 to 20, eg 'Thirteen is 1 group of ten and 3 ones' ○ Recognise the number of objects or dots in a pattern of objects or dots instantly, eg recognise dice and domino dot patterns (Communicating)	**EAS Assessment**

2	**Whole Number** **MAe-4NA counts to 30, and orders, reads and represents numbers in the range 0 to 20**	○ Instantly recognise (subitise) different arrangements for the same number, eg different representations of five ○ Recognise that the way objects are arranged affects how easy it is to subitise (Reasoning) ○ Use the language of money ○ Use the language of money in everyday contexts, eg coins, notes, cents, dollars ○ Recognise that there are different coins and notes in our monetary system ○ Exchange money for goods in a play situation (Problem Solving)	**Whole Number Assessment**
3	**Fractions and Decimals** **MAe-7NA describes two equal parts as halves**	○ Share an object by dividing it into two equal parts, eg cutting a piece of ribbon into halves ○ Describe how to make equal part (Communicating) ○ Recognise that halves are two equal parts ○ Explain why two parts of one whole are or are not halves, eg 'The two parts are not halves because they are not the same' use the term 'half' accurately in everyday situations (Communicating, Reasoning) ○ Record halves of objects using drawings	**Fractions and Decimals Assessment**
4	**2D Space** **MAe-15MG manipulates, sorts and describes representations of two-dimensional shapes, including circles, triangles, squares and rectangles, using everyday language**	○ Sort two-dimensional shapes according to features such as size and shape (Communicating, Reasoning) ○ Manipulate circles, triangles, squares and rectangles, and describe their features using everyday language, eg 'A square has four sides' (Problem Solving) ○ Make representations of two-dimensional shapes using a variety of materials, including paint, paper, body movements and computer drawing tools ○ Make pictures and designs using a selection of shapes, eg make a house from a square and a triangle (Communicating)	**2D & 3D Space Assessment**

	3D Space **MAe-14MG manipulates, sorts and represents three-dimensional objects and describes them using everyday language**	○ Sort three-dimensional objects and explain the attributes used to sort them, eg colour, size, shape, function (Communicating, Reasoning) ○ Recognise how a group of objects has been sorted, eg 'These objects are all pointy' (Communicating, Reasoning) ○ Recognise and use informal names for three-dimensional objects, eg box, ball ○ Predict and describe the movement of objects, eg 'This will roll because it is round' ○ Predict the building and stacking capabilities of various three-dimensional objects (Reasoning)	
5	**Mass** **MAe-12MG describes and compares the masses of objects using everyday language**	○ Identify the attribute of 'mass' as the amount of matter in an object ○ Use everyday language to describe objects in terms of their mass, eg heavy, light, hard to push, hard to pull ○ Predict which object would be heavier than, lighter than, or have about the same mass as another object and explain reasons for this prediction (Communicating, Reasoning) ○ Compare two masses directly by hefting, eg 'This toy feels heavier than that one' ○ Use comparative language to describe mass, eg heavier, lighter, heaviest, lightest (Communicating) ○ Use a tool to determine the mass of an object. ○ Investigate the use of hefting in practical situations, eg the practice used by Aboriginal people of hefting duck eggs to determine whether ducklings will be male or female (Problem Solving) ○ Compare and describe two masses, such as by pushing or pulling	**Week 5: PLAN Data Entry Due** **Mass Assessment**

6	**Volume and Capacity** **MAe-11MG describes and compares the capacities of containers and the volumes of objects or substances using everyday language**	○ Use direct and indirect comparisons to decide which holds more, and explain their reasoning using everyday language identify the attribute of 'capacity' as the amount of liquid a container can hold ○ Fill and empty containers using materials such as water and sand ○ Use the terms 'full', 'empty' and 'about half-full' compare the capacities of two containers directly by filling one and pouring into the other (Reasoning) ○ Compare the capacities of two containers indirectly by pouring their contents into two other identical containers and observing the level reached by each (Communicating, Reasoning) ○ Establish that containers of different shapes may have the same capacity, eg a tall narrow container may hold the same amount as a short wide container ○ Identify the attribute of 'volume' as the amount of space an object or substance occupies ○ Stack and pack blocks into defined spaces, eg boxes (Reasoning) ○ Compare the volumes of two piles of material directly by filling two identical containers, eg 'This pile of rice has a larger volume as it takes up more space in the container'	**Volume and Capacity Assessment**
7	**Length** **MAe-9MG describes and compares lengths and distances using everyday language**	○ Use direct and indirect comparisons to decide which is longer, and explain their reasoning using everyday language ○ Identify the attribute of 'length' as the measure of an object from end to end make and sort long and short constructions from concrete materials ○ Identify an object that is longer or shorter than another, eg 'Find an object longer than this pencil' (Communicating) ○ Predict whether an object will be longer or shorter than another object and explain the reasons for this prediction (Communicating, Reasoning) ○ Compare lengths indirectly by copying a length, eg using the same strip of paper to compare lengths ○ Record length comparisons informally by drawing, tracing, or cutting and pasting, and by using words and numerals	

8	**Patterns and Algebra MAe-8NA recognises, describes and continues repeating patterns**	○ Recognise that a group of objects can be sorted and classified in different ways (Communicating, Reasoning) ○ Recognise, copy and continue repeating patterns using sounds and/or actions ○ Recognise, copy, continue and create repeating patterns using shapes, objects or pictures ○ Recognise, copy, continue and create a number pattern	**Patterns and Algebra Assessment**
9-10	**Revision of Key Concepts**	○ **Base this on your class needs**	**Week 9: REPORTS HOME** **Week 10: PLAN Data Entry Due**