Para Meadows Numeracy Continuum K-12

		Cluster 1	Cluster 2	Cluster 3	Cluster 4 Emergent	Cluster 5 Perceptual	Cluster 6 Figurative	Cluster 7 Counting On and Back	Cluster 8	Cluster 9	Cluster 10	Cluster 11	Cluster 12
Number and Algebra Students apply number sense and strategies for counting, computation and representing numbers. They understand the connections between operations and recognise patterns.	Whole Number		Reaches for tactile numbers or representations of numbers. Smiles during counting experiences. Turns in the direction of staff or peer who is counting and modelling counting. MAe-4NA MALS-4NA, MALS-5NA Stage 6-1.1	Engages in songs, number rhymes and counting activities. Intentionally engages in counting experiences. Chooses between two objects. Begins to explore the concept of same and different. MAe -4NA MALS-4NA, MALS-5NA Stage 6-1.1	Starts to use number language randomly e.g. ordinals 1st to 10th and position (first, last, next, before, after). Matches numbers. Participates in counting experiences. Attempts to write numbers by making marks on paper. MAe-4NA MALS-4NA, MALS-5NA Stage 6-1.1, Stage 6-1.4	Demonstrates 1:1 correspondence. Rote counts forwards and backwards to and from 0-10. Counts ordinals 1st-10th. Recognises numbers 0-10. Writes numerals from 0-10. Exposed to number lines. Begins to count groups of objects. MAe-4NA MALS-5NA, MALS-6N, MALS-7NA Stage 6-1.1, Stage 6-1.2 Stage 6-1.3, Stage 6-1.4	Counts forwards from 0-31. Counts and recognises ordinals 1st-31st (calendar). Counts backwards from 20-0. Orders numbers from 0-10. Recognises and writes numerals 0-20. Counts on from a given number between 0-20. Recognises numbers on a number line. Counts and labels groups of objects. Starts from one to find a total. MAe-4NA MALS-5NA, MALS-6NA, MALS-7NA Stage 6-1.4, Stage 6-1.2	Counts by 2's, 5's and 10's. Counts forwards and backwards to and from 50. Counts on from a given number between 0 and 50. Recognises and writes numerals 0-50. Orders numbers 0-50. Writes number words 0-20. Begins to understand odd and even numbers. Exposed to place value of units, tens and hundreds. Uses a number line. MA1-4NA MALS-5NA, MALS-6NA, MALS-7NA Stage 6-1.3	Counts forwards by 3's. Counts backwards by 2's, 5's and 10's. Counts forwards and backwards to and from 100. Counts on from a given number between 0 and 100. Recognises and writes numbers 0-100. Orders numbers 0-100. Writes numbers 0-50. Writes number words 0-50. Starts using place value of units, tens and hundreds. MA1-4NA MALS-6NA, MALS-7NA Stage 6-1.5	Orders and reads 3 digit numbers. Recognises and writes any 3 digit number up to 999. Writes number words 0-999. Knows and uses place value of units, ten and hundreds. MA1-4NA MALS-6NA, MALS-7NA Stage 6-1.5	Recognises and writes 4 digit numbers. Reads and orders numbers up to 4 digits. Records numbers up to 4 digits in expanded form. MA2-4NA MALS-6NA, MALS-7NA Stage 6-1.5	Recognises and writes 5 digit numbers. Reads and orders numbers up to 5 digits. Records numbers up to 5 digits in expanded form. MA2-4NA MALS-6NA, MALS-7NA Stage 6-1.5	Recognises and writes all numbers. Reads and orders all numbers. MA3-4NA MALS-6NA, MALS-7NA Stage 6-1.5
	Money		Reaches for coins and notes. Smiles during counting experiences. Turns in the direction of staff or peer who is modelling counting. MAe-4NA MALS-12NA Stage 6-5.2	Engages in tactile experiences and language through play with coins. Intentionally engages in tactile experiences. MAe-4NA MALS-12NA Stage 6-5.2	Matches coins and notes. MAe-4NA MALS-12NA Stage 6-5.2	Recognises 5c and 10c coins based on face value. Begins to understand that money is used in exchange for purchasing items. MAe-4NA MALS-12NA Stage 6-5.1, Stage 6-5.2	Recognises 5c, 10c and 20c coins based on face value. Understands that money has a value. MAe-4NA MALS-12NA Stage 6-5.2	Recognises 5c, 10c, 20c, 50c, $1 and $2. Recognises the symbol for dollars and cents. Counts and sorts money based on face value. Understands that different coins have different values. MA1-4NA MALS-12NA, MALS-13NA Stage 6-5.2	Recognises coins and notes. Writes and recognises written amounts of money. MA1-4NA MALS-14NA Stage 6-5.3	Understands and recognises different values of coins and notes. Recognises that total amounts can be made using different denominations, e.g. 20 cents can be made using a single coin or two 10 cent coins. MA1-4NA MALS-15NA Stage 6-5.3	Performs calculations with money, including calculating equivalent amounts using different denominations. Solves word problems, including those involving money. Estimates and calculates change. MA2-5NA MALS-10NA, MALS-15NA Stage 6-5.4	Compare costs of goods and services.For example, showing two washing powders with prices e.g. "Which washing powder is the cheapest or most expensive?" Recognise that amounts of money are written with two decimal places. MA2-5NA MALS-16NA Stage 6-5.4	Creates a simple budget. MA3-5NA MALS-17A Stage 6-5.5
	Addition and Subtraction	Exposed to topic related activities and songs Shows recognition of familiarand favourite objects or activities by vocalising or gesture. Makes eye contact. Experiences and tolerates being shown topic related books. Experiences and tolerates sensory stimulus related to topic content. Experiences topic content through touching and playing with concrete material. Experiences topic related books and objects by mouthing them, patting them, carrying them around. Focuses attention briefly on hands. Moves hands over or through some sensory material. Coactively holds an object briefly when placed in their hands. Number and Algebra: MAe-4NA; MAe-5NA; MAe-6NA; MAe-7NA; MAe-8NA Measurement and Geometry: MAe-9MG; MAe-10MG; MA-e11MG; MAe-12MG; MAe-13MG; MAe-14MG; MAe-15MG; MAe-16MG Statistics and Probability: MAe-17SP; MA-e18SP	Reaches for tactile numbers or representations of addition and subtraction. Explores addition and subtraction using tactile objects. Smiles during addition and subtraction experiences. Turns in the direction of staff or peer exploring addition and subtraction. MAe-5NA MALS-10NA Stage 6-2.1	Engages in tactile experiences and language by grouping objects through play. Intentionally engages in tactile experiences. Starts to investigate multiple groups. MAe-5NA MALS-10NA Stage 6-2.1	Exposed to groups of objects to model addition and subtraction. Mimics counting and making groups during modelled addition and subtraction experiences. Copies making groups of items. Exposed to the language associated with addition and subtraction. MAe-5NA MALS-10NA Stage 6-2.1	Combines two or more groups of objects to model addition. Records addition informally using objects and drawings. Attempts to take part of a group away to model subtraction. Uses concrete items when exploring addition and subtraction. Begins to understand the language of 'group', 'combines' and 'takeaway'. Introduced to symbols of addition and subtraction. MAe-5NA MALS-10NA Stage 6-2.1	Compares two groups to determine how many more. Independently creates and identifies groups. Uses symbols of addition and subtraction but not necessarily correctly. Understands language associated with addition and subtraction such as 'add', 'plus', 'takeaway', 'equals'. Begins to explore using a calculator. MAe-5NA MALS-10NA Stage 6-2.1, Stage 6-2.3	Uses counting on and counting down to solve addition and subtraction tasks. Uses the language of 'add', 'plus', 'equals' etc. Uses concrete objects for addition and subtraction of single-digit numbers. Recognises combinations of numbers that add two numbers up to 10. Records number sentences using drawings, words, numerals and the symbols + - and =. Identify number and operation buttons on a calculator. MA1-5NA MALS-10NA Stage 6-2.1, Stage 6-2.3	Uses and records single digit numbers with trading and carrying. Uses concrete objects for addition and subtraction of single digit numbers with carrying or trading. Recognises combinations of numbers that add two numbers up to 20. Makes connections between addition and subtraction. Uses the equals sign to record equivalent number sentences. Uses a calculator to perform a given operation. MA1-5NA MALS-10NA Stage 6-2.1, Stage 6-2.3	Solves word problems involving addition and subtraction. MA1-5NA MALS-10NA Stage 6-2.4	Uses and records a range of mental strategies for addition and subtraction of 2 digit and 3 digit numbers. Uses inverse operations to check addition and subtraction calculations. Uses the formal written algorithm for addition and subtraction. MA2-5NA MALS 10NA Stage 6-2.4	Uses and records a range of mental strategies for addition and subtraction of 2 digit, 3 digit and 4 digit numbers. Uses estimation to check answers to calculations. Solves word problems and records the strategy used. MA2-5NA MALS 10NA Stage 6-2.4	Selects and applies effective mental, written and calculator strategies for addition and subtraction of numbers of any size. Selects and applies efficient mental, written and calculator strategies to solve word problems and record the strategy used. MA3-5NA MALS 10NA Stage 6-2.4
	Multiplication and Division		Reaches for tactile objects. Touches object placed in hand. Smiles during multiplication and vision experiences. Turns in the direction of staff or peer exploring multiplication and division. MAe-6NA MALS-11NA Stage 6-2.1	Engages in tactile experiences and language by grouping objects through play. Intentionally engages in tactile experiences by reaching for part of a group. Starts to investigate multiple groups. Chooses between two groups. Investigates modelled equal groups. MAe-6NA MALS-11NA Stage 6-2.1	Exposed to groups of objects to model multiplication and division. Exposed to the term 'group' when used to describe a collection of objects. Copies making groups of items. Copies sharing items into equal groups. MAe-6NA MALS-11NA Stage 6-2.1	Begins to understand the term 'group' to describe a collection of objects. Recognises groups that are equal or not equal. Begins to identify smaller and larger groups. Introduced to multiplication and division symbols. MAe-6NA MALS-11NA Stage 6-2.1	Models division by sharing items into two equal groups. Combines equal groups of concrete items. Exposed to multiplication and division symbols. Uses objects as a strategy for multiplication. Records grouping for multiplication using numerals. Begins to explore multiplication and division on a calculator. MAe-6NA MALS-11NA Stage 6-2.1	Uses informal methods to record grouping and sharing including drawing and marks. Uses the term 'group' and 'share'. Records sharing for division using numerals. Identifies number and operation buttons on a calculator. MAe-6NA MALS-11NA Stage 6-2.3	Uses and models repeated addition and skip counting as a strategy for multiplication. Records grouping using words and numerals. Recognises and uses multiplication and division symbols. Uses a calculator to perform a given operation. MA1-6NA MALS11-NA Stage 6-2.3, Stage 6-2.4	Recalls multiplication facts x2, x3, x5, x10. Uses and models repeated subtraction as a strategy for division. Uses mental strategies to multiply a single digit number by 10. Uses the formal algorithm for multiplication and division with single digit numbers. MA1-6NA MALS11-NA Stage 6-2.4	Recalls and uses multiplication facts up to 10 x 10. Relates multiplication facts to their inverse division facts. Uses the formal algorithm for multiplication by 1 and 2 digit numbers. MA2-6NA MALS11-NA Stage 6 2.1, Stage 6-2.4	Finds missing numbers in number sentences on one side of equation involving multiplication and division. Uses mental strategies and informal recording methods for division with remainders. MA2-6NA MALS11-NA Stage 6-2.4	Finds missing numbers in number sentences on one or both sides of the equation. Solves word problems and records the strategy used (mental, written or calculator). Interprets remainders in division problems. Recognises and uses grouping symbols. Applies the order of operations in calculations. MA3-6NA MALS11-NA Stage 6-2.2, Stage 6-2.3, Stage 6-2.4
	Fractions		Reaches for tactile representations of halves. Smiles during fraction experiences. Explores fractions using tactile objects. Turns in the direction of staff or peer discussing fractions. MAe-7NA MALS-8NA Stage 6-1.6	Engages in tactile experiences and language through play. Intentionally engages in tactile experiences by choosing between two objects. Explores halves through tactile experiences such as blocks and puzzles. MAe-7NA MALS-8NA Stage 6-1.6	Exposed to the language of a half. Participates in fraction experiences. Matches halves of a picture to a whole picture. MAe-7NA MALS-8NA Stage 6-1.6	Experiments with half using objects and pictures i.e such as toast in half, butter on half (not always in two equal parts). MAe-7NA MALS-8NA Stage 6-1.6	Shows understanding of the concept of a half. Records halves of objects using drawings. Shares an object by dividing it into two equals parts such as cutting toast in half, cutting apple in half. Understands and uses language of 'half' and 'equal parts' in familiar contexts. Exposed to fraction notation for half 1/2 MAe-7NA MALS-8NA Stage 6-1.6	Understands the concept of half as one of two equal parts of a whole. Recognises when two parts are equal or not equal. Begins to use fraction notation for half 1/2. MA1-7NA MALS-8NA, MALS-9NA Stage 6-1.6	Recognises, describes and represents half as one of two equal parts of whole objects, shapes and collections. Is exposed to fraction notation for quarters 1/4and eighths 1/8. MA1-7A MALS-8NA, MALS-9NA Stage 6-1.6	Uses the fraction notation for half 1/2 Recognises, describes and represents quarters and eighths of whole objects, shapes and collections. Represents half on a number line from 0 - 1. MA1-7NA MALS-8NA, MALS-9NA Stage 6-1.6	Uses fraction notation for quarters 1/4 and eighths 1/8. Model and represent fractions and denominators 2, 3, 4, 5 and 8. Count by halves including mixed numbers. MA2-7NA MALS-9NA Stage 6-1.6	Model and find equivalence between fractions with denominators 2, 3, 4, 5, 6, 10 and 100. Apply place value system to represent tenths and hundredths as decimals. Make connections between fraction and decimal notation. Model, compare and represent decimals. Represent decimals on number lines. MA2-7NA MALS-9NA Stage 6-1.7	Expresses mixed numerals as improper fractions. Models and represents strategies to add and subtract fractions with the same denominator. Compares, orders and represents decimals with up to two decimal places. Determines, generates and records equivalent fractions. Write fractions in their simplest form. MA3-7NA MALS-9NA Stage 6-1.7, Stage 6-1.8
	Patterns and Algebra		Reaches for tactile representations of patterns and algebra. Explores patterns and algebra using tactile objects. Smiles during pattern and algebra experiences. Turns in the direction of staff or peer discussing patterns and algebra. MAe-8NA MALS-18NA Stage 6 4.1	Engages in tactile experiences and language through play. Intentionally engages in tactile experiences through play. Exposed to patterns and the language used to describe a pattern such 'same', 'different' and 'next'. MAe-8NA MALS-18NA Stage 6 4.1	Sorts and classifies objects into groups based on one attribute e.g. colour, size, shape etc. Understands the language of the same and different. MAe-8NA MALS-18NA Stage 6-4.1	Recognises, copies and continues basic repeating patterns of objects and drawings with a maximum of two attributes e.g. red, blue, red, blue. MAe-8NA MALS-18NA Stage 6-4.1	Creates and describes repeating patterns of objects and drawings with two attributes. MAe-8NA MALS-18NA Stage 6-4.1	Recognises, copies and continues increasing and decreasing number patterns. Recognises, copies and continues repeating patterns of objects or symbols. Is exposed to odd and even numbers. MA1-8NA MALS-18NA Stage 6-4.1	Creates and describes repeating patterns of objects or symbols with more than two attributes and number patterns. Models or describes odd and even numbers. Describes patterns with numbers and identifies missing elements. MA1-8NA MALS-18NA, MALS-19NA Stage 6-4.1	Identifies and records increasing and decreasing number patterns. Finds missing numbers in number sentences involving addition and subtraction on one or both sides of the equals sign. MA2-8NA MALS-19NA Stage 6-4.1	Identifies odd and even numbers of up to four-digits. Recognises, continues and describes number patterns resulting from performing multiplication. MA2-8NA MALS-19NA Stage 6-4.1	Investigates and uses the properties of odd and even numbers (rules for addition and multiplication). Finds missing numbers in number sentences involving one operation of multiplication or division. MA3-8NA MALS-19NA Stage 6-4.1	Continues, creates, records and describes geometric and number patterns in words. Finds missing numbers in number sentences involving multiplication or division on one or both sides of the equals sign. Identifies, continues, creates and describes increasing and decreasing number patterns . MA3-8NA MALS-19NA Stage 6-4.1
	Length		Reaches for tactile representations of length. Smiles during length experiences. Explores length using tactile objects. Turns in the direction of staff or peer discussing length. MAe-9MG MALS-26MG Stage 6-6.1	Engages in tactile experiences and language through play with materials used for measuring length. Intentionally engages in tactile experiences of measuring length. Exposed to the language of 'longer/shorter', 'big/little', 'short/tall', 'bigger/smaller'. MAe-9MG MALS-26MG Stage 6-6.1	Starts to become familiar with and use length and distance terms. Starts to use language of longer/shorter, big/little, short/tall, bigger/smaller. Uses matching to identify 'longer than', 'shorter than', 'same length'. MAe-9MG MALS-26MG Stage 6-6.1	Uses comparative and everyday language to describe length and distance. Compares lengths of two objects using direct comparison and placing objects side by side. MAe-9MG MALS-26MG Stage 6-6.1	Records comparisons of length informally using drawing, tracing, cutting and pasting. Responds to oral descriptions from others e.g. "make a long, thin snake". Exposed to metres and centimetres to measure and estimate lengths and distances. MAe-9MG MALS-26MG Stage 6-6.1, Stage 6-6.2	Uses uniform informal units to measure and compare lengths and distances such as handspan. Compares and orders shapes or objects based on length measures using informal units. Recognises the need for formal units to measure length. Attempts to use metres and centimetres to measure and estimate lengths and distances. Records lengths using the abbreviations m and cm. Introduced to millimetres. MA1-9MG MALS-25MG, MALS-26MG Stage 6-6.2	Uses metres, centimetres and millimetres to measure, compare, order and estimate lengths. Selects and uses appropriate scaled instruments to measure and compare lengths. Recognises that there are 100cm in a metre. MA1-9MG MALS-25MG, MALS-26MG Stage 6-6.2	Estimates and measures perimeters of 2D shapes. Uses a scaled instrument to measure and compare temperatures. Records temperatures using the symbol for degrees. MA2-9MG MALS-25MG, MALS-26MG Stage 6-6.4	Recognises parts of a 3D object associated with length, that can be measured. Converts between metres, centimetres and millimetres. Uses kilometre to measure length and distance. Selects and uses appropriate instruments and units to measure length. Records length and distance using km, m, cm and mm. MA2-9MG MALS-25MG, MALS-26MG Stage 6-6.6	Finds perimeters of common 2D shapes and records the strategy. Converts between kilometres, metres, centimetres and millimetres. Records length and distances using decimal notation to two decimal places. MA3-9MG MALS-26MG Stage 6-6.6	Records lengths and distances using decimal notation to three decimal places. Solves problems involving length and perimeter. MA3-9MG MALS-26MG Stage 6-6.5, Stage 6-6.6
	Area		Reaches for tactile representations of area. Explores area using tactile objects. Smiles during area experiences. Turns in the direction of staff or peer discussing area. MAe-10MG MALS-29MG Stage 6-6.1	Engages in tactile experiences through play with materials used for measuring area. Intentionally engages in tactile experiences of measuring area. Exposed to the language of area such as 'bigger', 'smaller', 'same as'. MAe-10MG MALS-29MG Stage 6-6.1	Starts to use language of area such as 'bigger than', 'smaller than' and 'same as' but not necessarily accurately. Responds to oral questions from staff e.g. "Which table is bigger?" MAe-10MG MALS-29MG Stage 6-6.1	Uses the language of area such as 'bigger than', 'smaller than' and 'same as' correctly to describe an amount of surface Identifies area as a measure of the amount of surface. Describes area using everyday language including comparatives. MAe-10MG MALS-29MG Stage 6-6.1	Compares areas using direct comparison such as placing one shape over another. Predicts whether a surface will be bigger or smaller than another. Records comparisons of area informally. MAe-10MG MALS-29MG Stage 6-6.1	Uses uniform informal units to estimate and calculate areas of regular surfaces. Records area by referring to the number and type of uniform informal unit used. Compares and orders surfaces based on area measured using uniform informal units of regular surfaces. Attempts to use square centimetres and square metres to measure and estimate rectangular and square areas. Recognises the need for formal units to measure area. MA1-10MG MALS-25MG; MALS-29MG Stage 6-6.1, Stage 6-6.2	Recognises the appropriate unit and its abbreviation for measuring area e.g. cms, ms Uses square centimetres and square metres to measure and estimate rectangular and square areas. Records lengths using the abbreviations cm and m. MA2-10MG MALS-25MG; MALS-29MG Stage 6-6.2	Measures and compares the areas of regular and irregular shapes using a square-centimetre grid. Compares areas measured in square centimetres and square metres. Estimates the areas of everyday objects and checks these using a measuring device. MA2-10MG MALS-25MG; MALS-29MG Stage 6-6.4, Stage 6-6.6	Recognises the need for square kilometres and hectares to measure area. Records using the abbreviations kms and ha. MA3-10MG MALS-25MG; MALS-29MG Stage 6-6.4, Stage 6-6.6	Develops a strategy to find areas of rectangles (including squares) and records the strategy in words. Develop a strategy to find areas of triangles and record the strategy in words. MA3-10MG MALS-29MG Stage 6-6.6	Solves problems involving areas of rectangles (including squares) and triangle. MA3-10MG MALS-29MG Stage 6-6.5, Stage 6-6.6

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Measurement and Geometry Students develop an understanding of size, shape, position and movement of 2D figures and 3D objects; comparing and constructing figures and objects. They make measurements of quantities, choosing appropriate units.	Volume and Capacity		Reaches for tactile representations of volume and capacity. Explores volume and capacity using tactile objects. Smiles during volume and capacity experiences. Turns in the direction of staff or peer discussing volume and capacity. MAe-11MG MALS-28MG Stage 6-6.1	Reaches for measuring equipment and containers that can be filled with liquid or objects. Exposed to the language of volume and capacity such as 'full' and 'empty'. MAe-11MG MALS-28MG Stage 6-6.1	Participates in measuring activities. Starts to use the language 'more' and 'less than', 'full' or 'empty' but not necessarily correctly. MAe-11MG MALS-28MG Stage 6-6.1	Uses the language 'more', 'less than', 'full' or 'empty'. Recognises a container as being full, half full, almost full or empty. Starts to explore pouring liquids using a variety of containers. MAe-11MG MALS-28MG Stage 6-6.1	Consistently uses the language 'more' and 'less than', 'full' or 'empty', 'bigger' and 'smaller'. Compares capacities of containers using direct comparison. Uses comparative language 'has more', 'has less', 'will hold' in direct reference to volume and capacity. Introduced to uniform informal units of measure such as cups in cooking, sand and water play. MAe-11MG MALS-28MG Stage 6-6.1	Uses and selects appropriate informal units of measure such as cups to fill a bucket, teaspoon or cup when preparing food . Exposed to the language of 'millilitres' and 'litres'. MA1-11MG MALS-25MG, MALS-28MG Stage 6-6.1, Stage 6-6.2	Records comparisons of volume and capacity informally. Begins to recognise the need for formal units of measure. Practises recording volume and capacity using litres and millilitres. MA1-11MG MALS-25MG, MALS-28MG Stage 6-6.2	Recognises the need for formal units of measurement for capacity and volume. Uses and records litres using (L). Orders a variety of containers with different shapes and capacity using litres. Explores differences in volumes and capacities using litres e.g. 'smaller', 'larger' and 'the difference between'. MA2-11MG MALS-25MG, MALS-28MG Stage 6-6.2	Uses litres and millilitres to measure, compare and estimate capacities and volumes. Uses capacities and volumes with the abbreviations L and mL. Compares volumes of two or three objects by submerging each in water. MA2-11MG MALS-25MG, MALS-28MG Stage 6-6.5	Connects volume and capacity using their unit of measurement. MA3-11MG MALS-28MG Stage 6-6.1, Stage 6-6.2	Converts between litres and millilitres. Uses cubic metres and centimetres to measure and estimate volume. Records volumes using the abbreviations cme and me. MA3-11MG MALS-28MG Stage 6-6.1, Stage 6-6.2
	Mass		Reaches for tactile representations of mass. Explores mass using tactile objects. Smiles during mass experiences. Turns in the direction of staff or peer discussing mass. MAe-12MG MALS-27MG Stage 6-6.1	Reaches for and begins to interact with different weighted objects. Exposed to the language of mass such as 'heavy' and 'light'. MAe-12MG MALS-27MG Stage 6-6.1	Participates in free play with different materials used for balancing including blocks, marbles and beads. Starts to use the comparative language of mass 'heavier' and 'lighter' but not necessarily correctly. Compares objects of extreme difference through free play. Starts to interact with equal arm balance equipment. MAe-12MG MALS-27MG Stage 6-6.1	Exposed to or modelled the use of equal arm balance or scales (different types of scales). Uses the language of mass such as 'heavier' and 'lighter'. MAe-12MG MALS-27MG Stage 6-6.1	Consistently uses the language 'heavier' and 'lighter'. Compares two masses using direct comparisons. Experiments with different mass objects. Begins to use a variety of scale types or equal arm balance scales to explore objects of differing mass. Makes predictions e.g 'heavier than', 'lighter than.' MAe-12MG MALS-27MG Stage 6-6.1	Exposed to the language of 'kilograms' and 'grams' in direct relation to heavier and lighter. Uses and selects appropriate informal units to measure the mass of objects. Sorts objects based on their mass. MA1-12MG MALS-27MG Stage 6-6.2	Records comparisons of mass informally. Begins to recognise the need for formal units of measure. Estimate mass by referring to the number and type of uniform informal unit used. Begins to recognise the need for formal units of measure. MA1-12MG MALS-27MG Stage 6-6.2	Recognises the need for formal units of measurement for mass. Uses and records kilograms using (kg). Introduced formally to the term 'grams.' Orders a variety of containers with different shapes and capacities using kilograms. MA2-12MG MALS-27MG Stage 6-6.2	Uses kilograms and grams to measure, compare and estimate mass. Uses and records mass using grams (g). Compares the mass of 2 or 3 objects by submerging each in water. MA2-12MG MALS-27MG Stage 6-6.2	Recognises the need for formal units of measure larger than kilogram such as tonnes. Selects and uses the appropriate instruments and units to measure mass. Solves problems involving mass. MA3-12MG MALS-27MG Stage 6-6.2	Converts between kilograms and grams. Recognises the need for tonnes to measure mass. Records mass with the abbreviations t, kg and g. Records mass using decimal notation to two decimal places. MA3-12MG MALS-27MG Stage 6-6.2
	Time	Exposed to topic related activities and songs Shows recognition of familiarand favourite objects or activities by vocalising or gesture. Makes eye contact. Experiences and tolerates being shown topic related books. Experiences and tolerates sensory stimulus related to topic content. Experiences topic content through touching and playing with concrete material. Experiences topic related books and objects by mouthing them, patting them, carrying them around. Focuses attention briefly on hands. Moves hands over or through some sensory material. Coactively holds an object briefly when placed in their hands. Number and Algebra: MAe-4NA; MAe-5NA; MAe-6NA; MAe-7NA; MAe-8NA Measurement and Geometry: MAe-9MG; MAe-10MG; MA-e11MG; MAe-12MG; MAe-13MG; MAe-14MG; MAe-15MG; MAe-16MG Statistics and Probability: MAe-17SP; MA-e18SP	Reaches for tactile representations of time. Explores time using tactile objects. Smiles during time experiences. Turns in the direction of staff or peer discussing time. MAe-13MG MALS-20MG, MALS-21MG Stage 6-3.1	Engages in free play with digital and analogue clocks. Aware that a timer or buzzer has gone off. (Not necessarily stopping the activity). Exposed to the language of describing time e.g. 'day/night', 'before/now/after', 'longer/shorter', 'first/this/then', 'today/tomorrow/yesterday'. Exposed to language associated with the 'days of the week', 'months', 'year' and 'seasons'. Starts to use the language of describing time e.g. 'day/night', 'before/now/after', 'longer/shorter', 'first/this/then', 'today/tomorrow/yesterday'. Starts to use the language associated with the 'days of the week', 'months', 'year' and 'seasons'. MAe-13MG MALS-20MG, MALS-21MG Stage 6-3.1	Understands everyday language that is used to describe time e.g. 'before/now/after', 'longer/shorter', 'day/night', 'today/tomorrow/yesterday'. . Understands sequencing of 2-3 activities e.g. breakfast, get dressed and brush teeth. Responds to a 'first/then' instruction. Exposed to telling time on digital and analog clocks. Aware that a timer or buzzer has gone off and responds by ceasing or changing the activity. MAe-13MG MALS-20MG, MALS-21MG Stage 6-3.2	Exposed to language of approximation e.g. 'almost', 'about', 'nearly', 'not quite' and 'soon'. Uses everyday language to describe time e.g. 'before/now/after', 'longer/shorter', 'day/night', 'today/tomorrow/yesterday. Sequence 2-3 activities using every day language or visuals e.g. breakfast, get dressed and brush teeth. Begins to understand that clocks represent time and that the hands and numbers change as time passes. MAe-13MG MALS-20MG, MALS-21MG Stage 6-3.2	Sequences 5-6 daily activities using everyday language or visuals. Associates specific activities to a specific day e.g. weekdays and weekends. Uses the language associated with days of the 'week', 'months' and 'seasons'. Exposed to telling time on the hour on digital and analogue clocks, including language associated with duration e.g. 'seconds', 'minutes', 'hours' and 'days'. Engages in activities of different durations e.g. hour, half, quarter, minute, seconds to develop understanding of language associated with duration. MAe-13MG MALS-20MG, MALS-21MG Stage 6-3.3, Stage 6-3.4	Names and orders days of the week, months and seasons. Uses the calendar to identify the day and determine the number of days in each month, including special events e.g. birthdays. Tells time on the hour on digital and analogue clocks, using the term o'clock. Exposed to half hours. MA1-13MG MALS-21MG Stage 6-3.4, Stage 6-3.8	Uses a calendar to determine duration in months, weeks and days. Tells time to the half hour. Exposed to the concept of a quarter of an hour, using the language of 'past' and 'to'. Exposed to the language 'minute' and 'second'. Uses and understands the language associated with the duration of time including e.g. 'longer', 'shorter', 'quickly' and 'slowly'. MA1-13MG MALS-22MG Stage 6-3.6	Tells the time to the quarter of an hour, using the language of 'past' and 'to'. Using and understanding the language 'mintue' and 'second'. Recognises the coordinated movements of the hands of a clock. Is exposed to the language of 'am' and 'pm'. Exposed to 24 hour time. MA1-13MG MALS-22MG Stage 6-3.5, Stage 6-3.6	Reads time to the minute using digital notation and the terms 'past' and 'to', including 24 hour time and 'am' and 'pm'. Converts between seconds, minutes, hours and days. MA2-13MG MALS-22MG Stage 6-3.5, Stage 6-3.6	Records time to the minute using digital notation and the terms past and to, including 24 hour time and 'am' and 'pm'. Reads and interprets simple timetables, timelines and calendars, e.g. adapted and personalised bus and train timetables. MA3-13MG MALS-22MG; MAL 23MG Stage 6-3.6, Stage 6-3.7, Stage 6-3.9	Converts between 12 and 24 hour time. Determine and compare the duration of events. Interpret and use timetables, e.g. public bus and train. Draws and interprets timelines using a given scale. MA3-13MG MAL-24MG, MAL-24MG Stage 6-3.7, Stage 6-3.9, Stage6-3.10
	Two-dimensional Space		Reaches for tactile representations of 2D space. Explores 2D space using tactile objects. Smiles during 2D space experiences. Turns in the direction of staff or peer discussing 2D space. MAe-15MG MALS-30MG Stage 6-4.1	Engages in tactile experiences and language through play with 2D objects. Intentionally engages in tactile experiences by choosing between 2D objects. Is exposed to concepts of same and different. Starts to use language of same and different. MAe-15MG MALS-30MG Stage 6-4.1	Uses the language of shapes but not 1:1 correspondence. Sorts and matches circles, squares, triangles and rectangles. MAe-15MG MALS-30MG Stage 6-4.1	Identifies and names circles, squares, triangles and rectangles in pictures and environment. Makes and draws circles, squares, triangles and rectangles. Is exposed to the language of 'horizontal', 'vertical', 'parallel', 'side' and 'vertex'. Is exposed to the language of symmetrical shapes and designs. MAe-15MG; MA1-15MG MALS-30MG Stage 6-4.3	Identifies, names and describes circles, squares, triangles and rectangles presented in different orientations. Uses the language of 'horizontal', 'vertical', 'parallel', 'side' and 'vertex'. Makes symmetrical shapes and designs with an understanding. Is exposed to the language of parts of circles. MAe-15MG; MA1-15MG MALS-31MG Stage 6-4.3	Manipulates circles, squares, triangles and rectangles. Uses the language of quadrilaterals, pentagons, octagons and hexagons. Describes and compares 2D shapes. Identifies and names parts of circles. MAe-15MG; MA1-15MG MALS-31MG Stage 6-4.3	Identifies and names quadrilaterals, pentagons, octagons and hexagons in pictures and environments. Makes and draws 2D shapes. Is exposed to the language of one-step 'slides',' flips', 'full', 'half' and quarter 'turns'. Identifies and draws lines of symmetry. MA1-15MG MALS-31MG, MALS-31MG Stage 6-4.3	Identifies, names and describes quadrilaterals, pentagons, octagons and hexagons presented in different orientations. Makes and draws 2D shapes in different orientations. Uses thelanguage of one-step 'slides',' flips', 'full', 'half' and quarter 'turns'. Identifies and names special quadrilaterals. Describes and compares features of all shapes. MA1-15MG MALS-31MG, MALS-32MG Stage 6-4.1, Stage 6-4.3, Stage 6-4.3	Identifs the results of one-step 'slides',' flips', 'full', 'half' and quarter 'turns'. Identifies names and describes special quadrilaterals in different orientations. Combine and split common shapes to form other shapes, e.g. two triangles make a square and record the arrangement. Uses transformations to create and describe symmetrical designs. MA1-15MG; MA2-15MG MALS-31MG, MALS-31MG Stage 6-4.1, Stage 6-4.3, Stage 6-4.3	Performs and records the results of one-step 'slides' and 'flips' of full, half and quarter 'turns'. Creates and records tessellation designs. MA2-15MG MALS-31MG Stage 6-4.1, Stage 6-4.3, Stage 6-4.3	Identifies, names and draws right-angled, equilateral, isosceles and scalene triangles. Comparse and describes side properties of the special quadrilaterals and special triangles. Uses the terms 'translate', 'reflect' and 'rotate' to describe transformations of shapes. Identifs line and rotational symmetries. Identifs, describe, compare and draw diagonals of two-dimensional shapes. MA2-15MG; MA3-15MG MALS-31MG, MALS-31MG Stage 6-4.1, Stage 6-4.3, Stage 6-4.3
	Three-dimensional Space		Reaches for tactile representations of 3D space. Explores 3D space using tactile objects. Smiles during 3D space experiences. Turns in the direction of staff or peer discussing 3D space. MAe-14MG MALS-30MG Stage 6-4.1	Engages in tactile experiences through play with 3D objects and language. Intentionally engages in tactile experiences by choosing between 3D objects. Starts to use the language of same and different. MAe-14MG MALS-30MG Stage 6-4.1	Describes features using everyday language of 3D shapes but not 1:1 correspondence. Sorts, manipulates and matches 3D objects found in the environment (shape, colour, size and function). MAe14MG MALS-30MG Stage 6-4.1	Distinguishes between flat and curved surfaces. Is introduced to 'faces' in order to describe flat surfaces with straight edges. Identifies cones, cubes, cylinders, spheres and prisms in pictures and the environment. MA1-14MG MALS-30MG Stage 6-4.3	Identifies cones, cubes, cylinders, spheres and prisms in different orientations in pictures and the environment. Introduced to language terms such as 'flat surface', 'curved surface' and 'edge'. Recognises that 3D objects look different from different vantage points. MA1-14MG MALS-31MG Stage 6-4.3	Uses the terms ' flat surface', 'curved surface', 'face', 'edge' and 'vertex' appropriately to describe 3D objects. Recognises faces of 3D objects as 2D shapes. Distinguishes between 3D objects and 2D shapes. MA1-14MG MALS-31MG Stage 6-4.3	Represents 3D objects in models and drawings. MA2-14MG MALS-31MG Stage 6-4.3	Identifies, describes and compares features of prisms, pyramids, cylinders, cones and spheres. Makes models of 3D objects. Creates nets from everyday packages. MA2-14MG MALS-31MG Stage 6-4.3	Represents 3D objects in drawings showing depth. Sketches 3D objects from different views. Interprets and make drawings of objects on isometric grid paper. MA2-14MG MALS-31MG Stage 6-4.3	Names prisms and pyramids according to the shape of their base. Recognises that prisms have a uniform cross-section and pyramids do not. Identifies, describes and compares properties of prisms and pyramids in terms of their faces, edges and vertices. MA3-14MG MALS-31MG Stage 6-4.3	Connects 3D objects with their nets. Constructs prisms and pyramids using a variety of materials and given drawings from different views. MA3-14MG MALS-31MG Stage 6-4.3
	Angles									Will have completed all 3D and 2D indicators/outcomes up to Cluster 8 before beginning angle work. Is exposed to the language of angles e.g. perpendicular lines and right angles, degrees, acute, obtuse, straight, reflex or a revolution. MA2-16MG MALS-31MG	Identifys and describes angles as measures of turn. Compares angle sizes in everyday situations. Identifys perpendicular lines and right angles. MA2-16MG MALS-31MG	Draws and classifies angles as acute, obtuse, straight, reflex or a revolution. Recognises the need for formal units to measure angles. MA2-16MG MALS-31MG	Measures, compares and estimates angles in degrees (up to 360°). Records angle measurements using the symbol for degrees. Constructs angles using a protractor (up to 360°). Describes angle size in degrees for each angle classification. Identifys and names angle types formed by the intersection of straight lines, including angles on a straight line, angles at a point and vertically opposite angles. Uses known angle results to find unknown angles in diagrams. MA3-16MG MALS-31MG
	Position		Smiles during position experiences. Turns to music or person discussing position. Is aware of position activities. Gives attention to position experiences. MAe-16MG MALS-32MG Stage 6-4.2	Engages in tactile experiences and language through play. Intentionally engages in tactile experiences by choosing between two positions. Is exposed to and begins to use the language of positions e.g. 'front', 'behind', 'under', 'on'. Starts to follow simple directions. MAe-16MG MALS-32MG Stage 6-4.2	Describes position using everyday language. MAe-16MG MALS-32MG Stage 6-4.4	Uses the term 'left' and 'right' to describe pattern in relation to self. Gives and follows directions to move to familiar locations and to position objects. MA1-16MG MALS-32MG Stage 6-4.2, Stage 6-4.4	Uses the terms 'left' and 'right' to describe position in relation to self and from the perspective of a person facing in the opposite direction. Describes a path from one location to another. MA1-16MG MALS-32MG Stage 6-4.2, Stage 6-4.4	Interprets simple maps of familiar locations. Represents the position of objects in models, photographs and drawings. MA1-16MG MALS-33MG Stage 6-4.5	Uses grid-referenced maps to locate and describe positions and pathways. Draws simple maps with a grid. MA2-16MG MALS-33MG Stage 6-4.5	Draws simple maps without a grid. Determines direction 'North, East, South, West and NE, SE, SW, NW' when given one of the directions. MA2-16MG MALS-33MG Stage 6-4.4	Interpret legends and directions on maps. Use the scale to calculate the distance between two points on maps. Use grid-referenced maps to locate and describe positions. MA3-17MG MALS-34MG Stage 6-4.5	Follow a sequence of directions, including compass directions, to find a particular location on a map. MA3-17MG MALS-34MG Stage 6-4.5	Describe routes using landmarks and directional language. MA3-17MG MALS-34MG Stage 6-4.5
Statistics and Probability Students collect, represent, analyse, interpret and evaluate data, assign and use probabilities, and make sound judgements.	Data		Smiles during data activities. Turns towards graphs and tables. Is aware a graph or table is being developed. Gives attention to data collection experiences e.g. hair colour. MAe-17SP MALS-35SP Stage 6-6.3	Makes a choice between two objects using eye gaze, pointing, reaching or augmentative communication. Sorts identical objects into two groups using colour, shape or size as a distinction. Intentionally contributes to data collection through eye gaze or raising their hand. MAe-17SP MALS-35SP Stage 6-6.3	Sorts objects into more than two groups by characteristics. Experiences activities that match people or objects into 1:1 correspondence in order to make comparisons. Attends to pictorial displays that represent people or objects to record the data collection (e.g. "draw a picture of a graph made with real pieces of fruit"). MAe-17SP MALS-35SP Stage 6-6.3	Makes comparisons between groups of objects according to number. Identifies bigger and smaller groups when displayed in lines. Identifies bigger and smaller groups when displayed in bundles. MAe-17SP MALS-35SP Stage 6-6.3	Recognises that information can be presented in tables and graphs, e.g. a picture graph to represent favourite foods, column graph to represent classroom gender, table to record daily rainfall. Recognises data displayed in different ways, e.g. a table and graph to show daily temperatures over a week. MAe-17SP MALS-35SP Stage 6-6.3	Identifies information in graphs using features such as the heading or title of the graph, labels on axes, scale and key. Recognises ways in which data about the environment can be displayed, e.g. data about climate and population growth. MA1-17SP MALS-35SP Stage 6-6.3	Plans methods for data collection. Gathers and organises data in lists, tables and picture graphs and interprets the results. Interprets information and draws conclusions from data displays. MA1-17SP MALS-36SP Stage 6-6.3	Selects appropriate methods to collect data and constructs, compares, interprets and evaluates data displays, including tables, picture graphs and column graphs. Compares tables and graphs constructed from the same data to determine which is the most appropriate method of display. MA2-17SP MALS-37SP Stage 6-6.3	Constructs data displays, including tables, column graphs, dot plots and line graphs, appropriate for the data type. Describes and interprets data presented in tables, column graphs, dot plots and line graphs. MA2-17SP, MA3-18SP MALS-37SP Stage 6-6.3	Collect categorical and numerical data by observation and by survey. Interprets side-by-side column graphs. MA3-18SP MALS-37SP Stage 6-6.3	Uses statistical displays to compare sets of data and evaluates statistical claims made in the media and elsewhere. Interprets and creates two-way tables. MA3-18SP MALS-37SP Stage 6-6.3
	Chance		Smiles during chance activities. Gives attention to person leading chance activity. Gives attention to peers engaged in chance activities. MA1-18SP MALS-38SP	Shows excitement or anticipation towards an expected outcome through body language and facial expressions. Begins to interact with objects related to chance e.g. spin dial, dice. MA1-18SP MALS-38SP	Is exposed to the element of chance in familiar situations e.g. "It is sunny so it's not going to rain today". MA1-18SP MALS-38SP	Takes turns to use spin dials, dice etc. Begins to make simple predictions based on yes and no answers when asked (not necessarily correct). Is exposed to the language of 'likely' and 'unlikely'. Recognises chance in familiar situations e.g. the student identifies it's sunny so the chance of rain is unlikely. MA1-18SP MALS-38SP	Uses spin dials and dice in chance related activities eg. board games. Begins to make more accurate predictions about the likelihood of an outcome based on a yes or no response. Begins to use the language of 'likely' and 'unlikely'. MA1-18SP MALS-38SP	Uses and understands spin dials and dice in chance related activities e.g. board games. Makes accurate predictions about the likelihood of an outcome. Uses the language of 'likely' and 'unlikely' to describe an event. MA1-18SP MALS-38SP	Distinguishes between possible and impossible events. MA1-18SP MALS-39SP	Identifies and describes possible outcomes of chance events and activities. Conducts chance experiments and compares predicted with actual results. MA2-19SP MALS-39SP	Describe possible everyday events and order their chances of occurring. Identify everyday events where one occurring cannot happen if the other happens. Identify events where the chance of one occurring will not be affected by the occurrence of the other. MA2-19SP MALS-39SP	Lists outcomes of chance experiments involving equally likely outcomes. Understands the probability of an event occurring when described as a percentage, e.g. "there is 75% chance it will rain today". MA3-19SP MALS-39SP	Represents probabilities using fractions, decimals or percentages. Recognises that probabilities range from 0-1. Compares and observes frequencies in chance experiments with expected frequencies. MA3-19SP MALS-39SP
Working Mathematically Students develop understanding and fluency in mathematics through inquiry, exploring and connecting mathematical concepts, choosing and applying problem-solving skills and mathematical techniques, communication and reasoning.			**Communicating:** Students develop the ability to use representations, in written, oral or graphical form, to formulate and express mathematical ideas. Students are communicating mathematically when they describe, represent and explain mathematical situations, concepts and solutions to problems.									
			Problem Solving: Students develop the ability to make choices, interpret, model and investigate unfamiliar problem situations. They solve problems when they use mathematics, design investigations, apply strategies to seek reasonable stiuations and communicate their findings effectively.									
			Reasoning: Students develop the capacity for logical thought and actions, such as analyzing, proving, evaluating, explaining, inferring, justifying and generalising. They are reasoning when they explain their thinking, deduce and justify strategies and conclusions reached, prove that something is true or false, and compare and contrast ideas.									
			Understanding: Students develop an understanding of the relationship between the 'why' and the 'how' of mathematics. They build understanding when they connect related ideas, represent concepts in different ways, identify commonalities and differences between aspects of content, describe their thinking and interpret information.									
			Fluency: Students are fluent when they calculate answers efficiently, recognise robust ways of answering questions, choose appropriate methods and approximations, recall definitions and regularly use facts, and manipulate expressions and equations to find solutions.									