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| **EARLY STAGE 1**  **KINDERGARTEN** | **WORKING**  **MATHEMATICALLY** | **NUMBER &**  **ALGEBRA** | **MEASUREMENT**  **& GEOMETRY** | **STATISTICS &**  **PROBABILITY** | **NUMERACY**  **CONTINUUM** |
| *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* | *develop efficient strategies for numerical calculation, recognise patterns, describe*  *relationships and apply algebraic techniques and generalisation* | *identify, visualise and quantify measures and the attributes of shapes and objects, and explore measurement concepts and geometric relationships, applying formulas, strategies*  *and geometric reasoning in the solution of problems* | *collect, represent, analyse, interpret and evaluate data, assign and use probabilities, and make sound judgements* |
| **LEARNING ACROSS THE CURRICULUM** |
| **OUTCOMES** | **OUTCOMES** | **OUTCOMES** | **OUTCOMES** |
| **Cross-curriculum priorities**  🞎  Aboriginal &Torres Strait Islander histories & cultures  🞎  Asia & Australia’s engagement with Asia  🞎  Sustainability  **General capabilities**  🞎  Critical & creative thinking  🞎  Ethical understanding  🞎  Information & communication technology capability  🞎  Intercultural understanding  🞎  Literacy  🞎  Numeracy  🞎  Personal & social capability  **Other learning across the curriculum areas**  🞎  Civics & citizenship  🞎  Difference & diversity  🞎  Work & enterprise | ***Communicating***  **🞎 MAe-1WM** describes mathematical situations using everyday language, actions, materials and informal recordings  ***Problem Solving***  **🞎 MAe-2WM** uses objects, actions, technology and/or trial and error to explore mathematical problems  ***Reasoning***  **🞎 MAe-3WM** uses concrete materials and/or pictorial representations to support conclusions | ***Whole Numbers***  **🞎 MAe-4NA** counts to 30, and orders, reads and represents numbers in the range 0 to 20  ***Addition and Subtraction***  **🞎 MAe-5NA** combines, separates and compares  collections of objects, describes using everyday  language, and records using informal methods  ***Multiplication and Division***  **🞎 MAe-6NA** groups, shares and counts collections of objects, describes using everyday language, and records using informal methods    ***Fractions and Decimals***  **🞎 MAe-7NA** describes two equal parts as halves  ***Patterns and Algebra***  🞎 **MAe-8NA** recognises, describes and continues  repeating patterns | ***Length***  **🞎 MAe-9MG** describes and compares lengths and  distances using everyday language  ***Area***  **🞎 MAe-10MG** describes and compares areas using  everyday language  ***Volume and Capacity***  **🞎 MAe-11MG** describes and compares the capacities of containers and the volumes of objects or substances using everyday language  ***Mass***  **🞎 MAe-12MG** describes and compares the masses of  objects using everyday language  ***Time***  **🞎 MAe-13MG** sequences events, uses everyday  language to describe the durations of events, and reads hour time on clocks  ***Three-Dimensional Space***  **🞎 MAe-14MG** manipulates, sorts and represents three-dimensional objects and describes them using everyday language  ***Two-Dimensional Space***  **🞎 MAe-15MG** manipulates, sorts and describes  representations of two-dimensional shapes, including circles, triangles, squares and rectangles, using everyday language  ***Position***  **🞎 MAe-16MG** describes position and gives and follows simple directions using everyday language | ***Data***  **🞎 MAe-17SP** represents data and interprets data displays made from objects | **ASPECT 1**  **Forward Number Word Sequence**  🞎 Counts to 10  🞎 Cannot say the number word just after a given number word in the range 1-10  🞎 Dropping back to one does not appear at this level  **Forward Number Word Sequence**  🞎 Counts to 10  🞎 Says the number word just after a given number word but drops back to one when doing so  **Forward Number Word Sequence**  🞎 Counts to 10  🞎 Says the number word just after a given number word in the range 1-10 without dropping back  **Forward Number Word Sequence**  🞎 Counts to 30  🞎 Says the number word just after a given number word in the range 1-30 without dropping back  **Backward Number Word Sequence**  🞎 Counts backwards from 10-1  🞎 Cannot say the number word just before a given number word in the range 1-10  🞎 Dropping back to one does not appear at this level  **Backward Number Word Sequence**  🞎 Counts backwards from 10-1  🞎 Says the number word just before a given number word in the range 1-10, but drops back to one when doing so  **Backward Number Word Sequence**  🞎 Counts backwards from 10-1  🞎 Says the number word just before a given number word in the range 1-10 without dropping back  **Backward Number Word Sequence**  🞎 Counts backwards from 30-1  🞎 Says the number word just before a given number word in the range 1-30 without dropping back  **Numeral Identification**  🞎 Identifies all numerals in the range 1-10  **Numeral Identification**  🞎 Identifies all numerals in the range 1-30  **ASPECT 2**  **Perceptual Counting**  🞎 Counts visible items to find the total count  🞎 Builds and subtracts numbers by using materials or fingers to represent each number  🞎 Objects or fingers remain constantly in view while counting  **ASPECT 3**  **Instant**  🞎 Subitise small numbers  **Repeated**  🞎 Recognises, describes and continues a repeated pattern  **Multiple**  🞎 Creates a pattern of repeated units of a specified size  **ASPECT 5**  **Forming Equal Groups**  🞎 Uses perceptual counting and sharing to form groups of specified sizes  🞎 Does not see the groups as composite units and counts each individual item  **Perceptual Multiples**  🞎 Uses groups or multiples in perceptual counting and sharing, eg. Rhythmic or skip counting  🞎 Cannot deal with concealed items  **ASPECT 6**  **Halving**  🞎 Forms halves and quarters by repeated halving  🞎 Can use distributive dealing to share  **ASPECT 7**  **Direct Alignment**  🞎 Directly compares the size of two objects (alignment)  **Transitive Comparison**  🞎 Directly compares the size of three or more objects (transitivity)  🞎 Uses indirect comparison by coping the size of one of the objects |

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| **STAGE 1**  **YEARS 1** | **WORKING**  **MATHEMATICALLY** | **NUMBER &**  **ALGEBRA** | **MEASUREMENT**  **& GEOMETRY** | **STATISTICS &**  **PROBABILITY** | **NUMERACY**  **CONTINUUM** |
| *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* | *develop efficient strategies for numerical calculation, recognise patterns, describe*  *relationships and apply algebraic techniques and generalisation* | *identify, visualise and quantify measures and the attributes of shapes and objects, and explore measurement concepts and geometric relationships, applying formulas, strategies*  *and geometric reasoning in the solution of problems* | *collect, represent, analyse, interpret and evaluate data, assign and use probabilities, and make sound judgements* |
| **LEARNING ACROSS THE CURRICULUM** |
| **OUTCOMES** | **OUTCOMES** | **OUTCOMES** | **OUTCOMES** |
| **Cross-curriculum priorities**  🞎  Aboriginal &Torres Strait Islander histories & cultures  🞎  Asia & Australia’s engagement with Asia  🞎  Sustainability  **General capabilities**  🞎  Critical & creative thinking  🞎  Ethical understanding  🞎  Information & communication technology capability  🞎  Intercultural understanding  🞎  Literacy  🞎  Numeracy  🞎  Personal & social capability  **Other learning across the curriculum areas**  🞎  Civics & citizenship  🞎  Difference & diversity  🞎  Work & enterprise | ***Communicating***  **🞎 MA1-1WM** describes mathematical situations and  methods using everyday and some mathematical language, actions, materials, diagrams and symbols  ***Problem Solving***  **🞎 MA1-2WM** uses objects, diagrams and technology to explore mathematical problems  ***Reasoning***  **🞎 MA1-3WM** supports conclusions by explaining or  demonstrating how answers were obtained | ***Whole Numbers***  **🞎 MA1-4NA** applies place value, informally, to count,  order, read and represent two- and three-digit  numbers  ***Addition and Subtraction***  **🞎 MA1-5NA** uses a range of strategies and informal  recording methods for addition and subtraction  involving one- and two-digit numbers  ***Multiplication and Division***  **🞎 MA1-6NA** uses a range of mental strategies and  concrete materials for multiplication and division  ***Fractions and Decimals***  **🞎 MA1-7NA** represents and models halves, quarters  and eighths  ***Patterns and Algebra***  **🞎 MA1-8NA** creates, represents and continues a variety of patterns with numbers and objects | ***Length***  **🞎 MA1-9MG** measures, records, compares and estimates lengths and distances using uniform informal units, metres and centimetres  ***Area***  **🞎 MA1-10MG** measures, records, compares and  estimates areas using uniform informal units  ***Volume and Capacity***  **🞎 MA1-11MG** measures, records, compares and  estimates volumes and capacities using uniform  informal units  ***Mass***  **🞎 MA1-12MG** measures, records, compares and  estimates the masses of objects using uniform informal units  ***Time***  **🞎 MA1-13MG** describes, compares and orders  durations of events, and reads half- and quarter-hour time  ***Three-Dimensional Space***  **🞎 MA1-14MG** sorts, describes, represents and recognises familiar three-dimensional objects, including cones, cubes, cylinders, spheres and prisms  ***Two-Dimensional Space***  **🞎 MA1-15MG** manipulates, sorts, represents, describes and explores two-dimensional shapes, including quadrilaterals, pentagons, hexagons and octagons  ***Position***  **🞎 MA1-16MG** represents and describes the positions of objects in everyday situations and on maps | ***Data***  **🞎 MA1-17SP** gathers and organises data, displays data in lists, tables and picture graphs, and interprets the results  ***Chance***  **🞎 MA1-18SP** recognises and describes the element of chance in everyday events | **ASPECT 1**  **Forward Number Word Sequence**  🞎 Counts to 100  🞎 Says the number word just after a given number word in the range 1-100 without dropping back  **Backward Number Word Sequence**  🞎 Counts backwards from 100-1  🞎 Says the number word just before a given number word in the range 1-100 without dropping back  **Numeral Identification**  🞎 Identifies numerals in the range 1-100  **Counting By 10s and 100s**  🞎 Counts forwards and backwards by 10s to 100, eg. 10, 20........100  🞎 Counts forwards and backwards by 100s to 1000, eg. 100, 200.........1000  **Counting By 10s and 100s**  🞎 Counts forwards and backwards by 10s and 5s, off the decade to 100, eg. 2, 12, 22...92  **ASPECT 2**  **Figurative Counting**  🞎 Visualises concealed items and determines the total by counting from one  🞎 May use fingers to represent the concealed items when the total of two screened parts is greater than ten.  **Counting-On-and-Back**  🞎 Counts on or back to solve problems  🞎 A number takes a place of a completed count  🞎 Counts on rather than counting from one to solve addition or missing addends tasks  🞎 Uses count-down-from strategy, eg. 17-3 as 16, 15, 14, answer 14, or a count-down-to strategy, eg. 17-14 as 16, 15, 14, answer 3, to solve subtraction tasks  **ASPECT 3**  **Multiple**  🞎 Creates a pattern of repeated units of a specified size  **Part-Whole to 20**  🞎 Knows or easily derives number combinations to 20. For example, 7+8 might be instantly recalled or treated as one more or less than a double.  🞎 Partitions numbers to 20 in both standard and non-standard form  **ASPECT 4**  **Ten as a Count**  🞎 Counts on but uses single units of one or ten in counting strategies  🞎 Knows the sequence of multiples of ten, i.e. 10, 20, 30.... as a sequenced count  🞎 Treats ten as something constructed of ten *ones*, but one *ten* and ten *ones* do not exist for the student at the same time  **Tens as a Unit**  🞎 Counts by tens and ones from the middle of the decade to find the total or difference of two 2-digit numbers where one of the numbers is represented by materials  🞎 Treats ten as a single unit while recognising that it contains ten *ones* (abstract composite unit)  **ASPECT 5**  **Figurative Units**  🞎 Uses equal grouping and counting without individual items visible  🞎 Relies on perceptual markers to represent each group  🞎 Needs to represent the groups before determining the total  **ASPECT 6**  **Halving**  🞎 Forms halves and quarters by repeated halving  🞎 Can use distributive dealing to share  **ASPECT 7**  **Multiple Units**  🞎 Uses multiple units of the same size to measure an object (without gaps or overlaps)  🞎 Chooses and uses a selection of the same size and type of units to measure an object (without gaps or overlaps)  **Indirect Comparison**  🞎 States the qualitative relationship between the size and number of units (i.e. with bigger units you need fewer of them)  🞎 Chooses and uses a selection of the same size and type of units to measure by indirect comparison |

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| **STAGE 1**  **YEAR 2** | **WORKING**  **MATHEMATICALLY** | **NUMBER &**  **ALGEBRA** | **MEASUREMENT**  **& GEOMETRY** | **STATISTICS &**  **PROBABILITY** | **NUMERACY**  **CONTINUUM** |
| *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* | *develop efficient strategies for numerical calculation, recognise patterns, describe*  *relationships and apply algebraic techniques and generalisation* | *identify, visualise and quantify measures and the attributes of shapes and objects, and explore measurement concepts and geometric relationships, applying formulas, strategies*  *and geometric reasoning in the solution of problems* | *collect, represent, analyse, interpret and evaluate data, assign and use probabilities, and make sound judgements* |
| **LEARNING ACROSS THE CURRICULUM** |
| **OUTCOMES** | **OUTCOMES** | **OUTCOMES** | **OUTCOMES** |
| **Cross-curriculum priorities**  🞎  Aboriginal &Torres Strait Islander histories & cultures  🞎  Asia & Australia’s engagement with Asia  🞎  Sustainability  **General capabilities**  🞎  Critical & creative thinking  🞎  Ethical understanding  🞎  Information & communication technology capability  🞎  Intercultural understanding  🞎  Literacy  🞎  Numeracy  🞎  Personal & social capability  **Other learning across the curriculum areas**  🞎  Civics & citizenship  🞎  Difference & diversity  🞎  Work & enterprise | ***Communicating***  **🞎 MA1-1WM** describes mathematical situations and  methods using everyday and some mathematical language, actions, materials, diagrams and symbols  ***Problem Solving***  **🞎 MA1-2WM** uses objects, diagrams and technology to explore mathematical problems  ***Reasoning***  **🞎 MA1-3WM** supports conclusions by explaining or  demonstrating how answers were obtained | ***Whole Numbers***  **🞎 MA1-4NA** applies place value, informally, to count,  order, read and represent two- and three-digit  numbers  ***Addition and Subtraction***  **🞎 MA1-5NA** uses a range of strategies and informal  recording methods for addition and subtraction  involving one- and two-digit numbers  ***Multiplication and Division***  **🞎 MA1-6NA** uses a range of mental strategies and  concrete materials for multiplication and division  ***Fractions and Decimals***  **🞎 MA1-7NA** represents and models halves, quarters  and eighths  ***Patterns and Algebra***  **🞎 MA1-8NA** creates, represents and continues a variety of patterns with numbers and objects | ***Length***  **🞎 MA1-9MG** measures, records, compares and estimates lengths and distances using uniform informal units, metres and centimetres  ***Area***  **🞎 MA1-10MG** measures, records, compares and  estimates areas using uniform informal units  ***Volume and Capacity***  **🞎 MA1-11MG** measures, records, compares and  estimates volumes and capacities using uniform  informal units  ***Mass***  **🞎 MA1-12MG** measures, records, compares and  estimates the masses of objects using uniform informal units  ***Time***  **🞎 MA1-13MG** describes, compares and orders  durations of events, and reads half- and quarter-hour time  ***Three-Dimensional Space***  **🞎 MA1-14MG** sorts, describes, represents and recognises familiar three-dimensional objects, including cones, cubes, cylinders, spheres and prisms  ***Two-Dimensional Space***  **🞎 MA1-15MG** manipulates, sorts, represents, describes and explores two-dimensional shapes, including quadrilaterals, pentagons, hexagons and octagons  ***Position***  **🞎 MA1-16MG** represents and describes the positions of objects in everyday situations and on maps | ***Communicating***  **🞎 MA1-1WM** describes mathematical situations and  methods using everyday and some mathematical language, actions, materials, diagrams and symbols  ***Problem Solving***  **🞎 MA1-2WM** uses objects, diagrams and technology to explore mathematical problems  ***Reasoning***  **🞎 MA1-3WM** supports conclusions by explaining or  demonstrating how answers were obtained | **ASPECT 1**  **Forward Number Word Sequence**  🞎 Counts to 100  🞎 Says the number word just after a given number word in the range 1-100 without dropping back  **Backward Number Word Sequence**  🞎 Counts backwards from 100-1  🞎 Says the number word just before a given number word in the range 1-100 without dropping back  **Numeral Identification**  🞎 Identifies numerals in the range 1-1000  **Counting By 10s and 100s**  🞎 Counts forwards and backwards by 10s and 5s, off the decade to 100, eg. 2, 12, 22...92  **Counting By 10s and 100s**  🞎 Counts forwards and backwards by 10s, off the decade in the range 1-1000, eg. 367, 377, 387, .....  **ASPECT 2**  **Counting-On-and-Back**  🞎 Counts on or back to solve problems  🞎 A number takes a place of a completed count  🞎 Counts on rather than counting from one to solve addition or missing addends tasks  🞎 Uses count-down-from strategy, eg. 17-3 as 16, 15, 14, answer 14, or a count-down-to strategy, eg. 17-14 as 16, 15, 14, answer 3, to solve subtraction tasks  **Facile (flexible)**  🞎 Uses known facts, number structure and other non-count-by-one strategies to solve problems (involving one or two digits)  **ASPECT 3**  **Part-Whole to 20**  🞎 Knows or easily derives number combinations to 20. For example, 7+8 might be instantly recalled or treated as one more or less than a double.  🞎 Partitions numbers to 20 in both standard and non-standard form  **ASPECT 4**  **Tens and Ones**  ***2a: Jump Method***  🞎 Treats ten as a unit that can be repeatedly constructed in place of ten individual counts. Tens and ones are flexibly regrouped.  🞎 Counts forwards or backwards firstly by tens and then by ones  ***2b: Split Method***  🞎 Treats ten as an abstract composite unit  🞎 Solves addition and subtraction problems mentally by separating the tens from the ones, then adding or subtracting each separately before combining  🞎 Uses non-standard decomposition of two-digit numbers, eg, 76=60+16  **ASPECT 5**  **Figurative Units**  🞎 Uses equal grouping and counting without individual items visible  🞎 Relies on perceptual markers to represent each group  🞎 Needs to represent the groups before determining the total  **ASPECT 6**  **Halving**  🞎 Forms halves and quarters by repeated halving  🞎 Can use distributive dealing to share  **ASPECT 7**  **Indirect Comparison**  🞎 States the qualitative relationship between the size and number of units (i.e. with bigger units you need fewer of them)  🞎 Chooses and uses a selection of the same size and type of units to measure by indirect comparison |

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| **STAGE 2**  **YEAR 3** | **WORKING**  **MATHEMATICALLY** | **NUMBER &**  **ALGEBRA** | **MEASUREMENT**  **& GEOMETRY** | **STATISTICS &**  **PROBABILITY** | **NUMERACY**  **CONTINUUM** |
| *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* | *develop efficient strategies for numerical calculation, recognise patterns, describe*  *relationships and apply algebraic techniques and generalisation* | *identify, visualise and quantify measures and the attributes of shapes and objects, and explore measurement concepts and geometric relationships, applying formulas, strategies*  *and geometric reasoning in the solution of problems* | *collect, represent, analyse, interpret and evaluate data, assign and use probabilities, and make sound judgements* |
| **LEARNING ACROSS THE CURRICULUM** |
| **OUTCOMES** | **OUTCOMES** | **OUTCOMES** | **OUTCOMES** |
| **Cross-curriculum priorities**  🞎  Aboriginal &Torres Strait Islander histories & cultures  🞎  Asia & Australia’s engagement with Asia  🞎  Sustainability  **General capabilities**  🞎  Critical & creative thinking  🞎  Ethical understanding  🞎  Information & communication technology capability  🞎  Intercultural understanding  🞎  Literacy  🞎  Numeracy  🞎  Personal & social capability  **Other learning across the curriculum areas**  🞎  Civics & citizenship  🞎  Difference & diversity  🞎  Work & enterprise | ***Communicating***  **🞎 MA2-1WM** uses appropriate terminology to describe, and symbols to represent, mathematical ideas  ***Problem Solving***  **🞎 MA2-2WM** selects and uses appropriate mental or written strategies, or technology, to solve problems  ***Reasoning***  **🞎 MA2-3WM** checks the accuracy of a statement and  explains the reasoning used | ***Whole Numbers***  **🞎 MA2-4NA** applies place value to order, read and represent numbers of up to five digits  ***Addition and Subtraction***  **🞎 MA2-5NA** uses mental and written strategies for addition and subtraction involving two-, three-, four- and five-digit numbers  ***Multiplication and Division***  **🞎 MA2-6NA** uses mental and informal written strategies for multiplication and division  ***Fractions and Decimals***  **🞎 MA2-7NA** represents, models and compares commonly used fractions and decimals  ***Patterns and Algebra***  **🞎 MA2-8NA** generalises properties of odd and even  numbers, generates number patterns, and completes simple number sentences by calculating missing values | ***Length***  **🞎 MA2-9MG** measures, records, compares and estimates lengths, distances and perimeters in metres, centimetres and millimetres, and measures, compares and records temperatures  ***Area***  **🞎 MA2-10MG** measures, records, compares and  estimates areas using square centimetres and square metres  ***Volume and Capacity***  **🞎 MA2-11MG** measures, records, compares and  estimates volumes and capacities using litres,  millilitres and cubic centimetres  ***Mass***  **🞎 MA2-12MG** measures, records, compares and  estimates the masses of objects using kilograms and  grams  ***Time***  **🞎 MA2-13MG** reads and records time in one-minute  intervals and converts between hours, minutes and seconds  ***Three-Dimensional Space***  **🞎 MA2-14MG** makes, compares, sketches and names three-dimensional objects, including prisms, pyramids, cylinders, cones and spheres, and describes their features  ***Two-Dimensional Space***  **🞎 MA2-15MG** manipulates, identifies and sketches two-dimensional shapes, including special quadrilaterals, and describes their features  ***Angles***  **🞎 MA2-16MG** identifies, describes, compares and  classifies angles  ***Position***  **🞎 MA2-17MG** uses simple maps and grids to represent position and follow routes, including using compass directions | ***Data***  **🞎 MA2-18SP** selects appropriate methods to collect data, and constructs, compares, interprets and  evaluates data displays, including tables, picture  graphs and column graphs  ***Chance***  **🞎 MA2-19SP** describes and compares chance events in social and experimental contexts | **ASPECT 1**  **Forward Number Word Sequence**  🞎 Counts beyond 100  **Backward Number Word Sequence**  🞎 Counts backwards from any number  **Numeral identification**  🞎 Identifies numerals in the range 1-10000  **Counting By 10s and 100s**  🞎 Counts forwards and backwards by 100s, off the 100, and on or off the decade to 1000, eg. 24, 124, 224,.....924  **ASPECT 3**  **Number Properties**  🞎 Understands the structural properties of numbers including how to regroup when operating with numbers. For example, 9x6=6x6+3x6, 27+38+3=(27+3)+38  **ASPECT 4**  **Tens and Ones**  ***2a: Jump Method***  🞎 Treats ten as a unit that can be repeatedly constructed in place of ten individual counts. Tens and ones are flexibly regrouped.  🞎 Counts forwards or backwards firstly by tens and then by ones  ***2b: Split Method***  🞎 Treats ten as an abstract composite unit  🞎 Solves addition and subtraction problems mentally by separating the tens from the ones, then adding or subtracting each separately before combining  🞎 Uses non-standard decomposition of two-digit numbers, eg, 76=60+16  **Hundreds, Tens and Ones**  ***3a: Jump Method***  🞎 Uses hundreds, tens and ones in standard decomposition, eg. 326 as three groups of 100, two groups of 10 and six ones  🞎 Increments by hundreds and tens to add mentally  🞎 Determines the number of tens in 621 without counting by ten  ***3b: Split Method***  🞎 Adds and subtracts mentally combinations of numbers to 1000  🞎 Uses the positional value of numbers flexibly in regrouping without the need to rely on incrementing by tens or hundreds  🞎 Uses a part-whole knowledge of numbers to 100  **ASPECT 5**  **Multiplication and Division as Operations**  🞎 Coordinates two composite units as an operation, eg. 6 times 3 is 18; 18÷6=3  🞎 Uses multiplication and division as inverse operations flexibly in problem solving tasks  **ASPECT 6**  **Equal Partitions**  🞎 Verifies continuous and discrete linear arrangements have been partitioned into thirds or fifths by iterating one part to form the whole or checking the equality and number of parts forming the whole  **ASPECT 7**  **Iterates the unit**  🞎 Uses a single unit repeatedly (iterating) to measure or construct length  🞎 Make a multi-unit ruler by iterating a single unit and quantifying accumulated distance  🞎 Identifies the quantitative relationship between length and number of units (ie. 🞎 If you halve the size of the units you will have twice as many units to measure)  **Composite Area**  🞎 Creates the row-column structure of the iterated composite unit of area  🞎 Uses the row-column structure to find the number of units to measure area |

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| **STAGE 2**  **YEAR 4** | **WORKING**  **MATHEMATICALLY** | **NUMBER &**  **ALGEBRA** | **MEASUREMENT**  **& GEOMETRY** | **STATISTICS &**  **PROBABILITY** | **NUMERACY**  **CONTINUUM** |
| *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* | *develop efficient strategies for numerical calculation, recognise patterns, describe*  *relationships and apply algebraic techniques and generalisation* | *identify, visualise and quantify measures and the attributes of shapes and objects, and explore measurement concepts and geometric relationships, applying formulas, strategies*  *and geometric reasoning in the solution of problems* | *collect, represent, analyse, interpret and evaluate data, assign and use probabilities, and make sound judgements* |
| **LEARNING ACROSS THE CURRICULUM** |
| **OUTCOMES** | **OUTCOMES** | **OUTCOMES** | **OUTCOMES** |
| **Cross-curriculum priorities**  🞎  Aboriginal &Torres Strait Islander histories & cultures  🞎  Asia & Australia’s engagement with Asia  🞎  Sustainability  **General capabilities**  🞎  Critical & creative thinking  🞎  Ethical understanding  🞎  Information & communication technology capability  🞎  Intercultural understanding  🞎  Literacy  🞎  Numeracy  🞎  Personal & social capability  **Other learning across the curriculum areas**  🞎  Civics & citizenship  🞎  Difference & diversity  🞎  Work & enterprise | ***Communicating***  **🞎 MA2-1WM** uses appropriate terminology to describe, and symbols to represent, mathematical ideas  ***Problem Solving***  **🞎 MA2-2WM** selects and uses appropriate mental or written strategies, or technology, to solve problems  ***Reasoning***  **🞎 MA2-3WM** checks the accuracy of a statement and  explains the reasoning used | ***Whole Numbers***  **🞎 MA2-4NA** applies place value to order, read and represent numbers of up to five digits  ***Addition and Subtraction***  **🞎 MA2-5NA** uses mental and written strategies for addition and subtraction involving two-, three-, four- and five-digit numbers  ***Multiplication and Division***  **🞎 MA2-6NA** uses mental and informal written strategies for multiplication and division  ***Fractions and Decimals***  **🞎 MA2-7NA** represents, models and compares commonly used fractions and decimals  ***Patterns and Algebra***  **🞎 MA2-8NA** generalises properties of odd and even  numbers, generates number patterns, and completes simple number sentences by calculating missing values | ***Length***  **🞎 MA2-9MG** measures, records, compares and estimates lengths, distances and perimeters in metres, centimetres and millimetres, and measures, compares and records temperatures  ***Area***  **🞎 MA2-10MG** measures, records, compares and  estimates areas using square centimetres and square metres  ***Volume and Capacity***  **🞎 MA2-11MG** measures, records, compares and  estimates volumes and capacities using litres,  millilitres and cubic centimetres  ***Mass***  **🞎 MA2-12MG** measures, records, compares and  estimates the masses of objects using kilograms and  grams  ***Time***  **🞎 MA2-13MG** reads and records time in one-minute  intervals and converts between hours, minutes and seconds  ***Three-Dimensional Space***  **🞎 MA2-14MG** makes, compares, sketches and names three-dimensional objects, including prisms, pyramids, cylinders, cones and spheres, and describes their features  ***Two-Dimensional Space***  **🞎 MA2-15MG** manipulates, identifies and sketches two-dimensional shapes, including special quadrilaterals, and describes their features  ***Angles***  **🞎 MA2-16MG** identifies, describes, compares and  classifies angles  ***Position***  **🞎 MA2-17MG** uses simple maps and grids to represent position and follow routes, including using compass directions | ***Communicating***  **🞎 MA2-1WM** uses appropriate terminology to describe, and symbols to represent, mathematical ideas  ***Problem Solving***  **🞎 MA2-2WM** selects and uses appropriate mental or written strategies, or technology, to solve problems  ***Reasoning***  **🞎 MA2-3WM** checks the accuracy of a statement and  explains the reasoning used | **ASPECT 1**  **Forward Number Word Sequence**  🞎 Counts beyond 100  **Backward Number Word Sequence**  🞎 Counts backwards from any number  **Numeral identification**  🞎 Identifies numerals in the range 1-10000  **Counting By 10s and 100s**  🞎 Counts forwards and backwards by 100s, off the 100, and on or off the decade to 1000, eg. 24, 124, 224,.....924  **ASPECT 3**  **Number Properties**  🞎 Understands the structural properties of numbers including how to regroup when operating with numbers. For example, 9x6=6x6+3x6, 27+38+3=(27+3)+38    **ASPECT 4**  **Hundreds, Tens and Ones**  ***3a: Jump Method***  🞎 Uses hundreds, tens and ones in standard decomposition, eg. 326 as three groups of 100, two groups of 10 and six ones  🞎 Increments by hundreds and tens to add mentally  🞎 Determines the number of tens in 621 without counting by ten  ***3b: Split Method***  🞎 Adds and subtracts mentally combinations of numbers to 1000  🞎 Uses the positional value of numbers flexibly in regrouping without the need to rely on incrementing by tens or hundreds  🞎 Uses a part-whole knowledge of numbers to 100  **Decimal Place Value**  🞎 Uses tenths and hundredths to represent fractional parts with an understanding of the positional value of decimals, eg. 0.8 is larger than 0.75 because of the positional value of the digits  🞎 Interchanges tenths and hundredths, eg. 0.75 may be thought of as seven *tenths* and five *hundredths*    **ASPECT 5**  **Multiplication and Division as Operations**  🞎 Coordinates two composite units as an operation, eg. 6 times 3 is 18; 18÷6=3  🞎 Uses multiplication and division as inverse operations flexibly in problem solving tasks  **ASPECT 6**  **Equal Partitions**  🞎 Verifies continuous and discrete linear arrangements have been partitioned into thirds or fifths by iterating one part to form the whole or checking the equality and number of parts forming the whole  **ASPECT 7**  **Composite Area**  🞎 Creates the row-column structure of the iterated composite unit of area  🞎 Uses the row-column structure to find the number of units to measure area  **Repeated Layers**  🞎 Creates the row-column-layer structure of the iterated layers when measuring volume  🞎 Uses the row-column-layer structure to find the number of units to measure volume |

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| **STAGE 3**  **YEAR 5** | **WORKING**  **MATHEMATICALLY** | **NUMBER &**  **ALGEBRA** | **MEASUREMENT**  **& GEOMETRY** | **STATISTICS &**  **PROBABILITY** | **NUMERACY**  **CONTINUUM** |
| *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* | *develop efficient strategies for numerical calculation, recognise patterns, describe*  *relationships and apply algebraic techniques and generalisation* | *identify, visualise and quantify measures and the attributes of shapes and objects, and explore measurement concepts and geometric relationships, applying formulas, strategies*  *and geometric reasoning in the solution of problems* | *collect, represent, analyse, interpret and evaluate data, assign and use probabilities, and make sound judgements* |
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| **Cross-curriculum priorities**  🞎  Aboriginal &Torres Strait Islander histories & cultures  🞎  Asia & Australia’s engagement with Asia  🞎  Sustainability  **General capabilities**  🞎  Critical & creative thinking  🞎  Ethical understanding  🞎  Information & communication technology capability  🞎  Intercultural understanding  🞎  Literacy  🞎  Numeracy  🞎  Personal & social capability  **Other learning across the curriculum areas**  🞎  Civics & citizenship  🞎  Difference & diversity  🞎  Work & enterprise | ***Communicating***  **🞎 MA3-1WM** describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions  ***Problem Solving***  **🞎 MA3-2WM** selects and applies appropriate problem solving strategies, including the use of digital technologies, in undertaking  Investigations  ***Reasoning***  **🞎 MA3-3WM** gives a valid reason for supporting one possible solution over another | ***Whole Numbers***  **🞎 MA3-4NA** orders, reads and represents integers of any size and describes properties of whole numbers  ***Addition and Subtraction***  **🞎 MA3-5NA** selects and applies appropriate strategies for addition and subtraction with counting numbers of any size  ***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  ***Fractions, Decimals and Percentages***  **🞎 MA3-7NA** compares, orders and calculates with fractions, decimals and percentages | ***Length***  **🞎 MA3-9MG** selects and uses the appropriate unit and device to measure lengths and distances, calculates  perimeters, and converts between units of length  ***Area***  **🞎 MA3-10MG** selects and uses the appropriate unit to  calculate areas, including areas of squares, rectangles and triangles  ***Volume and Capacity***  **🞎 MA3-11MG** selects and uses the appropriate unit to  estimate, measure and calculate volumes and capacities, and converts between units of capacity  ***Mass***  **🞎 MA3-12MG** selects and uses the appropriate unit and  device to measure the masses of objects, and converts between units of mass  ***Time***  **🞎 MA3-13MG** uses 24-hour time and am and pm notation in real-life situations, and constructs timelines  ***Three-Dimensional Space***  **🞎 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  ***Two-Dimensional Space***  **🞎 MA3-15MG** manipulates, classifies and draws two dimensional shapes, including equilateral, isosceles and  scalene triangles, and describes their properties  ***Angles***  **🞎 MA3-16MG** measures andconstructs angles, andapplies angle relationships tofind unknown angles  ***Position***  **🞎MA3-17MG** locates and describes position on maps  using a grid-reference system | ***Data***  **🞎 MA3-18SP** uses appropriate methods to collect data and constructs, interprets and evaluates data displays, including dot plots, line graphs and two-way tables  ***Chance***  **🞎 MA3-19SP** conducts chance experiments and assigns probabilities as values between 0 and 1 to describe their outcomes | **ASPECT 3**  **Number Properties**  🞎 Understands the structural properties of numbers including how to regroup when operating with numbers. For example, 9x6=6x6+3x6, 27+38+3=(27+3)+38  **ASPECT 4**  **System Place Value**  🞎 Recognises that the place value system can be extended indefinitely in two directions – to the left and right of the decimal point  🞎 Recognises the relationship between values of adjacent places (units) in a numeral  **ASPECT 6**  **Reforms the Whole**  🞎 When iterating a fraction part such as one-third beyond the whole, re-forms the whole  **ASPECT 7**  **Composite Area**  🞎 Creates the row-column structure of the iterated composite unit of area  🞎 Uses the row-column structure to find the number of units to measure area  **Repeated Layers**  🞎 Creates the row-column-layer structure of the iterated layers when measuring volume  🞎 Uses the row-column-layer structure to find the number of units to measure volume |

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