Mathematics Yearly Overview 2014: Early Stage 1 Outcomes

Sub strand	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	11
Whole Number MAe-4NA																																									
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Angles No outcome																																									
Position MAe-16MG																																									
Data MAe-17SP																																									
Chance No outcome																																									

Mathematics - Early Stage 1

Outcomes	*Number and Algebra – key ideas*	Term 1	Term 2	Term 3	Term 4
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				
	Compare, order, read and represent numbers to at least 20				
	Read and use the ordinal names to at least 'tenth'				
	Subitise small collections of objects				
	Use the term 'is the same as' to express equality of groups				
	Use the language of money				
Addition and Subtraction 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				
	Take part of a group away to model subtraction				
	Compare two groups to determine 'how many more'				
	Record addition and subtraction informally				
Multiplication and Division MAe-6NA groups, shares and counts collections of objects, describes using everyday language, and records using informal methods	Investigate and model equal groups				
	Record grouping and sharing using informal methods				
Fractions and Decimals MAe-7NA describes two equal parts as halves	Establish the concept of one-half				
	Record halves of objects using drawings				

Mathematics - Early Stage 1

Outcomes	*Number and Algebra – key ideas cont.*	Term 1	Term 2	Term 3	Term 4
Patterns and Algebra MAe-8NA recognises, describes and continues repeating patterns	Sort and classify objects into groups				
	Recognise, copy, continue, create and describe repeating patterns of objects and drawings				

Outcomes	*Measurement and Geometry- key ideas*	Term 1	Term 2	Term 3	Term 4
Length MAe-9MG describes and compares lengths and distances using everyday language	Identify the attribute of 'length' as a measure of an object from end to end				
	Describe length and distance using everyday language, including comparatives				
	Compare lengths using direct comparison				
	Record comparisons of length informally				
Area MAe-10MG describes and compares areas using everyday language	Identify the attribute of 'area' as a measure of the amount of surface				
	Describe area using everyday language, including comparatives				
	Compare areas using direct comparison				
	Record comparisons of area informally				
Volume and Capacity MAe-11MG describes and compares the capacities of containers and the volumes of objects or substances using everyday language	Identify the attribute of 'capacity' as a measure of the amount of substance a container can hold				
	Identify the attribute of 'volume' as a measure of the amount of space an object occupies				
	Describe capacity and volume using everyday language, including comparatives				
	Compare volumes and capacities using direct comparison				
	Record comparisons of capacity and volume informally				
Mass MAe-12MG describes and compares the masses of objects using everyday language	Identify the attribute of 'mass' as a measure of the amount of matter in an object				
	Describe mass using everyday language, including comparatives				
	Compare masses directly by hefting				
	Record comparisons of mass informally				

Outcomes	*Measurement and Geometry- key ideas cont.*	Term 1	Term 2	Term 3	Term 4
Time MAe-13MG sequences events, uses everyday language to describe the durations of events, and reads hour time on clocks	Compare and order the duration of events using everyday language				
	Sequence events in time				
	Connect days of the week to familiar events and actions				
	Tell time on the hour on digital and analog clocks				
Three-Dimensional Space MAe-14MG manipulates, sorts and represents three-dimensional objects and describes them using everyday language	Describe features of common three-dimensional objects using everyday language				
	Sort and manipulate three-dimensional objects found in the environment				
Two-Dimensional Space MAe-15MG manipulates, sorts and describes representations of two-dimensional shapes, including circles, triangles, squares and rectangles, using everyday language	Identify, name and describe circles, squares, triangles and rectangles presented in different orientations, in pictures and the environment				
	Sort, manipulate, make and draw circles, squares, triangles and rectangles				
Position MAe-16MG describes position and gives and follows simple directions using everyday language	Give and follow simple directions				
	Describe position using everyday language				
	Use the terms ‘left’ and ‘right’ to describe position in relation to self				

Outcomes	*Statistics and Probability– key ideas*	Term 1	Term 2	Term 3	Term 4
Data MAe-17SP represents data and interprets data displays made from objects	Collect information about themselves and their environment				
	Organise actual objects into data displays				
	Interpret data displays made from objects				

Mathematics Yearly Overview 2014: Stage 1 Outcomes

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Mathematics - Stage 1

Outcomes	*Number and Algebra- key ideas*	Term 1	Term 2	Term 3	Term 4
Whole Number MA1-4NA applies place value, informally, to count, order, read and represent two- and three-digit numbers	***Part 1*** Count forwards and backwards by ones from a two-digit number				
	Partition two-digit numbers using place value				
	Read, write and order two-digit numbers				
	Read and use ordinal names to at least 'thirty-first'				
	Recognise, describe and order Australian coins according to their value				
	Part 2 Count forwards and backwards by twos, threes, fives and tens from any starting point				
	Partition numbers of up to three digits using place value				
	Read, write and order three-digit numbers				
	Recognise, count and order Australian coins and notes according to their value				
Addition and Subtraction MA1-5NA uses a range of strategies and informal recording methods for addition and subtraction involving one- and two-digit numbers	***Part 1*** Model addition and subtraction using concrete materials				
	Recognise and recall combinations of numbers that add to numbers up to 20				
	Model and apply the commutative property for addition				
	Record number sentences using drawings, words, numerals and the symbols +, – and =				
	Use and record a range of mental strategies for addition and subtraction of one- and two-digit numbers				
	Use the equals sign to record equivalent number sentences				
	Part 2 Make connections between addition and subtraction				
	Use and record a range of mental strategies for addition and subtraction of two-digit numbers				
	Solve word problems involving addition and subtraction				

Mathematics - Stage 1

Outcomes	*Number and Algebra- key ideas cont.*	Term 1	Term 2	Term 3	Term 4
Multiplication and Division MA1-6NA uses a range of mental strategies and concrete materials for multiplication and division	***Part 1*** Rhythmic and skip count by twos, fives and tens from zero				
	Model and use equal 'groups of' objects as a strategy for multiplication				
	Model division by sharing a collection equally into a given number of groups to determine the number in each group				
	Model division by sharing a collection equally into groups of a given size to determine the number of groups				
	Part 2 Model and use repeated addition as a strategy for multiplication				
	Model and use arrays described in terms of 'rows' and 'columns' as a strategy for multiplication				
	Model and use groups, arrays and repeated subtraction as strategies for division				
	Record using drawings, words and numerals				
Fractions and Decimals MA1-7NA represents and models halves, quarters and eighths	***Part 1*** Recognise, describe and represent one-half as one of two equal parts of whole objects, shapes and collections				
	Use fraction notation ½				
	Part 2 Recognise, describe and represent halves, quarters and eighths of whole objects, shapes and collections				
	Use fraction notation ¼ and 1/8				
Patterns and Algebra MA1-8NA creates, represents and continues a variety of patterns with numbers and objects	***Part 1*** Recognise, copy, continue, create and describe increasing and decreasing number patterns				
	Recognise, copy, create, continue and describe repeating patterns of objects or symbols				
	Model and describe odd and even numbers				
	Part 2 Describe patterns with numbers and identify missing elements				
	Find missing numbers in number sentences involving one operation of addition or subtraction				

Mathematics - Stage 1

Outcomes	*Measurement and Geometry– key ideas*	Term 1	Term 2	Term 3	Term 4
Length MA1-9MG measures, records, compares and estimates lengths and distances using uniform informal units, metres and centimetres	***Part 1*** Use uniform informal units to measure, compare and estimate lengths				
	Part 2 Record lengths by referring to the number and type of uniform informal unit used				
	Compare and order shapes/objects based on length measured using uniform informal units				
	Recognise the need for formal units to measure length				
	Use metres and centimetres to measure and estimate lengths and distances				
	Record lengths using the abbreviations m and cm				
Area MA1-10MG measures, records, compares and estimates areas using uniform informal units	***Part 1*** Use uniform informal units to measure and estimate areas				
	Record areas by referring to the number and type of uniform informal unit used				
	Part 2 Compare and order surfaces based on area measured using uniform informal units				
Volume and Capacity MA1-11MG measures, records, compares and estimates volumes and capacities using uniform informal units	***Part 1*** Use uniform informal units to measure, compare and estimate capacities				
	Use uniform informal units to measure and estimate volumes				
	Record capacities and volumes by referring to the number and type of uniform informal unit used				
	Part 2 Compare and order objects based on capacity and volume measured using uniform informal units				

Mathematics - Stage 1

Outcomes	*Measurement and Geometry– key ideas cont.*	Term 1	Term 2	Term 3	Term 4
Mass MA1-12MG measures, records, compares and estimates the masses of objects using uniform informal units	***Part 1*** Place objects on either side of a pan balance to obtain a level balance				
	Use a pan balance to compare two objects based on mass				
	Part 2 Use uniform informal units to measure, compare and estimate the masses of objects				
	Record masses by referring to the number and type of uniform informal unit used				
Time MA1-13MG describes, compares and orders durations of events, and reads half- and quarter-hour time	***Part 1*** Name and order months and seasons				
	Use a calendar to identify the date and determine the number of days in each month				
	Tell time to the half-hour				
	Part 2 Use a calendar to determine duration in months, weeks and days				
	Use informal units to measure and compare the durations of events				
	Experience activities with duration of one hour, half/quarter of an hour, one minute and a few seconds				
	Tell time to the quarter-hour, using the language of ‘past’ and ‘to’				
Three-Dimensional Space MA1-14MG sorts, describes, represents and recognises familiar three-dimensional objects, including cones, cubes, cylinders, spheres and prisms	***Part 1*** Distinguish between flat and curved surfaces				
	Use the term ‘faces’ to describe flat surfaces with straight edges				
	Identify cones, cubes, cylinders, spheres and prisms presented in different orientations, in pictures and the environment				
	Recognise that three-dimensional objects look different from different vantage-points				

Mathematics - Stage 1

Outcomes	*Measurement and Geometry– key ideas cont.*	Term 1	Term 2	Term 3	Term 4
Three-Dimensional Space MA1-14MG sorts, describes, represents and recognises familiar three-dimensional objects, including cones, cubes, cylinders, spheres and prisms	***Part 2*** Use the terms 'flat surface', 'curved surface', 'face', 'edge' and 'vertex' appropriately to describe three-dimensional objects				
	Recognise faces of three-dimensional objects as two-dimensional shapes				
	Distinguish between three-dimensional objects and two-dimensional shapes				
	Represent three-dimensional objects in models and drawings				
Two-Dimensional Space MA1-15MG manipulates, sorts, represents, describes and explores two dimensional shapes, including quadrilaterals, pentagons, hexagons and octagons	***Part 1*** Identify horizontal, vertical and parallel lines				
	Identify and name triangles, quadrilaterals, pentagons, hexagons and octagons presented in different orientations, in pictures and the environment				
	Use the terms 'side' and 'vertex' to describe and compare two-dimensional shapes				
	Part 2 Make and draw two-dimensional shapes in different orientations				
	Identify, perform and record the result of one-step 'slides' and 'flips'				
	Make symmetrical designs with a variety of materials				
	Identify, perform, describe and record the result of full, half and quarter 'turns'				
Position MA1-16MG represents and describes the positions of objects in everyday situations and on maps	***Part 1*** Give and follow directions to move to familiar locations and to position objects				
	Use the terms 'left' and 'right' to describe position in relation to self and from the perspective of a person facing in the opposite direction				
	Describe a path from one location to another				
	Part 2 Interpret simple maps of familiar locations				
	Represent the position of objects in models, photographs and drawings				

Mathematics - Stage 1

Outcomes	*Statistics and Probability– key ideas*	Term 1	Term 2	Term 3	Term 4
Data MA1-17SP gathers and organises data, displays data in lists, tables and picture graphs, and interprets the results	***Part 1*** Collect data and track what has been counted				
	Create data displays using objects and pictures (one-to-one correspondence) and interpret them				
	Part 2 Pose questions and collect categorical data				
	Create data displays using lists, tables and picture graphs (one-to-one correspondence) and interpret them				
Chance MA1-18SP recognises and describes the element of chance in everyday events	***Part 1*** Recognise the element of chance in familiar situations				
	Describe chance events using everyday language				
	Part 2 Identify practical activities and everyday events that involve chance				
	Describe events as ‘likely’ or ‘unlikely’				
	Distinguish between ‘possible’ and ‘impossible’ events				
	Identify some events as ‘certain’ or ‘impossible’				

Mathematics Yearly Overview 2014: Stage 2 Outcomes

Sub strand	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	11
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Mathematics - Stage 2

Outcomes	*Number and Algebra– key ideas*	Term 1	Term 2	Term 3	Term 4
Whole Number MA2-4NA applies place value to order, read and represent numbers of up to five digits	***Part 1*** Count forwards and backwards by tens and hundreds from any starting point				
	State the place value of digits in numbers of up to four digits				
	Read, write and order numbers of up to four digits				
	Part 2 State the place value of digits in numbers of up to five digits				
	Read, write and order numbers of up to five digits				
	Record numbers of up to five digits using expanded notation				
Addition and Subtraction MA2-5NA uses mental and written strategies for addition and subtraction involving two-, three-, four- and five-digit numbers	***Part 1*** Model and apply the associative property for addition				
	Use and record a range of mental strategies for addition and subtraction of two-, three- and four-digit numbers				
	Perform calculations with money, including calculating equivalent amounts using different denominations				
	Use the equals sign to record equivalent number sentences				
	Part 2 Use the inverse operation to check addition and subtraction calculations				
	Use and record a range of mental strategies for addition and subtraction of two-, three-, four- and five-digit numbers				
	Use the formal written algorithm for addition and subtraction				
	Solve word problems, including those involving money				

Mathematics - Stage 2

Outcomes	*Number and Algebra– key ideas cont.*	Term 1	Term 2	Term 3	Term 4
Multiplication and Division MA2-6NA uses mental and informal written strategies for multiplication and division	***Part 1*** Recall multiplication facts for twos, threes, fives and tens				
	Recognise and use the symbols × and ÷				
	Link multiplication and division using arrays				
	Model and apply to commutative property for multiplication				
	Use mental strategies to multiply one-digit numbers by multiples of 10				
	Use and record a range of mental strategies for multiplication of two single-digit numbers				
	Part 2 Recall and use multiplication facts up to 10 × 10 with automaticity				
	Relate multiplication facts to their inverse division facts				
	Determine multiples and factors of whole numbers				
	Use the equals sign to record equivalent number relationships involving multiplication				
	Use and record a range of mental and informal written strategies for multiplication and division of two-digit numbers by a one-digit operator				
	Use mental strategies and informal recording methods for division with remainders				
Fractions and Decimals MA2-7NA represents, models and compares commonly used fractions and decimals	***Part 1*** Model and represent fractions with denominators 2, 3, 4, 5 and 8				
	Count by halves, quarters and thirds, including with mixed numerals				
	Represent fractions on number lines, including number lines that extend beyond 1				

Mathematics - Stage 2

Outcomes	*Number and Algebra– key ideas cont.*	Term 1	Term 2	Term 3	Term 4
Fractions and Decimals MA2-7NA represents, models and compares commonly used fractions and decimals	***Part 2*** Model and find equivalence between fractions with denominators 2, 4 and 8; 3 and 6; and 5, 10 and 100				
	Apply the place value system to represent tenths and hundredths as decimals				
	Make connections between fraction and decimal notation				
	Model, compare and represent decimals with one and two decimal places				
	Represent decimals on number lines				
Patterns and Algebra MA2-8NA generalises properties of odd and even numbers, generates number patterns, and completes simple number sentences by calculating missing values	***Part 1*** Identify, continue, create, describe and record increasing and decreasing number patterns				
	Identify odd and even numbers of up to four digits				
	Part 2 Find missing numbers in number sentences involving addition or subtraction on one or both sides of the equals sign				
	Investigate and use the properties of odd and even numbers				
	Recognise, continue and describe number patterns resulting from performing multiplication				
	Find missing numbers in number sentences involving one operation of multiplication or division				

Mathematics - Stage 2

Outcomes	*Measurement and Geometry– key ideas*	Term 1	Term 2	Term 3	Term 4
Length MA2-9MG measures, records, compares and estimates lengths, distances and perimeters in metres, centimetres and millimetres, and measures, compares and records temperatures	***Part 1*** Use metres, centimetres and millimetres to measure, compare, order and estimate lengths				
	Record lengths using the abbreviations m, cm and mm				
	Part 2 Select and use appropriate scaled instruments and units to measure and compare lengths				
	Estimate and measure perimeters of two-dimensional shapes				
	Convert between metres, centimetres and millimetres				
	Record lengths and distances using decimal notation to two decimal places				
	Use a scaled instrument to measure and compare temperatures				
	Record temperatures using the symbol for degrees (°)				
Area MA2-10MG measures, records, compares and estimates areas using square centimetres and square metres	***Part 1*** Recognise the need for formal units to measure area				
	Use square centimetres and square metres to measure and estimate rectangular (and square) areas				
	Record lengths using the abbreviations cm^2 and m^2				
	Part 2 Measure and compare the areas of regular and irregular shapes using a square-centimetre grid				
	Compare areas measured in square centimetres and square metres				
Volume and Capacity MA2-11MG measures, records, compares and estimates volumes and capacities using litres, millilitres and cubic centimetres	***Part 1*** Recognise the need for formal units to measure capacity and volume				
	Use litres to measure, compare and estimate capacities and volumes				
	Use cubic centimetres to measure and compare volumes				
	Record capacities and volumes using the abbreviations L and cm^3				

Mathematics - Stage 2

Outcomes	*Measurement and Geometry– key ideas cont.*	Term 1	Term 2	Term 3	Term 4
Volume and Capacity MA2-11MG measures, records, compares and estimates volumes and capacities using litres, millilitres and cubic centimetres	***Part 2*** Use litres and millilitres to measure, compare and estimate capacities and volumes				
	Record capacities and volumes using the abbreviations L and mL				
	Convert between litres and millilitres				
	Compare volumes of objects by submerging each in water				
Mass MA2-12MG measures, records, compares and estimates the masses of objects using kilograms and grams	***Part 1*** Recognise the need for formal units to measure mass				
	Use kilograms to measure, compare, order and estimate masses				
	Record masses using the abbreviation kg				
	Part 2 Use kilograms and grams to measure and compare masses using a scaled instrument				
	Record masses using the abbreviations kg and g				
Time MA2-13MG reads and records time in one-minute intervals and converts between hours, minutes and seconds	***Part 1*** Recognise the coordinated movements of the hands on a clock				
	Read and record time to the minute, using digital notation and the terms ‘past’ and ‘to’				
	Part 2 Convert between seconds, minutes, hours and days				
	Use and interpret am and pm notation				
	Read and interpret simple timetables, timelines and calendars				

Mathematics - Stage 2

Outcomes	*Measurement and Geometry– key ideas cont.*	Term 1	Term 2	Term 3	Term 4
Three-Dimensional Space MA2-14MG makes, compares, sketches and names three-dimensional objects, including prisms, pyramids, cylinders, cones and spheres, and describes their features	***Part 1*** Identify, describe and compare features of prisms, pyramids, cylinders, cones and spheres				
	Make models of three-dimensional objects				
	Create nets from everyday packages				
	Part 2 Represent three-dimensional objects in drawings showing depth				
	Sketch three-dimensional objects from different views				
	Interpret and make drawings of objects on isometric grid paper				
Two-Dimensional Space MA2-15MG manipulates, identifies and sketches two-dimensional shapes, including special quadrilaterals, and describes their features	***Part 1*** Identify and name the special quadrilaterals presented in different orientations				
	Identify and describe shapes as ‘regular’ or ‘irregular’				
	Describe and compare features of shapes, including the special quadrilaterals				
	Identify and draw lines of symmetry on shapes				
	Part 2 Combine common shapes to form other shapes and record the arrangement				
	Split common shapes into other shapes and record the result				
	Use transformations to create and describe symmetrical designs				
	Create and record tessellating designs				

Mathematics - Stage 2

Outcomes	*Measurement and Geometry– key ideas cont.*	Term 1	Term 2	Term 3	Term 4
Angles MA2-16MG identifies, describes, compares and classifies angles	***Part 1*** Identify and describe angles as measures of turn				
	Compare angle sizes in everyday situations				
	Identify 'perpendicular' lines and 'right angles'				
	Part 2 Draw and classify angles as acute, obtuse, straight, reflex or a revolution				
Position MA2-17MG uses simple maps and grids to represent position and follow routes, including using compass directions	***Part 1*** Use grid-referenced maps to locate and describe positions and pathways				
	Draw simple maps, with and without a grid				
	Part 2 Determine directions N, E, S, W and NE, SE, SW, NW, given one of the directions				
	Interpret legends and directions on maps				
	Use the scale to calculate the distance between two points on maps				

Mathematics - Stage 2

Outcomes	*Statistics and Probability– key ideas*	Term 1	Term 2	Term 3	Term 4
Data MA2-18SP selects appropriate methods to collect data, and constructs, compares, interprets and evaluates data displays, including tables, picture graphs and column graphs	***Part 1*** Plan methods for data collection				
	Collect data, organise into categories and create displays using lists, tables, picture graphs and simple column graphs (one-to-one correspondence)				
	Interpret and compare data displays				
	Part 2 Select, trial and refine methods for data collection, including survey questions and recording sheets				
	Construct data displays, including tables, and column graphs and picture graphs of many-to-one correspondence				
	Evaluate the effectiveness of different displays				
Chance MA2-19SP describes and compares chance events in social and experimental contexts	***Part 1*** Identify and describe possible 'outcomes' of chance experiments				
	Predict and record all possible combinations in a chance situation				
	Conduct chance experiments and compare predicted with actual results				
	Part 2 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				

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Mathematics - Stage 3

Outcomes	*Number and Algebra– key ideas*	Term 1	Term 2	Term 3	Term 4
Whole Numbers MA3-4NA orders, reads and represents integers of any size and describes properties of whole numbers	***Part 1*** Read, write and order numbers of any size				
	State the place value of digits in numbers of any size				
	Record numbers of any size using expanded notation				
	Determine factors and multiples of whole numbers				
	Part 2 Recognise the location of negative numbers in relation to zero on a number line				
	Identify and describe prime and composite numbers				
	Model and describe square and triangular numbers				
Addition and Subtraction MA3-5NA selects and applies appropriate strategies for addition and subtraction with counting numbers of any size	***Part 1*** Select and apply efficient mental, written and calculator strategies for addition and subtraction of numbers of any size				
	Use estimation to check answers to calculations				
	Solve word problems and record the strategy used, including problems involving money				
	Create a simple budget				
	Part 2 Select and apply efficient mental, written and calculator strategies to solve word problems and record the strategy used				

Mathematics - Stage 3

Outcomes	*Number and Algebra– key ideas cont.*	Term 1	Term 2	Term 3	Term 4
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	***Part 1*** Use and record a range of mental and written strategies to multiply by one- and two-digit operators				
	Use the formal algorithm for multiplication by one- and two-digit operators				
	Use and record a range of mental and written strategies to divide numbers with three or more digits by a one-digit operator, including problems that result in a remainder				
	Solve word problems and record the strategy used				
	Interpret remainders in division problems				
	Use estimation to check answers to calculations				
	Part 2 Select and apply efficient mental, written and calculator strategies to solve word problems and record the strategy used				
	Recognise and use grouping symbols				
	Apply the order of operations in calculations				
Fractions and Decimals MA3-7NA compares, orders and calculates with fractions, decimals and percentages	***Part 1*** Compare and order unit fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12 and 100				
	Express mixed numerals as improper fractions and vice versa				
	Model and represent strategies to add and subtract fractions with the same denominator				
	Apply the place value system to represent thousandths as decimals				
	Compare, order and represent decimals with up to three decimal places				

Mathematics - Stage 3

Outcomes	*Number and Algebra– key ideas cont.*	Term 1	Term 2	Term 3	Term 4
Fractions and Decimals MA3-7NA compares, orders and calculates with fractions, decimals and percentages	***Part 2*** Represent, compare and order fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12 and 100				
	Determine, generate and record equivalent fractions				
	Write fractions in their 'simplest form'				
	Add and subtract fractions, included mixed numerals, with the same or related denominators				
	Multiply fractions by whole numbers				
	Find a simple fraction of a quantity				
	Use mental, written and calculator strategies to add and subtract decimals with up to three decimal places				
	Use mental, written and calculator strategies to multiply decimals by one- and two-digit whole numbers				
	Use mental, written and calculator strategies to divide decimals by one-digit whole numbers				
	Multiply and divide decimals by 10, 100 and 1000				
	Solve word problems involving fractions and decimals, including money problems				
	Make connections between equivalent percentages, fractions and decimals				
	Use mental, written and calculator strategies to calculate 10%, 25% and 50% of quantities, including as discounts				

Mathematics - Stage 3

Outcomes	*Number and Algebra– key ideas cont.*	Term 1	Term 2	Term 3	Term 4
Patterns and Algebra MA3-8NA analyses and creates geometric and number patterns, constructs and completes number sentences, and locates points on the Cartesian plane	***Part 1*** Identify, continue create and describe increasing and decreasing number patterns with fractions, decimals and whole numbers				
	Find missing numbers in number sentences involving multiplication or division on one or both sides of the equals sign				
	Part 2 Continue, create, record and describe geometric and number patterns in words				
	Determine the rule for geometric and number patterns in words and use the rule to calculate values				
	Locate and record the coordinates of points in all four quadrants of the Cartesian plane				

Outcomes	*Measurement and Geometry– key ideas*	Term 1	Term 2	Term 3	Term 4
Length MA3-9MG selects and uses the appropriate unit and device to measure lengths and distances, calculates perimeters, and converts between units of length	***Part 1*** Use the kilometre to measure lengths and distances				
	Select and use appropriate instruments and units to measure lengths				
	Record lengths and distances using the abbreviations km, m, cm and mm				
	Find perimeters of common two-dimensional shapes and record the strategy				
	Part 2 Record lengths and distances using decimal notation to three decimal places				
	Convert between kilometres, metres, centimetres and millimetres				
	Solve problems involving length and perimeter				

Mathematics - Stage 3

Outcomes	*Measurement and Geometry– key ideas cont.*	Term 1	Term 2	Term 3	Term 4
Area MA3-10MG selects and uses the appropriate unit to calculate areas, including areas of squares, rectangles and triangles	***Part 1*** Recognise the need for square kilometres and hectares to measure area				
	Record areas using the abbreviations km^2 and ha				
	Develop a strategy to find areas of rectangles (including squares) and record the strategy in words				
	Part 2 Develop a strategy to find areas of triangles and record the strategy in words				
	Solve problems involving areas of rectangles (including squares) 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	***Part 1*** Use cubic centimetres and cubic metres to measure and estimate volumes				
	Select and use appropriate units to measure volume				
	Record volumes using the abbreviations cm^3 and m^3				
	Part 2 Connect volume and capacity and their units of measurement				
	Record volumes and capacities using decimal notation to three decimal places				
	Convert between millilitres and litres				
	Develop a strategy to find volumes of rectangular prisms and record the strategy in words				

Mathematics - Stage 3

Outcomes	*Measurement and Geometry– key ideas cont.*	Term 1	Term 2	Term 3	Term 4
Mass MA3-12MG selects and uses the appropriate unit and device to measure the masses of objects, and converts between units of mass	***Part 1*** Recognise the need for tonnes to measure mass				
	Record masses using the abbreviations t, kg and g				
	Select and use appropriate instruments and units to measure mass				
	Distinguish between 'gross mass' and 'net mass'				
	Solve problems involving mass				
	Part 2 Record mass using decimal notation to three decimal places				
	Convert between tonnes, kilograms and grams				
Time MA3-13MG uses 24-hour time and am and pm notation in real-life situations, and constructs timelines	***Part 1*** Convert between 12- and 24-hour time				
	Determine and compare the duration of events				
	Part 2 Interpret and use timetables				
	Draw and interpret timelines using a given scale				
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	***Part 1*** Name prisms and pyramids according to the shape of their 'base'				
	Recognise that prisms have a uniform cross-section and pyramids do not				
	Describe and compare properties of prisms and pyramids in terms of their faces, edges and vertices				
	Connect three-dimensional objects with their nets				
	Part 2 Construct prisms and pyramids using a variety of materials, and given drawings from different views				

Mathematics - Stage 3

Outcomes	*Measurement and Geometry– key ideas cont.*	Term 1	Term 2	Term 3	Term 4
Two-Dimensional Space MA3-15MG manipulates, classifies and draws two-dimensional shapes, including equilateral, isosceles and scalene triangles, and describes their properties	***Part 1*** Identify, name and draw right-angled, equilateral, isosceles and scalene triangles				
	Compare and describe side properties of the special quadrilaterals and special triangles				
	Explore angle properties of the special quadrilaterals and special triangles				
	Classify and draw regular and irregular two-dimensional shapes from descriptions of their features				
	Use the terms 'translate', 'reflect' and 'rotate' to describe transformations of shapes				
	Identify line and rotational symmetries				
	Make and compare enlargements of shapes/pictures				
	Part 2 Identify, describe, compare and draw diagonals of two-dimensional shapes				
	Identify and name parts of circles				
	Identify, use and describe combinations of translations, reflections and rotations				

Mathematics - Stage 3

Outcomes	*Measurement and Geometry– key ideas cont.*	Term 1	Term 2	Term 3	Term 4
Angles MA3-16MG measures and constructs angles, and applies angle relationships to find unknown angles	***Part 1*** Recognise the need for formal units to measure angles				
	Measure, compare and estimate angles in degrees (up to 360°)				
	Record angle measurements using the symbol for degrees (°)				
	Construct angles using a protractor (up to 360°)				
	Describe angle size in degrees for each angle classification				
	Part 2 Identify and name angle types formed by the intersection of straight lines, including 'angles on a straight line', 'angles at a point' and 'vertically opposite angles'				
	Use known angle results to find unknown angles in diagrams				
Position MA3-17MG locates and describes position on maps using a grid-reference system	Use grid-referenced maps to locate and describe positions				
	Follow a sequence of directions, including compass directions, to find a particular location on a map				
Note: There is only one part in the Position substrand in Stage 3.	Describe routes using landmarks and directional language				

Mathematics - Stage 3

Outcomes	*Statistics and Probability– key ideas*	Term 1	Term 2	Term 3	Term 4
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	***Part 1*** Collect categorical and numerical data by observation and by survey				
	Construct data displays, including tables, column graphs, dot plots and line graphs, appropriate for the data type				
	Describe and interpret data presented in tables, column graphs, dot plots and line graphs				
	Part 2 Interpret and create two-way tables in digital media and elsewhere				
	Interpret side-by-side column graphs				
	Compare a range of data displays to determine the most appropriate display for particular sets of data				
	Interpret and critically evaluate data presented				
Chance MA3-19SP conducts chance experiments and assigns probabilities as values between 0 and 1 to describe their outcomes	***Part 1*** List outcomes of chance experiments involving equally likely outcomes				
	Represent probabilities using fractions				
	Recognise that probabilities range from 0 to 1				
	Part 2 Compare observed frequencies in chance experiments with expected frequencies				
	Represent probabilities using fractions, decimals and percentages				
	Conduct chance experiments with both small and large numbers of trials				