Mathematics Scope & Continuum

Linking Support Material to the Syllabus
Early Stage 1 – Stage 4

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MATHEMATICS OUTCOMES

Strands and Sub-strands	Early Stage 1	Stage 1	Stage 2	Stage 3	Stage 4
Number					
Whole Numbers	NES1.1 Counts to 30, and orders, reads and represents numbers in the range 0 to 20.	NS1.1 Counts, orders, reads and represents two- and three-digit numbers.	NS2.1 Counts, orders, reads and records numbers up to four digits.	NS3.1 Orders, reads and writes numbers of any size.	NS4.1 Recognises the properties of special groups of whole numbers and applies arrange of strategies to aid computation
Addition and Subtraction	NES1.2 Combines, separates and compares collections of objects, describes using everyday language and records using informal methods.	NS1.2 Uses a range of mental strategies and informal recording methods for addition and subtraction involving one- and two-digit numbers.	NS2.2 Uses mental and written strategies for addition and subtraction involving two-, three- and four-digit numbers.	NS3.2 Selects and applies appropriate strategies for addition and subtraction with counting numbers of any size.	NS4.2 Compares, orders and calculates with integers
Multiplication and Division	NES1.3 Groups, shares and counts collections of objects, describes using everyday language and records using informal methods.	NS1.3 Uses a range of mental strategies and concrete materials for multiplication and division.	NS2.3 Uses mental and informal written strategies for multiplication and division.	NS3.3 Selects and applies appropriate strategies for multiplication and division.	
Fractions and Decimals	NES1.4 Describes halves, encountered in everyday contexts, as two equal parts of an object.	NS1.4 Describes and models halves and quarters, of objects and collections, occurring in everyday situations.	NS2.4 Models, compares and represents commonly used fractions and decimals, adds and subtracts decimals to two decimal places, and interprets everyday percentages.	NS3.4 Compares, orders and calculates with decimals, simple fractions and simple percentages.	NS4.3 Operates with fractions, decimals, percentages, ratios and rates
Chance	No outcome at this stage.	NS1.5 Recognises and describes the element of chance in everyday events.	NS2.5 Describes and compares chance events in social and experimental contexts.	NS3.5 Orders the likelihood of simple events on a number line from zero to one.	NS4.4 Solves probability problems involving simple events
Patterns and Algebra					
Patterns and Algebra					PAS4.1 uses letters to represent numbers and translates between words and algebraic symbols
	PAES1.1 Recognises, describes, creates and continues repeating patterns and number patterns that increase or decrease.	PAS1.1 Creates, represents and continues a variety of number patterns, supplies missing elements in a pattern and builds number relationships.	PAS2.1 Generates, describes and records number patterns using a variety of strategies and completes simple number sentences by calculating missing values.	PAS3.1a Records, analyses and describes geometric and number patterns that involve one operation using tables and words.	PAS4.2 Create, records, analyses and generalises number patterns using words and algebraic symbols in a variety of ways

				PAS3.1b Constructs, verifies and completes number sentences involving the four operations with a variety of numbers.	PAS4.3 Uses the algebraic system to simplify, expand and factorise simple algebraic expressions
					PA4.4 Uses algebraic techniques to solve linear equations and simple inequalities
					PAS4.5 Graphs and interprets linear relationships on the number plane

Data

Data	DES1.1 Represents and interprets data displays made from objects and pictures.	DS1.1 Gathers and organises data, displays data using column and picture graphs, and interprets the results.	DS2.1 Gathers and organises data, displays data using tables and graphs, and interprets the results.	DS3.1 Displays and interprets data in graphs with scales of many-to-one correspondence.	DS4.1 Constructs, reads and interprets graphs, tables, charts and statistical information
					DS4.2 Collects statistical data using either a census or a sample, and analyses data using measures of location and range

Measurement

Length	MES1.1 Describes length and distance using everyday language and compares lengths using direct comparison.	MS1.1 Estimates, measures, compares and records lengths and distances using informal units, metres and centimetres.	MS2.1 Estimates, measures, compares and records lengths, distances and perimeters in metres, centimetres and millimetres.	MS3.1 Selects and uses the appropriate unit and device to measure lengths, distances and perimeters.	MS4.1 Uses formulae and Pythagoras' theorem in calculating perimeter and area of circles and figures composes of rectangles and triangles
Area	MES1.2 Describes area using everyday language and compares areas using direct comparison.	MS1.2 Estimates, measures, compares and records areas using informal units.	MS2.2 Estimates, measures, compares and records the areas of surfaces in square centimetres and square metres.	MS3.2 Selects and uses the appropriate unit to calculate area, including the area of squares, rectangles and triangles.	
Volume and Capacity	MES1.3 Compares the capacities of containers and volumes of objects or substances using direct comparison.	MS1.3 Estimates, measures, compares and records volumes and capacities using informal units.	MS2.3 Estimates, measures, compares and records volumes and capacities using litres, millilitres and cubic centimetres.	MS3.3 Selects and uses the appropriate unit to estimate and measures volumes and capacity, including the volume of rectangular prisms.	MS4.2 Calculates surface area of rectangular and triangular prisms and volume of right prisms and cylinders
Mass	MES1.4 Compares the masses of two objects and describes mass using everyday language.	MS1.4 Estimates, measures, compares and records the masses of two or more objects using informal units.	MS2.4 Estimates, measures, compares and records masses using kilograms and grams.	MS3.4 Selects and uses the appropriate unit measuring device to find the mass of objects.	

Time	MES1.5 Sequences events and uses everyday language to describe the duration of activities.	MS1.5 Compares the duration of events using informal methods and reads clocks on the half-hour.	MS2.5 Reads and records time in one-minute intervals and makes comparisons between time units.	MS3.5 Uses twenty-four hour time and am and pm notation in real-life situations and constructs timelines.	MS4.3 Performs calculations of time that involves mixed units
Space and Geometry					
Three-dimensional Space	SGES1.1 Manipulates, sorts and represents three-dimensional objects and describes them using everyday language.	SGS1.1 Models, sorts, describes and represents three-dimensional objects including cones, cubes, cylinders, spheres and prisms, and recognises them in pictures and the environment.	SGS2.1 Makes, compares, describes and names three-dimensional objects including pyramids, and represents them in drawings.	SG31.1 Identifies three-dimensional objects, including particular prisms and pyramids, on the basis of their properties, and visualises, sketches and constructs them given drawings of different views.	SGS4.1 Describes and sketches three-dimensional solids including polyhedra, and classifies them in terms of properties
Two-dimensional Space	SGES1.2 Manipulates, sorts and describes representations of two-dimensional shapes using everyday language.	SGS1.2 Manipulates, sorts, represents, describes and explores various two-dimensional shapes.	SGS2.2a Manipulates, compares, sketches and names two-dimensional shapes and describes their features.	SGS3.2a Manipulates, classifies and draws two-dimensional shapes and describes side and angle properties.	SG4.3 Classifies, constructs and determines the properties of triangles and quadrilaterals
					SG4.4 Identifies congruent and similar two-dimensional figures stating the relevant conditions
			SGS2.2b Identifies, compares and describes angles in practical situations.	SGS3.2b Measures, constructs and classifies angles.	SG4.2 Identifies and names angles formed by the intersection of straight lines, including those related to transversal on sets of parallel lines, and makes use of the relationship between them
Position	SGES1.3 Uses everyday language to describe position and give and follow simple directions.	SGS1.3 Represents the position of objects using models and drawings and describes using everyday language.	SGS2.3 Uses simple maps and grids to represent position and follow routes.	SGS3.3 Uses a variety of mapping skills.	

Working Mathematically

Questioning	WMES1.1 Asks questions that could be explored using mathematics in relation to Early Stage 1 content.	WMS1.1 Asks questions that could be explored using mathematics in relation to Stage 1 content.	WMS2.2 Asks questions that could be explored using mathematics in relation to Stage 2 content.	WMS3.1 Asks questions that could be explored using mathematics in relation to Stage 3 content.	WMS4.1 Asks questions that could be explored using mathematical in relation to Stage 4 content
Applying Strategies	WMES1.2 Uses objects, actions, imagery, technology and/or trial and error to explore mathematical problems.	WMS1.2 Uses objects, diagrams, imagery and technology to explore mathematical problems.	WMS2.2 Selects and uses appropriate mental or written strategies, or technology, to solve problems.	WMS3.2 Selects and applies appropriate problem-solving strategies, including technological applications, in undertaking investigations.	WMS4.2 Analyses a mathematical or real-life situation, solving problems using technology where appropriate
Communicating	WMES1.3 Describes mathematical situations using everyday language, actions, materials and informal recordings.	WMS1.3 Describes mathematical situations and methods using everyday and some mathematical language, actions, materials, diagrams and symbols.	WMS2.3 Uses appropriate terminology to describe, and symbols to represent, mathematical ideas.	WMS3.3 Describes and represents a mathematical situation in a variety of ways using mathematical terminology and some conventions.	WMS4.3 Uses mathematical terminology and notation, algebraic symbols, diagrams, text and tables top communicate mathematical ideas
Reasoning	WMES1.4 Uses concrete materials and/or pictorial representations to support conclusions.	WMS1.4 Supports conclusions by explaining or demonstrating how answers were obtained.	WMS2.4 Checks the accuracy of a statement and explains the reasoning used.	WMS3.4 Gives a valid reason for supporting one possible solution over another.	WMS4.4 Identifies relationships and the strengths and weaknesses of different strategies and solutions, giving reasons
Reflecting	WMES1.5 Links mathematical ideas and makes connections with, and generalisations about, existing knowledge and understanding in relation to Early Stage 1 content.	WMS1.5 Links mathematical ideas and makes connections with, and generalisations about, existing knowledge and understanding in relation to Stage 1 content.	WMS2.5 Links mathematical ideas and makes connections with, and generalisations about, existing knowledge and understanding in relation to Stage 2 content.	WMS3.5 Links mathematical ideas and makes connections with, and generalisations about, existing knowledge and understanding in relation to Stage 3 content.	WMS4.5 Links mathematical ideas and makes connections with, and generalisations about, existing knowledge and understanding in relation to Stage 4 content

Yearly Overview

Week	Term 1	Term 2	Term 3	Term 4
Week 1	Assessment	Revision	Revision	Revision
	SENA 1&2, Counting On	Whole Numbers	Whole Numbers	2D Space
Week 2	Whole Numbers	Patterns and Algebra	Patterns and Algebra	Patterns and Algebra
	Time	Mass	Position	3D Space
Week 3	Patterns and Algebra	Patterns and Algebra	Patterns and Algebra	Patterns and Algebra
	Time	Time	Mass	Volume and Capacity
Week 4	Patterns and Algebra	Addition and Subtraction	Addition and Subtraction	Addition and Subtraction
	Data	Money	Money	Length
Week 5	Addition and Subtraction	Addition and Subtraction	Addition and Subtraction	Addition and Subtraction
	Money	Length	Time	Mass
Week 6	Addition and Subtraction	Multiplication and Division	Multiplication and Division	Multiplication and Division
	Chance	2D Space	Length	Position
Week 7	Multiplication and Division	Multiplication and Division	Multiplication and Division	Multiplication and Division
	2D Space	Data	2D Space - Angles	Area
Week 8	Multiplication and Division	Fractions relate to area	Fractions and Decimals	Fractions and Decimals
	2D Space - Angles	Area	Data	Time
Week 9	Fractions relate to length	Fractions and Decimals	Fractions and Decimals	Fractions and Decimals
	Length	3D Space	Area	Chance
Week 10	Volume and Capacity	Position	Chance	Revision
	Position	Volume and Capacity	3D Space	

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Strand	Term 1										Term 2										Term 3										Term 4									
	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10
Whole Numbers ES1 – S3 (Daily)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Whole Numbers		■																			■																			
Addition and subtraction					■	■								■	■									■	■									■	■					
Money					■																			■																
Multiplication and division							■	■							■	■										■	■									■	■			
Fractions and Decimals									■									■	■							■	■											■	■	
Chance						■																								■									■	
Patterns and Algebra			■	■								■	■									■	■									■	■							
Data				■							■						■											■												
Length									■						■										■									■						
Area																		■											■								■			
Volume and Capacity							■													■													■							
Mass												■													■									■						
Time		■	■										■												■													■		
3D Space																	■												■				■							
2D Space						■	■										■										■					■								
Position									■											■	■															■				
Revision											■										■										■									■

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Stage Statements

	Early Stage 1	Stage 1	Stage 2	Stage 3	Stage 4
General	• *Students who have achieved Early Stage 1 outcomes* • recognise numbers and shapes in their environment • pose and explore mathematical questions using objects, actions, imagery, technology and/or trail and error • describe mathematical situations • make conclusions and reflect on their learning using everyday language, a actions and materials • encouraged to use informal recordings • understandings are demonstrated in informal experiences such as play	• *Students who have achieved Stage 1 outcomes* • show a growing awareness of the many purposes of mathematics in their daily lives • pose questions and explore basic mathematical concepts by manipulating objects, pictures, imagery and technology applications • describe mathematical situations and explain how answers were obtained using every day language, actions, materials, diagrams and symbols • give reasons to support their conclusions and link mathematical ideas and make connections with existing knowledge and understanding in relation to the content	• *Students who have achieved Stage 2 outcomes* • demonstrate their problems-solving skills using a range of strategies to deal with simple spatial, measurement and numerical problems] • pose questions that can be explored using mathematics • develop and check solutions using appropriate mental or written strategies or technology • use some mathematical terminology to describe or represent mathematical ideas and link their learning to other experiences	• *Students who have achieved Stage 3 outcomes* • extend mathematical investigations using appropriate problems-solving strategies, including the selection and use of appropriate technology. • use appropriate mathematical terminology • use some conventions when representing mathematical situations • gives a valid reason for supporting one possible solution to a problem over another • applies a familiar solution method to new problems'' • appreciate that mathematics involves observing, representing and generalising [patterns and relationships	• *Students who have achieved Stage 4 outcomes* • Use mathematical terminology, algebraic notation, diagrams, texts and tables to communicate mathematical ideas • links concepts and processes within and between mathematical contexts • apply mathematical skills and understanding in analysing real-life situations • systematically formulating questions or problems that they then explore and solve, using technology where appropriate • compare the strengths and weaknesses of different strategies and solutions when solving problems
Number	• *Students who have achieved Early Stage 1 outcomes* • count to 30 • order, read and represent numbers in the range 0-20 in a variety of forms, using objects, pictures, numerals and words • combine, separate, compare, group and share collections of objects and use everyday language to describe collections • visualise numbers and number combinations from pictorial representations • divide an object into two equal parts and describe the parts as halves • recognise that there are different coins and notes in our monetary system' • recognise, describe, create and continue repeating patterns and number patterns that increase and decrease	• *Students who have achieved Stage 1 outcomes* • count, order, read and present two- and three-digit numbers using numerals, words, objects and pictures • develop face value concepts • begin to use a range of mental strategies to estimate and solve number problems involving the four operations • developing mental facility with number facts, number combinations and counting by ones, twos, fives and tens • model and describe halves, quarters of objects and collections occurring in everyday situations • sort, order, classify and count coins and perform simple monetary operations • recognise and describe the element of chance in everyday events • create, represent and extend a variety of number patterns and supply missing elements • begin to build number relationships and make simple generalisations and record these in their own words	• *Students who have achieved Stage 2 outcomes* • use place value to count, order, read and record numbers to four digits • use estimation and employ mental strategies to solve problems • demonstrate mental facility with multiples of numbers up to 10x10 • use informal written strategies for multiplication and division • solve addition and subtraction problems using mental and written strategies, including the formal written algorithm • model, compare and represent commonly used fractions and related decimals • recognise percentages in everyday situations • perform simple calculations with money and use estimation to check their solutions • order events from least likely to most likely and identify and record all possible outcomes for a simple chance experiment • generate, describe and record number patterns using a variety of strategies • complete simple number sentences by calculating missing values	• *Students who have achieved Stage 3 outcomes* • read, write, represent and order numbers of any size using place value • select and apply appropriate strategies for the four operations]interpret their solutions in the context of a problem • compare, order and perform calculations involving simple fractions, decimals and simple percentages • assign numerical values to the likelihood of simple events occurring and order them on a number line • record using tables • analyse and describe geometric and number patterns that involve number sentences • using the four operations with a variety of numbers	• *Students who have achieved Stage 4 outcomes* • develop a range of mental strategies to enhance their computational skills • operate competently with directed numbers fractions, percentages, mixed numerals and decimals • apply these in a range of contexts, including problems related to discounts and profits and loss • familiar with the concepts of ration, rates and the probability of simple and contemporary evens and apply these when solving problems • use index notation for numbers with positive integral indices • explore prime numbers factorisation, square and related square roots and cube and related cube roots • investigate special groups of positive whole numbers, divisibility tests and other counting systems • extend and generalise number patterns • understand the use of pronumerals and the language of algebra, including the index notation • simplify algebraic expressions, substitute into algebraic expressions and formulae and expand and factorise algebraic expressions • solve simple linear equations, inequalities, and word problems • develop tables of values from simple relationships and illustrate these relationships on the number plane

Data	*Students who have achieved Early Stage 1 outcomes* • collect data • use objects or pictures to represent information about themselves and their environment • organise objects or pictures into a data display • interpret the information presented	*Students who have achieved Stage 1 outcomes* • gather and organise data • use column and picture graphs • interpret the results	*Students who have achieved Stage 2 outcomes* • conduct surveys, and classify and organise data to answer a specific question they have posed. • present the information in tales and graphs • interpret results	*Students who have achieved Stage 3 outcomes* • gather, organise, display, read and interpret data and make judgements in relation to this data • read and interpret picture, simple line, pie and divided bar graphs with scales • utilise data to find the average score	*Students who have achieved Stage 4 outcomes* • construct and interpret line, sector, travel step and conversion graphs, dot plots, stem and leaf plots, divided bar graphs and frequency tables and histograms • analyse data and consider both discrete and continuous variables, sampling versus census, prediction and possible misrepresentation of data • calculate the mean, mode, median and range
Measurement	*Students who have achieved Early Stage 1 outcomes* • compare objects directly in terms of length, area, volume, capacity and mass • use everyday and comparative language to describe these attributes • sequence events • tell the time on the hour using analog and digital times	*Students who have achieved Stage 1 outcomes* • use informal units to estimate and measure length, area, volume, capacity, mass and time • compare and order objects according to these attributes and record findings • recognise the need for formal units of length • use metre and centimetre to measure length and distance • compare and order the duration of events using informal units • read clock to the half-hour	*Students who have achieved Stage 2 outcomes* • recognise the need for formal units to measure perimeter, area, volume, capacity and mass • use particular formal units to estimate and measure to the nearest unit • read and record time in one-minute intervals • make comparisons between time units • interpret calendars, simple timetables and timelines	*Students who have achieved Stage 3 outcomes* • select and use the appropriate device and unit for measuring • convert measurements from one unit to another and record in decimal notation • estimate and measure volume and capacity, including the volume of regular prisms in cubic centimetres and cubic meters • use 24 hour time, am and pm, notation, and construct timelines and simple timetables • use Australian time zones to solve simple problems related to time differences	*Students who have achieved Stage 4 outcomes* • find the area and perimeter of a variety of polygons, circles and simple composite figures, the surface area and volume of rectangular and triangular prisms and the volume of cylinders and right prisms • uses Pythagoras' theorem to calculate distance between two points • describe the limit of accuracy of their measure, • interpret and use tables and charts related to time • apply their understanding of Australian and world time zones to solve problems
Space and Geometry	*Students who have achieved Early Stage 1 outcomes* • manipulate and sort objects • describe their size, shape, position and other features in everyday language • represent objects and shapes using a variety of materials • use everyday language to describe position and give and follow simple directions	*Students who have achieved Stage 1 outcomes* • manipulate, name, make, sort, describe and represent particular three-dimensional objects and two-dimensional shapes • recognise them in pictures and in the environment • make simple tessellating designs • identify parallel, vertical and horizontal limes • complete designs with one line pf symmetry • describe the [position of objects in the immediate environment, in models and in pictures • represent the position of objects using models and drawings	*Students who have achieved Stage 2 outcomes* • identify, manipulate and compare groups of three-dimensional objects and two-dimensional shapes • describe their feature suing appropriate mathematical terminology • make and describe tessellating designs • identify perpendicular lines • find lines of symmetry for a give shape • aware of angles in the environment and measure them using informal means • use coordinates to describe position • give and follow directions using compass points	*Students who have achieved Stage 3 outcomes* • construct and classify three-dimensional objects and two-dimensional shapes • compare and describe their properties using strategies such as recognising symmetry and measuring angles and dimensions • make simple calculations using scale • use a variety of mapping skills	*Students who have achieved Stage 4 outcomes* • knowledge of three-dimensional and two-dimensional geometrical figures, angles, parallel lines, perpendicular lines, congruent figures, similar figures and scale drawings • able to solve numerical exercises on finding unknown lengths and angles in figures

Sample Indicators of Student Achievement.

	ES1	S1	S2	S3	S4
Whole Number	counts forwards to 30, from a given number	counts forwards or backwards from a given two-digit number	names the number before and after a given four-digit number	reads, writes and says large numbers	describes the link between squares and square roots
	counts backwards from a given number, in the range 0 to 20	names the number before and after a given three-digit number	reads, writes and says three- and four-digit numbers	writes a number presented orally	expresses a number as a product of its prime factors
	names the number before and after a given number	reads, writes and says two- and three-digit numbers	states the place value of digits in a four-digit number	makes the second largest or second smallest number, given any four digits	expresses a number as a product of its prime factors using index notation
	demonstrates one-to-one correspondence when counting to 20	states the place value of digits in a three-digit number	makes the largest and smallest number given any four digits	explains the place value of any digit in a number	uses diagrams to represent figurate numbers
	reads and records numbers up to 20, including 0	makes the largest or smallest number given any three digits	places a set of three- and four-digit numbers in ascending or descending order	places a set of large numbers in ascending or descending order	uses mental or written strategies to aid computation
	makes groups of objects up to 20	orders a set of two- and three-digit numbers	uses the symbols for 'is less than' (<) and 'is greater than' (>) to show the relationship between two numbers	records large numbers using expanded notation e.g. 59 675 = 50 000 + 9000 + 600 + 70 + 5	explains, in words, number sentences involving integers
	matches numerals to the number of objects up to 20	uses the terms 'more than' and 'less than' when comparing numbers	counts forwards or backwards from any four-digit number by tens or hundreds	rounds numbers to the nearest ten thousand when estimating e.g. 92 000 rounds to 90 000	plots directed numbers on a number line
	orders a set of numbers up to 20 from smallest to largest	uses ordinal names 'first' to 'thirty-first' on a calendar	records three- and four-digit numbers using expanded notation e.g. 5429 = 5000 + 400 + 20 + 9	matches different abbreviations of numbers used in everyday contexts e.g. $350 K represents $350 000	explains why –8 is less than –3
	names instantly the number represented by an arrangement of dots on a standard die	counts forwards or backwards by twos, fives or tens	rounds numbers to the nearest ten, hundred or thousand when estimating	orders a set of single digit numbers, including some negative numbers, on a number line	orders a set of integers
	estimates the number of objects in a group and counts to check	represents two- and three-digit numbers using materials e.g. bundles of pop sticks			adds or subtracts directed numbers
	uses the ordinal names 'first' to 'tenth'	orders a collection of notes or coins according to face value			multiplies or divides directed numbers

	ES1	S1	S2	S3	S4
Addition & Subtraction	combines two or more groups of objects to model addition	represents subtraction as the difference between two numbers	uses patterns to extend number facts e.g. 5 – 2 = 3, so 500 – 200 is 300	chooses appropriately between mental, written and calculator methods for addition and subtraction problems	
	separates and takes part of a group of objects away to model subtraction	creates simple addition and subtraction stories and picture problems	explains and records methods for adding and subtracting	gives reasons why a calculator was useful when solving a problem	
	compares two groups of objects and describes 'how many more'	records number sentences using the symbols +, – and =	uses a split strategy for addition or subtraction	uses estimation to check solutions to addition and subtraction problems	
	joins two groups of objects and states the number altogether	recalls addition and subtraction facts for numbers to 20	uses an empty number line and jump strategies to represent solutions to addition and subtraction problems involving three- or four-digit numbers	uses the formal written algorithm to solve addition and subtraction problems involving counting numbers of any size	
	uses concrete materials to model different combinations to 10 e.g. using a ten-frame and counters	uses two or more different strategies to solve an addition or subtraction problem	adds or subtracts two numbers, with and without trading, using concrete materials	uses addition to check answers to subtraction problems	
	describes the action of combining using everyday language such as 'makes', 'join' and 'together'	explains how an answer to an addition or subtraction problem was obtained	uses the formal written algorithm to solve addition or subtraction problems	adds numbers with different numbers of digits e.g. 42 000 + 5123 + 246	
	takes part of a group of objects away and states the number of objects remaining	counts on from the larger number to find the total of two numbers	uses a calculator to solve addition and subtraction problems that include larger numbers contained in a problem context		
	describes the action of subtraction using everyday language such as 'take away'	counts on or back to find the difference between two numbers			
	uses concrete materials, including fingers, to solve simple addition and subtraction problems	bridges to ten to assist addition e.g. 17 + 5; 17 and 3 is 20 and add 2 more			
	records addition and subtraction informally using drawings, numerals and words	recognises related addition and subtraction number sentences e.g. 8 + 2 is 10 so 10 – 2 is 8			
		uses pop sticks to perform addition and subtraction of two-digit numbers with trading			
		uses an empty number line to record strategies used to solve addition or subtraction problems			
		performs simple calculations with money			

	ES1	S1	S2	S3	S4
Multiplication & Division	uses the term 'group' to describe a collection of objects	counts by ones, twos, fives or tens	uses mental strategies to recall multiplication facts to 10×10	selects appropriate mental, written or calculator strategies to solve multiplication and division problems	
	uses the term 'sharing' to describe the distribution of a collection of objects	describes collections of objects as 'rows of' or 'groups of'	uses multiplication facts to work out division facts	records a remainder as a fraction or decimal, where appropriate e.g. $25 \div 4 = 6\frac{1}{4}$ or 6.25	
	uses concrete materials to solve grouping or sharing problems	uses an array to model multiplication problems	explains the relationship between multiplication facts e.g. explains how the 3 and 6 times tables are related	multiplies a three- or four-digit number by a one-digit number using a mental or written strategy	
	models and describes equal groups and equal rows	uses counting strategies to find the total number of objects e.g. rhythmic counting, repeated addition	uses mental strategies to divide a two-digit number by a one-digit number	multiplies a three-digit number by a two-digit number using the extended form of the formal written algorithm	
	recognises an unequal group and an unequal row	shares a collection of objects into equal groups to model division	describes and records methods used to solve a multiplication or division problem	divides a number with three or more digits by a single divisor	
	labels the number of objects in a group or row	models division as repeated subtraction	identifies multiples and factors for a given number	divides a number with three or more digits by a multiple of ten	
	records grouping and sharing informally using pictures, numerals and words	uses a number line or hundreds chart to solve multiplication and division problems	uses mental strategies to multiply a one-digit number by a multiple of 10	calculates solutions to problems involving mixed operations e.g. $5 \times 4 + 7 = 27$	
		recognises and names the symbols $\times$, $\div$ and $=$	uses mental strategies to multiply a two-digit number by a one-digit number	identifies prime and composite numbers from a group of mixed numbers	
			explains and records remainders to division problems e.g. $17 \div 4 = 4$ remainder 1		

	ES1	S1	S2	S3	S4
Fractions & Decimals	shares an object by dividing it into two equal parts	models and describes a half or a quarter of an object	compares and orders fractions with the same denominator	finds equivalent fractions using a diagram, number line or mental strategy	adds or subtracts fractions using written methods
	describes parts of an object using the term 'half'	models and describes a half or a quarter of a collection of objects	renames fractions where the numerator and denominator are the same as 1 e.g. $\frac{4}{4}$ =1	expresses improper fractions as mixed numerals	expresses improper fractions as mixed numerals
	explains that halves are two equal parts	models and describes the dividing of a collection of objects into quarters	interprets the numerator and denominator of a fraction e.g. '$\frac{3}{8}$ means 3 equal parts of 8'	subtracts a unit fraction from a whole number	multiplies or divides mixed numerals
	recognises when two parts are not halves	uses fraction language in a variety of everyday contexts e.g. 'the half-hour'	models fifths and tenths of an object or collection of objects	adds or subtracts fractions that have the same denominator	adds, subtracts, multiplies and divides decimals
	uses drawings to record a half of an object e.g. draws a pizza cut in half	recognises when four parts are not quarters	expresses whole numbers as decimals	adds or subtracts decimal numbers that have a different number of decimal places	expresses fractions as decimals or percentages
		uses fraction notation for half ($\frac{1}{2}$) and quarter ($\frac{1}{4}$)	interprets decimal notation for tenths or hundredths	multiplies or divides decimal numbers by single-digit numbers	increases or decreases a quantity by a given percentage
			adds or subtracts two decimal numbers with two decimal places	adds or subtracts simple fractions where one denominator is a multiple of the other e.g. $\frac{2}{3}+\frac{1}{6}=\frac{4}{6}+\frac{1}{6}=\frac{5}{6}$	uses ratio to compare quantities of the same type
			finds equivalence between halves, quarters and eighths of an object or collection of objects	multiplies simple fractions by whole numbers	calculates speed given distance and time
			rounds a number with one or two decimal places to the nearest whole number	calculates simple percentages of quantities	

	ES1	S1	S2	S3	S4
Chance		uses the language of chance (e.g. 'will happen', 'might happen', 'might not happen') to describe everyday events	lists all the possible outcomes in a simple chance situation e.g. 'heads', 'tails' if a coin is tossed	uses data to order chance events from least likely to most likely e.g. roll two dice twenty times and order the results according to how many times each total is obtained	lists all possible outcomes of a simple event
		describes the element of chance in familiar activities e.g. 'I might play with my friend after school.'	describes events as being certain or uncertain	orders commonly used chance words on a number line between zero (impossible) and one (certain)	expresses the probability of a particular outcome as a fraction between 0 and 1
		describes familiar events as being possible or impossible	compares familiar events and describes them as being equally likely, more likely or less likely to occur	assigns a numerical value to the likelihood of an event occurring e.g. there is a 50% chance	describes the complement of an event
		compares two familiar events and explains which is more likely to happen	predicts possible outcomes in a simple chance experiment e.g. 'You are more likely to draw out a blue ball because there are more blue than red in the bag.'	describes the likelihood of an event occurring as being more or less than a half	finds the probability of a complementary event
			explains the differences between expected results and actual results in a simple chance experiment		
			conducts simple experiments using coins, dice or spinners and records the results		

	ES1	S1	S2	S3	S4
Patterns & Algebra	copies and continues a repeating pattern made using sounds or actions	identifies patterns when counting by ones, twos, fives or tens	identifies and records number patterns when counting forwards by threes, fours, fives, sevens, eights or nines	builds a simple geometric pattern using materials	translates from a word statement to an algebraic statement
	recognises a repeating pattern	supplies the next number in an increasing or decreasing pattern and describes how it was determined	creates a variety of number patterns using whole numbers, fractions or decimals	completes a table of values for a geometric pattern or a number pattern	translates an algebraic statement into words
	continues a repeating pattern made from shapes, objects or pictures	creates and describes simple number patterns that increase or decrease	uses the equals sign to record equivalent number relationships e.g. $4 \times 3 = 6 \times 2$	calculates the value of a missing number in a table of values and explains how it was determined	models algebraic expressions using cups and counters
	creates a repeating pattern using shapes, objects or pictures e.g. ∇, Δ, $\bullet$, ∇, Δ, $\bullet$	determines a missing number in a number pattern and describes how it was determined	recognises and describes patterns in multiplication facts to 10×10	records a description of a number pattern using words	uses cups and counters to add and subtract simple algebraic expressions
	describes a repeating pattern made from shapes by referring to the names of the shapes or their attributes	creates number sentences to record equivalent number relationships e.g. $5 + 2 = 4 + 3$	forms arrays using materials, to demonstrate multiplication patterns and relationships e.g. $3 \times 5 = 15$ • • • • • • • • • • • • • • •	determines a rule, in words, to describe the pattern presented in a table	records a number pattern to describe a geometric pattern
	describes a repeating pattern in terms of a 'number pattern' e.g. O, ∇, O, ∇, O, ∇ is a 'two' pattern	recognises patterns that can be created by recording all possible combinations for a given number	explains the relationship between multiplication facts e.g. explains how the 3 and 6 times tables are related	uses the rule for a pattern to calculate the corresponding value for a larger number	completes a table of values for a number pattern and explains how the answers were determined
	creates a new repeating pattern that is similar to a given repeating pattern	identifies and describes the relationship between addition and subtraction facts e.g. $3 + 5 = 8$; hence $8 - 5 = 3$ and $8 - 3 = 5$	relates multiplication and division facts e.g. $6 \times 4 = 24$; so $24 \div 4 = 6$ and $24 \div 6 = 4$	completes number sentences that involve more than one operation by calculating missing values	describes a number pattern using algebraic symbols
	continues a simple number pattern that increases or decreases and explains how this was achieved		completes number sentences involving one operation by calculating missing values e.g. Find so that $5 +$ $= 13$	completes number sentences involving fractions or decimals e.g. Find so that $7 \times$ $= 7.7$	calculates the corresponding values for larger numbers in a table of values
	uses the term 'is the same as' to express equality of groups			constructs a number sentence to match a problem that is presented in words and that requires finding an unknown	simplifies algebraic expressions using standard conventions
				checks a solution to a number sentence by substituting into the original question	describes what is wrong with incorrect expansions e.g. what is wrong with $5(a + 7) = 5a + 7$?

				uses inverse operations to assist with the solution of a number sentence e.g. Find ☐ so that 125 ÷ 5 = ☐ becomes find ☐ so that ☐ × 5 = 125	factorises expressions by identifying a common factor e.g. $x^2 - xy = x(x - y)$
					generates a number pattern by substituting several values into an expression e.g. $4y - 2$ leads to the pattern 2, 6, 10, 14, …
					chooses and justifies a correct solution to an equation from a given set
					solves an equation by using algebraic methods
					substitutes into a given formula to find the value of the subject
					solves simple inequalities and graphs solutions on a number line
					names the coordinates of the origin and other points that lie on the x and y axes
					reads, plots and names ordered pairs from a number plane diagram
					plots points on the number plane from a table of values
					gives the coordinates of points that lie on a line drawn on the number plane

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	ES1	S1	S2	S3	S4
Data	sorts objects into groups according to a characteristic e.g. sorts lunch boxes according to colour	poses a suitable question that can be answered by gathering and displaying data	poses a suitable question to be answered using a survey	finds the mean for a small set of data	displays information using a line graph
	organises a group of similar objects into rows or columns	uses concrete materials, tally marks or symbols to keep track of collected data	creates a simple table to organise data	determines a suitable scale for data on a picture, column or line graph	displays information using a sector graph
	compares groups by counting	displays data using a symbol to represent data e.g. using a coloured square to represent each fruit	constructs a column graph or a picture graph on grid paper using one-to-one correspondence	draws a picture graph where one picture or symbol represents more than one item e.g. ♥ = 100	interprets information from a line graph
	uses a picture of an object to represent the object in a data display	displays data using an object to represent data e.g. using a block to represent each car	marks equal spaces on each axis, labels axes and names a column or picture graph	interprets graphs using the scale to make generalisations about data	interprets information from a conversion graph
	organises actual objects or pictures of the objects into a data display	uses a baseline and equal spacing when representing data in a display	interprets information presented in a given column graph or picture graph	draws a line graph to represent data that demonstrates a continuous change e.g. hourly temperature	constructs a frequency distribution table for data collected from a survey
	describes information presented in a data display e.g. 'I can see that there are more red lunch boxes.'	uses same-sized symbols when representing data	represents the same data in a table, a column graph and a picture graph	names the category represented by each section in a divided bar graph or sector (pie) graph	draws a histogram from data presented in a frequency table
	interprets information presented in a data display to answer questions e.g. 'Most people in our class have brown eyes.'	displays data using a column graph or a picture graph	creates a two-way table to organise data		constructs a dot plot for a small number of data points
		interprets information presented in a given picture graph or column graph	interprets information presented in a table		displays data in a stem-and-leaf plot, choosing an appropriate stem for the data
					determines whether it would be appropriate to collect data from a whole population or a sample to answer a particular question
					finds the mean, range, median and mode of a set of data presented in a frequency distribution table
					uses a spreadsheet to tabulate data and determine measures of location
					compares two sets of data (e.g. pulse rates before and after exercise) using a back-to-back stem-and-leaf plot
					identifies and comments on the bias of a given sample
					uses a random number generator on a calculator to select a sample

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	ES1	S1	S2	S3	S4
Length	sorts objects into groups of long and short objects	measures the length of an object by placing informal units end-to-end without gaps or overlaps	records lengths or distances using metres, centimetres and/or millimetres e.g. 1 m 25 cm, 5 cm 3 mm	gives examples of situations where a longer unit than the metre is needed for measurement	
	uses everyday language to describe length e.g. long, short, high, tall, low, the same	estimates the number of units required to measure length or distance	gives examples of situations where a unit smaller than the centimetre is needed for measurement	measures a kilometre and half-kilometre	
	describes an object as being shorter, longer, wider, deeper, thicker or thinner than another object	counts units to compare and order the length of two or more objects	estimates, measures and compares the lengths of objects in metres, centimetres and millimetres	converts between units when comparing lengths and distances e.g. metres and kilometres, centimetres and metres	
	describes distance using terms such as near, far, nearer, further and closer	selects and uses an appropriate informal unit for measuring length e.g. uses paper clips instead of pop sticks to measure a pencil	estimates, measures and compares the distances between two objects in metres, centimetres and millimetres	records lengths or distances using decimal notation to three decimal places e.g. 2.753 km	
	compares the lengths of two objects by placing the objects side-by-side and aligning the ends	describes and records length as the number and type of units used e.g. six paper clips long	uses the abbreviation for millimetre (mm)	interprets symbols used to record speed in kilometres	
	identifies an object that is longer or shorter than another object	uses the abbreviation for metre (m) and centimetre (cm)	records lengths or distances using decimal notation to two decimal places e.g. 1.23 m	selects and uses the appropriate measuring device to measure lengths, distances or perimeters	
	straightens a curved or bent length of material to check if two lengths are the same	estimates and measures lengths and distances to the nearest metre or half-metre	uses the term 'perimeter' to describe the total distance around a shape	selects and uses the appropriate unit to record lengths, distances or perimeters	
	records length comparisons by drawing, tracing, or cutting and pasting	classifies the lengths of objects as being more than, less than or about the same as a metre	estimates and measures the perimeter of two-dimensional shapes	measures the perimeter of a large area	
		measures length using a 10 cm length, with 1 cm markings, as a measuring device	reads and interprets calibrations on measuring devices e.g. ruler, measuring tape	estimates, measures and compares the perimeters of squares, rectangles and triangles	
				explains that the perimeters of squares, rectangles and triangles can be found by finding the sum of the side lengths	

	ES1	S1	S2	S3	S4
Area	covers a surface completely with smaller shapes	measures area by placing identical informal units in rows or columns without gaps or overlaps	identifies areas that are less than, greater than or about the same as 100 square centimetres or 1 square metre	explains the need for a unit larger than a square metre	converts between metric units of length
	makes a closed shape and describes the area of the shape	estimates the number of informal units needed to measure area	estimates, measures and records the size of a small area in square centimetres	gives examples of where square kilometres are used for measuring area e.g. suburbs, towns	finds the perimeter of squares, rectangles and simple composite figures
	uses everyday language to describe area e.g. surface, inside, outside	counts and records the number of units used and describes the part left over	measures and compares small areas using a square-centimetre grid overlay	explains what can be appropriately measured in hectares and why square metres would not be used	makes reasonable estimates of lengths, perimeters and areas in the school environment
	describes an area as being bigger than, smaller than or the same as another area	compares and orders two or more areas using informal units	constructs a square metre	recognises the relationship between square metres and hectares	compares the areas of different rooms
	compares area by placing one area on top of another	compares the areas of two surfaces which cannot be moved or superimposed	estimates the number of square metres in a given area	selects the appropriate unit when measuring area	labels the hypotenuse in right-angled triangles presented in any orientation
	records area comparisons informally by drawing, tracing, or cutting and pasting	chooses appropriate informal units to measure area e.g. those that tessellate	measures and records an area using a square metre	explains the relationship between the length, breadth and area of squares and rectangles	calculates the circumference and area of circles given the radius or diameter
		describes the same area in terms of different-sized units used e.g. 'It took 10 tiles but only 4 books to cover the surface.'	identifies areas that are less than, more than or about the same as a square metre	explains the relationship between the base, perpendicular height and area of triangles	uses Pythagoras' theorem to find lengths of sides in right-angles triangles
			records area using the abbreviations for square metres (m^2) and square centimetres (cm^2)		

	ES1	S1	S2	S3	S4
Volume & Capacity	fills and empties a variety of containers using different materials e.g. water, sand, marbles, blocks	counts and compares the number of cups of sand or water needed to fill two different containers	selects from a range of containers those that have a capacity of more than, less than and about one litre	estimates then measures the volume of a rectangular prism built from cubic centimetre blocks by counting the blocks	calculates the surface area of rectangular and triangular prisms
	recognises when a container is full, empty and about half full	recognises that two containers of different shape may hold the same amount of material e.g. 'This short fat cup holds about the same amount of drink as this tall thin glass.'	uses the abbreviation for litre (L) and millilitre (mL)	estimates then measures the capacity of a rectangular container using centimetre blocks	calculates the volume of right prisms and cylinders
	explains that one container 'has more' or 'has less' capacity than another container	estimates and measures the capacity of a container using informal units	estimates and measures the capacity of containers to the nearest litre	identifies instances where capacity is measured in cubic metres	measures the dimensions of an object and calculates its volume
	explains that one container 'will hold more', 'will hold less' or 'will hold about the same' as another container	orders three containers according to their capacity	gives examples of situations where a unit smaller than the litre is needed for measurement	explains the relationship between the length, breadth, height and volume of rectangular prisms	measures and calculates the surface area of a package that is a rectangular prism
	compares capacities by packing materials from one container into another	calibrates a clear bottle using a cup as the informal unit	estimates, measures and compares volume and capacity using millilitres	recognises the relationship between one millilitre and one cubic centimetre	draws two containers with the same volume but different dimensions
	compares capacities by pouring materials from one container into another	selects an appropriate informal unit to measure and compare the capacities of two containers	describes the litre as being the same as 1000 millilitres	selects a cube with a volume of one cubic centimetre from a collection of other cubes	calculates the capacity of containers that are in the shape of prisms and cylinders
	compares the volumes of two piles of materials by filling two identical containers	compares the capacities of two containers by filling each and counting the number of informal units used	compares packaging quantities measured in millilitres	calculates the volume of an irregular solid by submerging it in water and measuring the water displaced	
	describes the amount of space occupied by objects e.g. 'The garbage truck takes up more space than a car.'	builds models using blocks and compares their volume by counting the number of identical blocks used	compares the volumes of three objects by marking the change in water level when each is submerged in a container		
		orders three models according to their volume	measures volume using cubic centimetres		
		compares the volumes of two objects by marking the change in water level when each is submerged			

	ES1	S1	S2	S3	S4
Mass	describes objects in terms of their mass using everyday language e.g. heavy, light, hard to lift	uses an equal arm balance to find two objects which have the same mass	identifies objects that have a mass more than, less than or about the same as one kilogram	chooses appropriate units to solve problems involving mass	
	discusses the action of an equal arm balance when a heavy object is placed in one pan and a lighter object in the other	orders the mass of two or more objects by hefting	estimates, measures and records the mass of objects to the nearest kilogram or gram using an equal arm balance	names objects and materials whose mass is measured in tonnes e.g. sand, soil, vehicles	
	describes the mass of an object as being 'heavier' or 'lighter' than another object	estimates, measures and records the mass of an object using informal units and an equal arm balance	uses the abbreviation for kilograms (kg) and grams (g)	uses the abbreviation for tonne (t)	
	describes which object is harder to push or pull e.g. 'The big block was harder to push than the crayon.'	compares and orders the mass of three objects using informal units	explains the need for a unit smaller than a kilogram to measure mass	converts between kilograms and tonnes	
	determines which of two objects is heavier or lighter by hefting	records the mass of an object by referring to the number and type of informal units used e.g. 'Fifteen teddy bears balanced the book.'	measures mass using a given measuring device e.g. a kitchen scale	selects the appropriate device to measure mass	
	sorts objects into light and heavy groups	uses an equal arm balance to find two collections of objects that have the same mass e.g. a collection of three blocks is the same as a collection of ten counters	converts between kilograms and grams	selects and uses the appropriate unit to measure mass	
	determines which of two objects is heavier or lighter by using an equal arm balance	selects an identical informal unit to compare masses	estimates and checks the number of similar objects which have a total mass of one kilogram	uses decimal notation to three decimal places when recording mass	
		selects an appropriate informal unit to measure the mass of an object and justifies the choice	orders commercial products by interpreting labelling e.g. a 1.25 kg box of cereal has a greater mass than a 625 g tin of fruit	relates the mass of one litre of water to one kilogram	
			records mass using decimal notation to two decimal places e.g. 1.25 kg		

	ES1	S1	S2	S3	S4
Time	describes 'daytime' and 'night-time'	measures the duration of events using informal units	reads time using the terms 'quarter-past' and 'quarter-to'	uses am and pm notation	calculates differences in time using a calculator
	uses the terms 'yesterday', 'today', 'tomorrow' and 'before' and 'after'	orders two or more events measured using a repeated informal unit	identifies which hour has just passed when the hour hand is not pointing to a numeral	uses 24-hour time notation to tell the time	mentally adds measurements of time
	sorts picture cards into events that happen in the morning, afternoon or night-time	names and orders the months of the year	reads analog and digital clocks to the minute	converts between 24-hour notation and am/pm notation	uses timetables to solve problems
	names and orders the days of the week and identifies week-days and weekend days	recalls the number of days that there are in each month	relates analog notation to digital notation e.g. ten to nine is the same as 8:50	determines the duration of an event using starting and finishing times	solves simple problems involving time zones
	relates an event to a particular day e.g. 'We have music on Monday.'	matches the months of the year to the seasons	converts between units of time	uses a stop watch to measure the duration of events	plans a journey which satisfies a set of time constraints
	names the seasons	uses a calendar to identify a particular day or date	reads and interprets simple timetables, timelines and calendars	compares local time to the time in another time zone in Australia	
	compares and discusses the duration of two events e.g. 'It takes me longer to eat my lunch than it does to clean my teeth.'	uses the terms 'hour', 'minute' and 'second' to describe time	interprets a given timeline using the scale	reads timetables from real-life situations involving 24-hour time	
	reads hour time on analog and digital clocks	reads half-hour time on analog and digital clocks		determines a suitable scale and uses the scale to draw a timeline	
	uses the term 'o'clock'	associates everyday events with particular hour or half-hour times			
		indicates when it is thought that an activity has gone for one minute			

	ES1	S1	S2	S3	S4
3D Space	describes three-dimensional objects using everyday language e.g. 'The block of wood is box-shaped.'	describes cones, cubes, cylinders, spheres and prisms	describes the features of prisms, pyramids, cylinders, cones and spheres	describes similarities and differences between different pyramids	describes prisms, cylinders, pyramids, cones and spheres in terms of their geometric properties
	describes the features of three-dimensional objects using everyday language e.g. flat, round, curved	identifies and names cones, cubes, cylinders, spheres and prisms from a collection of everyday objects	identifies and names groups of three-dimensional objects as prisms, pyramids, cylinders, cones and spheres	names prisms and pyramids according to the shape of their base	describes the cross-section of three-dimensional solids
	sorts three-dimensional objects and explains the attribute used e.g. colour, size, shape, function	recognises three-dimensional objects in the environment	identifies prisms, pyramids, cylinders, cones and spheres from descriptions	describes and lists some of the properties of three-dimensional objects	distinguishes between right pyramids and oblique pyramids
	predicts and describes the movement of an object e.g. 'This will roll because it is round.'	matches a photograph or drawing of an object with the actual object	makes models of three-dimensional objects given a picture or photograph to view	constructs a model of a three-dimensional object given an isometric drawing	sketches a model made from cubes on isometric grid paper
	makes models from a variety of materials and describes them using everyday language	uses the terms 'faces', 'edges' and 'corners' to describe three-dimensional objects	makes skeletal models of three-dimensional objects	visualises and sketches a three-dimensional object from different views	counts systematically the vertices, faces and edges of a polyhedron
		sorts three-dimensional objects according to a particular attribute e.g. shape of faces	sketches a three-dimensional model, attempting to show depth	visualises and sketches a variety of nets for a given three-dimensional object	
		recognises that three-dimensional objects look different from different views	sketches three-dimensional objects from different views including top, front and side views	draws three-dimensional objects showing simple perspective	
			recognises that prisms have a uniform cross-section		

	ES1	S1	S2	S3	S4
2D Space	identifies and draws straight and curved lines	identifies, describes and records the number of sides and corners of various two-dimensional shapes	identifies pentagons, octagons and parallelograms presented in different orientations	compares and describes the properties of isosceles, equilateral and scalene triangles	names special types of triangles and quadrilaterals
	describes closed shapes and open lines	describes features of hexagons, rhombuses and trapeziums	describes the features of special groups of quadrilaterals	draws regular and irregular two-dimensional shapes given a description of their side and angle properties	draws and labels a diagram from a set of simple specifications for a given triangle or quadrilateral
	manipulates a two-dimensional shape and describes its features using everyday language	identifies and sorts two-dimensional shapes by a given attribute e.g. number of sides	uses measurement to describe the features of a two-dimensional shape e.g. the opposite sides of a parallelogram are the same length	uses a ruler, set square, protractor or template to draw regular and irregular two-dimensional shapes	recognises particular triangles and quadrilaterals embedded in composite figures
	sorts shapes into groups according to size or shape and describes each group	names hexagons, rhombuses and trapeziums presented in different orientations	groups two-dimensional shapes using multiple attributes e.g. shapes with parallel sides and right angles	identifies and names the centre, radius, diameter and circumference of a circle	lists the properties of specific triangles and quadrilaterals
	identifies and names a circle, square, triangle and rectangle presented in different orientations	uses drawing and painting to represent two-dimensional shapes	compares the rigidity of three-sided frames with the rigidity of four-sided frames	identifies and names shapes that have rotational symmetry	applies the angle sum of a triangle result, to find the third angle in a triangle
	identifies shapes in the environment	makes as many different shapes as possible by combining two shapes that are the same e.g. using two triangles to make	identifies all lines of symmetry for a given shape	enlarges or reduces a graphic or photograph using a computer program	finds the fourth angle in a quadrilateral given three of the angles
	makes shapes using a variety of materials	draws a single line of symmetry on appropriate shapes	identifies and names perpendicular lines	identifies the arms and vertex of an angle where both arms are invisible, such as in rotations and rebounds	solves simple numerical problems related to triangles and quadrilaterals
	creates different shapes using a computer drawing program	makes symmetrical designs with pattern blocks, drawings and paintings	identifies an angle with two arms in practical situations	measures and constructs angles in degrees using a protractor	names angles in a diagram
	turns two-dimensional shapes to fit into a given space	identifies shapes that do and do not tessellate	identifies angles in two-dimensional shapes and three-dimensional objects	classifies angles as right, acute, obtuse, reflex, straight or a revolution	finds the complement and supplement of an angle
		identifies and names parallel, vertical and horizontal lines in pictures and the environment	identifies the arm and vertex of the angle in an opening, a slope and a turn where one arm is visible	measures angles in a quadrilateral to determine whether it is a rectangle or a parallelogram	finds the size of all angles formed when two lines intersect, given the size of one of the angles
		compares angles by placing one angle on top of another	compares angles using an angle tester	identifies angle types as intersecting lines	finds the size of all angles formed when two parallel lines are intersected by a transversal, given the size of one of the angles
					explains the difference between figures that are congruent and those that are similar
					matches the angles of similar or congruent figures when naming the figures
					draws congruent figures using geometrical instruments
					enlarges or reduces a diagram given a scale factor

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	ES1	S1	S2	S3	S4
Position	follows a simple direction to position an object e.g. 'Put the blue teddy in the circle.'	makes a simple model of the playground or classroom and describes the position of objects	describes the location of an object using more than one descriptor e.g. 'The book is on the third shelf and second from the left.'	finds a place on a map given its coordinates	
	participates in movement games involving turning and direction	follows oral instructions to position objects in models and drawings	uses a key or legend to locate a specific object	uses a given map to plan or show a route	
	moves to a different position and describes their action to others e.g. 'I skipped to the library and walked back.'	describes the position of an object in a model, photograph or drawing	describes a route on a simple map	draws and labels a grid on a map	
	describes their position in relation to an object e.g. 'I am under the tree.'	uses 'left' or 'right' to describe the position of objects in relation to themselves	uses simple coordinates on a grid to describe position e.g. 'The lion's cage is at B3.'	identifies different scaled representations of the same plan or model	
	describes the position of an object in relation to themselves e.g. 'The table is behind me.'	describes the path from one location to another on a drawing	plots points at given coordinates to create a picture	uses the scale to calculate the distance between two points on a map	
	describes the position of an object in relation to another object e.g. 'The book is inside the box.'	creates a path using drawing tools on a computer	uses a compass to find North	locates a place on a map which is a given direction from a town or landmark e.g. locates a town that is north-east of Broken Hill	
			uses an arrow to represent North on a map	draws a map from an aerial view	
			determines the directions N, S, E and W given one of the directions		
			uses N, S, E and W to describe the location of an object on a simple map e.g. 'The treasure is east of the cave.'		
			determines the directions NE, NW, SE and SW given one of the directions		
			uses NE, NW, SE and SW to describe the location of an object on a simple map e.g. 'The treasure is north-east of the cave.'		

Early Stage 1 Maths Key Ideas

	Content	Term 1	Term 2	Term 3	Term 4
NES1.1	Count Forwards to 30, from a given number				
	Counts backwards from a given number range 0 to 20		Vital, Daily Counting Drills		
	Compare, order, read and represent numbers to at least 20				
	Read and use ordinal names to at least tenth				
	Use the language of money				
NES1.2	Combine groups to model addition				
	Take part of a group away to model subtraction				
	Compare groups to determine 'how many more'				
	Record addition and subtraction informally				
NES1.3	Model equal groups or rows				
	Group and share collections of groups equally				
	Record grouping and sharing informally				
NES1.4	Divide an object into 2 equal parts				
	Recognise and describe halves				
PAES1.1	Recognize, describe, create and continue repeating patterns				
	Continue simple number patterns that increase or decrease		Vital, Daily Counting Drills		
	Use the term 'is the same as' to describe equality of groups				
DES1.1	Collect Data about students and their environment				
	Organise actual objects or pictures of objects into data displays				
	Interpret data displays made from objects and pictures				
MES1.1	Identify and describe the attribute of length				
	Compare lengths directly by placing objects side by side and aligning ends				
	Record comparisons informally				
MES1.2	Identify and describe the attribute of area				
	Estimate the larger of 2 areas and compare using direct comparison				
	Record comparisons informally				
MES1.3	Identify and describe the attributes of volume and capacity				
	Compare the capacities of 2 containers using direct comparison				
	Compare the volumes of 2 objects using direct comparison				
	Record comparisons informally				
MES1.4	Identify and describe the attribute of mass				
	Compare the masses of 2 objects by pushing, pulling, or hefting or using an equal arm balance				
	Record comparisons informally				
MES1.5	Describe the duration of events using everyday language				
	Sequence events in time				
	Name days of the week and seasons				
	Tell time on the hour on digital and analog clocks				
SGES1.1	Manipulate and sort 3D objects in the environment				
	Describe features of 3D objects using everyday language				
	Use informal names for 3D objects				
SGES1.2	Manipulate, sort and describe 2D shapes				
	Identify and name circles, squares, triangles and rectangles in pictures and the environment, and presented in different orientations				
	Represent 2D shapes using a variety of materials				
	Identify and draw straight and curved lines				
SGES1.3	Give and follow simple directions				
	Use everyday language to describe position				

Stage 1 Maths Key Ideas

	Content	Term 1	Term 2	Term 3	Term 4
NS1.1	Count Forwards and backwards by ones, twos and fives				
	Count forwards and backwards by tens, on and off the decade	Vital, Daily Counting Drills			
	Read, order and represent two and three digit numbers				
	Read and use the ordinal names to at least 'thirty-first'				
	Sort, order and count money using face value				
NS1.2	Model addition and subtraction using concrete materials				
	Develop a range of mental strategies and informal recording methods for addition and subtraction				
	Record number sentences using drawings, numerals, symbols and words				
NS1.3	Rhythmic and skip count by ones, twos, fives and tens				
	Model and use strategies for multiplication including arrays, equal groups and repeated addition				
	Model and use strategies for division including sharing, arrays and repeated subtraction				
	Record using drawings, numerals, symbols and words				
NS1.4	Model and describe a half or a quarter of a whole object				
	Model and describe a half or a quarter of a collection of objects				
	Use fraction notation ½ and ¼				
	Money concepts are developed in Whole Numbers				
NS1.5	Recognise the elements of chance in familiar daily activities				
	Use familiar language to describe the element of chance				
PAS1.1	Create, represent and continue a variety of number patterns and supply missing elements	Vital, Daily Counting Drills			
	Use the equals sign to record equivalent number relationships				
	Build number relationships by relating addition and subtraction facts to at least 20				
	Make generalizations about number relationships	Vital, Daily Counting Drills			
DS1.1	Gather and record data using tally marks				
	Display the data using concrete materials and pictorial representations				
	Use objects or pictures as symbols to represent other objects, using one-to-one correspondence				
	Interpret information presented in picture graphs and column graphs				
MS1.1	Use informal units to estimate and measure length and distance by placing informal units end-to-end without gaps or overlaps				
	Recognise the need for metres and centimeters, and use them to estimate and measure length and distance				
	Record measurements by referring to the number and type of informal or formal units used				
MS1.2	Use appropriate informal units to estimate and measure area				
	Compare and order two or more areas				
	Record measurements by referring to the number and type of informal units used				
MS1.3	Use appropriate informal units to estimate and measure volume and capacity				
	Compare and order the capacities of two or more containers and the volumes of two or more models or objects				
	Record measurements by referring to the number and type of informal units used				
MS1.4	Estimate and measure the mass of an object using an equal arm balance and appropriate informal units				
	Compare and order two or more objects according to mass				
	Record measurements by referring to the number and type of informal units used				
MS1.5	Use informal units to measure and compare the duration of events				
	Name and order the months and seasons of the year				
	Identify the day and date on a calendar				
	Tell time on the hour and half-hour on digital and analog clocks				
SGS1.1	Name, describe, sort and model cones, cubes, cylinders, spheres and prisms				
	Recognise 3D objects in pictures and the environment, and presented in different orientations				
	Recognise that 3D objects look different from different views				
SGS1.2	Identify, name, compare and represent hexagons, rhombuses and trapeziums presented in different orientations				
	Make tessellating designs using flips, slides and turns				
	Identify a line of symmetry				
	Identify and name parallel, vertical and horizontal lines				
	Identify corners as angles				
	Compare angles by placing one angle on top of another				
SGS1.3	Represent the position of objects using models and drawings				
	Describe the position of objects using everyday language, including 'left' and 'right'				

Stage 2 Maths Key Ideas

	Content	Term 1	Term 2	Term 3	Term 4
NS2.1	Count Forwards and backwards by tens or hundreds, on and off the decade	Vital, Daily Counting Drills			
	Use place value to read, represent and order numbers up to four digits				
	Money concepts are developed further in Fractions and Decimals				
NS2.2	Use a range of mental strategies for addition and subtraction involving two, three and four digit numbers				
	Explain and record methods for adding and subtracting				
	Use a formal written algorithm for addition and subtraction				
NS2.3	Develop mental facility for number facts up to 10 x 10				
	Find multiples and squares of numbers				
	Interpret remainders in division problems				
	Determine factors for a given number				
	Use mental and informal written strategies for multiplying or dividing a two digit number by a one digit operator				
NS2.4	Model, compare and represent fractions with denominators 2, 4, and 8, followed by fractions with denominators 5, 10 and 100				
	Find equivalence between halves, quarters and eighths; fifths and tenths; tenths and hundredths				
	Model, compare and represent decimals to 2 decimal places				
	Add and subtract decimals with the same number of decimal places (to 2 decimal places)				
	Recognise percentages in everyday situations.				
	Relate a common percentage to a fraction or decimal				
	Perform calculations with money				
NS2.5	Explore all possible outcomes in a simple chance situation				
	Conduct simple chance experiments				
	Collect data and compare likelihood of events in different contexts				
PAS2.1	Generate, describe and record number patterns using a variety of strategies	Vital, Daily Counting Drills			
	Build number relationships by relating multiplication and division facts to at least 10 x 10				
	Complete simple number sentences by calculating the value of a missing number				
DS2.1	Conduct surveys, classify and organize data using tables				
	Construct vertical and horizontal column graphs and picture graphs				
	Interpret data presented in tables, column graphs and picture graphs				
MS2.1	Estimate, measure, compare and record lengths and distances using metres, centimeters and/or millimetres				
	Convert between metres and centimetres, and centimetres and millimetres				
	Estimate and measure the perimeter of 2D shapes				
	Record lengths and distances using decimal notation of two places				
MS2.2	Recognise the need for square centimetres and square metres to measure area				
	Estimate, measure, compare and record areas in square cm and square metres				
MS2.3	Recognise the need for a formal unit to measure volume and capacity				
	Estimate, measure, compare and record volumes and capacities using litres and millilitres				
	Measure the volume of models in cubic centimetres				
	Convert between litres and millilitres				
MS2.4	Recognise the need for a formal unit to measure mass				
	Estimate, measure, compare and record masses using kilograms and grams				
MS2.5	Recognise the coordinated movements of the hands on a clock				
	Read and record time using digital and analog notation				
	Convert between units of time				
	Read and interpret simple timetables, timelines and calendars				
SGS2.1	Name, describe, sort, make and sketch prisms, pyramids, cylinders, cones and spheres				
	Create nets from everyday packages				
	Describe cross-sections of 3D objects				
SGS2.2a	Identify and name pentagons, octagons and parallelograms presented in different orientations				
	Compare and describe special groups of quadrilaterals				
	Make tessellating designs by reflecting, translating and rotating				
	Find all lines of symmetry for a 2D shape				
SG2.2b	Recognise openings, slopes and turns as angles				
	Describe angles using everyday language and the term 'right'				
	Compare angles using informal means				
SGS1.3	Use simple maps and grids to represent position and follow routes				
	Determine the directions N, S, E and W; NE, NW, SE and SW, given one of the directions				
	Describe the location of an object on a simple map using coordinates or directions				

Stage 3 Maths Key Ideas

	Content	Term 1	Term 2	Term 3	Term 4
NS3.1	Identify differences between Roman and Hindu-Arabic counting systems				
	Read, write and order numbers of any size using place value	Vital, Daily Counting Drills			
	Record numbers in expanded notation				
	Recognise the location of negative numbers in relation to zero				
	Money concepts are developed further in Fractions and Decimals				
NS3.2	Select and apply appropriate mental, written or calculator strategies for addition and subtraction with counting numbers of any size				
NS3.3	Select and apply appropriate mental, written or calculator strategies for multiplication and division				
	Explore prime and composite numbers				
	Use formal written algorithms for multiplication (limit operators to two-digit numbers) and division (limit operators to single digits)				
NS3.4	Model, compare and represent commonly used fractions (those with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100)				
	Find equivalence between thirds, sixths and twelfths				
	Express a mixed numeral as an improper fraction and vice versa				
	Add and subtract simple fractions where one denominator is a multiple of the other				
	Multiply simple fractions by whole numbers.				
	Calculate unit fractions of a number.				
	Multiply and divide decimals by whole numbers in everyday contexts.				
	Add and subtract decimals to three decimal places				
	Calculate simple percentages of quantities				
	Apply the four operations to money in real-life situations				
NS3.5	Assign numerical values to the likelihood of simple events occurring				
	Order the likelihood of simple events on a number line from 0 to 1				
PAS3.1a	Build simple geometric patterns involving multiples				
	Complete a table of values for geometric and number patterns				
	Describe a pattern in words in more than one way				
PASS3.1b	Construct, verify and complete number sentences involving the four operations with a variety of numbers				
DS3.1	Draw picture, column, line and divided bar graphs using scales of many-to-one correspondence				
	Read and interpret sector (pie) graphs				
	Read and interpret graphs with scales of many-to-one correspondence				
	Determine the mean (average) for a small set of data				
MS3.1	Select and use the appropriate unit and device to measure lengths, distances and perimeters				
	Convert between metres and kilometres; millimetres, centimeters and metres				
	Calculate and compare perimeters of squares, rectangles and equilateral and isosceles triangles				
	Record lengths and distances using decimal notation of three places				
MS3.2	Select and use the appropriate unit to calculate area				
	Recognise the need for square kilometres and hectares				
	Develop formulae in words for finding area of squares, rectangles and triangles				
MS3.3	Select the appropriate unit to measure volume and capacity				
	Recognise the need for cubic metres				
	Estimate and measure the volume of rectangular prisms				
	Determine the relationship between cubic centimetres and millilitres				
	Record volume and capacity using decimal notation to three decimal places				
MS3.4	Select and use the appropriate unit and device to measure mass				
	Recognise the need for tonnes				
	Convert between kilograms and grams and between kilograms and tonnes				
	Record mass using decimal notation to 3 decimal places				
MS3.5	Convert between am/pm notation and 24 hour time				
	Compare various time zones in Australia, including during daylight saving				
	Draw and interpret a timeline using a scale				
	Use timetables involving 24 hour time				
SGS3.1	Identify 3D objects, including particular prisms and pyramids, on the basis of their properties				
	Construct 3D models given drawings of different views				
SGS3.2a	Identify right-angled, isosceles, equilateral and scalene triangles				
	Identify and draw regular and irregular 2D shapes				
	Identify and name parts of circle				
	Enlarge and reduce shapes, pictures and maps				
	Identify shapes that have rotational symmetry				
SG3.2b	Classify angles as right, acute, obtuse, reflex, straight or a revolution				
	Measure in degrees and construct angles using a protractor				
SGS3.3	Interpret scales on maps and plans				
	Make simple calculations using scale				

Stage 4 Maths Key Ideas

	Content	Term 1	Term 2	Term 3	Term 4
NS4.1	Explore other counting systems				
	Investigate groups of positive whole numbers				
	Apply mental strategies to aid computation				
	Find squares/related square roots; cubes/related cube roots				
	Use index notation for positive integral indices				
	Determine and apply tests of divisibility				
	Express a number as a product of its prime factors				
	Divide two- and three-digit numbers by a two-digit number				
NS4.2	Perform operations with directed numbers				
	Simplify expressions involving grouping symbols and apply order of operations				
NS4.3	Perform operations with fractions, decimals and mixed numerals				
	Use ratios and rates to solve problems				
NS4.4	Determine the probability of simple events				
	Solve simple probability problems				
	Recognise complementary events				
PAS4.1	Use letters to represent numbers				
	Translate between words and algebraic symbols and between algebraic symbols and words				
	Recognise and use simple equivalent algebraic expressions				
PAS4.2	Create, record and describe number patterns using words				
	Use algebraic symbols to translate descriptions of number patterns				
	Represent number pattern relationships as a point on a grid				
PAS4.3	Use the algebraic symbol system to simplify, expand and factorise simple algebraic expressions				
	Substitute into algebraic expressions				
PAS4.4	Solve linear equations and word problems using algebra				
PAS4.5	Interpret the number plane and locate ordered pairs				
	Graph and interpret linear relationships created from simple number patterns and equations				
DS4.1	Draw, read and interpret the graphs (line, sector, travel, step, conversion, divided bar, dot plots, and stem and leaf plots) tables and charts				
	Distinguish between types of variables used in graphs				
	Identify misrepresentations of data in graphs				
	Construct frequency tables				
	Draw frequency histograms and polygons				
DS4.2	Use sampling and census				
	Make predictions from samples and diagrams				
	Analyse data using mean, mode, median and range				
MS4.1	Describe the limits of accuracy of measuring instruments				
	Convert between metric units of length				
	Develop formulae and use to find the area and perimeter of triangles, rectangles, and parallelograms				
	Find the area pf simple composite figures				
	Investigate and find the area and circumference of circles				
	Convert between metric units of area				
	Apply Pythagoras' theorem				
MS4.2	Find the surface area of rectangular and triangular prisms				
	Find the volume of right prisms and cylinders				
	Convert between metric units of volume				
MS4.3	Perform operations involving time units				
	Use international time zones compare times				
	Interpret a variety of tables and charts related to time				
SGS4.1	Determine properties of three-dimensional objects				
	Investigate Platonic solids				
	Investigate Euler's relationship for convex polyhedra				
	Make isometric drawings				
SGS4.2	Classify angles and determine angle relationships				
	Construct parallel and perpendicular lines and determine associated angle properties				
SGS4.3	Classify, construct and determine properties if triangles and quadrilaterals				
	Investigate similar figures and interpret and construct scale drawings				
	Complete simple numerical exercises based on geometrical properties				
SG4.4	Identify congruent figures				
	Investigate similar figures and interpret and construct scale drawings				

Daily Plan	Day:

Outcomes:	
Key Ideas:	

Vocabulary:	Resources:

Warm Up 5-10 min	Auto Recall Prior Knowledge	
	Counting Drills Whole Number Patterns & Algebra	

Concept Development	Main Focus + Vocabulary 15 min Modelled Teaching	

Guided Teaching 10 min	Group 1	
	Group 2	
	Group 3	
	Group 4	
	Group 5	

Independent Deconstruct a worded problem, complete a worksheet or supporting text page 5 - 10 min	

Reflection and Review 5 - 10 min Share Questions Writing in Mathematics	

Weekly Plan

Day:	Monday	Tuesday	Wednesday	Thursday	Friday
Outcomes:					
Key Ideas:					
Warm Up — Auto Recall Prior Knowledge					
Warm Up — Counting Drills Whole Number Patterns & Algebra					
Concept Development — Main Focus + Vocabulary / Modelled Teaching					
Guided Teaching — Group 1					
Guided Teaching — Group 2					
Guided Teaching — Group 3					
Guided Teaching — Group 4					
Guided Teaching — Group 5					
Independent Deconstruct a worded problem, complete a worksheet or supporting text page Etc					
Reflection and Review / Share Questions / Writing in Mathematics					
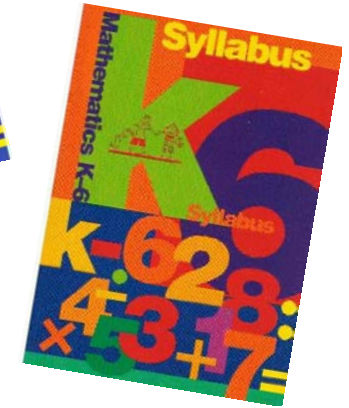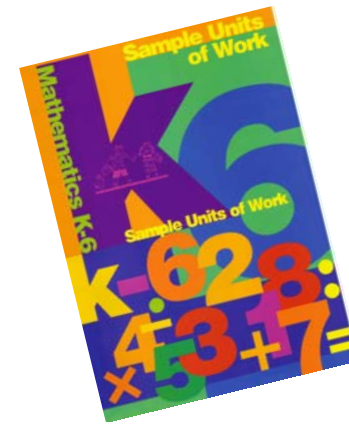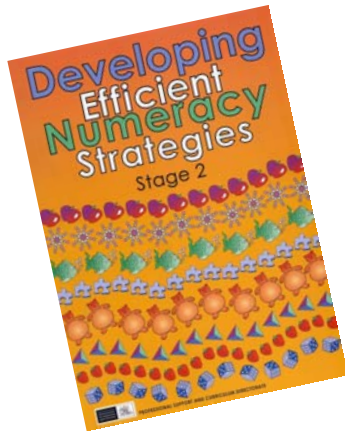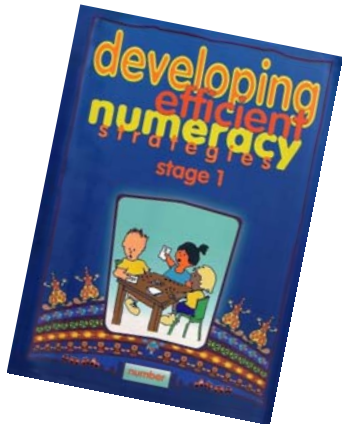
Term 1
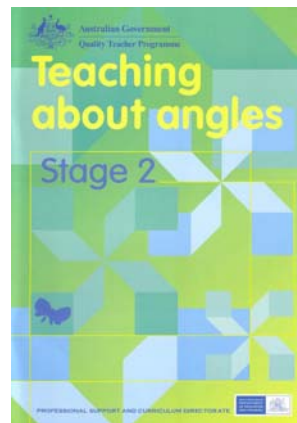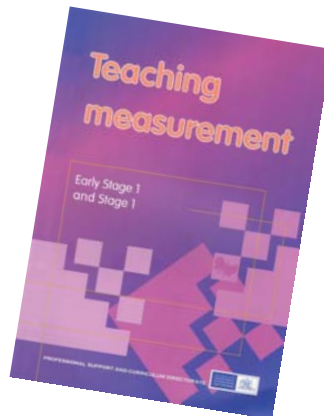
<u>Daily Counting</u> – Lesson Warm-up (5 to 10 minutes)

Whole Number and Patterns and Algebra concepts form the basis of many sub-strands of Number and require continuous, daily development and consolidation.

Daily Counting Drills	Strand	ES1	S1	S2	S3
Daily Lesson Intro 5-10 min	**Whole Number** includes counting strategies, number relationships and the concept of place value. Counting is an important component of number and the early learning of operations. There is a distinction between counting by rote and counting with understanding. Regularly counting forwards and backwards from a given number will familiarise students with the sequence.	*NES1.1* ● Count forward to 30, from a given number ● Count backwards from a given number, in the range 0-20	*NS1.1* ● Count forwards and backwards by ones, twos and five ● Count forwards and backwards by tens, on and off the decade	*NS2.1* ● Count forwards and backwards by tens or hundreds, on and off the decade	*Stage 3 need consolidation of the counting sequence by extending S2 to counting by thousands ensuring that they have an idea of the magnitude of <u>numbers of any size</u>.* ● Read ,write and order numbers of any size using place value
		● Counting forwards to 30 from a given number ● Counting backwards from a given number in the range 0 to 20 ● Identifying the number before and the number after a given number ● Counting with one to one correspondence ● Recognising a dot pattern instantly for numbers up to seven (Subitising)	● Counting forwards or backwards by ones, from a given two-digit number ● Identifying the number before and the number after a given two-digit number ● Counting and representing large sets of objects by systematically grouping in tens ● Using a number line or hundreds chart to assist with counting and ordering ● Counting forward and backwards by twos, fives and tens ● Counting forwards and backwards by tens, on and off the decade ● Counting forwards and backwards by ones, from a given three-digit number Identifying the number before and the number after a given three-digit number	● Identifying the number before and the number after a given two, three or four-digit number ● Counting forwards and backwards by tens or hundreds on and off the decade NAPLAN Strategies Doc 2008 Click here ☺	● Identifying the number before and the number after a given two, three, four (and five) -digit number ● Counting forwards and backwards by tens, hundreds (and thous ands) on and off the decade
	Patterns and Algebra includes the exploration of number and pre-algebra concepts by pattern making (replicate, complete, continue), and discussing, generalising, and recording observations in a variety of ways.	*PAES1.1* ● Recognise, describe, create and continue repeating patterns ● Continue simple number patterns that increase or decrease ● Use the term 'is the same as' to describe equality	*PAS1.1* ● Create, represent and continue a variety of number patterns and supply missing elements ● Make generalisations about number relationships	*PAS2.1* ● Generate, describe, record number patterns using a variety of strategies ● Complete simple number sentences by calculating the value of a missing number	*PAS3.1a* ● Describe a pattern in words in more than one way
		● Recognising, copying, and continuing repeating patterns using sounds, actions, shapes, objects or pictures ● Describing a repeating pattern in terms of a 'number' pattern	● Recognising and describing patterns when counting forwards or backwards by ones, twos, fives, or tens ● Representing number patterns on a number line or hundred chart ● Determining missing elements in a number pattern	● Identifying and describing number patterns when counting forwards and backwards by threes, fours, sixes, sevens, eights & nines ● Describing a simple number pattern in words	● Determine a rule to describe number patterns

Developed by Sue O'Regan (Numeracy Consultant) Original Formatting by Gayle Pinn (Yerong Ck PS) Trialled & Edited by the Staff of Wollongbar PS

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Term 1	Strand	ES1	ST1	ST2	ST3	ST4
Week 1	**Assessment**	**Best Start / SENA 1**	**SENA 1**	**SENA 2**		
		http://www.juliethompson.com/SMART.html	**http://www.juliethompson.com/SMART.html**	**http://www.juliethompson.com/SMART.html**	**http://www.juliethompson.com/SMART.html**	**http://www.members.optusnet.com.au/~borishandal/MathsInternetGuide/**
Week 2	**Whole Numbers** Students develop a sense of the relative size of whole numbers and the role of place value in their representation Many Key Ideas of Whole Number are addressed during daily counting activities and lesson warm-ups.	*NES1.1* ● Count forward to 30, from a given number ● Count backwards from a given number, in the range 0-20 ● Compare, order, read and represent numbers to at least 20 ● Read a use the ordinal numbers to at least 'tenth' ● Use the language of money Syllabus Page : 41	*NS1.1* ● Count forwards and backwards by ones, twos and five ● Count forwards and backwards by tens, on and off the decade ● Read, order and represent two and three-digit numbers ● Read and use the ordinal numbers to and least 'thirty-first' ● Sort, order and count money using face value Syllabus Page : 42-43	*NS2.1* ● Count forwards and backwards by tens or hundreds, on and off the decade ● Use place value to read, represent and order numbers up to four digits Money concepts are developed further in fractions and decimals Syllabus Page : 44	*NS3.1* ● Identify differences between Roman and Hindu-Arabic counting systems ● Read ,write and order numbers of any size using place value ● Record numbers in expanded notation ● Recognise the location of negative numbers in relation to zero Money concepts are developed further in fractions and decimals Syllabus Page : 45	*NS4.1* ● Explore other counting systems ● Investigate groups of positive whole numbers ● Apply mental strategies to aid computation
			NAPLAN Strategies Doc 2008 Click here ☺		NAPLAN Strategies Doc 2008 Click here ☺	
			Sample BST/NAPLAN Questions **Click here** ⊗	Sample BST/NAPLAN Questions **Click here** ⊗		
		DENS 1 23, 24, 28, 30, 31, 33, 34, 35, 36, 37, 41, 43, 45, 49, 85, 87, 89, 97, 93, 101, 105, 113, 119, 125, 221,	DENS 1 81, 85, 87, 95, 157, 161, 221, 223, 225, 227, 229, 239,	DENS 2 66, 70, 76, 88, 90, 180, 184, 222, 284, 292,	DENS 2 180, 182, 184, 192, 194,	

			CMIT Activities *Abracadabra* *Before and after* *Clear the board* dot dice	CMIT Activities *Abracadabra* *Before and after* *Clear the board* # Dice *Blocks on a bowl* *Teddy race*	CMIT Activities *Three in a line* *Choosy*	Counting On Activities *Ordering whole numbers to 100* *Jumps of ten on the number line* *Double number line* *Tracks on a hundreds chart* *Hundreds chart jigsaw* *First to 100* *Add to 100* *Make 100* *The nasty game* *Climb the ladder*	Counting On Activities *Ordering whole numbers to 100* *Jumps of ten on the number line* *Double number line* *Tracks on a hundreds chart* *Hundreds chart jigsaw* *First to 100* *Add to 100* *Make 100* *The nasty game* *Climb the ladder*
			Syllabus Sample Units of Work 13, 14, 15	Syllabus Sample Units of Work 48, 51, 50	Syllabus Sample Units of Work 85, 86		
			Learning Object CMIT Website *Butterfly Ten Frames* *Hanging Cards on Line* *Numeral Track* Learning Federation - TALE *Number Trains* http://www.abc.net.au/countusin	Learning Object Learning Federation - TALE *Scale Matters: Ones* *Scale Matters: Tens* *Scale Matters: Hundreds* *Scale Matters: Simple Units* http://www.mathcats.com/	Learning Object CMIT Website *Arrow Card Game* Learning Federation - TALE *Number Trains:* *Number Trains: Skip counting* *Scale Matters: simple units* *Scale Matters: tens* *Scale Matters: hundreds* *Scale Matters: tens of thousands* *Hopper: whole numbers* *Wishball: Whole numbers* *Wishball: challenge* *Tower of Hanoi* http://www.funbrain.com/brain/MathBrain/MathBrain.html	Learning Object Learning Federation - TALE *Wishball: Ultimate* *Sieve of Eratosthenes* *Circle 99* http://www.figurethis.org/	Learning Object Learning Federation - TALE *Scale Matters: negatives* http://illuminations.nctm.org/ActivitySearch.aspx http://www.mathplayground.com/

Week 2	**Time** Students develop an understanding of the passage of time, its measurement and representations, though the use of everyday language and experiences ☺	*MES1.5* ● Describe the duration of events using everyday language ● Sequence events in time ● Name the days of the week and seasons ● Tell time on the hour on digital and analog clocks Syllabus Page : 112	*MS1.5* ● Use informal units to measure and compare the duration of events ● Name and order the months and seasons of the year ● Identify the day and date on a calendar ● Tell the time on the hour and half-hour on digital and analog clocks Syllabus Page : 113	*MS2.5* ● Recognise the coordinated movements of the hands on a clock ● Read and record time using digital and analog notation ● Convert between units of time ● Read and interpret simple timetables, timelines and calendars Syllabus Page : 114	*MS3.5* ● Convert between am/pm notation and 24-hour time ● Use timetables involving 24-hour time ● Compare various time zones in Australia, including during daylight saving ● Draw and interpret a timeline using a scale Syllabus Page : 115	*MS4.3* ● Perform operations involving time units ● Use international time zones to compare times ● Interpret a variety of tables and charts related to time Syllabus Page : 116
				NAPLAN Strategies Doc 2008 Click here ☺		NAPLAN Strategies Doc 2008 Click here ☺
			Sample BST/NAPLAN Questions **Click here** ⊗	Sample BST/NAPLAN Questions **Click here** ⊗		
			Learning Object Learning Federation - TALE *After school – Analogue & digital* *School day – analogue* *School day – digital* *School day – analogue and digital*			

Week 3	**Patterns and Algebra** Students develop skills in creating, describing and recording number patterns as well as an understanding of the relationships between numbers	*PAES1.1* ● Recognise, describe, create and continue repeating patterns ● Continue simple number patterns that increase or decrease ● Use the term 'is the same as' to describe equality	*PAS1.1* ● Create, represent and continue a variety of number patterns and supply missing elements ● Build number relationships by relating addition and subtraction facts to at least 20 ● Make generalisations about number relationships ● Use the equals sign to record equivalent number relationships	*PAS2.1* ● Generate, describe, record number patterns using a variety of strategies ● Build number relationships by relating multiplication and division facts to at least 10 x 10 ● Complete simple number sentences by calculating the value of a missing number	*PAS3.1a* ● Build simple geometric patterns involving multiples ● Complete a table of values for geometric and number patterns ● Describe a pattern in words in more than one way *PAS3.1b* ● Construct, verify and complete number sentences involving the four operations with a variety of numbers	**Algebraic Techniques** *PAS4.1* ● Use letters to represent numbers ● Translate between words and algebraic symbols and between algebraic symbols and word ● Recognise and use simple equivalent algebraic expressions *PAS4.2* ● Create, record and describe number patterns using words *PAS4.3* ● Use the algebraic symbol to simplify, expand and factorise simple algebraic expressions ● Substitute into algebraic expressions *PAS4.4* ● Solve linear equations and word problems using algebra
		Syllabus Page :73	Syllabus Page : 74	Syllabus Page : 75	Syllabus Page : 76	Syllabus Page : 78
			NAPLAN Strategies Doc 2008 **Click here** ☺			
			Sample BST/NAPLAN Questions **Click here** ⊗	Sample BST/NAPLAN Questions **Click here** ⊗	Sample SNAP/NAPLAN Question **Click here** ⊗	Sample SNAP/NAPLAN Question **Click here** ⊗
		DENS 1 157	DENS 1			
		Talking About Patterns & Algebra CD 26-30	Talking About Patterns & Algebra CD 38-46 47-49	Talking About Patterns & Algebra CD 71-77 85-87	Talking About Patterns & Algebra CD 115-122 124 129-136	
			Syllabus Sample Units of Work 60 - 65			

					Counting On Activities *AFLgebra*	Counting On Activities *AFLgebra*
		Learning Object [Learning Federation - TALE](#) *Monster Choir: patterns Monster Choir: missing monsters Colour Patterns*	Learning Object [Learning Federation - TALE](#) *Balance the Cups Balance the Cups: use the rule Musical Number Patterns; Musical Counter Monster Choir: Look & Listen The Number Partner Number Partner: Go Figure Colour Patterns*	Learning Object [CMIT Website](#) *Calendar Patterns* [Learning Federation - TALE](#) *Wishball Challenge The number partner: go figure Musical number patterns: odds & evens, musical times, music maker Monster choir: look & listen, go Vile Vendor Balance the cups: use the rule Balance the blobs: find the rule Hopper Whole Numbers Squirt Two containers Squirt Two containers: Level 1 Squirt Two containers: Level 2 Attribute Trains Tower of Hanoi Function machine*	Learning Object [Learning Federation - TALE](#) *Musical number patterns: odds & evens, musical times, music make, the challenger Attribute trains Pentominoes Pascal's Triangle Pattern Blocks Colour Patterns Algebra Balance Scales Attribute Blocks Balance the Blobs ; find the rule 3 Balance the Blobs : Find the Rule 2 Squirt three containers – series of 4 Filling glasses – series of 5 Bridge Builder - series of 5 Tower of Hanoi Algebra Balance Scales – Series of 2 Function machine Exploring Algebra*	Learning Object [Learning Federation - TALE](#) *Squirt three containers – Series of 4*
		[http://www.gingerbooth.com/flash/patblocks/patblocks.php](#)	[http://www.gingerbooth.com/flash/patblocks/patblocks.php](#)	[http://www.gingerbooth.com/flash/patblocks/patblocks.php](#)		
Week 3	**Time** Students develop an understanding of the passage of time, its measurement and representations, though the use of everyday language and experiences	*MES1.5* ● Describe the duration of events using everyday language ● Sequence events in time ● Name the days of the week and seasons ● Tell time on the hour on digital and analog clocks [Syllabus Page : 112](#)	*MS1.5* ● Use informal units to measure and compare the duration of events ● Name and order the months and seasons of the year ● Identify the day and date on a calendar ● Tell the time on the hour and half-hour on digital and analog clocks [Syllabus Page : 113](#)	*MS2.5* ● Recognise the coordinated movements of the hands on a clock ● Read and record time using digital and analog notation ● Convert between units of time ● Read and interpret simple timetables, timelines and calendars [Syllabus Page : 114](#)	*MS3.5* ● Convert between am/pm notation and 24-hour time ● Use timetables involving 24-hour time ● Compare various time zones in Australia, including during daylight saving ● Draw and interpret a timeline using a scale [Syllabus Page : 115](#)	*MS4.3* ● Perform operations involving time units ● Use international time zones to compare times ● Interpret a variety of tables and charts related to time [Syllabus Page : 116](#)
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			Sample BST/NAPLAN Questions **Click here** ⊗	Sample BST/NAPLAN Questions **Click here** ⊗	Sample SNAP/NAPLAN Question **Click here** ⊗	Sample SNAP/NAPLAN Question **Click here** ⊗
			Learning Object [Learning Federation - TALE](#) *After school – Analogue & digital* *School day – analogue* *School day – digital* *School day – analogue and digital*			

Week 4	Patterns and Algebra	PAES1.1	PAS1.1	PAS2.1	PAS3.1a	Algebraic Techniques PAS4.1
	Students develop skills in creating, describing and recording number patterns as well as an understanding of the relationships between numbers	● Recognise, describe, create and continue repeating patterns ● Continue simple number patterns that increase or decrease ● Use the term 'is the same as' to describe equality	● Create, represent and continue a variety of number patterns and supply missing elements ● Build number relationships by relating addition and subtraction facts to at least 20 ● Make generalisations about number relationships ● Use the equals sign to record equivalent number relationships	● Generate, describe, record number patterns using a variety of strategies ● Build number relationships by relating multiplication and division facts to at least 10 x 10 ● Complete simple number sentences by calculating the value of a missing number	● Build simple geometric patterns involving multiples ● Complete a table of values for geometric and number patterns ● Describe a pattern in words in more than one way PAS3.1b ● Construct, verify and complete number sentences involving the four operations with a variety of numbers	● Use letters to represent numbers ● Translate between words and algebraic symbols and between algebraic symbols and word ● Recognise and use simple equivalent algebraic expressions PAS4.2 ● Create, record and describe number patterns using words ● Use algebraic symbols to translate descriptions of number patterns ● Represent number pattern relationships as a point on a grid PAS4.3 ● Use the algebraic symbol to simplify, expand and factorise simple algebraic expressions ● Substitute into algebraic expressions PAS4.4 ● Solve linear equations and word problems using algebra PAS4.5 ● Interpret the number plane and locate ordered pairs ● Graph and interpret linear relationships created from simple number patterns and equations
		Syllabus Page :73	Syllabus Page : 74	Syllabus Page : 75	Syllabus Page : 76	Syllabus Page : 78
				NAPLAN Strategies Doc 2008 Click here ☺	NAPLAN Strategies Doc 2008 Click here ☺ ☺	NAPLAN Strategies Doc 2008 Click here ☺

			Sample BST/NAPLAN Questions **Click here** ⊗	Sample BST/NAPLAN Questions **Click here** ⊗	Sample SNAP/NAPLAN Question **Click here** ⊗	Sample SNAP/NAPLAN Question **Click here** ⊗
		DENS 1 157	DENS 1			
		Talking About Patterns & Algebra CD 26-30	Talking About Patterns & Algebra CD 38-46 47-49	Talking About Patterns & Algebra CD 71-77 85-87	Talking About Patterns & Algebra CD 115-122 124 129-136	
			CMIT Activities *Dotto*		Counting On Activities *AFLgebra*	Counting On Activities *AFLgebra*
			Syllabus Sample Units of Work 60 - 65			
		Learning Object Learning Federation - TALE *Monster Choir: patterns* *Monster Choir: missing monsters* *Colour Patterns* http://www.gingerbooth.com/flash/patblocks/patblocks.php	Learning Object Learning Federation - TALE *Balance the Cups* *Balance the Cups: use the rule* *Musical Number Patterns; Musical Counter* *Monster Choir: Look & Listen* *The Number Partner* *Number Partner: Go Figure* *Colour Patterns* http://www.gingerbooth.com/flash/patblocks/patblocks.php	Learning Object CMIT Website *Calendar Patterns* Learning Federation - TALE *Wishball Challenge* *The number partner: go figure* *Musical number patterns: odds & evens, musical times, music maker* *Monster choir: look & listen, go* *Vile Vendor* *Balance the cups: use the rule* *Balance the blobs: find the rule* *Hopper Whole Numbers* *Squirt Two containers* *Squirt Two containers: Level 1* *Squirt Two containers: Level 2* *Attribute Trains* *Tower of Hanoi* *Function machine* http://www.gingerbooth.com/flash/patblocks/patblocks.php	Learning Object Learning Federation - TALE *Musical number patterns: odds & evens, musical times, music make, the challenger* *Attribute trains* *Pentominoes* *Pascal's Triangle* *Pattern Blocks* *Colour Patterns* *Algebra Balance Scales* *Attribute Blocks* *Balance the Blobs ; find the rule 3* *Balance the Blobs : Find the Rule 2* *Squirt three containers – series of 4* *Filling glasses – series of 5* *Bridge Builder - series of 5* *Tower of Hanoi* *Algebra Balance Scales – Series of 2* *Function machine* *Exploring Algebra*	Learning Object Learning Federation - TALE *Squirt three containers – Series of 4*

Week 4	**Data** Students inform their inquiries through gathering, organising, tabulating and graphing data	*DES1.1*	*DS1.1*	*DS2.1*	*DS3.1*	*DS4.1*
		● Collect data about students and their environment ● Organise actual objects or pictures of the objects into a data display ● Interpret data displays made from objects and pictures	● Gather and record data using tally marks ● Display the data using concrete materials and pictorial representations ● Use objects or pictures as symbols to represent other objects, using one-tone correspondence ● Interprets information presented in picture graphs and column graphs	● Conduct surveys, classify and organise data using tables ● Construct vertical and horizontal column graphs and picture graphs ● Interpret data presented in tables, column graphs and picture graphs	● Daw pictures, column, line and divided bar graphs using scales or many to one correspondence ● Read and interpret sector (pie) graphs ● Read and interpret graphs with scales of many-to-one correspondence ● Determine the mean (average) for a small set of data	● Draw, read and interpret graphs (line, sector, travel, step, conversion, divided bar, dot plots, and stem-leaf plots tables and charts ● Distinguish between types of variables used in graphs ● Identify misrepresentations of data in graphs ● Construct frequency tables ● Draw frequency histograms and polygons ● Use sampling and census ● Make predictions from samples and diagrams ● Analyse data using mean, mode, median and range
		Syllabus Page : 85	Syllabus Page : 86	Syllabus Page : 87	Syllabus Page : 88	Syllabus Page : 89-90
				NAPLAN Strategies Doc 2008 Click here ☺	NAPLAN Strategies Doc 2008 Click here ☺	NAPLAN Strategies Doc 2008 Click here ☺
			Sample BST/NAPLAN Questions **Click here** ⊗	Sample BST/NAPLAN Questions **Click here** ⊗	Sample SNAP/NAPLAN Question **Click here** ⊗	Sample SNAP/NAPLAN Question **Click here** ⊗
					Syllabus Sample Units of Work *133 - 136*	

			Learning Object Learning Federation - TALE	Learning Object Learning Federation - TALE	Learning Object Learning Federation - TALE *Mystery Spinner: match the graph* *Home internet survey: Where* *Home internet survey: Who*	Learning Object Learning Federation - TALE *Spinners: Match up* *Mystery Spinner: Challenge Bar Chart* *Bridge Builder: Triangles* *Filling glasses: find the right graph, create the right glass, graphing and comparing* *Media Report:1-2* *Media Report: future plans* *Media Report: water usage* *Media Report: starting salary* *Media Report: Junk food* *Media Report: music* *Media Report: cost of petrol* *Skateboard survey*	Learning Object Learning Federation - TALE *Scatter plots: about scatter plots* *Scatter plots: create your own* *Scatter plots: age & reaction time* *Scatter plots: height & belly button height*
Week 5		**Addition and Subtraction** Students develop facility with number facts and computation with progressively larger numbers in addition and subtraction and an appreciation of the relationship between those facts	*NES1.2* ● Combine groups to model addition ● Take part of a group away to model subtraction ● Compare groups to determine' how many' ● Record addition and subtraction informally Syllabus Page : 46	*NS1.2* ● Model addition and subtraction using concrete materials ● Develop a range of mental strategies and informal recording methods for addition and subtraction ● Record number sentences using drawings, numerals, symbols and words Syllabus Page : 47-48	*NS2.2* ● Use a range of mental strategies for addition and subtraction involving two-, three- and four-digit numbers ● Explain and record methods for adding and subtracting ● Use a formal written algorithms for addition and subtraction Syllabus Page : 49-50	*NS3.2* ● Select and apply appropriate mental, written or calculator strategies for addition and subtraction with counting numbers of any size. Syllabus Page : 51	I ntegers *NS4.2* ● Perform operations with directed numbers ● Simplify expressions involving grouping symbols and apply order of operations Syllabus Page : 59
					NAPLAN Strategies Doc 2008 Click here ☺ ☺	NAPLAN Strategies Doc 2008 Click here ☺	
				Sample BST/NAPLAN Questions Addition Subtraction ⊗ **Click here** ⊗	Sample BST/NAPLAN Questions Addition Subtraction ⊗ **Click here** ⊗	Sample SNAP/NAPLAN Question Addition Subtraction ⊗ **Click here** ⊗	Sample SNAP/NAPLAN Question Addition Subtraction ⊗ **Click here** ⊗
			DENS 1 24, 28, 45, 117, 119, 121, 159,163,171,175, 183,185, 225, 261, 271,	DENS 1 119, 121, 173, 181, 233, 235, 239, 243, 245, 247, 267	DENS 2 24, 28, 50, 108, 128, 190, 284, 290,	DENS 2 186, 194, 284, 286, 288, 290,	

		CMIT Activities	CMIT Activities	CMIT Activities	Counting On Activities	Counting On Activities
		Addo *Birds in trees 1* *Birds in trees 2* *Five Cards* *Make Five* *Fish* *Rabbit Game* *Diffy towers* *Cross out dice* *Friends of 10 jingle* *A 10 and 1 teen chant* *How many more* *Handful of teddies* *Number Line Race* *Sort and count*	*Blackboard bingo* *Card bingo* *Clear the board* 1 die *Clear the board* 2 dice *Clear the board* 3 dice *Make 10* *Make 10 again* *Dotto* *Diffy* *Flying saucer* *I spy* *Jigsaw* *Countdown* *Count on bingo*	*Doubles plus one* *Doubles minus one* *Double dice multi* *Triple dice multi* *Triples plus one* *Subtracting 10's game* *Clear the board* 3 dice *Flipper* *Largest Number Wins* *On target* *Pairs* *Ten points* *Thirty one* *Make 100*	*Grids to ten* *Addition pairs to 10* *Make 7 Fish* *Ten pin bowling* *Adding larger numbers* *Subtraction* *Jumps of ten on the number line*	*Grids to ten* *Addition pairs to 10* *Make 7 Fish* *Ten pin bowling* *Adding larger numbers* *Subtraction* *Jumps of ten on the number line*
		Syllabus Sample Units of Work *16 - 19*	Syllabus Sample Units of Work *42 – 46*	Syllabus Sample Units of Work *87 - 90*		
		Learning Object CMIT Website *Dominoes* *Eggs in a carton* Learning Federation – TALE	Learning Object CMIT Website *Addition Wheel* *Darts Game* Learning Federation - TALE	Learning Object CMIT Website *Addition Wheel* *Calendar Game* *Four Turns to 100* Learning Federation – TALE *Difference Bars* *The difference bar: go figure* *The difference bar: generate easy subtractions, hard subtractions* *The difference bar: make your own easy subtractions, hard subtractions* *The Part-Adder: go figure* *Part-adder: generate hard sums* *Part-adder: make your own easy sums, hard sums*	Learning Object Learning Federation – TALE *The difference bar: go figure* *The difference bar: generate easy subtractions, hard subtractions* *The difference bar: make your own easy subtractions, hard subtractions* *The Part-Adder: go figure* *Part-adder: generate hard sums* *Part-adder: make your own easy sums, hard sums* *School Canteen: estimate & check: Level 1* *School Canteen: two trades: Level 1*	
		http://www.mathszone.co.uk/	http://www.mathszone.co.uk/	http://www.mathszone.co.uk/	http://www.mathszone.co.uk/	
Week 5	**Money** (Whole numbers, F&D)	***NES1.1*** ● Use the language of money Syllabus Page : 41	***NS1.1*** ● Sort, order and count money using face value Syllabus Page : 42	*NS2.4* ● Perform calculations with money Syllabus Page : 62	*NS3.4* ● Apply the four operations to money in real life situations Syllabus Page : 65	*NS4.3* ● Use ratios and rates to solve problems Syllabus Page : 66

Week 6	**Addition and Subtraction** Students develop facility with number facts and computation with progressively larger numbers in addition and subtraction and an appreciation of the relationship between those facts	*NES1.2* ● Combine groups to model addition ● Take part of a group away to model subtraction ● Compare groups to determine' how many more' ● Record addition and subtraction informally Syllabus Page : 46	*NS1.2* ● Model addition and subtraction using concrete materials ● Develop a range of mental strategies and informal recording methods for addition and subtraction ● Record number sentences using drawings, numerals, symbols and words Syllabus Page : 47-48	*NS2.2* ● Use a range of mental strategies for addition and subtraction involving two-, three- and four-digit numbers ● Explain and record methods for adding and subtracting ● Use a formal written algorithms for addition and subtraction Syllabus Page : 49-50	*NS3.2* ● Select and apply appropriate mental, written or calculator strategies for addition and subtraction with counting numbers of any size. Syllabus Page : 51	**Integers** *NS4.2* ● Perform operations with directed numbers ● Simplify expressions involving grouping symbols and apply order of operations Syllabus Page : 59
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			Sample BST/NAPLAN Questions Addition Subtraction ⊗ **Click here** ⊗	Sample BST/NAPLAN Questions Addition Subtraction ⊗ **Click here** ⊗	Sample SNAP/NAPLAN Question Addition Subtraction ⊗ **Click here** ⊗	Sample SNAP/NAPLAN Question Addition Subtraction ⊗ **Click here** ⊗
		DENS 1 24, 28, 45, 117, 119, 121, 159,163,171,175, 183,185, 225, 261, 271,	DENS 1 119, 121, 173, 181, 233, 235, 239, 243, 245, 247, 267	DENS 2 24, 28, 50, 108, 128, 190, 284, 290,,	DENS 2 186, 194, 284, 286, 288, 290,	
		CMIT Activities *Addo* *Birds in trees 1* *Birds in trees 2* *Five Cards* *Make Five* *Fish* *Rabbit Game* *Diffy towers* *Cross out dice* *Friends of 10 jingle* *A 10 and 1 teen chant* *How many more* *Handful of teddies* *Number Line Race* *Sort and count*	CMIT Activities *Blackboard bingo* *Card bingo* *Clear the board* 1 die *Clear the board* 2 dice *Clear the board* 3 dice *Make 10* *Make 10 again* *Dotto* *Diffy* *Flying saucer* *I spy* *Jigsaw* *Countdown* *Count on bingo*	CMIT Activities *Doubles plus one* *Doubles minus one* *Double dice multi* *Triple dice multi* *Triples plus one* *Subtracting 10's game* *Clear the board* 3 dice *Flipper* *Largest Number Wins* *On target* *Pairs* *Ten points* *Thirty one* *Make 100*	Counting On Activities *Grids to ten* *Addition pairs to 10* *Make 7 Fish* *Ten pin bowling* *Adding larger numbers* *Subtraction* *Jumps of ten on the number line* *Make 100*	Counting On Activities *Grids to ten* *Addition pairs to 10* *Make 7 Fish* *Ten pin bowling* *Adding larger numbers* *Subtraction* *Jumps of ten on the number line*
		Syllabus Sample Units of Work *16 - 19*	Syllabus Sample Units of Work *42 - 46*	Syllabus Sample Units of Work *87 - 90*		

		Learning Object CMIT Website *Dominoes* *Eggs in a Carton* Learning Federation - TALE	Learning Object CMIT Website *Addition Wheel* *Darts Game* Learning Federation - TALE	Learning Object CMIT Website *Addition Wheel* *Calendar Game* *Four Turns to 100* Learning Federation - TALE *Take –away bars: go figure* *Take-away bars: make your own hard/easy subtractions* *Difference Bars* *Diffy* *The difference bar: go figure* *The difference bar: generate easy subtractions, hard subtractions* *The difference bar: make your own easy subtractions, hard subtractions* *The Part-Adder: go figure* *Part-adder: generate hard sums* *Part-adder: make your own easy sums, hard sums* http://www.mathszone.co.uk/	Learning Object Learning Federation - TALE *Diffy* *Take –away bars: go figure* *Take-away bars: make your own hard/easy subtractions* *Hopper Challenge: ultimate* *Hopper Challenge: tenths* *Hopper Challenge: whole numbers*	
Week 6	**Chance** Students develop an understanding of the application of chance in everyday situations and an appreciation of the difference between theoretical and experimental probabilities	No Chance outcomes at this Stage Stage 1 Chance or revision	*NS1.5* ● Recognise the element of chance in familiar daily activities ● Use familiar language to describe the elements of chance Syllabus Page : 68	*NS2.5* ● Explore all possible outcomes in a simple chance situation ● Conduct simple chance experiments ● Collect data and compare likelihood of events of different contexts Syllabus Page : 69	*NS3.5* ● Assign numerical value to the likelihood of simple events occurring ● Order the likelihood of simple vents on a number line from 0 to 1 Syllabus Page : 70	**Probability** *NS4.4* ● Determine the probability of simple events ● Solve simple probability problems ● Recognise complementary events Syllabus Page : 71
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			Sample BST/NAPLAN Questions **Click here** ⊗	Sample BST/NAPLAN Questions **Click here** ⊗	Sample SNAP/NAPLAN Question **Click here** ⊗	Sample SNAP/NAPLAN Question **Click here** ⊗
			Syllabus Sample Units of Work *57 - 59*	Syllabus Sample Units of Work *102 - 104*	Syllabus Sample Units of Work *130 - 132*	

			Learning Object [Learning Federation - TALE](#) Spinners	Learning Object [Learning Federation - TALE](#) *The Slushy Sludger: Go figure* *The Slushy Sludger: Best Guess* *The Slushy Sludger: Questions* *Spinners*	Learning Object [Learning Federation - TALE](#) *The Slushy Sludger: Go figure* *The Slushy Sludger: Best Guess* *The Slushy Sludger: Questions* *Spinners: match up* *Spinners: explore* *Spinners: advanced builder* *Spinners: Basic builder* *The Vile Vendor: best guess* *The Vile Vendor: questions* *The Vile Vendor: go figure*	Learning Object [Learning Federation - TALE](#) *The foul food maker: Q2* *Random of not: open investigation* *Random or not: analyse alternating jubes 1:1* *Dice Duels: Lucky 16 game* *Dice Duels: airport subtraction* *Dice Duels: bike race* *Dice Duels: go-kart race* *Dice Duels: uneven distribution* *Dice duels: load one dice* *Dice Duels: load a pair of dice* *Dice Duels: find the bias*	
Week 7	**Multiplication and Division** Students develop facility with number facts and computation with progressively larger numbers in multiplication and division and an appreciation of the relationship between those facts	*NES1.3* • Make equal groups or rows • Group and share collections of objects equally • Record grouping and sharing informally [Syllabus Page : 52](#)	*NS1.3* • Rhythmic and skip count by ones, twos, fives and tens • Model and use strategies for multiplication including arrays, equal groups and repeated addition • Model and use strategies for division including sharing, array and repeated subtraction • Record using drawings, numerals, symbols and words [Syllabus Page : 53](#)	*NS2.3* • Develop mental facility for number facts up to 10 X 10 • Find multiples and squares of numbers • Use mental and informal written strategies for multiplying or dividing a two-digit number by a one-digit operator • Interpret remainders in division problems • Determine factors for a given number [Syllabus Page : 54-55](#)	*NS3.3* • Select and apply appropriate mental, written or calculator strategies for multiplication and division • Use formal written algorithms for multiplication (limit operators to two-digit numbers) and division (limit operators to single digit) • Explore prime and composite numbers [Syllabus Page : 56](#)	*NS4.1* • Explore other counting systems • Investigate groups of positive whole numbers • Determine and apply tests of divisibility • Express a number as a product of its prime factors • Find the squares/related square roots; cube/related cube roots • Use index notation for positive integral indices • Apply mental strategies to aid computation • Divide two or three-digit numbers by a two digit number [Syllabus Page : 57-58](#)
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			Sample BST/NAPLAN Questions Multiplication Division ⊗ **Click here** ⊗	Sample BST/NAPLAN Questions Multiplication Division ⊗ **Click here** ⊗	Sample SNAP/NAPLAN Question Multiplication Division ⊗ **Click here** ⊗	Sample SNAP/NAPLAN Question Multiplication Division ⊗ **Click here** ⊗
		DENS 1 113, 123, 129, 131, 133, 173, 189, 195,	DENS 1 123, 191, 195, 199, 269, 271, 273, 275, 277	DENS 2 38, 96, 98, 198, 256, 260, 265, 266, 268, 276, 278,	DENS 2 272, 276, 278, 280, 282,	
		CMIT Activities *When the music stops* *Equal group game* *Equal blocks* *Coin game*	CMIT Activities *Bead patterns* *Group grabbing* *Grouping game* ***Multiplication-Div wheel***	CMIT Activities *Five card multi* *Double dice multi* *Hit the deck* *Knock out* *Mables tables x2 x3 x5 x10* *Multiplication bingo* *Multiple madness* *Mungo* *Popstick bingo* *Triple dice multi* *Triples plus one*	Counting On Activities *Multiple count* *Rectangular grid* *Blobs and rectangles* *Array grids* *Array bingo* *3x3 squares* *Multiplication grids* *Factors from rectangles* *Dice times* *Dice tables* *Four in a row* *Multo* *Divide by 2-6* *Multiplication cards* *Hilo* *Division cards*	Counting On Activities *Multiple count* *Rectangular grid* *Blobs and rectangles* *Array grids* *Array bingo* *3x3 squares* *Multiplication grids* *Factors from rectangles* *Dice times* *Dice tables* *Four in a row* *Multo*
		Syllabus Sample Units of Work *20 - 23*	Syllabus Sample Units of Work ***47 - 51***	Syllabus Sample Units of Work ***91 - 94***	Syllabus Sample Units of Work *122 - 125*	
		Learning Object CMIT Website *Arrays* Learning Federation - TALE	Learning Object CMIT Website *Arrays* Learning Federation - TALE ***The Array*** ***The Array: Go Figure***	Learning Object CMIT Website *Remainders Count* Learning Federation - TALE ***The Multiplier: go figure*** ***The Multiplier: make your own hard/easy multiplications*** ***The Multiplier: generate your own hard/easy multiplications*** ***The Divider: whole number remainders*** ***The Divider: solve your own problem*** ***The Divider: without remainders***	Learning Object CMIT Website *Remainders Count* Learning Federation - TALE ***Rectangle Division*** ***The Multiplier: go figure*** ***The Multiplier: make your own hard/easy multiplications*** ***The Multiplier: generate your own hard/easy multiplications*** ***The Divider: whole number remainders*** ***The Divider: solve your own problem*** ***The Divider: without remainder***	

Week 7	**2D Space** Students develop verbal, visual and mental representations of lines, angles and two-dimensional shapes, their parts and properties, and different orientations	*SGES1.2* ● Manipulate, sort and describe 2D shapes ● Identify and name circles, squares, triangles and rectangles in pictures and the environment, and presented in different orientations ● Represent 2D shapes using a variety of materials ● Identify and draw straight and curved lines Syllabus Page : 124	*SGS1.2* ● Identify, name, compare and represent hexagons, rhombuses and trapeziums presented in different orientations ● Make tessellating designs using flips, slides and turns ● Identify a line of symmetry ● Identify and name parallel, vertical and horizontal lines ● Identify corners as angles ● Compare angles by placing one angle on top of another Syllabus Page : 125	*SGS2.2a* ● Identify and name pentagons, octagons and parallelograms presented in different orientations ● Compare and describe special groups of quadrilaterals ● Make tessellating designs by reflecting, translating and rotating ● Find all lines of symmetry for a two-dimensional shape ● Recognise openings, slopes and turns as angles ● Describe angles using everyday language and the term 'right' ● Compare angles using informal means Syllabus Page : 126-127	*SG3.2a* ● Identify right-angled, isosceles, equilateral and scalene triangles ● Identify and draw regular and irregular 2D shapes ● Identify and name parts of a circle ● Enlarge and reduce shapes, pictures and maps ● Identify shapes that have rotational symmetry ● Classify angles as right, acute, obtuse, reflex, straight or a revolution ● Measure in degrees and construct angles using a protractor Syllabus Page : 128-129	*SG4.3* ● Classify, construct and determine properties of triangles and quadrilaterals ● Investigate similar figures and interpret and construct scale drawings ● Complete simple numerical exercises based on geometrical properties ● Classify angles and determine angle relationships ● Construct parallel and perpendicular lines and determine associated angle properties Syllabus Page : 130-131
		Teaching Space & Geometry CD Discovering Shapes Unit	Teaching Space & Geometry CD Part-whole Unit	Teaching Space & Geometry CD Exploring Quadrilaterals Unit	Teaching Space & Geometry CD Constructing Shapes Unit	
			Sample BST/NAPLAN Questions **Click here** ⊗	Sample BST/NAPLAN Questions **Click here** ⊗	Sample SNAP/NAPLAN Question **Click here** ⊗	Sample SNAP/NAPLAN Question **Click here** ⊗
		Syllabus Sample Units of Work *36 - 40*	Syllabus Sample Units of Work *76 - 79*		Syllabus Sample Units of Work *147 - 150 151-153*	
		Learning Object Learning Federation - TALE *Shape Overlays: Find & Cut* *Shape Overlays: Picture Studio*	Learning Object Learning Federation - TALE *Shape Maker*	Learning Object Learning Federation - TALE *Shape maker*	Learning Object Learning Federation - TALE *Viewfinder* *Viewfinder: backwards glance* *Viewfinder: up front* *Viewfinder: flip side* *Compound shapes* *Tessellations* *Golden Rectangle* *Turtle Geometry*	

Week 8	Multiplication and Division	NES1.3	NS1.3	NS2.3	NS3.3	NS4.1
	Students develop facility with number facts and computation with progressively larger numbers in multiplication and division and an appreciation of the relationship between those facts	• Make equal groups or rows • Group and share collections of objects equally • Record grouping and sharing informally	• Rhythmic and skip count by ones, twos, fives and tens • Model and use strategies for multiplication including arrays, equal groups and repeated addition • Model and use strategies for division including sharing, array and repeated subtraction • Record using drawings, numerals, symbols and words	• Develop mental facility for number facts up to 10 X 10 • Find multiples and squares of numbers • Use mental and informal written strategies for multiplying or dividing a two-digit number by a one-digit operator • Interpret remainders in division problems • Determine factors for a given number	• Select and apply appropriate mental, written or calculator strategies for multiplication and division • Use formal written algorithms for multiplication (limit operators to two-digit numbers) and division (limit operators to single digit) • Explore prime and composite numbers	• Explore other counting systems • Investigate groups of positive whole numbers • Determine and apply tests of divisibility • Express a number as a product of its prime factors • Find the squares/related square roots; cube/related cube roots • Use index notation for positive integral indices • Apply mental strategies to aid computation • Divide two or three-digit numbers by a two digit number
		Syllabus Page : 52	Syllabus Page : 53	Syllabus Page : 54-55	Syllabus Page : 56	Syllabus Page : 57-58
			NAPLAN Strategies Doc 2008 **Click here** ☺	NAPLAN Strategies Doc 2008 Click here ☺	NAPLAN Strategies Doc 2008 Click here ☺	
			Sample BST/NAPLAN Questions Multiplication Division ⊗ **Click here** ⊗	Sample BST/NAPLAN Questions Multiplication Division ⊗ **Click here** ⊗	Sample SNAP/NAPLAN Question Multiplication Division ⊗ **Click here** ⊗	Sample SNAP/NAPLAN Question Multiplication Division ⊗ **Click here** ⊗
		DENS 1 113, 123, 129, 131, 133, 173, 189, 195,	DENS 1 123, 191, 195, 199, 269, 271, 273, 275, 277	DENS 2 38, 96, 98, 198, 256, 260, 265, 266, 268, 276, 278,	DENS 2 272, 276, 278, 280, 282,	

			CMIT Activities *When the music stops* *Equal group game* *Equal blocks* *Coin game*	CMIT Activities *Bead patterns* *Group grabbing* *Grouping game* **Multiplication-Div wheel**	CMIT Activities *Five card multi* *Double dice multi* *Hit the deck* *Knock out* *Mables tables x2 x3 x5 x10* *Multiplication bingo* *Multiple madness* *Mungo* *Popstick bingo* *Triple dice multi* *Triples plus one*	Counting On Activities *Multiple count* *Rectangular grid* *Blobs and rectangles* *Array grids* *Array bingo* *3x3 squares* *Multiplication grids* *Factors from rectangles* *Dice times* *Dice tables* *Four in a row* *Multo* *Divide by 2-6* *Multiplication cards* *Hilo* *Division cards*	Counting On Activities *Multiple count* *Rectangular grid* *Blobs and rectangles* *Array grids* *Array bingo* *3x3 squares* *Multiplication grids* *Factors from rectangles* *Dice times* *Dice tables* *Four in a row* *Multo*
			Syllabus Sample Units of Work *20 - 23*	Syllabus Sample Units of Work *47 - 51*	Syllabus Sample Units of Work *91 - 94 95-97*	Syllabus Sample Units of Work *122 - 125*	
			Learning Object [CMIT Website](#) *Arrays* [Learning Federation - TALE](#)	Learning Object [CMIT Website](#) *Arrays* [Learning Federation - TALE](#) *The Array* *The Array: Go Figure*	Learning Object [CMIT Website](#) *Remainders Count* [Learning Federation - TALE](#) *Divide it up: Sharing* *Divide it up: Hardware* *Divide it up: Puppies* *Divide it up: Grouping tool* *Divide it up: Kittens* *Pobble arrays: make multiples* *Arrays: word problems with products 10-30, 35-64* *Arrays: factor families* *Arrays: explore factors*	Learning Object [CMIT Website](#) *Remainders Count* [Learning Federation - TALE](#) *Arrays: explore factors* *Pobble arrays: make multiples* *Arrays: word problems with products 10-30, 35-64*	

Week 8	**2D Space** Students develop verbal, visual and mental representations of lines, angles and two-dimensional shapes, their parts and properties, and different orientations	*SGES1.2* ● Manipulate, sort and describe 2D shapes ● Identify and name circles, squares, triangles and rectangles in pictures and the environment, and presented in different orientations ● Represent 2D shapes using a variety of materials ● Identify and draw straight and curved lines Syllabus Page : 124	*SGS1.2* ● Identify, name, compare and represent hexagons, rhombuses and trapeziums presented in different orientations ● Make tessellating designs using flips, slides and turns ● Identify a line of symmetry ● Identify and name parallel, vertical and horizontal lines ● Identify corners as angles ● Compare angles by placing one angle on top of another Syllabus Page : 125	*SGS2.2a* ● Identify and name pentagons, octagons and parallelograms presented in different orientations ● Compare and describe special groups of quadrilaterals ● Make tessellating designs by reflecting, translating and rotating ● Find all lines of symmetry for a two-dimensional shape ● Recognise openings, slopes and turns as angles ● Describe angles using everyday language and the term 'right' ● Compare angles using informal means Syllabus Page : 126-127	*SG3.2a* ● Identify right-angled, isosceles, equilateral and scalene triangles ● Identify and draw regular and irregular 2D shapes ● Identify and name parts of a circle ● Enlarge and reduce shapes, pictures and maps ● Identify shapes that have rotational symmetry ● Classify angles as right, acute, obtuse, reflex, straight or a revolution ● Measure in degrees and construct angles using a protractor Syllabus Page : 128-129	*SG4.3* ● Classify, construct and determine properties of triangles and quadrilaterals ● Investigate similar figures and interpret and construct scale drawings ● Complete simple numerical exercises based on geometrical properties ● Classify angles and determine angle relationships ● Construct parallel and perpendicular lines and determine associated angle properties Syllabus Page : 130-131
		Teaching Space & Geometry CD Shapes all Around Unit	Teaching Space & Geometry CD Shape Maker Unit Part-whole Unit	Teaching Space & Geometry CD Transforming Shapes Unit	Teaching Space & Geometry CD The Protractor Unit	
			Sample BST/NAPLAN Questions **Click here** ⊗	Sample BST/NAPLAN Questions **Click here** ⊗	Sample SNAP/NAPLAN Question **Click here** ⊗	Sample SNAP/NAPLAN Question **Click here** ⊗
		Syllabus Sample Units of Work *36 - 40*	Syllabus Sample Units of Work *76 - 79*		Syllabus Sample Units of Work *147 – 150 151 - 153*	
		Learning Object Learning Federation - TALE *Shape Overlays: Find & Cut* *Shape Overlays: Picture Studio*	Learning Object Learning Federation - TALE *Shape Maker*	Learning Object Learning Federation - TALE *Shape maker*	Learning Object Learning Federation - TALE *Viewfinder* *Viewfinder: backwards glance* *Viewfinder: up front* *Viewfinder: flip side* *Compound shapes* *Tessellations* *Golden Rectangle* *Turtle Geometry*	

Week 9	Fractions and Decimals	NES1.4	NS1.4	NS2.4	NS3.4	Fractions, Decimals and Percentages
	Students develop an understanding of the parts of a whole, and the relationships between the different representations of a fractions	● Divide an object into two equal parts ● Recognise and describe halves	● Model and describe a half or a quarter of a whole object ● Model and describe a half or a quarter of a collection of objects ● Use fraction notation ½ and ¼	● Model, compare and represent fractions with denominators 2, 4 and 8, followed by fractions with denominators 5, 10 and 100 ● Find equivalence between halves, quarters and eighths, fifths and tenths, tenths and hundredths ● Model compare and represent decimals to 2 decimal places ● Add and subtract decimals with the same number of decimal places (to 2 decimal places) ● Recognise percentages in everyday situations. Relate a common percentage to a fraction or decimal ● Perform calculations with money	● Model, compare and represent commonly used fractions (those with denominators 2, 3, 4, 5, 6, 8, 10, 12 and 100) ● Find equivalence between thirds, sixths and twelfths ● Express a mixed numeral as an improper fraction, and vice versa ● Add and subtract simple fractions where one denominator is a multiple of the other ● Multiply simple fractions by whole numbers. Calculate unit fractions of a number ● Multiply and divide decimals by whole numbers in everyday contexts. Add and subtract decimals to three decimal places ● Calculate simple percentages of quantities ● Apply the four operations to money in real-life situations	NS4.3 ● Perform operations with fractions, decimals and mixed numerals ● Use ratios and rates to solve problems
		Syllabus Page : 60	Syllabus Page : 61	Syllabus Page : 62-63	Syllabus Page : 64-65	Syllabus Page : 66-67
			NAPLAN Strategies Doc 2008 **Click here** ☺			
				Sample BST/NAPLAN Questions Fractions Decimals ⊗ **Click here** ⊗	Sample SNAP/NAPLAN Question Fractions Decimals ⊗ **Click here** ⊗	Sample SNAP/NAPLAN Question Fractions Decimals ⊗ **Click here** ⊗
		Fractions: Pikelets & Lamingtons 11, 12	Fractions: Pikelets & Lamingtons 11 - 31	Fractions: Pikelets & Lamingtons 11 - 42	Fractions: Pikelets & Lamingtons 25 - 62	
			Syllabus Sample Units of Work *52 - 56*	Syllabus Sample Units of Work *98 - 101*	Syllabus Sample Units of Work *126 - 129*	

		Learning Object Fractions Pikelets Lamingtons CD *Sharing Pikelets* *Geoboard* Learning Federation - TALE	Learning Object Fractions Pikelets Lamingtons CD *Sharing Pikelets* *Geoboard* Learning Federation - TALE *Fractions Fiddle*	Learning Object Fractions Pikelets Lamingtons CD *Sharing Pikelets* *Geoboard* Learning Federation – TALE *Fractions Fiddle: tool* *Fractions fiddle: shoot the hoop* *Fractions Fiddle: hit the apple* *Fractions Fiddle: comparing non-unit fractions* *Fractions Fiddle: matching cake fractions* *Cassowary Fractions* *Shape Fractions* *Dynamic Fractions* *Park Fractions*	Learning Object Fractions Pikelets Lamingtons CD *Fraction Wall* *Download* Learning Federation - TALE *Fractions Fiddle: tool* *Fractions fiddle: shoot the hoop* *Fractions Fiddle: reach the target* *Fractions Equivalent* *Fractions: visualising* *Fractions: parts of a whole* *Fractions: rectangle multiplication* *Fractions: Comparing* *Fractions: naming* *Neighbourhood fractions* *Shape Fractions* *Dynamic Fractions* *Park Fractions* *Wishball: hundredths* *Wishball: thousandths* *Fractions pieces*	
Week 9	**Length** Students distinguish the attribute of length and use informal and metric units for measurement	*MES1.1* ● Identify and describe the attribute of length ● Compare lengths directly by placing objects side by side and aligning ends ● Record comparisons informally Syllabus Page : 92	*MS1.1* ● Use informal units to estimate and measure length and distance by placing informal units end to end without gaps or overlap ● Recognise the need for metres and centimetres, and use them to estimate and measure length and distance ● Record measurements by referring to the number and type of informal or formal units used Syllabus Page : 93	*MS2.1* ● Estimate, measure, compare and record lengths and distances using metres, centimetres and/or millimetres ● Convert between metres and centimetres and vice versa ● Estimate and measure the perimeter of 2D shapes ● Record lengths and distances using decimal notation to two places Syllabus Page : 94	*MS3. 1* ● Select and use the appropriate device to measure lengths, distances and perimeters ● Convert between metres and kilometres, millimetres, centimetre and metres ● Calculate and compare perimeters of squares, rectangles and equilateral and isosceles triangles ● Record lengths and distances using decimal notation to three places Syllabus Page : 95	**Perimeter and Area** *MS4.1* ● Describe the limits of accuracy of measuring instruments ● Convert between metric units of length Syllabus Page : 100-101
		NAPLAN Strategies Doc 2008 **Click here** ☺		NAPLAN Strategies Doc 2008 Click here ☺	NAPLAN Strategies Doc 2008 Click here ☺	

				Sample BST/NAPLAN Questions **Click here** ⊗	Sample BST/NAPLAN Questions **Click here** ⊗	Sample SNAP/NAPLAN Question **Click here** ⊗	Sample SNAP/NAPLAN Question **Click here** ⊗
				Teaching Measurement ES1–S1 Make comparisons of length Order lengths by comparison	Teaching Measurement ES1–S1 Use informal units of length Compare informal units	Teaching Measurement S2 – S3 Measure length in metres Measure length in cm	Teaching Measurement S 2 – S3 Select measuring devices Convert between m, cm, mm	
					Syllabus Sample Units of Work **66 - 68**	Syllabus Sample Units of Work *105 - 108*	Syllabus Sample Units of Work *137 - 139*	
			Learning Object CMIT Website *Plasticine Snakes* Learning Federation - TALE *Scale Matters: Ones* *Scale Matters: simple Units*	Learning Object CMIT Website *Plasticine Snakes* Learning Federation - TALE *Direct a Robot: How Far*	Learning Object CMIT Website Learning Federation - TALE *Scale Matters :tenths* *Direct a robot: How far* *Direct a Robot: Collector*	Learning Object CMIT Website Learning Federation - TALE	
Week 10	**Volume and Capacity** Students recognise the attribute of volume and use informal and metric units for measuring volume and capacity		*MES1.3* • Identify and describe the attributes of volume and capacity • Compare the capacities of 2 containers using direct comparison • Compare the volume of 2 objects using direct comparison • Record comparisons informally Syllabus Page : 102	*MS1.3* • Use appropriate informal units to estimate and measure volume and capacity • Compare and order the capacities of two or more containers and the volumes of two or more models or objects • Record measurements by referring to the number and type of informal units used Syllabus Page : 103	*MS2.3* • Recognise the need for a formal unit to measure volume and capacity • Estimate, measure, compare and record volumes and capacities using litres and millilitres • Measure the volume of models in cubic centimetres • Convert between litres and millilitres Syllabus Page : 104-105	*MS3.3* • Select the appropriate unit to measure volume and capacity • Recognise the need for cubic metres • Estimate and measure the volume of rectangular prisms • Determine the relationship between cubic centimetres and millilitres • Record volume and capacity using decimal notation to three decimal places Syllabus Page : 106	**Surface Area and Volume** *MS4.2* • Find the surface area of rectangular and triangular prisms • Find the volume of right prisms and cylinders • Convert between metric units of volume Syllabus Page : 107
			NAPLAN Strategies Doc 2008 ***Click here*** ☺	NAPLAN Strategies Doc 2008 ***Click here*** ☺	NAPLAN Strategies Doc 2008 Click here ☺ ☺	NAPLAN Strategies Doc 2008 Click here ☺ ☺	NAPLAN Strategies Doc 2008 Click here ☺
				Sample BST/NAPLAN Questions **Click here** ⊗	Sample BST/NAPLAN Questions **Click here** ⊗	Sample SNAP/NAPLAN Question **Click here** ⊗	Sample SNAP/NAPLAN Question **Click here** ⊗

		Teaching Measurement ES1 – S1 Make comparisons	Teaching Measurement ES1 – S1 Use informal units of volume	Teaching Measurement S2 – S3 Relationship between unit size and number	Teaching Measurement S2 – S3 Measure in cubic cm	
		Syllabus Sample Units of Work *30 - 32*	Syllabus Sample Units of Work *73 - 75*			
		Learning Object Learning Federation - TALE	Learning Object Learning Federation - TALE *Squirt 2 Containers: Level 1* *Squirt 2 Containers: Level 2* *Cubirocks Galore* *Cubirocks are Measured* *Cubirocks Go*	Learning Object Learning Federation - TALE *Cubirocks: go* *Cubirocks: Galore* *Cubirocks: are measured* *Squirt 2 Containers: Level 1* *Squirt 2 Containers: Level 2*	Learning Object Learning Federation - TALE *Filling glasses: find the right glass* *How high* *What's in a cube: Level 1* *Inside a cubic metre* *How big is a cubic metre*	
Week 10	**Position** Students develop their representation of position through precise language and the use of grids and compass directions	*SGES1.3* ● Give and follow simple directions ● Use everyday language to describe position	*SGS1.3* ● Represent the position of objects using models and drawings ● Describe the position of objects using everyday language, including 'left' and 'right'	*SGS2.3* ● Use simple maps and grids to represent position and follow routes ● Determine the directions N,S,E,W and NE, NW, SE, SW, given one of the directions ● Determine the location of an object on a simple map using coordinates or directions	*SGS3.3* ● Interpret scales on maps and plans ● Make simple calculations using scale	
		Syllabus Page : 134	Syllabus Page : 135	Syllabus Page : 136	Syllabus Page :137	
				NAPLAN Strategies Doc 2008 Click here ☺ ☺	NAPLAN Strategies Doc 2008 Click here ☺	
			Sample BST/NAPLAN Questions **Click here** ⊗	Sample BST/NAPLAN Questions **Click here** ⊗	Sample SNAP/NAPLAN Question **Click here** ⊗	Sample SNAP/NAPLAN Question **Click here** ⊗
			Syllabus Sample Units of Work *80 - 82*	Syllabus Sample Units of Work *116 - 120*	Syllabus Sample Units of Work *154 - 156*	

		Learning Object [Learning Federation - TALE](#)	Learning Object [Learning Federation - TALE](#) *Direct a Robot: Which Way*	Learning Object [Learning Federation - TALE](#) *Direct a Robot: Which Way* *Design a park* *Design your own park*	Learning Object [Learning Federation - TALE](#) *Direct a Robot: Which Way* *Journey Planner: quickest route 1-4* *Design a neighbourhood* *Design your own school* *Design a school* *Design a farm* *Design a city* *Ladybird Mazes* *Contours*	