			Foundation			Year 1			Year 2	Year 3		Year 4		Year 5/6	
			Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8	Step 9	Step 10	Step 11	Step12	Step 13
Numbers and Number Systems	Whole Number	Subitising / Part-part-whole	*Structured and supported counting rhymes and songs*	Recognises collections to 5 in less than 2 seconds without counting	Consistently recognises collections to 6 or 7 in less than 2 seconds without counting	Consistently recognises collections to at least 10 without counting	Recognises 10 of these is 1 of those (ten as a composite or countable unit via bundling) Subitises to 20 where there is a clear group of 10	Identifies collections of tens and ones to 50 without counting	Recognises multiple collections to 20 without counting (eg, 3 threes, 1 six and 1 five)		` Recognises 1000 of these is 1 of those (recursion of 'hundreds, tens, and ones' pattern to name larger whole numbers)		Recognise 1 tenth of this is 1 of those (eg, 1 tenth of 10 is 1, 1 tenth of 100 is 10 and so on)		*Recognises recursive structure of number system (i.e.representation of place value parts/units extend in both directions from the decimal point)* *Also, that for each place a digit is moved to the left, its value increases by a factor of 10. Conversely, each place a digit is moved to the right decreases its value by a factor of 10*
		Matches numerals to collections (Reads numerals)	Matches some number words and symbols to small collections with support	Matches collections, number names and symbols for some numbers in the range 1 to 10 (Reads to 10)	Makes, models, names and records collections to 10 (Reads to 30)	Makes, names and records numbers to at least 30 (Reads to 99)	Makes, models names and records multiple groups of tens (1 ten, 2 tens, 3 tens as 10, 20, 30...) to 100	Makes, models names and records 2 digit numbers	Makes, models, names and records 3 digit numbers (Reads to 999)		Models, names, and records 4-digit numbers (Reads 4-digit numerals)	Models, names, and records 5-digit numbers (Reads 5-digit numerals)	Models, names, and records 6 digit numbers (Reads 6-digit numerals)	Models, names and records numbers to millions and beyond (Reads beyond 6-digit numerals)	
		Counting	Counts to 10 with support using number naming sequence	Counts collections to at least 10 starting from 1	Counts forwards & backwards from known, concealed, or given number in range to 10	Counts forwards & backwards from known, concealed, or given number in range to 30	As for previous level but in range to 100. Can count by 2s, 5s, or 10s (from 0)	Counts forwards in place-value parts (tens and ones), starting from any number, in range to 99	Counts forwards and backwards in place-value parts (hundreds, tens and ones) in range to 999	Counts in range to 9999	Counts forwards and backwards in place value parts for 4-digit numbers		Counts forwards and backwards in place value parts for 5 and 6 digit numbers		
		Comparing, ordering and locating	*Uses language to compare two small collections (eg, big, bigger, biggest, more than, less than…)*	Compares and orders *collections* to 5	Compares and orders numerals to 10	Locates to 10 Compares and orders to 30	Compares and orders to 99 Locates numbers to 20	Compares, orders and locates numbers to 99	Compares and orders numbers to 999	Compares, orders and Locates numbers to 999	Compares, and orders to 4 digits	Compares, orders and Locates to 4-digits	Compares and orders 5 and 6 digit numbers. *Locates negative numbers*	Orders, compares and locates 5 and 6 digit numbers.	Compares, orders, locates to millions and beyond
		Part-part-whole / Place Value partitioning		Recognises numbers to 5 in terms of their parts eg 5 is 4 and 1 or 3 and 2	Recognises numbers to 10 in terms of their parts (eg, 8 is 6 and 2, 1 more than 7, 2 less than 10 …)	Recognises teen numbers in terms of their 'ten' structure (eg 10 and 3 is 13)	Identifies place value of digits in 2 digit numbers (eg, 67 is 6 tens and 7 ones or 67 ones)		Identifies place value of digits in 3 digit numbers (eg, 467 is 4 hundreds, 6 tens and 7 ones)	Renames 3 digit numbers in terms of place-value parts (eg, 671 is 67 tens and 1 ones)	Renames 3 digit numbers in terms of place-value parts	Renames 4 digit numbers in terms of place-value parts	Renames 5 and 6 digit numbers. Rounds to nearest ten and nearest hundred	Rounds to nearest thousand, nearest hundredth, nearest tenth, nearest whole	Renames to millions and beyond. Rounds to nearest place-value part as required
	Fractions & Decimals	Strategies	*Model fractional language and concepts incidentally when dividing or sharing objects (eg an orange or a collection of berries) within small groups*			Recognises and names halves of familiar objects (eg, half an apple)	Recognises and names halves of familiar collections (eg, half the class)	Partitions to make halves and quarters	Uses halving strategy to construct region diagrams and line models of fractions in the halving family *Names and records familiar fractions using numerals and fraction names eg, '3 quarters' (not ¾) of the netball court*	Uses thirding strategy to construct region diagrams and line models of thirds	Combine halving and thirding strategies to construct region diagrams and line models of sixths	Combine halving and fifthing to make, name and record tenths	Uses partitioning strategies as appropriate to construct models of a range of fractions Express tenths in decimal form	Uses partitioning strategies (halving and fifthing) to make, name and record tenths and hundredths. Express hundredths in decimal and percentage form	Recognises that if the total number of parts increases (or decreases) by certain factor then the number of parts required increases (or decreases) by the same factor
		Key concepts					Recognises that equal parts are needed			Recognises the number of parts names the part	Recognises that as the total number of parts increases the size of each part decreases	Uses formal fraction notation to make, name and record fractions	Recognises relationship between fractions and multiplication (eg, thirds by halves are sixths) and fractions and division (eg, ¾ means 3 ÷ 4)		
		Comparing, ordering and locating fractions				Recognises and names halves of familiar objects (eg, half an apple)	Recognise that the 'whole' is bigger than one half	Recognise that one half is bigger than one quarter	Compares and orders **models** of proper and mixed fractions in the halving family	Locates, renames and **models** fractions in the halving family (eg, 3 and 3 quarters is 15 quarters or 7 halves and 1 quarters etc)	Compares and orders **models** of proper and mixed fractions involving thirds	Compares, orders, locates and renames ones and tenths Compares, orders, locates, and renames like fractions (eg, 2/3, 5/3 and 7/3)	Compares, orders, locates and renames related fractions (eg, 3/4 and 7/8)	Compares, orders, locates and renames tenths and hundredths (including mixed fractions) in decimal form	Renames unlike fractions Uses partitioning strategies and fraction renaming to compare and order unlike fractions Names, compares, orders and locates decimal fractions to thousandths and beyond

		Foundation			Year 1			Year 2	Year 3		Year 4		Year 5	
		Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8	Step 9	Step 10	Step 11	Step 12	Step 13
Operations (Calculating)	Addition (Teach in conjunction with subtraction)	*Recognises 'more' and 'less' in appropriate contexts (eg, The Three Bears)*	Offers solution to simple action stories when modelled by teacher, involving join and take-away in the range 1 – 5 using concrete materials and language and 'make-all/count-all' (count by ones) strategy	Uses concrete materials to model and solve addition action stories (1-10) involving join or combine using 'make all / count all' or counting on from known ('trusted') number	Uses concrete materials where some items are concealed to solve addition problems to 20 using counting on strategies or part-part-whole knowledge Poses and solves simple addition problems	Uses count on from larger (add 1, 2 or 3) or part-part-whole knowledge to mentally add small collections to one and two digit numbers	Uses doubles and near doubles strategy and part-part-whole knowledge to mentally add 1 and 2-digit numbers (eg, 8 and 9, 15 and 16) Use formal notation to record equations	Uses make-to-ten strategy to mentally add single digit numbers and beyond (eg, 8 and 6, 18 and 6) Solves 2 digit addition problems with support , eg model 28 + 36 using MAB, 10 frames or Open Number Lines	Uses number fact knowledge and renaming (grouping) to record solutions to problems involving 2 digit numbers Uses number fact knowledge to solve single digit, multiple addend problems	Uses number fact knowledge and renaming to record solutions to problems involving 3 digit numbers May use MAB initially Uses place-value strategies such as skip and jump and renaming to mentally solve 2 digit addition problems	Uses number fact knowledge and renaming (grouping) to record solutions to problems involving 4 digit numbers Solves problems involving multiple addends	Uses rounding strategies and/or renaming and number fact knowledge to estimate answers to addition problems (tenths to thousands)	Uses number fact knowledge to record solutions to addition problems (tenths to hundreds of thousands)	Uses strategies as appropriate to solve an extended range of addition and subtraction problems involving large whole numbers and decimal fractions Uses fraction renaming strategies to record solutions to addition and subtraction problems involving unlike proper and mixed fractions
	Subtraction			Uses concrete materials to model and solve simple subtraction action stories (1-10) using a make-all/count-all' strategy ie items are removed from a known collection and a new total is determined by counting the remainder.	Uses concrete materials to solve simple subtraction problems (take 1, 2 or 3) or use materials to solve missing addend (5 and something makes 8) problems using 'make-all/count-all' strategy	Solves and poses 'difference' problems (1-10) using counting back (1, 2 or 3) from known or part-part-whole knowledge i.e. Solve missing addend problems (numbers to 10) mentally	Uses count on from (think of addition) strategy to solve difference problems involving numbers to 20 eg understand 13 – 11 is the same as saying 11 + ☐ = 13 Use formal notation to record equations	Uses make-back-to-ten, halving and/or place-value-based strategies to mentally subtract single digit numbers from 1 and 2-digit numbers Solves 2 digit subtraction problems with support (eg, MAB and Open Number Lines)	Uses number fact knowledge and renaming (trading) to record solutions to subtraction problems involving 2 digit numbers May use MAB initially	Uses number fact knowledge and renaming to record solutions to subtraction problems involving 3 digit numbers May use MAB initially Uses place-value strategies such as skip and jump and renaming to mentally solve 2 digit subtraction problems	Uses number fact knowledge and renaming to record solutions to subtraction problems involving 4 digit numbers May use Number Expanders initially	Uses rounding strategies and/or renaming and number fact knowledge to estimate answers to subtraction problems (tenths to thousands)	Uses number fact knowledge to record solutions to addition problems (tenths to hundreds of thousands)	
	Multiplication (Teach in conjunction with division)	*Structured and supported spatial patterning or sharing games and activities as well as rhythmic songs or rhymes will help to build this concept.*		Makes and distributes small equal groups with support (eg, 2 paste bottles per table, 6 crayons per table)	Can determine total number of elements in a collection of grouped items, but counts grouped items by 1s without any reference to group structure (ie, uses make-all/count-all strategy)	Efficient counting using 'easy' composite units (2s, 5s and 10s) Elements of group still need to be modelled (e.g. counters)	Uses arrays to make, model and explore equal groups (rows or columns) and totals. Group structure still needs to be modelled e.g. Cuisenaire rods	Makes and names equal groups via sharing (eg, 24 shared among 3, 3 eights) Uses consistent language, eg 2 fours, 3 sixes …	Builds on from known to count arrays and regions more efficiently (eg, for 6 fours, uses 3 fours and doubles the total).Turns arrays to show commutativity	Uses formal notation Uses patterns and/or place-value strategies to determine x5 and x9 facts and commutative property for 5x and 9x facts.	Uses the area idea, extended number fact knowledge, and renaming to record solutions to 2-digit by 1-digit problems Represents and solves simple Combinations problems	Recalls multiplication and complimentary division facts Uses place-value based strategies (rounding) to estimate or mentally calculate solutions to 2 digit by 1 digit multiplication problems	Uses extended number fact knowledge and renaming to record solutions to 2 digit by 2 digit multiplication problems May use MAB initially	Uses rounding to estimate solutions to 2 digit by 2 digit multiplication problems Uses strategies as appropriate to solve an extended range of problems (eg, involving ratio, rate, larger whole numbers and decimals to hundredths)
	Mental Strategies					Use group structure and stress or rhythmic counting to determine total Identifies x10 pattern	Uses doubles strategy for x2	(May need to use 'double count' to determine total with fingers standing for groups)	Uses doubles and 1 more group strategy for x3 facts and commutative property for 3x facts	Uses double doubles strategy for x4 facts and commutative property for 4x facts Uses x10 and halve strategy for x5	Uses strategies as appropriate for remaining facts (see NTCF Band 2 Calculating for details)			
	Division			Shares collections equally in supported play activity	Shares (approximately) equally by using structured 1:1 correspondence to make groups	Shares small collections without support and shares large collections more efficiently (eg, dealing out 3 cards at a time)	Recognises remainders as a consequence of not being able to share physical collections equally (eg, 24 shared among 7)	Recognises partitioning can be used to assign remainders (eg, 9 pikelets shared among 4 is 2 and 1 quarter per share)	Uses bundling materials and MAB to solve sharing problems involving 2 digit numbers and 1 digit divisors	Uses think of multiplication strategy for division facts (eg, 36 divided by 4, think 4 whats are 36?) Uses formal notation	Uses sharing and MAB to solve and record division problems involving 2 and 3 digit numbers and 1 digit divisors	Uses think of multiplication strategy to mentally solve problems involving 2 and 3 digit numbers and 1 digit divisors	Uses number fact knowledge and renaming to record solutions division problems May use MAB initially	Estimates and solves a range of division problems using strategies as appropriate