NUMBER						
YEAR	NUMBER & PLACE VALUE	ADDITION & SUBTRACTION	MULTIPLICATION & DIVISION	MONEY	FRACTIONS	STATISTICS
N	NNP1 Use some number names accurately in play	NAS1 Separate a group of 3/4 objects in different ways		RMY1 Use everyday language related to money		
	NNP2 Recite numbers in order to 10	NAS2 Recognise when the total number of objects in a group are the same				
	NNP3 Know that numbers identify how many objects are in a set					
	NNP4 Recognise numerals 1-5					
	NNP5 Match numeral/quantity correctly to 5					
	NNP6 Represent numbers using fingers					
	NNP7 Represent numbers using pictures					
	NNP8 Represent numbers using marks					
	NNP9 Know not only objects can be counted [e.g. steps, claps, jumps]					
	NNP10 Compare two groups of objects saying when they have the same number and when there are more					

NUMBER						
YEAR	NUMBER & PLACE VALUE	ADDITION & SUBTRACTION	MULTIPLICATION & DIVISION	MONEY	FRACTIONS	STATISTICS
R	RNP1 Count up to 4 objects saying number name for each item	RAS1 Use language "more" and "fewer" to compare two sets of objects	RMD1 Solve problems involving doubling to total 10	RMY1 Use everyday language related to money [pay, how much]	RFP1 Solve problems involving halving from up to 10	
	RNP2 Count objects to 10	RAS2 Say the number that is one more than a given number	RMD2 Solve problems involving sharing to 10	RMY2 Use everyday language related to money [pound, pence]	RFP2 Solve problems involving halving from up to 20	
	RNP3 Count out up to 6 objects from larger group	RAS3 Say the number that is one less than a given number	RMD3 Solve problems involving doubling to total 20	RMY3 Use everyday language related to money [change, cost, price]		
	RNP4 Select correct numeral to represent 1-5 objects	RAS4 Find one more/less from a group of up to 5 objects	RMD4 Solve problems involving sharing to 20			
	RNP5 Select correct numeral to represent 1-10 objects	RAS5 Find the total number of items in two groups by counting all of them				
	RNP6 Estimate/count irregular arrangement of up to 10 objects	RAS6 Find one more/less from a group of up to 10 objects				
	RNP7 Count reliably with numbers from 1-20	RAS7 Say which number is one more/less than a given number to 10				
	RNP8 Place numbers from 1-20 in order	RAS8 Say which number is one more/less than a given number to 20				
	RNP9 Know the value of each digit in numbers up to 20	RAS9 Add two single-digit numbers by counting on				
		RAS10 Subtract two single-digit numbers by counting back				

NUMBER

YEAR	NUMBER & PLACE VALUE	ADDITION & SUBTRACTION	MULTIPLICATION & DIVISION	MONEY	FRACTIONS	STATISTICS
1	1NV1 Count to and across 100, forwards/backwards, beginning with 0 or 1	1AS1 Read/write/interpret mathematical statements involving addition/subtraction/equals signs	1MD1 Double and halve numbers and quantities	1MY1 Recognise and know the value of different denominations of coins and notes	1FP1 Recognise, find and name a half as one of two equal parts of an object or shape	
	1NV2 Count to and across 100, forwards/backwards, beginning from any given number	1AS2 Use vocabulary "put together", "add", "take away" "more than", "less than"	1MD2 Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects		1FP2 Recognise, find and name a half as one of two equal parts of a quantity	
	1NV3 Count numbers to 100 in numerals	1AS3 Represent/use number bonds and related subtraction facts within 20	1MD3 Solve one-step problems involving multiplication and division, by calculating the answer using pictorial representations		1FP3 Recognise, find and name a quarter as one of four equal parts of an object or shape	
	1NV4 Recognise the value of each digit to 100					
	1NV5 Read and write numbers from 1 to 20 in numerals	1AS4 Use vocabulary "altogether", "total"	1MD4 Solve one-step problems involving multiplication and division, by calculating the answer usingarrays		1FP4 Recognise, find and name a quarter as one of four equal parts of a quantity.	
	1NV6 Count in multiples of twos	1AS5 Add and subtract one-digit and two-digit numbers to 20, including zero	1MD5 Make connections between arrays, number patterns, and counting in twos, fives and tens.		1FP5 Connect halves and quarters to the equal sharing and grouping of sets of objects	
	1NV7 Count in multiples of fives	1AS6 Solve one-step problems that involve addition and subtraction, using concrete objects				
	1NV8 Count in multiples of tens	1AS7 Solve one-step problems that involve addition and subtraction, using pictorial representations				
	1NV9 Given a number, identify one more	1AS8 Solve one-step problems that involve addition and subtraction, using missing numbers [e.g. 7 = □ – 9]				
	1NV10 Given a number, identify one less					
	1NV11 Identify and represent numbers using objects including the number line					
	1NV12 Identify and represent numbers using pictorial representations including the number line					
	1NV13 Use the language of: equal to					
	1NV14 Use the language of: more than, less than [fewer], how many more/less					
	1NV15 Use the language of: most, least					
	1NV16 Read and write numbers to 100 in numerals					
	1NV17 Read and write numbers from 1 to 20 in words					
	1NV18 Use ordinal numbers [first, second, third…]					

NUMBER

YEAR	NUMBER & PLACE VALUE	ADDITION & SUBTRACTION	MULTIPLICATION & DIVISION	MONEY	FRACTIONS	STATISTICS
2	2NP1 Count in steps of 2,3 and 5 from 0, forward and backward	2AS1 Recall and use addition and subtraction facts to 20 fluently	2MD1 Solve problems involving x and ÷, using repeated addition	2MY1 Solve problems with addition and subtraction using coins and pictorial representations	2FP1 Connect unit fractions to equal sharing and grouping	2ST1 Record/collate/organise/ compare information
	2NP2 Count in tens from any number, forward and backward	2AS2 Add and subtract a two-digit number and ones using concrete objects and pictorial representations	2MD2 Recall/use x and ÷ facts for the 2 multiplication table, including recognising odd and even numbers and connect them to each other	2MY2 Recognise/use symbols for pounds (£) and pence (p), recording separately	2FP2 Recognise, find, name and write fractions 1/4, 2/4 and 3/4 of a set of objects [3/4 as the first example of a non-unit fraction]	2ST2 Interpret/construct simple pictograms. Ask/answer simple questions by counting the number of objects in each category
	2NP3 Recognise the place value of each digit in a two-digit number (tens, ones)	2AS3 Add and subtract a two-digit number and ones mentally	2MD3 Recall/use x and ÷ facts for the 5 and 10 multiplication tables and connect them to each other	2MY3 Combine amounts to make a particular value	2FP3 Recognise, find, name and write fractions 1/3 of a set of objects	2ST3 Interpret/construct tally charts. Ask/answer simple questions by counting number of objects
	2NP4 Identify and represent numbers using different representations, including the number line	2AS4 Extend understanding of the language of addition and subtraction to include sum/difference	2MD4 Connect the 10 x table to place value, and the 5 x table to the divisions on the clock face	2MY4 Find different combinations of coins that equal the same amounts of money	2FP4 Recognise, find, name and write fractions 1/4 , 2/4 and 3/4 of a quantity	2ST4 Interpret/construct tally charts. Use many-to-one correspondence with simple ratios 2, 5, 10
	2NP5 Estimate numbers using different representations, including the number line	2AS5 Add and subtract two two-digit numbers using concrete objects and pictorial representations	2MD5 Solve problems involving multiplication and division, using materials and arrays	2MY5 Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	2FP5 Recognise, find, name and write fractions 1/3 of a quantity	2ST5 Interpret/construct block diagrams. Ask/answer questions by sorting categories by quantity
	2NP6 Compare and order numbers from 0 up to 100	2AS6 Solve problems with addition and subtraction using concrete objects and pictorial representations	2MD6 Solve problems in contexts involving x and ÷, using mental methods and multiplication and division facts		2FP6 Write simple fractions [e.g. ½ of 6 = 3]	2ST6 Interpret/construct block diagrams. Ask/answer questions by sorting the categories by quantity. Use many-to-one correspondence
	2NP7 Use <, > and = signs	2AS7 Add and subtract three one-digit numbers using concrete objects and pictorial representations	2MD7 Calculate mathematical statements for x and ÷ within the 2,5,10 multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs		2FP7 Recognise the equivalence of 2/4 and 1/2	2ST7 Interpret/construct simple tables. Ask/answer simple questions by sorting the categories by quantity
	2NP8 Read and write numbers to at least 100 in numerals	2AS8 Add and subtract a two-digit number and tens using concrete objects and pictorial representations	2MD8 Show that multiplication of 2 numbers can be in any order (commutative) and division of 1 number by another cannot [e.g. 4 × 5 = 20; 20 ÷ 5 = 4]		2FP8 Count in fractions up to 10, starting from any number and using the 1/2 and 2/4 equivalence on the number line [e.g. 1¼ , 1 2/4 (or 1 ½), 1 ¾ , 2]	2ST8 Interpret/construct simple tables. Ask/answer simple questions by sorting the categories by quantity. Use many-to-one correspondence
	2NP9 Read and write numbers to at least 100 in words	2AS9 Add and subtract a two-digit number and tens mentally				2ST9 Ask/answer questions about totalling/comparing categorical data
	2NP10 Recognise patterns within the number system	2AS10 Recognise/use the inverse relationship between + and - . Use to check calculations and solve missing number problems				
	2NP11 Begin to understand zero as a place holder	2AS11 Use + and - facts to 20 to derive and use related facts up to 100 [e.g. 3 + 7 = 10; 10 – 7 = 3 and 7 = 10 – 3 to calculate 30 + 70 = 100]				
	2NP12 Partition numbers in different ways [e.g. 23 = 20 + 3 ; 23 = 10 + 13]	2AS12 Add and subtract 3 one-digit numbers mentally				
	2NP13 Read/measure temperature (°C) using thermometers	2AS13 Add and subtract 2 two-digit mentally				
		2AS14 Show that addition of 2 numbers can be done in any order [commutative] and subtraction of 1 number from another cannot				

NUMBER

YEAR	NUMBER & PLACE VALUE	ADDITION & SUBTRACTION	MULTIPLICATION & DIVISION	MONEY	FRACTIONS	STATISTICS
3	3NV1 Count from 0 in multiples of 4 and 8	3AS1 Solve varied addition and subtraction questions using mental calculations with two-digit numbers; the answers may exceed 100	3MD1 Recall and use multiplication and division facts for the 3 multiplication tables	3MY1 Add amounts of money using both £ and p in practical contexts	3FP1 Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts	3ST1 Interpret and present data using pictograms
	3NV2 Count from 0 in multiples of 50 and 100	3AS2 Add and subtract a three digit number and ones mentally [e.g. 369 – 7; 254 – 9]	3MD2 Recall and use multiplication and division facts for the 4 and 8 multiplication tables	3MY2 Add and subtract amounts of money to give change, using both £ and p in practical contexts	3FP2 Count up and down in tenths; recognise that tenths arise from dividing one-digit numbers or quantities by 10. Connect tenths to place value and division by 10	3ST2 Solve one-step questions using information presented in scaled pictograms [e.g. 2,5,10 units per cm]
	3NV3 Find 10 or 100 more or less than a given number	3AS3 Add and subtract a three digit number and tens mentally [e.g. 459 + 10; 263 + 30; 529 – 20]	3MD3 Through doubling, connect the 2, 4 and 8 multiplication tables	3MY3 Begin to use decimal notation related to money (e.g. £1.45 = 145p)	3FP3 Recognise, find and write fractions of a discrete set of objects using unit fractions with small denominators	3ST3 Interpret and present data using bar charts
	3NV4 Recognise the place value of each digit in a three-digit number (hundreds, tens, ones)	3AS4 Add and subtract a three digit number and hundreds mentally [643 + 200; 475 – 300]	3MD4 Solve missing number problems, involving multiplication and division		3FP4 Recognise and use fractions as numbers using unit fractions with small denominators	3ST4 Solve one-step questions using information presented in scaled bar charts [e.g. 2,5,10 units per cm]
	3NV5 Apply partitioning related to place value using varied and increasingly complex problems [e.g. 146 = 100 + 40 and 6, 146 = 130 + 16]	3AS5 Estimate the answer to a calculation and use inverse operations to check answers	3MD5 Write/calculate mathematical statements for multiplication and division using the multiplication tables that they know including for two-digit numbers times one-digit numbers using formal written methods [short multiplication and division]		3FP5 Compare and order unit fractions. Understand unit fractions as numbers on the number line	3ST5 Interpret and present data using tables
	3NV6 Compare and order numbers up to 1000	3AS6 Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	3MD6 Solve positive integer scaling problems involving multiplication and division		3FP6 Recognise, find and write fractions of a discrete set of objects using non-unit fractions with small denominators	3ST6 Solve one-step questions using information presented in tables
	3NV7 Read and write numbers up to 1000 in numerals and in words		3MD7 Write/calculate mathematical statements for multiplication and division using the multiplication tables that they know including for two-digit numbers times one-digit numbers using mental methods		3FP7 Recognise and use fractions as numbers using non-unit fractions with small denominators	3ST7 Solve two-step questions [e.g. 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms
	3NV8 Count in ones, tens and hundreds and order numbers to 1000		3MD8 Solve correspondence problems in which n objects are connected to m objects involving multiplication and division		3FP8 Compare and order fractions with the same denominators. Understand non- unit fractions as numbers on the number line	3ST8 Solve two-step questions [e.g. 'How many more?' and 'How many fewer?'] using information presented in tables
			3MD9 Develop efficient mental methods to derive related facts [e.g. commutativity/associativity]		3FP9 Add and subtract fractions with the same denominator within one whole [e.g. 5/7 + 1/7 = 6/7]	
					3FP10 Recognise and show, using diagrams, equivalent fractions with small denominators	

NUMBER

YEAR	NUMBER & PLACE VALUE	ADDITION & SUBTRACTION	MULTIPLICATION & DIVISION	MONEY & DECIMALS	FRACTIONS & PERCENTAGES	STATISTICS
4	4NV1 Count in multiples of 25 and 1000	4AS1 Estimate and use inverse operations to check answers to a calculation	4MD1 Recall multiplication and division facts for multiplication tables up to 12x12	4MY1 Estimate, compare and calculate money in pounds and pence using decimal notation to record	4FP1 Know that decimals and fractions are different ways of expressing numbers and proportions	4ST1 Solve comparison problems using information presented in tables
	4NV2 Find 1000 more or less than a given number	4AS1 Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	4MD2 Recognise and use factor pairs and commutativity in mental calculations	4MY2 Recognise/write decimal equivalents of any number of tenths/hundredths. Use decimal notation and associated language	4FP2 Add and subtract fractions with the same denominator	4ST2 Solve sum and difference problems using information presented in tables
	4NV3 Recognise the place value of each digit in a four-digit number	4AS3 Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	4MD3 Combine knowledge of number facts and rules of arithmetic to solve mental and written calculations [e.g. 2x6x5 = 10x6 = 60]	4MY3(D) Recognise and write decimal equivalents to ¼; ½; ¾	4FP3 Extend the use of the number line to connect fractions & numbers. Practise counting simple fractions and decimals forwards /backwards	4ST3 Interpret and present discrete and continuous data using appropriate graphical method, (bar charts)
	4NV4 Count in multiples of 9		4MD4 Use place value, known and derived facts to x and ÷ mentally, including multiplying by 0 and 1 and dividing by 1	4MY4(D) Compare numbers with the same number of decimal places up to two decimal places	4FP4 Recognise and show, using diagram, families of common equivalent fractions	4ST4 Solve comparison problems using information presented in bar charts, pictograms and other graphs
	4NV5 Count in multiples of 6,7,8		4MD5 Use place value, known and derived facts to multiply and divide mentally, multiplying together three numbers	4MY5 Solve simple money problems involving fractions and decimals to two decimal places	4FP5 Count up/down in hundredths; recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten. Connect hundredths to tenths and place value	4ST5 Solve sum and difference problems using information presented in bar charts, pictograms and other graphs
	4NV6 Count backwards through zero to include negative numbers		4MD6 Multiply two-digit and three-digit numbers by a one-digit number using formal written layout [short multiplication]	4MY6(D) Round decimals with one decimal place to the nearest whole number	4FP6 Solve problems involving increasingly harder fractions to calculate quantities	4ST6 Interpret/present discrete/continuous data using appropriate graphical method [time graphs]
	4NV7 Order and compare numbers beyond 1000		4MD7 Solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one digit		4FP7 Solve problems involving increasingly harder fractions to calculate fractions to divide quantities, including non-unit fractions where the answer is a whole number	4ST7 Relate graphical representation of data to recording change over time
	4NV8 Round any number to the nearest 10,100 or 1000		4MD8 Write statements about the equality of expressions [e.g. use distributive law 39x7=30x7+9x7]		4FP8 Find the effect of dividing one-digit numbers by 10 and 100, identify the value of the digits in the answer as units, tenths and hundredths	
	4NV9 Identify, represent and estimate numbers using different representations		4MD9 Write statements about the equality of expressions [e.g. use associative law [(2x3)x4=2x(3x4)]		4FP9 Find the effect of dividing two-digit numbers by 10 and 100, identify the value of the digits in the answer as units, tenths and hundredths	
	4NV10 Solve number and practical problems with increasingly large positive numbers		4MD10 Use mental methods with three-digit numbers to derive facts [e.g. 600 ÷ 3 = 200 can be derived from 2x3=6]			
	4NV11 Read Roman numerals to 100 (I to c) and know that over time, the numeral system changed to include the concept of zero and place value		4MD11 Solve problems involving multiplying and adding, including integer scaling problems			
			4MD12 Solve problems involving x and adding, including harder correspondence problems such as *n* objects and connected to *m* objects			

NUMBER

YEAR	NUMBER & PLACE VALUE	ADDITION & SUBTRACTION	MULTIPLICATION & DIVISION	MONEY & DECIMALS	FRACTIONS & PERCENTAGES	STATISTICS
5	5NV1 Recognise/describe linear number sequences involving fractions and decimals [3, 3 ½ , 4…]	5AS1 Add/subtract whole numbers with more than 4 digits using formal written methods (columnar)	5MD1 Multiply numbers up to 4 digits by a one-digit number using a formal written method	5MY1(D) Round decimals with 2 decimal places to the nearest whole number	5FP1 Use fractions including bridging zero on a number line. Recognise mixed numbers/improper fractions	5ST1 Solve comparison problems using information presented in a line graph
	5NV2 Interpret negative numbers in context. Count forwards/backwards positive/negative numbers through 0	5AS2 Use rounding to check answers to calculations and, in the context of a problem, levels of accuracy	5MD2 Identify multiples and factors. Use to construct equivalence statements [e.g. 4x35 = 2x2x35]	5MY2(D) Round decimals with 2 decimal places to 1 decimal place	5FP2 Compare and order fractions whose denominators are all multiples of the same number	5ST2 Solve sum and difference problems using information presented in a line graph
	5NV3 Find the term-to-term rule in words [e.g. add ½]	5AS3 Add/subtract numbers mentally with increasingly large numbers	5MD3 Know/use the vocabulary of prime/composite [non-prime]numbers	5MY3(D) Read and write numbers with up to 3 decimal places	5FP3 Count forwards and backwards in simple fractions	5ST3 Read and interpret information in tables, including timetables
	5NV4 Read/write/order/compare numbers to at least 1,000,000 and determine the value of each digit	5AS4 Solve + and - multi-step problems in contexts, deciding which operations/methods to use and why	5MD4 Multiply and divide numbers mentally, drawing upon known facts to make larger calculations	5MY4(D) Order and compare numbers with up to 3 decimal places	5FP4 Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per 100'	5ST4 Complete information in tables, including timetables
	5NV5 Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000		5MD5 Use/explain equals sign to indicate equivalence, including in missing number problems	5MY5(D) Solve problems which require knowing percentage and decimal equivalents of ½ and ¼.	5FP5 Add and subtract fractions with the same denominator	
	5NV6 Round any number up to 1,000,000 to nearest 10/100/1,000		5MD6 Find common factors of 2 numbers	5MY6(D) Use decimals including bridging zero on a number line	5FP6 Find fractions of numbers/quantities	
	5NV7 Round any number up to 1,000,000 to nearest 10,000/100,000		5MD7 Find all factor pairs of a number	5MY7 Solve money problems using decimal notation [four operations]	5FP7 Read/write decimal numbers as fractions [e.g. 0.71 = 71/100]	
	5NV8 Read Roman numerals to 1,000 (M). Recognise years written in Roman numerals		5MD8 Know and use the vocabulary of prime factors	5MY8(D) Know that percentages, decimals and fractions express proportions	5FP8 Mentally add/subtract tenths	
			5MD9 Establish whether a number up to 100 is prime	5MY9(D) Solve problems which require knowing percentage and decimal equivalents of 1/5, 2/5, 4/5	5FP9 Write percentages as a fraction with denominator 100	
			5MD10 Recall prime numbers up to 19	5MY10(D) Write percentages as a decimal	5FP10 Mentally add/subtract one-digit whole numbers and tenths	
			5MD11 Multiply numbers to 4 digits by a two-digit number using formal written method [long multiplication]	5MY11(D) Relate thousandths to decimal equivalents	5FP11 Add and subtract fractions with denominators that are multiples of the same number	
			5MD12 Divide numbers to 4 digits by a one-digit number using the formal written method [short division]	5MY12 (D) Solve problems which require knowing percentage/decimal equivalents of those fractions with a denominator of a multiple of 10 or 25	5FP12 Identify/name/write equivalent fractions of a given fraction, represented visually, including tenths and hundredths	
			5MD13 Interpret remainders for context including fractions, decimals, rounding [e.g. 98 ÷ 4 = 98/4 = 24 r 2 = 24 ½ = 24.5 ≈ 25]		5FP13 Convert from one form to another and write mathematical statements > 1 as a mixed number [e.g. 2/5 + 4/5 = 6/5 = 1 1/5]	
			5MD14 Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000		5FP14 Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	
			5MD15 Recognise/use square numbers and notation for squared (^{2}).		5FP15 Connect multiplication by a fraction to using fractions as operators [fractions of] and to division	
			5MD16 Express distributivity as a(b+c) = ab + ac		5FP16 Recognise/use thousandths and relate them to tenths/hundredths	
			5MD17 Recognise and use cube numbers and the notation for cubed (^{3})			

NUMBER

YEAR	NUMBER, PLACE VALUE & ALGEBRA	ADDITION & SUBTRACTION	MULTIPLICATION & DIVISION	MONEY & DECIMALS	FRACTIONS & PERCENTAGES	STATISTICS
6	6NV1 Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit	6AS1 Solve addition and subtraction multi-step problems in contexts, deciding which operations to use and why	6MD1 Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method [long multiplication]	6MY1(D) Multiply and divide decimals by whole numbers in practical contexts	6FP1 Use common factors to simplify fractions	6ST1 Interpret and construct pie charts and use these to solve problems using knowledge of angles, fractions and percentages
	6NV2 Round any whole number to required degree of accuracy [e.g. to the nearest 10, 20, 50 etc]	6AS2 Use negative numbers in context, and calculate intervals across zero	6MD2 Divide numbers up to 4 digits by a two-digit number using the formal written method [short division]	6MY2(D) Identify the value of each digit in numbers given to 3 decimal places	6FP2 Use common multiples to express fractions in the same denomination	6ST2 Link percentages or 360° to calculate angles of a pie chart
	6NV3 Use symbols and letters to represent variables and unknowns	6AS3 Add and subtract positive and negative integers [e.g. to measure temperature] using the number line	6MD3 Divide numbers up to 4 digits by a two-digit whole number using the formal written method [long division]		6FP3 Compare and order fractions, including fractions >1	6ST3 Interpret/construct line graphs relating 2 variables and use these to solve problems from own enquiry
	6NV4 Express missing number problems algebraically	6AS4 Explore the order of operations using brackets	6MD4 Interpret remainders as whole number remainders, fractions or by rounding, as appropriate for context		6FP4 Add and subtract fractions with different denominators and mixed numbers, using concept of equivalent fractions	6ST4 Calculate/interpret the mean as an average knowing when it is appropriate to find mean of a data set
	6NV5 Generate/describe linear number sequences		6MD5 Identify common factors, common multiples and prime numbers		6FP5 Multiply simple pairs of proper fractions, writing the answer in its simplest form [e.g. ¼ x ½ = 1/8]	
	6NV6 Use simple formulae		6MD6 Multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places		6FP6 Divide proper fractions by whole numbers [e.g. 1/3 ÷ 2 = 1/6]	
	6NV7 Find pairs of numbers that satisfy an equation with 2 unknowns		6MD7 Multiply one-digit numbers with up to two decimal places by whole numbers		6FP7 Calculate decimal fraction equivalents for a simple fraction.	
	6NV8 Enumerate all possibilities of combinations of 2 variables		6MD8 Use written division methods in cases where the answer has up to two decimal places		6FP8 Recall/use equivalences between simple fractions, decimals and percentages, including in different contexts	
			6MD9 Explore the order of operations using brackets		6FP9 Associate a fraction with division	
			6MD10® Solve problems involving relative sizes of 2 quantities where missing values can be found using integer multiplication and division facts. Use notation (a:b) to record ratio/proportion		6FP10® Solve problems involving unequal sharing/grouping using knowledge of fractions and multiples Use notation (a:b) to record ratio/proportion.	
					6FP11® Solve problems involving the calculation of percentages [e.g. 15% of 360] and use percentages for comparison	

MEASUREMENT					GEOMETRY	
YEAR	LENGTH	MASS	CAPACITY/VOLUME	TIME	SHAPE	POSITION
N	RLG1 Compare 2 items by length or height [long/short]	NMS1 Compare 2 items by weight [heavy/light]	NCV1 Compare 2 items by capacity [full, empty]	NTM3 Measure short periods of time in simple ways	NSH1 Make arrangements with shapes	NPS1 Describe relative position [in front, behind, above, below]
					NSH2 Identify similarities of shapes in the environment	
					NSH3 Sustain interest when using construction	
					NSH4 Talks about arrangement of shapes	
					NSH5 Talk about shapes of everyday objects [e.g. round/tall]	

MEASUREMENT					GEOMETRY	
YEAR	LENGTH	MASS	CAPACITY/VOLUME	TIME	SHAPE	POSITION
R	RLG1 Order 2 items by length or height [longer than/shorter than]	RMS1 Order 2 items by weight [heavier than/lighter than]	RCV1 Order 2 items by capacity [full, empty, half full]	RTM1 Use everyday language related to time [day, night, morning, afternoon]	RSH1 Select a named shape [square, rectangle, triangle, circle, cube, cone, cylinder, sphere]	RPS1 Describe relative position [in front of, behind, next to, above, below]
	RLG2 Order 3 items by length or height [longer than/shorter than]			RTM2 Order/sequence familiar events [first, then, after, later]	RSH2 Use mathematical names/terms for 3D shapes	
				RTM3 Measure short periods of time in different ways	RSH3 Use mathematical names/terms for 2D shapes [square, rectangle, triangle, circle]	
					RSH4 Use familiar objects and common shapes to create patterns	
					RSH5 Use familiar objects and common shapes to build models	
					RSH6 Use familiar objects and common shapes to re-create patterns	

MEASUREMENT					GEOMETRY	
YEAR	LENGTH	MASS	CAPACITY/VOLUME	TIME	SHAPE	POSITION
1	1LG1 Measure lengths/height using non-standard units	1MS1 Measure mass [weight] using non-standard units	1CV1 Measure capacity/volume using non-standard units	1TM1 Compare, describe and solve practical problems for time [quicker, slower, earlier, later]	1SH1 Handle common 2D shapes and relate to everyday objects	1PS1 Describe position, using the language of position and direction including: left/right, top/middle/ bottom, on top of, in front of, above, between, around, near, close/far
	1LG2 Measure and begin to record lengths and heights using manageable common standard units	1MS2 Measure and begin to record mass/weight using manageable common standard units	1CV2 Measure and begin to record capacity and volume using manageable common standard units	1TM2 Measure and begin to record time [hours, minutes, seconds]	1SH2 Handle common 3D shapes and relate to everyday objects	1PS2 Use the language of motion, including:, up/down, forwards/ backwards, inside/outside
	1LG3 Compare, describe and solve practical problems for lengths and heights [long/short, longer/shorter, tall/short, double/half]	1MS3 Compare, describe and solve practical problems for mass/weight [heavy/light]	1CV3 Compare, describe and solve practical problems for capacity and volume [full/empty, more than, less than]	1TM3 Sequence events in chronological order using language [before/after, next, first]	1SH3 Recognise and name common 2-D shapes [rectangles (including squares), circles, triangles] in different orientations and sizes	1PS3 Describe direction and movement, including whole and half turns
	1LG4 Begin to use a ruler	1MS4 Compare, describe and solve practical problems for mass/weight [heavier than, lighter than]	1CV4 Compare, describe and solve practical problems for capacity and volume [half, half full, quarter]	1TM4 Sequence events in chronological order using language [today/yesterday/tomorrow, morning/afternoon/evening]	1SH4 Recognise and name common 3-D shapes [cuboids (including cubes), pyramids, spheres] in different orientations and sizes	1PS4 Describe direction and movement, including quarter and three-quarter turns
	1LG5 Use vocabulary “distance between”	1MS5 Begin to use weighing scales	1CV5 Begin to use graduated containers	1TM5 Recognise and use language relating to dates, including days of the week, months of the year	1SH5 Know that rectangles, triangles, cuboids and pyramids are not always similar to each other	1PS5 Make whole, half, quarter and three-quarter turns in both directions and connect turning clockwise with movement on a clock face
	1LG6 Connect halves and quarters to the equal sharing and grouping of sets of measures	1MS6 Connect halves and quarters to the equal sharing and grouping of sets of measures	1CV6 Connect halves and quarters to the equal sharing and grouping of sets of measures	1TM6 Recognise and use language relating to dates, including, weeks, months and years	1SH6 Recognise/create repeating patterns with objects and with shapes	
				1TM7 Tell the time to the hour using language of o’clock. Draw the hands on a clock face to show times.		
				1TM8 Tell the time to half past the hour using language of half past. Draw the hands on a clock face to show these times.		

MEASUREMENT					GEOMETRY	
YEAR	LENGTH	MASS	CAPACITY/VOLUME	TIME	SHAPE	POSITION
2	2LG1 Choose/use appropriate standard units (m/cm) to estimate and measure in any direction to the nearest appropriate unit using rulers	2MS1 Choose/use appropriate standard units (kg/g) to estimate and measure to the nearest appropriate unit using scales	2CV1 Choose/use appropriate standard units (litre/ml) to estimate and measure to nearest appropriate unit using graduated vessels	2TM1 Compare and sequence intervals of time	2SH1 Compare/sort common 2D/3D shapes and everyday objects	2PS1 Order/arrange combinations of mathematical objects in patterns and sequences
	2LG2 Compare and order lengths and record results using <, >, =. Record using standard abbreviations (m/cm)	2MS2 Compare and order mass and record results using <, >, =. Record using standard abbreviations (kg/g)	2CV2 Compare and order volume/capacity and record results using <, >, =	2TM2 Tell/write the time including quarter past/to the hour. Draw hands on clock face to show these times	2SH2 Identify/describe properties of 2D shapes [quadrilaterals and polygons] including number of edges	2PS2 Use mathematical vocabulary to describe position and direction including in a straight line
	2LG3 Measure and draw straight lines in centimetres			2TM3 Tell/write the time to five minutes. Draw hands on clock face to show these times	2SH3 Identify/describe properties of 2D shapes, including line symmetry in a vertical line	2PS3 Use mathematical vocabulary to describe movement including in a straight line and distinguishing between rotation as a turn
				2TM4 Know number of minutes in an hour and number of hours in a day	2SH4 Identify/describe properties of 3D shapes [cuboids, prisms and cones] including number of edges, vertices and faces	2PS4 Order/arrange combinations of mathematical objects in patterns and sequences in different orientations
				2TM5 Begin to write the time as it would show on a 12 hour digital clock	2SH5 Identify 2D shapes on the surface of 3D shapes	2PS5 Use concept and language of angles to instruct and describe turn by applying rotations in practical contexts
						2PS6 Describe rotation as a turn in terms of clockwise and anticlockwise
						2PS7 Describe rotation as a turn in terms of right angles for quarter, half and three-quarter turns
						2PS8 Program robots using instructions given in right angles

MEASUREMENT					GEOMETRY	
YEAR	LENGTH	MASS	CAPACITY/VOLUME	TIME	SHAPE	POSITION
3	3LG1 Measure and compare lengths (m/cm/mm)	3MS1 Measure and compare mass (kg/g)	3CV1 Measure and compare volume/capacity (l/ml)	3TM1 Use vocabulary such as morning, afternoon, noon and midnight	3SH1 Draw 2D shapes [symmetrical and non-symmetrical polygons]	
	3LG2 Compare and use mixed units [e.g. 5m= 500 cm] including simple scaling by integers [e.g. twice as long]	3MS2 Compare and use mixed units [e.g. 1kg and 200g] including simple scaling by integers [e.g. five times heavier]	3CV2 Compare/use mixed units [e.g. 2 litres and 20ml] including simple scaling by integers [e.g. 3x 250ml containers]	3TM2 Tell and write the time from a 12-hour analogue clock	3SH2 Make 3D shapes using modelling materials [symmetrical and non-symmetrical polyhedra]	
	3LG3 Add and subtract lengths (m/cm/mm)	3MS3 Add and subtract mass (kg/g)	3CV3 Add and subtract volume/capacity (l/ml)	3TM3 Use vocabulary: o'clock, a.m./p.m.	3SH3 Identify horizontal and vertical lines including length of lines	
				3TM4 Tell and write the time from a 12-hour digital clock	3SH4 Measure the perimeter of simple 2D shapes	
				3TM5 Compare durations of events [e.g. to calculate the time taken by particular events or tasks]	3SH5 Recognise angles as a property of a shape	
				3TM6 Know the number of seconds in a minute and the number of days in each month, year and leap year	3SH6 Recognise angles as a description of a turn	
				3TM7 Tell and write the time from a 24-hour digital clock	3SH7 Identify right angles	
				3TM8 Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours	3SH8 Identify whether angles are greater than or less than a right angle using accurate language [acute, obtuse]	
				3TM9 Tell and write the time from a 12-hour analogue clock using Roman numerals from I to XII	3SH9 Identify pairs of perpendicular and parallel lines	
					3SH10 Recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn	
					3SH11 Compare and classify 2D geometric shapes [quadrilaterals and polygons]	
					3SH12 Compare and classify 3D shapes [cuboids, prisms and cones]	
					3SH13 Recognise 3D shapes in different orientations/describe them	

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MEASUREMENT					GEOMETRY	
YEAR	LENGTH	MASS	CAPACITY/VOLUME	TIME	SHAPE	POSITION
4	4LG1 Convert between different units of measure [kilometre to metre]	4MS1 Convert between different units of measure [kilogram to gram]	4CV1 Convert between different units of measure	4TM1 Convert between different units of measure (hour to minute)	4SH1 Identify acute and obtuse angles and compare and order angles up to 180°	4PS1 Draw a pair of axes in one quadrant with equal scales and integer labels
	4LG2 Estimate, compare and calculate length	4MS2 Estimate, compare and calculate mass	4CV2 Estimate, compare and calculate capacity	4TM2 Read, write and convert time between analogue and digital 12- and 24- hour clocks	4SH2 Identify lines of symmetry in 2D shapes presented in different orientations	4PS2 Read/write/use pairs of co-ordinates [e.g. (2,5)]
	4LG3 Build on understanding of place value and decimal notation to record metric measures	4MS3 Build on understanding of place value and decimal notation to record metric measures	4CV3 Estimate, compare and calculate volume	4TM3 Solve problems involving converting from years to months	4SH3 Measure and calculate the perimeter of rectilinear figure in cm and m	4PS3 Use co-ordinate plotting ICT tools
	4LG4 Solve simple length problems involving fractions and decimals to two decimal places	4MS4 Solve simple mass problems involving fractions and decimals to two decimal places	4CV4 Build on understanding of place value and decimal notation to record metric measures	4TM4 Solve problems involving converting from weeks to days	4SH4 Express perimeter algebraically as *2(a+b)* where a and b are the dimensions in same unit	4PS4 Describe positions on a 2D grid as co-ordinates in the first quadrant
	4LG5 Connect estimation and rounding numbers to the use of measuring instruments	4MS5 Connect estimation and rounding numbers to the use of measuring instruments	4CV5 Solve simple capacity problems involving fractions and decimals to two decimal places	4TM5 Solve problems involving converting from hours to minutes	4SH5 Find the area of rectilinear shapes by counting squares	4PS5 Plot specified points and draw sides to complete a given polygon
	4LG6 Make connections between fractions of a length	4MS6 Make connections between fractions of a mass	4CV6 Make connections between fractions of capacity	4TM6 Solve problems involving converting from minutes to seconds	4SH6 Relate area to arrays and multiplication	4PS6 Describe movements between positions as translations of a given unit to the left/right and up/down
			4CV7 Connect estimation and rounding numbers to the use of measuring instruments		4SH7 Make connections between fractions of a shape	
			4CV8 Solve simple volume problems involving fractions and decimals to two decimal places		4SH8 Compare and classify geometric shapes, including quadrilaterals [parallelogram, rhombus, trapezium] based on their properties and sizes [e.g. compare lengths and angles to decide if a polygon is regular or irregular]	
			4CV9 Make connections between fractions of volume		4SH9 Compare and classify geometric shapes, including triangles [isosceles, equilateral, scalene], based on their properties and sizes	
					4SH10 Complete a simple symmetric figure with respect to s specific line of symmetry	
					4SH11 Recognise line symmetry in a variety of diagrams, including where the line of symmetry does not dissect the original shape	

MEASUREMENT					GEOMETRY	
YEAR	LENGTH	MASS	CAPACITY/VOLUME	TIME	SHAPE	POSITION
5	5LG1 Convert between different units of metric measure (kilometre/metre) using knowledge of place value, multiplication and division	5MS1 Convert between different units of metric measure (kilogram/gram) using knowledge of place value, multiplication and division	5CV1 Convert between different units of metric measure (litre/millilitre) using knowledge of place value, multiplication and division	5TM1 Solve problems involving converting between units of time [e.g. days to weeks, expressing the answer as weeks and days]	5SH1 Identify 3D shapes, including cubes and other cuboids, from 2D representations	5PS1 Identify/describe the position of a shape following a reflection using appropriate language; know the shape has not changed
	5LG2 Convert between different units of metric measure [metre/centimetre] using knowledge of place value, multiplication and division	5MS2 Understand/use equivalences between metric units and common imperial units (e.g. pounds)	5CV2 Understand and use equivalences between metric units and common imperial units [e.g. pints]		5SH2 Know angles are measured in degrees. Draw given angles, and measure them in degrees (°)	5PS2 Represent the position of a shape following a reflection using appropriate language; know the shape has not changed
	5LG3 Convert between different units of metric measure [centimetre/ millimetre] using knowledge of place value, multiplication and division	5MS3 Use all four operations to solve problems [e.g. mass using decimal notation, including scaling]	5CV3 Estimate volume [e.g. using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [e.g. using water]		5SH3 Estimate/compare acute, obtuse and reflex angles	5PS3 Identify/describe the position of a shape following a translation, using appropriate language; know the shape has not changed
	5LG4 Understand/use equivalences between metric units and common imperial units (e.g. inches)		5CV4 Use all four operations to solve problems involving measure [e.g. volume using decimal notation, including scaling]		5SH4 Use the properties of rectangles to deduce related facts and find missing lengths and angles. Express algebraically [e.g. 4 + 2b = 20 for a rectangles of edges 2cm and b cm and perimeter of 20]	5PS4 Represent the position of a shape following a translation, using appropriate language; know the shape has not changed
	5LG5 Use all four operations to solve problems [e.g. length using decimal notation, including scaling]				5SH5 Identify angles at a point and 1 whole turn [total 360°]	
					5SH6 Identify angles at a point on a straight line and half a turn [total 180°]	
					5SH7 Identify other multiples of 90°	
					5SH8 Measure/calculate the perimeter of composite rectilinear shapes in centimetres and metres	
					5SH9 Distinguish between regular and irregular polygons based on reasoning about equal edges and angles	
					5SH9 Estimate the area of irregular shapes	
					5SH10 Calculate/compare the area of rectangles (including squares), using standard units, square centimetres (cm^2) and square metres (m^2)	
					5SH11 Calculate the area from scale drawings using given measurements	
					5SH12 Calculate the perimeter of rectangles including using the relations of perimeter and area to find unknown lengths	
					5SH13 Calculate the perimeter of composite shapes, including using the relations of perimeter and area to find unknown lengths	
					5SH14 Use conventional markings for parallel lines and right angles	

MEASUREMENT					GEOMETRY	
YEAR	LENGTH	MASS	CAPACITY/VOLUME	TIME	SHAPE	POSITION
6	6LG1 Use, read and convert between standard units, converting measures of length from a smaller unit to a larger unit, and vice versa, using decimal notation to 3 decimal places	6MS1 Use, read and convert between standard units, converting measures of mass from a smaller unit to a larger unit, and vice versa, using decimal notation to 3 decimal places	6CV1 Use, read and convert between standard units, converting measures of volume from a smaller unit to a larger unit, and vice versa, using decimal notation to 3 decimal places	6TM1 Use, read and convert between standard units, converting measures of time from a smaller unit to a larger unit, and vice versa, using decimal notation to 3 decimal places	6SH1 Draw 2D shapes using given dimensions and angles using conventional markings and labels for lines and angles	6PS1 Extend knowledge of one quadrant to all four quadrants including the use of negative numbers
	6LG2 Convert between miles and kilometres	6MS2 Know approximate conversions to tell if an answer is sensible	6CV2 Calculate and compare volume of cubes and cuboids using centimetre cubed (cm^3)	6TM2 Know approximate conversions to tell if an answer is sensible	6SH2 Recognise and describe simple 3D shapes	6PS2 Draw and label a pair of axes in all four quadrants with equal scaling
	6LG3 Know approximate conversions to tell if an answer is sensible	6MS3 Recognise proportionality in context when the relations between quantities are the same ratio	6CV3 Calculate and compare volume of cubes and cuboids using cubic metres (m^3)	6TM3 Recognise proportionality in context when the relations between quantities are the same ratio	6SH3 Derive unknown angles and lengths from known measurements	6PS3 Describe positions on the full co-ordinate grid (all four quadrants)
	6LG4 Recognise proportionality in context when the relations between quantities are the same ratio		6CV4 Calculate and compare volume of cubes and cuboids using mm^3 and km^3	6TM4 Know compound units for speed [e.g. miles per hour]	6SH4 Calculate the area of parallelograms using related area of rectangles and understanding/using formulae	6PS4 Draw shapes [rectangles including squares, parallelograms and rhombi] on the co-ordinate plane
			6CV5 Know approximate conversions to tell if an answer is sensible		6SH5 Calculate the area of triangles	6PS5 Draw shapes [rectangles including squares, parallelograms and rhombi] on the co-ordinate plane, and reflect them in the axis
			6CV6 Recognise proportionality in context when the relations between quantities are the same ratio		6SH6 Recognise shapes with the same area can have different perimeters and vice versa	6PS6 Draw and translate simple shapes [rectangles including squares, parallelograms and rhombi] on the co-ordinate plane
					6SH7 Build simple 3D shapes, including making nets	6PS7 Predict missing co-ordinates using the properties of shapes
					6SH8 Compare/classify geometric shapes based on properties/sizes	
					6SH9 Illustrate/name parts of circles, (radius, diameter and circumference) Know diameter is twice the radius	
					6SH10 Recognise angles where they meet at a point. Find missing angles.	
					6SH11 Recognise where angles are on a straight line; find missing angles.	
					6SH12 Recognise angles where they are vertically opposite; find missing angles.	
					6SH13 Find unknown angles in any triangles	
					6SH14 Recognise when to use formulae for area/volume of shapes	
					6SH15 Find unknown angles in any regular quadrilaterals and polygons	
					6SH16 Express relationships algebraically [e.g. d = 2xr; a = 180 – (b+c)]	
					6SH17 Solve problems involving similar shapes where scale factor is known or can be found. Use notation (a:b) to record ratio/proportion	

FLUENCY, MATHEMATICAL REASONING & PROBLEM SOLVING

FOUNDATION STAGE N-R

UAF1 Find out and explore mathematically
UAF2 Use mathematics in play
UAF3 Choose ways of doing things and explain why

UAF4 Have own ideas and methods of how to approach a task
UAF5 Maintain involvement and concentration
UAF6 Use what is already known to learn new things

FOUNDATION STAGE	YEAR N	YEAR R
FM1 Show curiosity about Mathematics by offering comments and asking questions FM2 Sort objects, making choices and justifying decisions FM3 Talk about, recognise and recreate simple patterns FM4 Describe solutions to practical problems, drawing on experiences	NP1 Show an interest in representing numbers NP2 Show an interest in number problems NP3 Show an interest in mathematics in the environment NP4 Recognise numerals of personal significance	RP1 Explain and interpret marks made when recording RP2 Identify own mathematical problems based on own interests RP3 Estimate a number of objects and check quantities RP4 Solve practical problems involving combining groups

YEARS 1-6

UA1 Use mathematics as an integral part of classroom activities, including in other areas of the curriculum
UA2 Be able to recall and apply knowledge rapidly and accurately
UA3 Conjecture relationships and generalisations
UA4 Develop an argument, justification and/or proof using mathematical language
UA5 Explain why an answer is correct
UA6 Try different approaches and find ways of overcoming difficulties when solving problems
UA7 Apply mathematics to routine and non-routine problems

UA8 Break down problems into a series of smaller steps
UA9 Persevere in seeking solutions
UA10 Follow a line of enquiry
UA11 Collate, organise and compare information
UA12 Present information and results in a clear and organised way
UA13 Read and spell mathematical vocabulary accurately
UA14 Organise work, check results and explain thinking

KEY STAGE 1	YEAR 1	YEAR 2
K1M1 Develop confidence and mental fluency by understanding whole numbers, counting and place value K1M2 Represent work with objects, pictures and labels K1M3 Discuss work using appropriate mathematical vocabulary	1P1 Discuss and solve problems in familiar practical contexts 1M4 Recognise/use a simple pattern or relationship 1M5 Solve simple concrete problems practising counting and ordering	2P2 Use place value and number facts to solve problems. 2P3 Apply increasing knowledge of mental and written methods. 2P4 Derive and use related facts up to 100 2M6 Use a variety of language to describe multiplication and division 2M7 Select the mathematics used in classroom activities 2M8 Represent work using symbols and simple diagrams 2M9 Apply knowledge of numbers to reason with, discuss and solve problems that emphasise the value of each digit in two-digit numbers 2M10 Use standard units of measurement and use knowledge of number system to increase accuracy 2M11 Identify, compare and sort shapes on the basis of properties and use vocabulary precisely

FLUENCY, MATHEMATICAL REASONING & PROBLEM SOLVING

YEARS 1-6

UA1 Use mathematics as an integral part of classroom activities, including in other areas of the curriculum
UA2 Be able to recall and apply knowledge rapidly and accurately
UA3 Conjecture relationships and generalisations
UA4 Develop an argument, justification and/or proof using mathematical language
UA5 Explain why an answer is correct
UA6 Try different approaches and find ways of overcoming difficulties when solving problems
UA7 Apply mathematics to routine and non-routine problems
UA8 Break down problems into a series of smaller steps
UA9 Persevere in seeking solutions
UA10 Follow a line of enquiry
UA11 Collate, organise and compare information
UA12 Present information and results in a clear and organised way
UA13 Read and spell mathematical vocabulary accurately
UA14 Organise work, check results and explain thinking

LOWER KEY STAGE 2

LKM1 Develop efficient written methods and perform calculations accurately
LKM2 Develop efficient mental methods and perform calculations accurately
LKM3 Search for a solution trying out own ideas
LKM4 Use measuring instruments with accuracy, making connections between measures and number
LKM5 Connect decimals, estimation and rounding to drawing and measuring, in a variety of contexts
LKM6 Become increasingly fluent with whole numbers and the four operations
LKM7 Become increasingly fluent with number facts and the concept of place value
LKM8 Use and interpret mathematical symbols and diagrams
LKM9 Understand a general statement by finding examples that match it
LKM10 Draw with increasing accuracy
LKM11 Develop mathematical reasoning

YEAR 3

3P1 Solve number problems/practical problems involving number and place value
3P2 Solve problems, including missing number problems, using number facts, place value and more complex addition and subtraction
3P3 Solve problems involving fractions
3P4 Solve simple problems in contexts, deciding which of the four operations to use and why
3M12 Identify, represent and estimate numbers using different representations
3M13 Use understanding of place value to be able to use columnar addition and subtraction of large numbers
3M14 Use mental recall of multiplication tables when calculating mathematical statements
3M15 Measure, deciding on appropriate tools and units
3M16 Interpret data presented in many contexts, understanding and using simple scales

YEAR 4

4P5 Solve two-step problems in contexts, choosing the appropriate operation, including correspondence questions
4M17 Extend knowledge of number system to include decimal numbers/fractions
4M18 Become fluent in formal written method of short multiplication with exact answers
4M19 Become fluent in formal written method of short division with exact answers
4M20 Understand the relation between non-unit fractions and multiplication and division of quantities
4M21 Use factors and multiples to recognise equivalent fractions [and simplify as appropriate]
4M22 Understand number system and decimal place value [including relating decimal notation to division of whole number by 10/100]
4M23 Represent numbers with one or two decimal places in several ways, including on a number line
4M24 Draw symmetrical patterns using a variety of media, including where the line of symmetry does not dissect the original shape
4M25 Understand and use a greater range of scales in representations

UPPER KEY STAGE 2

UKP1 Solve number and place value problems, including practical problems in line with year group expectations
UKP2 Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign
UKP3 Carry through substantial tasks, solving complex problems of number/ arithmetic
UKP4 Use the language of algebra as a means for solving a variety of problems
UKM1 Identify and obtain necessary information
UKM2 Consider whether results are sensible
UKM3 Draw own conclusions with an explanation of reasoning
UKM4 Interpret, discuss and synthesise information presented in a variety of forms
UKM5 Write explanations to inform use of diagrams
UKM6 Give mathematical justifications
UKM7 Develop connections between multiplication and division with fractions, decimals, percentages and ratio
UKM8 Decide which representations of data are most appropriate and why

YEAR 5

5P9 Solve problems involving multiplication and division including using knowledge of factors and multiples, squares and cubes
5P10 Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates
5P11 Solve problems involving numbers up to three decimal places
5P12 Solve puzzles involving decimals beyond measurement and money
5P13 Use all four operations in problems involving time and money, including conversions
5M9 Develop understanding of fractions as numbers, measures and operators
5M10 Make connections between percentages, fractions and decimals
5M11 Use the relations of perimeter and area
5M12 Become accurate in drawing lines with a ruler to nearest mm.
5M13 Measure with a protractor
5M14 Use angle sum facts and other properties to make deductions about missing angles
5M15 Make conjectures about the angles formed between lines, and between diagonals and parallel lines, and other properties of quadrilaterals
5M16 Connect work on co-ordinates and scales to the interpretation of time graphs
5M17 Recognise and describe linear number sequences

YEAR 6

6P14 Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy
6P15 Solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 decimal places where appropriate
6P16 Solve a variety of problems to consolidate understanding of ratio when comparing quantities, sizes and scale drawings
6M18 Use knowledge of order of operations to carry out calculations involving the four operations
6M19 Perform mental calculations, including with mixed operations/large numbers
6M20 Use all multiplication tables calculate mathematical statements
6M21 Use a variety of images to show understanding of multiplication of fractions
6M22 Use understanding of the relationship between unit fractions and division to work backwards by multiplying a quantity that represents a unit fraction to find the whole quantity [e.g. if ¼ of a length is 36cm, the whole length is 36 x 4 = 144cm]
6M23 Explore and make conjectures about converting simple fractions to decimal fractions [e.g. 3÷8 = 0.375]
6M24 Develop skills of rounding and estimating as a means of predicting and checking magnitude of answers to decimal calculations
6M25 Connect conversion [e.g. kilometres to miles] to its graphical representation