	Year 1	Year 2	Year 3
Counting	• C1 count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number • C2 count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens	• C1 count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward	• C1 count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number.
Place Value		• PV1 recognise the place value of each digit in a two-digit number • PV2 compare and order numbers from 0 up to 100; use <, > and = signs	•PV1 recognise the place value of each digit in a three-digit number • PV2 compare and order numbers up to 1000
Representing number	• RN1 identify and represent numbers using objects and pictorial representations including the number line, & use language of: equal to, more than, less than (fewer), most, least • RN2 read and write numbers from 1 to 20 in numerals and words • RN3 read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs	• RN1 identify, represent and estimate numbers using different representations, including the number line • RN2 read and write numbers to at least 100 in numerals and in words	• RN1 identify, represent and estimate numbers using different representations • RN2 read and write numbers up to 1000 in numerals and in words
Number facts (+/-)	• N1 given a number, identify one more and one less • N2 represent and use number bonds and related subtraction facts within 20	• N1 use place value and number facts to solve problems • N2 recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100	
Mental +/- (Ml)	• Ml1 add and subtract one-digit and two-digit numbers to 20, including zero	• Ml1 add and subtract numbers using concrete objects, pictorial representations, and mentally, including: TU+U, TU+T, TU+TU and U+U+U • Ml2 show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot	• Ml1 add and subtract numbers mentally, including: HTU+U, HTU+T and HTU+H

Written +/-			• W1 add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction
Problems +/-	• P1 solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = □ − 9.	• P1 solve problems with addition and subtraction, using concrete, pictorial and abstract representations • P2 recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	• P1 estimate the answer to a calculation and use inverse operations to check answers • P2 solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction
Number facts (x/÷)		•NF1 recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	• NF1 recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables
Mental (x/÷) (Ml)		• Ml1 calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs • Ml2 show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot	• Ml1 write and 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
Written (x/÷)			• W1 Progress to formal written methods calculations as above
Problems (x/÷)	•P1 solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	• P1 solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	• P1 solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.

Recognising fractions	•RF1 recognise, find and name a half as one of two equal parts of an object, shape or quantity • RF2 recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.	• RF1 recognise, find, name and write fractions 1/3, 1/4 , 2/4 and 3/4 of a length, shape, set of objects or quantity	• RF1 count up and down in tenths; • RF2 recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10
Comparing fractions			• CF1 compare and order unit fractions, and fractions with the same denominators • CF2 recognise and show, using diagrams, equivalent fractions with small denominators
Finding fractions of quantities			• FFQ1 recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators • FFQ2 recognise and use fractions as numbers: unit fractions and non- unit fractions with small denominators
Fraction calculations		• FC1 write simple fractions for example, 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2.	• FC1 add and subtract fractions with the same denominator within one whole [for example, 5/7 + 1/7 = 6/7]
Decimals as fractional amounts			
Ordering decimals			
Calculating with decimals			

Percentages			
Fraction problems			• FP1 solve problems using all fraction knowledge
Ratio & Proportion			
Algebra			
Measures (Me)	• Me1 compare, describe and solve practical problems for: length/height, weight/mass, capacity/volume & time • Me2 measure and begin to record length/height, weight/mass, capacity/volume & time	• Me1 choose and use appropriate standard units to estimate and measure length/height (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels • Me2 compare and order lengths, mass, volume/capacity and record the results using >, < and =	• Me1 measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)
Mensuration (Men)			• Men1 measure the perimeter of simple 2-D shapes

Money (Mo)	• Mo1 recognise and know the value of different denominations of coins and notes	• Mo1 recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value • Mo2 find different combinations of coins that equal the same amounts of money • Mo3 solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	• Mo1 add and subtract amounts of money to give change, using both £ and p in practical contexts
Time	• T1 sequence events in chronological order using language recognise and use language relating to dates, including days of the week, weeks, months and years • T2 tell the time to the hour and half past the hour and draw the hands on a clock face to show these times	• T1 compare and sequence intervals of time • T2 tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times • T3 know the number of minutes in an hour and the number of hours in a day	• T1 tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks • T2 estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight • T3 know the number of seconds in a minute and the number of days in each month, year and leap year • T4 compare durations of events
Shape vocabulary	• SV1 recognise and name common 2-D shapes (e.g. Square, circle, triangle) • SV2 recognise and name common 3-D shapes (e.g. Cubes, cuboids, pyramids & spheres)	*SV1 (vertices, edges, faces, symmetry)*	• SV1 identify horizontal and vertical lines and pairs of perpendicular and parallel lines
Properties of 2-d shape		• *P2D1 identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line.* •*P2D2 compare and sort common 2-D and 3-D shapes and everyday objects.*	•*P2D1 draw 2-D shapes*

Properties of 3-d shape		• P3D1 identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces • P3D2 identify 2-D shapes on the surface of 3-D shapes. • P3D3 compare and sort common 2-D and 3-D shapes and everyday objects.	• P3D1 make 3-D shapes using modelling materials recognise 3-D shapes in different orientations and describe them
Angles			• A1 recognise angles as a property of shape or a description of a turn • A2 identify right angles, recognise that two right angles make a half- turn, three make three quarters of a turn and four a complete turn • A3 identify whether angles are greater or less than right angle
Position & Direction	• PD1 describe position, direction and movement, including whole, half, quarter and three-quarter turns.	• PD1 order and arrange combinations of mathematical objects in patterns and sequences. • PD2 use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and ¾ turns	
Interpreting data		• ID1 interpret and construct simple pictograms, tally charts, block diagrams and simple tables	• ID1 interpret and present data using bar charts, pictograms and tables
Extract info from data		• EID1 ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity • EID2 ask and answer questions about totalling and comparing categorical data	• EID1 solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables

	Year 4	Year 5	Year 6
Counting	• C1 count in multiples of 6, 7, 9, 25 and 1000 • C2 find 1000 more or less than a given number count backwards through zero to include negative numbers	• C1 count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 • C2 interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero	• C1 use negative numbers in context, and calculate intervals across zero
Place Value	• PV1 recognise the place value of each digit in a four-digit number • PV2 order and compare numbers beyond 1000 • PV3 round any number to the nearest 10, 100 or 1000	• PV1 read, write, order and compare numbers up to 1 000 000 and determine the value of each digit • PV2 round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000	• PV1 read, write, order and compare numbers up to 10 000 000 and determine the value of each digit • PV2 round any whole number to a required degree of accuracy
Representing number	• RN1 identify, represent and estimate numbers using different representations • RN2 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	• RN1 read Roman numerals to 1000 (M) and recognise years written in Roman numerals • RN2 recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3})	
Number facts (+/-)			
Mental +/- (Ml)		• Ml1 add and subtract numbers mentally with increasingly large numbers	• Ml1 perform mental calculations, including with mixed operations and large numbers
Written +/-	• W1 add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	• W1 add and subtract whole numbers with more than 4 digits, including using formal written methods	

Problems +/-	• P1 estimate and use inverse operations to check answers to a calculation • P2 solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	• P1 use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy • P2 solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	
Number facts (x/÷)	• NF1 recall multiplication and division facts for multiplication tables up to 12 × 12	• NF1 identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers • NF2 know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers • NF3 establish whether a number up to 100 is prime and recall prime numbers up to 19	• NF1 identify common factors, common multiples and prime numbers
Mental (x/÷) (Ml)	• Ml1 use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers • Ml2 recognise and use factor pairs and commutativity in mental calculations	• Ml1 multiply and divide numbers mentally drawing upon known facts • Ml2 multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	• Ml1 perform mental calculations, including with mixed operations and large numbers
Written (x/÷)	• W1 multiply two-digit and three-digit numbers by a one-digit number using formal written layout	• W1 multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers • W2 divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context	• W1 multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication • W2 divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context • W3 divide numbers up to 4 digits by a

			two-digit number using the formal written method of short division where appropriate, interpreting remainders according to context
Problems (x/÷)	• P1 solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects	• P1 solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes • P2 solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign • P3 solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	• P1 use their knowledge of the order of operations to carry out calculations involving the four operations • P2 solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why • P3 solve problems involving addition, subtraction, multiplication and division • P4 use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy
Recognising fractions	• RF1 count up and down in hundredths; • RF2 recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.	• RF1 recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number	
Comparing fractions	• CF1 recognise and show, using diagrams, families of common equivalent fractions	• CF1 compare and order fractions whose denominators are all multiples of the same number • CF2 identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths	• CF1 use common factors to simplify fractions • CF2 use common multiples to express fractions in the same denomination • CF3 compare and order fractions, including fractions > 1
Finding fractions of quantities	• FFQ1 solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number		

Fraction calculations	• FC1 add and subtract fractions with the same denominator	• FC1 add and subtract fractions with the same denominator and denominators that are multiples of the same number • FC2 multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	• FC1 add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions • FC2 multiply simple pairs of proper fractions, writing the answer in its simplest form • FC3 divide proper fractions by whole numbers
Decimals as fractional amounts	• DFA1 recognise and write decimal equivalents of any number of tenths or hundredths • DFA2 recognise and write decimal equivalents to ¼, ½ and ¾ • DFA3 find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths	• DFA1 read and write decimal numbers as fractions	• DFA1 associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction • DFA2 identify the value of each digit in numbers given to three decimal places
Ordering decimals	• OD1 round decimals with one decimal place to the nearest whole number • OD2 compare numbers with the same number of decimal places up to two decimal places	• OD1 recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents • OD2 round decimals with two decimal places to the nearest whole number and to one decimal place • OD3 read, write, order and compare numbers with up to three decimal places	
Calculating with decimals			• CWD1 multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places • CWD2 multiply one-digit number with up to two decimal places by whole numbers • CWD3 use written division methods in cases where the answer has up to two decimal places

Percentages		• P1 recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal	• P1 solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison
Fraction problems	• FP1 solve simple measure and money problems involving fractions and decimals to two decimal places	• FP1 solve problems involving number up to three decimal places • FP2 solve problems which require knowing percentage and decimal equivalents of ½ , ¼ , 1/5 , 2/5 , 4/5 and those fractions with a denominator of a multiple of 10 or 25	• FP1 solve problems which require answers to be rounded to specified degrees of accuracy • FP2 recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.
Ratio & Proportion			• RP1 solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts • RP2 solve problems involving similar shapes where the scale factor is known or can be found • RP3 solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.
Algebra			• A1 use simple formulae • A2 generate and describe linear number sequences • A3 express missing number problems algebraically • A4 find pairs of numbers that satisfy an equation with two unknowns • A5 enumerate possibilities of combinations of two variables.

Measures (Me)	• Me1 Convert between different units of measure estimate, compare and calculate different measures, including money in pounds and pence	• Me1 convert between different units of metric measure • Me2 understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints • Me3 estimate volume and capacity	• Me1 solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate • Me2 use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places • Me3 convert between miles and kilometres
Mensuration (Men)	• Men1 measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres find the area of rectilinear shapes by counting squares	• Men1 measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres • Men2 calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes	• Men1 recognise that shapes with the same areas can have different perimeters and vice versa • Men2 recognise when it is possible to use formulae for area and volume of shapes • Men3 calculate the area of parallelograms and triangles • Men4 calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units.
Money (Mo)		• Mo1 use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling	
Time	• T1 Convert between different units of measure (e.g. Hours to minutes) • T2 read, write and convert time between analogue and digital 12- and 24-hour clocks	• T1 solve problems involving converting between units of time	

	• T3 solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days		
Shape vocabulary			• SV1 illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
Properties of 2-d shape	• P2D1 compare and classify geometric shapes, including quadrilaterals and triangles, based on properties and sizes • P2D2 identify lines of symmetry in 2-D shapes presented in different orientations • P2D3 complete a simple symmetric figure with respect to a specific line of symmetry.	• P2D1 use the properties of rectangles to deduce related facts and find missing lengths and angles • P2D2 distinguish between regular and irregular polygons based on reasoning about equal sides and angles.	• P2D1 draw 2-D shapes using given dimensions and angles compare and classify geometric shapes based on their properties and sizes
Properties of 3-d shape		• P3D1 identify 3-D shapes, including cubes and other cuboids, from 2-D representations	• P3D1 recognise, describe and build simple 3-D shapes, including making nets • P3D2 find unknown angles in any triangles, quadrilaterals, and regular polygons
Angles	• A1 identify acute and obtuse angles and compare and order angles up to two right angles by size	• A1 know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles • A2 draw given angles, and measure them in degrees (°) • A3 identify angles at a point and one whole turn (total 360°); at a point on a straight line and ½ a turn (total 180°) • A4 identify other multiples of 90°	• A1 recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles
Position & Direction	• PD1 describe positions on a 2-D grid as coordinates in the first quadrant • PD2 describe movements between positions as translations of a given unit to the left/right and up/down	• PD1 identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed	• PD1 describe positions on the full coordinate grid (all four quadrants) • PD2 draw and translate simple shapes on the coordinate plane, and reflect them in the axes.

	• PD3 plot specified points and draw sides to complete a given polygon		
Interpreting data	• ID1 interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs	• ID1 complete, read and interpret information in tables, including timetables	• ID1 interpret and construct pie charts and line graphs calculate and interpret the mean as an average
Extract info from data	• EID1 solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs	• EID1 solve comparison, sum and difference problems using information presented in a line graph	• EID1 use pie charts and line graphs to solve problems