Maths progression framework

	Reception	Y1	Y2	Y3	Y4	Y5	Y6
Place Value		Counts to and across 100, forwards and backwards, beginning with 0 or one, or from any given number Counts, reads and writes numbers to 100 in numerals; Counts in multiples of twos, fives and tens Given a number, identifies one more and one less	Counts in steps of two, three, and five from 0, and in tens from any number, forward and backward Compares and orders numbers from 0 up to 100 Uses < > and = signs correctly Uses place value and number facts to solve problems	Counts from 0 in multiples of four, eight, 50 and 100 Can work out if a given number is greater or less than 10 or 100 Recognises the place value of each digit in a three-digit number (hundreds, tens, and ones) Solves number problems and practical problems involving these ideas	Counts in multiples of six, seven, nine, 25 and 1,000 Counts backwards through zero to include negative numbers Orders and compares numbers beyond 1,000 Rounds any number to the nearest 10, 100 or 1,000	Reads, writes, orders and compares numbers to at least 1,000,000 and determines the value of each digit Interprets negative numbers in context, counts forwards and backwards with positive and negative whole numbers including through zero	Rounds any whole number to a required degree of accuracy Uses negative numbers in context and calculates intervals across zero

Maths progression framework

	Reception	Y1	Y2	Y3	Y4	Y5	Y6
							Multiplies multi-digit numbers up to four digits by a two-digit whole number using the formal written method of long multiplication Divides numbers up to four digits by a two digit number using the formal written method of short division where appropriate, interpreting remainders according to the context Solves addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why Uses estimation to check answers to calculations and determines, in the context of a problem, an

							appropriate degree of accuracy

Calculation		Represents and uses number bonds and related subtraction facts within 20 Add and subtract one-digit and two-digit numbers to 20, including 0.	Solves problems with addition and subtraction by: Using concrete objects and pictorial representations, including those involving numbers, quantities and measures. applying an increasing knowledge of mental and written methods. Recalls and uses addition and subtraction facts **fluently** to 20 Recalls and uses addition and subtraction facts to 20 and 100 Recalls and uses multiplication and division facts for the two, five and 10 multiplication tables Recognises odd and even numbers	Adds and subtracts numbers mentally including a three-digit number and ones Adds and subtracts numbers mentally including a three-digit number and tens Adds and subtracts numbers mentally including a three-digit number and hundreds Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction Adds and subtracts numbers mentally including a three-digit number and ones Adds and subtracts numbers mentally including a three-	Solves addition and subtraction two-step problems in context, deciding which operations and methods to use and why Recalls multiplication and division facts for multiplication tables up to 12 x 12	Adds and subtracts whole numbers with more than four digits, including using formal written methods (columnar addition and subtraction) Adds and subtracts numbers mentally with increasingly large numbers (eg 12,462 - 2,300 = 10,162) Identifies multiples and factors including finding all factor pairs of a number and common factors of two numbers Solves problems involving multiplication and division including using a knowledge of factors and multiples, squares and cubes Solves problems involving multiplication and	

			Solves problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	digit number and tens Adds and subtracts numbers mentally including a three-digit number and hundreds Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction Recalls and uses multiplication and division facts for the three times tables Recalls and uses multiplication and division facts for the four times tables Recalls and uses multiplication and division facts for the eight times tables. Writes and calculates mathematical statements for		division, including scaling by simple fractions and problems involving simple rates	

				multiplication and division using the multiplication tables that are known including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods			

Maths progression framework

	Reception	Y1	Y2	Y3	Y4	Y5	Y6
Fractions (including decimals)		Recognises, finds and names a half as one of two equal parts of an object, shape or quantity Recognises, finds and names a quarter as one of four equal parts of an object, shape or quantity	Recognises, finds, names and writes fractions 1/3, 1/4, 2/4, and 3/4 of a length, shape, set of objects or quantity	Counts up and down in tenths; recognises that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 Recognises, finds and writes fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators Recognises and shows, using diagrams, equivalent fractions with small denominators	Recognises and shows, using diagrams, families of common equivalent fractions Counts up and down in hundredths; recognises that hundredths arise when dividing an object by 100 and dividing tenths by 10 Rounds decimals with one decimal place to the nearest whole number Solves simple measure and money problems involving fractions and decimals to two decimal places	Compares and orders fractions whose denominators are all multiples of the same number Reads and writes decimal numbers as fractions eg 0.71 = 71/100 Reads, writes, orders and compares numbers with up to three decimal places Solves problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5 and those fractions with a denominator of a multiple of 10 or 25	Uses written division methods in cases where the answer has up to two decimal places Solves problems which require answers to be rounded to specified degrees of accuracy Recalls and uses equivalences between simple fractions, decimals and percentages, including in different contexts

	Reception	Y1	Y2	Y3	Y4	Y5	Y6
Maths progression framework **Measurement**		Compares, describes and solves practical problems for: **-lengths and heights** eg long/short, longer/shorter, tall/short, double/half; **-mass/weight** eg heavy/light, heavier than, lighter than; **capacity and volume** eg full/empty, more than, less than, half, half full, quarter **Time** eg quicker, slower, earlier, later. Time- Tells the time to the hour and half past the hour and draws the hands on a clock face to show these times	Solves simple problems in a practical context involving addition and subtraction of money of the same unit including giving change	Interprets and presents data using bar charts, pictograms and tables Measures, compares, adds and subtracts lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) Adds and subtracts amounts of money to give change, using both £ and p in practical contexts Tells and writes the time from an analogue clock and 12-hour and 24-hour clocks Identifies right angles, recognises that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identifies whether angles are greater than or less than a right angle	Converts between different units of measure eg kilometre to metre Converts between different units of measure eg hour to minute	Converts between different units of metric measure (eg kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) Measures and calculates the perimeter of composite rectilinear shapes in centimetres and metres Calculates and compares the area of rectangles (including squares), and including using standard units, square centimetres (cm2) and square metres (m2)	Uses, reads, writes and converts 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

	Reception	Y1	Y2	Y3	Y4	Y5	Y6
Maths **Geometry: Properties of shape**	progression framework	Recognises and names common 2-D and 3-D shapes, including: -2-D shapes eg rectangles (including squares), circles and triangles -3-D shapes eg cuboids (including cubes), pyramids and spheres	Compares and sorts common 2-D and 3-D shapes and everyday objects		Compares and classifies geometric shapes, including quadrilaterals and triangles, based on their properties and sizes Identifies lines of symmetry in two dimensional shapes presented in different orientations	Draws given angles and measures them in degrees (0) Distinguishes between regular and irregular polygons based on reasoning about equal sides and angles	Compares and classifies geometric shapes based on their properties and sizes and finds unknown angles in any triangles, quadrilaterals and regular polygons

	Reception	Y1	Y2	Y3	Y4	Y5	Y6
Geometry: Position and direction	Maths progression framework		Uses mathematical vocabulary to describe position, direction and movement including movement in a straight line, and distinguishes between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise)		Plots specified points and draws sides to complete a given polygon		Draws and translates simple shapes on the coordinate plane and reflects them in the axes

	Reception	Y1	Y2	Y3	Y4	Y5	Y6
Maths **Ratio and proportion**	progression framework						Solves problems involving the calculation of percentages eg of measures and calculations such as 15 per cent of 360, and the use of percentages for comparison Solves problems involving unequal sharing and grouping using knowledge of fractions and multiples

	Reception	Y1	Y2	Y3	Y4	Y5	Y6
Algebra	Maths progression framework						Uses simple formulae

	Reception	Y1	Y2	Y3	Y4	Y5	Y6
Statistics			Asks and answers questions about totalling and comparing categorical data	Interprets and presents data using bar charts, pictograms and tables	Solves comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs	Completes, reads and interprets information in tables, including timetables	Interprets pie charts and line graphs and uses these to solve problems Calculates and interprets the mean as an average