Key Learning Outcomes – Knowledge and Skills - MATHEMATICS

	Y1	Y2	Y3	Y4	Y5	Y6
Number	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number Count and read numbers to 100 in numerals Count and write numbers to 100 in numerals Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward Identify one more and one less of a given number	Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward Compare and order numbers from 0 up to 100; use <, > and = signs	Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) Solve number problems and practical problems involving these ideas	Count in multiples of 6, 7, 9, 25 and 1000 Count backwards through zero to include negative numbers Order and compare numbers beyond 1000 Round any number to the nearest 10, 100 or 1000	Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero	Round any whole number to a required degree of accuracy Use negative numbers in context, and calculate intervals across zero Use simple formulae

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	Y1	Y2	Y3	Y4	Y5	Y6
Operations	Represent and use number bonds within 20 Represent and use subtraction facts within 20	Solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures Solve problems with addition and subtraction applying his/her increasing knowledge of mental and written methods Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers Solve problems involving multiplication and division, using concrete materials and mental methods Solve problems involving multiplication and division using arrays, repeated addition and multiplication and division facts, including problems in contexts	Add and subtract numbers mentally, including a three-digit number and ones Add and subtract numbers mentally, including a three-digit number and tens Add and subtract numbers mentally, including a three-digit number and hundreds Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables Write and calculate mathematical statements for multiplication and division using the multiplication tables that he/she knows, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods	Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why Recall multiplication and division facts for multiplication tables up to 12 × 12	Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) Add and subtract numbers mentally with increasingly large numbers Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	Solve multi-step problems in contexts, deciding which operations and methods to use and why. Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication 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 the context Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy

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	Y1	Y2	Y3	Y4	Y5	Y6
Fractions	Recognise, find and name a half as one of two equal parts of an object, shape or quantity	Recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity	Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators Recognise and show, using diagrams, equivalent fractions with small denominators	Recognise and show, using diagrams, families of common equivalent fractions Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten Round decimals with one decimal place to the nearest whole number Solve simple measure and money problems involving fractions and decimals to two decimal places	Compare and order fractions whose denominators are all multiples of the same number Read and write decimal numbers as fractions e.g. 0.71 = 71/100 Read, write, order and compare numbers with up to three decimal places Solve 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	Solve problems which require answers to be rounded to specified degrees of accuracy Use written division methods in cases where the answer has up to two decimal places Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts Solve problems involving the calculation of percentages e.g. of measures, and such as 15% of 360 e.g. and the use of percentages for comparison Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples

Key Learning Outcomes – Knowledge and Skills - MATHEMATICS

	Y1	Y2	Y3	Y4	Y5	Y6
Measures	Compare, describe and solve practical problems for lengths and heights e.g. long/short, longer/shorter, tall/short, double/half Compare, describe and solve practical problems for mass/weight e.g. heavy/light, heavier than, lighter than Compare, describe and solve practical problems for capacity and volume eg. full/empty, more than, less than, half, half full, quarte r Compare, describe and solve practical problems for time e.g. quicker, slower, earlier, later	Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) Add and subtract amounts of money to give change, using both £ and p in practical contexts Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks	Convert between different units of measure <eg>kilometre to metre; hour to minute</eg>	Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes	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

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	Y1	Y2	Y3	Y4	Y5	Y6
Geometry	Recognise and name common 2-D shapes e.g., rectangles (including squares), circles and triangles Recognise and name common 3-D shapes e.g. cuboids (including cubes), pyramids and spheres	Compare and sort common 2-D and 3-D shapes and everyday objects 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 three-quarter turns (clockwise and anti-clockwise)	Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle	Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes Identify lines of symmetry in 2-D shapes presented in different orientations Plot specified points and draw sides to complete a given polygon	Draw given angles, and measure them in degrees (°) Distinguish between regular and irregular polygons based on reasoning about equal sides and angles	Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons Draw and translate simple shapes on the coordinate plane, and reflect them in the axis
Statistics		Ask and answer questions about totalling and comparing categorical data	Interpret and present data using bar charts, pictograms and tables	Solve comparison, sum and difference problems using information presented in a line graph	Solve comparison, sum and difference problems using information presented in a line graph	Interpret and construct pie charts and line graphs and use these to solve