	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Problem Solving	I can solve one-step problems that can involve addition and subtraction, using concrete objects and pictorial representations. I can 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. I can compare, describe and solve practical problems for: Lengths and heights (e.g. long/short, longer/ shorter, tall/ short, double/half) Mass or weight (e.g. heavy/light, heavier than, lighter than) Capacity/ volume (full/empty, more than, less than, quarter) Time (quicker, slower, earlier, later).	I can use place value and number facts to solve problems. I can solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying my increasing knowledge of mental and written methods. I can solve problems involving multiplication and division using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts. Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	I can solve number problems and practical problems involving these ideas.	I can solve number and practical problems using all of my number skills.	I can solve number and practical problems using all of my number skills.	I can solve number problems and practical problems involving a range of ideas.

Number System	I can count to and across 100, forwards and backwards, beginning from 0 or 1, or from any given number. I can count, read and write numbers to 100 in numerals. I can count in multiples of twos, five and tens. When given a number, I can identify one more and one less. I can identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more then, less than (fewer), most and least. I can read and write numbers from 1 to 20 in numerals and words	I can count in steps of 2, 3 & 5 from 0, & in tens from any number forward and backward. I can recognise the place value of each digit in a 2-digit number (tens and ones). I can identify, represent & estimate number using different representations including number line. I can compare and order numbers from 0 up to 100; use <, > and = signs. I can read and write numbers to at least 100 in numerals and in words.	I can read and write numbers up to 1,000 in numerals and in words. I can count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number. I can recognise the place value of each digit in a 3-digit number. I can compare and order numbers up to 1,000. I can identify, represent and estimate numbers using different representations.	I can count in multiples of 6, 7, 9, 25 and 1000. I can find 1000 more or less than a given number. I can count backwards through 0 using negative numbers. I can recognise the place value of each digit in a four-digit number. I can compare and order numbers beyond 1000. I can identify, represent and estimate numbers using different representations. I can round any number to the nearest 10, 100 and 1000. Round decimals with one decimal place to the nearest whole number. I can compare and order decimal numbers with up to two decimal places. I can read Roman numerals to 100 (I to C) and I understand how numbers developed to include 0.	I can read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit. I can count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000. I can interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers through 0. I can round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000. I can read Roman numerals to 1,000 (M) and recognise years written in Roman numerals. I can read, write, order and compare numbers with up to 3 d.p. I can recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. I can round decimals with two d.p. to the nearest whole number and to one d.p. I can solve problems involving number up to three d.p.	I can read, write, order and compare numbers up to 10,000,000 and determine the value of each digit. I can round any whole number to a required degree of accuracy. I can use negative numbers in context, and calculate intervals across 0. I can solve number and practical problems that involve all of the above.

Fractions and Decimals	I can recognise, find and name a half as one of two equal parts of an object, shape or quantity. I can recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.	I can recognise, find, name and write fractions 1/3, ¼, 2/4 and ¾ of a length, shape, set of objects or quantity. I can write simple fractions e.g. ½ of 6 = 3 and recognise the equivalence of 2/4 and ½.	I can 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. I can recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators. I can recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators. I can recognise and show, using diagrams, equivalent fractions with small denominators. I can add and subtract fractions with the same denominator within one whole. I can compare and order unit fractions, and fractions with the same denominators. I can solve problems that involve all of the above	I can recognise and show, using diagrams, families of common equivalent fractions. I can count up and down in hundredths; recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten. I can solve problems involving increasingly harder fractions to calculate quantities and fractions divide quantities, including non-unit fractions where the answer is a whole number. I can add and subtract fractions with the same denominator. I can recognise and write decimal equivalents of any number of tenths or hundredths. I can recognise and write decimal equivalents to ¼, ½, ¾. I can solve simple measure and money problems involving fractions and decimals to two d.p.	I can compare and order fractions whose denominators are multiples of the same number. I can identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths. I can recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements <1 as mixed numbers e.g. 2/5 + 4/5 = 6/5 = 1 1/5. I can add and subtract fractions with the same denominator and multiplies of the same number. I can multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. I can read and write decimal numbers as fractions. I can recognise the percent symbol (%) and understand percent means number of parts per hundred and write percentages as a fraction with a denominator 100 and as a decimal. I can solve problems which require knowing percentage and decimal equivalents of ½, ¼, 1/5, 2/5, 4/5 and those with a denominator of a multiple of 10 or 25.	I can use common factors to simplify fractions; use common multiples to express fractions in the same denomination. I can compare and order fractions, including fractions >1 I can add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions. I can multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, × =]. I can divide proper fractions by whole numbers [for example, ÷ 2 =]. I can associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction. I can identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places. I can recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

Addition and Subtraction	I can read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. I can represent and use number bonds and related subtraction facts within 20. I can add and subtract 1-digit and 2-digit numbers to 20, including zero. I can solve missing number problems such as 7 = ? – 9.	I can recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100. I can add and subtract numbers using concrete objects, pictorial representations, and mentally, including: A 2-digit number and ones A 2-digit number and tens Two 2-digit numbers Adding three 1-digit numbers. I can show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. I can recognise and use the inverse relationship between addition & subtraction & use this to check calculations and missing number problems.	I can add and subtract numbers mentally. I can add and subtract numbers with up to 3 digits, using formal written methods of columnar addition and subtraction. I can estimate the answer to a calculation and use inverse operations to check answers. I can solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.	I can add and subtract numbers up to 4 digits using columnar methods. I can estimate and use inverse operations to check answers to a calculation. I can solve addition and subtraction two-step problems in contexts, deciding which operations to use and why.	I can add and subtract whole numbers with more than 4 digits using formal columnar addition. I can add and subtract numbers mentally with increasingly large numbers. I can use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. I can solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	I can perform mental calculations, including with mixed operations and large numbers. I can use my knowledge of the order of operations to carry out calculations involving the 4 operations. I can solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. I can use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.

Multiplication and Division	I can 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.	I can recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers. I can calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs. I can show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.	Recall and use multiplication and division for the 3,4 and 8 times tables. I can write and calculate mathematical statements for multiplication and division using the multiplication facts that they know including TU x U, using mental and then progressing to formal written methods. I can solve problems, including missing number problems, involving multiplication and division, including integer scaling problems and correspondence problems in which *n* objects are connected to *m* objects.	I can recall multiplication and division facts up to 12x12. I can use place value, known & derived facts to multiply and divide mentally, including multiplying & dividing by 0 and 1; dividing by 1; multiplying together three numbers. I can recognise and use factor pairs & commutativity in mental maths. I can multiply two-digit & three-digit numbers by a one-digit number using a formal layout. I can find the effect of dividing a one- or two- digit number by 10 & 100, identifying the value of the digits in the answer as units, tenths & hundredths. I can solve problems involving multiplying & adding, including integer scaling problems & harder correspondence problems such as n objects are connected to m objects.	I can identify multiples and factors, including finding all factor pairs of a number and common factors of two numbers. I can multiply and divide numbers mentally using known facts. I can divide numbers up to four-digits by a one-digit number using the formal written method of short division and interpret remainders appropriately according to context. I can solve problems using multiplication and division and a combination of these, including understanding the equals sign. I can solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple ratios. I know and use the words prime number, prime factors and composite numbers. I can tell whether a number up to 100 is a prime number and recall prime numbers up to 19. I can recognise and use square numbers and cube numbers and their notation. I can solve problems using multiplication and division using my knowledge of factors and multiples, squares and cubes.	I can multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication. I can 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. I can 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. I can perform mental calculations, including with mixed operations and large numbers. I can identify common factors, common multiples and prime numbers. I can use my knowledge of the order of operations to carry out calculations involving the 4 operations. I can multiply one-digit numbers with up to 2 decimal places by whole numbers. I can use written division methods in cases where the answer has up to 2 decimal places.

						I can solve problems which require answers to be rounded to specified degrees of accuracy. I can solve problems involving multiplication and division. I can use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.
Geometry Properties	I can recognise and name common 2-D shapes including: 2-D shapes (e.g. rectangles (including squares), circles and triangles. 3-D shapes (e.g. cuboids (including cubes), pyramids and spheres).	I can identify and describe the properties of 2-D shapes, including the number of sides and symmetry in a vertical line. I can identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces. I can identify 2-D shapes on the surface of 3-D shapes, for example a circle on a cylinder and a triangle on a pyramid. I can compare and sort common 2-D and 3-D shapes and everyday objects.	I can draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them recognise angles as a property of shape or a description of a turn. I can identify right angles, recognise that 2 right angles make a half-turn, 3 make three-quarters of a turn and 4 a complete turn; identify whether angles are greater than or less than a right angle. I can identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	I can compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. I can identify acute and obtuse angles and compare and order angles up to two right angles (180^0) by size. I can identify lines of symmetry in 2D shapes presented in different orientations. I can complete a simple symmetric figure with respect to a specific line of symmetry.	I can identify 3D shapes, including cubes and cuboids, from 2D representations. I know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. I can draw given angles and measure them in degrees (^{o}). I can identify: angles at a point and one whole turn (total 360^o). angles at a point on a straight line and ½ turn (total 180^o). other multiples of 90^o. I can use the properties of rectangles to deduce related facts and find missing lengths and angles. I can distinguish between regular and irregular polygons based on reasoning about equal sides and angles.	I can draw 2-D shapes using given dimensions and angles recognise, describe and build simple 3-D shapes, including making nets. I can compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons. I can illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius. I can recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.

Geometry Position and Direction	I can describe position, directions and movements, including half, quarter and three- quarter turns.	I can order and arrange combinations of mathematical objects in patterns. I can use mathematical vocabulary to describe position, direction and movement including distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise), and movement in a straight line.		I can describe positions on a 2D grids as coordinates in the first quadrant. I can describe movements between positions as translations of a given unit to the left/right and up/down. I can plot specified points and draw sides to complete a given polygon.	I can identify, describe and represent the position of a shape following a reflection or translation, including the appropriate language, and know that the shape has not changed.	I can describe positions on the full coordinate grid (all 4 quadrants). I can draw and translate simple shapes on the coordinate plane, and reflect them in the axes.

Measurement	I can compare, describe and solve practical problems for: Lengths and heights (e.g. long/short, longer/ shorter, tall/ short, double/half) Mass or weight (e.g. heavy/light, heavier than, lighter than) Capacity/ volume (full/empty, more than, less than, quarter) Time (quicker, slower, earlier, later). I can measure and record the following: Lengths and heights Mass/weight Capacity and volume Time (hours, minutes, seconds). I can recognise and know the value of different denominations of coins and notes. I can sequence events in a chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening. I can recognise and use language relating to dates, including days of the week, weeks, months and years. I can tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.	I can choose and use appropriate standard units to estimate and measure length/ height in any direction (m/cm); mass (kg/g); temperature (C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels. I can compare and order lengths, mass, volume/capacity and record the results using <, > and =. I can recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value. I can find different combinations of coins that equal the same amounts of money. I can solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change. I can compare and sequence intervals of time. I can 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. I know the number of minutes in an hour and the number of hours in a day	I can measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml). I can measure the perimeter of simple 2-D shapes. I can add and subtract amounts of money to give change, using both £ and p in practical contexts. I can tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks. I can 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, am/pm, morning, afternoon, noon and midnight. I know the number of seconds in a minute and the number of days in each month, year and leap year. I can compare durations of events [for example, to calculate the time taken by particular events or tasks].	I can convert between different units of measure (e.g. km to m; hr to min). I can measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres. I can find the area of rectilinear shapes by counting squares. I can read, write and convert time between analogue and digits 12 and 24hr clocks. I can solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days. I can estimate, compare and calculate different measures, including money in pounds and pence.	I can convert between different units of metric measure (e.g. km and m; cm and m; cm and mm; g and kg; l and ml). I can understand and use equivalences between metric units and common imperial units such as inches, pounds and pints. I can measure and calculate the perimeter of composite rectilinear shapes in cm and m. I can calculate and compare the area of squares and rectangles including using standard units cm^2 and m^2 and estimate the area of irregular shapes. I can estimate volume (e.g. using 1 cm^3 clocks to build cubes and cuboids) and capacity (e.g. using water). I can solve problems involving converting between units of time. I can use all four operations to solve problems including measure (e.g. length, mass, volume, money) using decimal notation including scaling.	I can solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 decimal places where appropriate. I can 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 3 decimal places. I can convert between miles and kilometres. I can recognise that shapes with the same areas can have different perimeters and vice versa. I can recognise when it is possible to use formulae for area and volume of shapes. I can calculate the area of parallelograms and triangles. I can calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units [for example, mm^3 and km^3]

Statistics		I can interpret and construct simple pictograms, tally charts, block diagrams and simple tables. I can ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. I can ask and answer questions about totalling and comparing categorical data.	I can interpret and present data using bar charts, pictograms and tables. I can 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.	I can interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and line graphs. I can solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.	I can solve comparison, sum and difference problems using information presented in line graphs. I can complete, read and interpret information in tables, including time tables.	I can interpret and construct pie charts and line graphs and use these to solve problems. I can calculate and interpret the mean as an average.
Algebra						I can use simple formulae. I can express missing number problems algebraically. I can find pairs of numbers that satisfy an equation with 2 unknowns. I can enumerate possibilities of combinations of 2 variables. I can generate and describe linear number sequences.

Ratio and Proportion						I can solve problems involving the relative sizes of 2 quantities where missing values can be found by using integer multiplication and division facts. I can solve problems involving similar shapes where the scale factor is known or can be found. I can solve problems involving the calculation of percentages [for example, of measures such as 15% of 360] and the use of percentages for comparison. I can solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.