Place Value: Count

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number <br> - Count numbers to 100 in numerals; count in multiples of twos, fives and tens | - count in steps of 2, 3, and 5 from 0 , and in tens from any number, forward and backward | - count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number | - count in multiples of $6,7,9,25$ and 1000 <br> - count backwards through zero to include negative numbers | - count forwards or backwards in steps of powers of 10 for any given number up to 1 000000 <br> - count forwards and backwards with positive and negative whole numbers, including through zero |  |
| Autumn 1 <br> Spring 1 <br> Spring 3 <br> Summer 4 | Autumn 1 | Autumn 1 <br> Autumn 3 | Autumn 1 Autumn 4 | Autumn 1 <br> Summer 4 |  |

Place Value: Represent

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| :--- | :--- | :--- | :--- | :--- | :--- |

Place Value: Use and Compare

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - given a number, identify one more and one less | - recognise the place value of each digit in a two-digit number (tens, ones) <br> - compare and order numbers from 0 up to 100 ; use $<,>$ and $=$ signs | - recognise the place value of each digit in a three-digit number (hundreds, tens, ones) <br> - compare and order numbers up to 1000 | - find 1000 more or less than a given number <br> - recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) <br> - order and compare numbers beyond 1000 | - (read, write) order and compare numbers to at least 1 000000 and determine the value of each digit | - (read, write), order and compare numbers up to 10 000000 and determine the value of each digit |
| Autumn 1 <br> Spring 1 <br> Spring 3 <br> Summer 4 | Autumn 1 | Autumn 1 | Autumn 1 | Autumn 1 | Autumn 1 |

Place Value: Problems / Rounding

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | - use place value and number facts to solve problems | - solve number problems and practical problems involving these ideas | - round any number to the nearest 10,100 or 1000 <br> - solve number and practical problems that involve all of the above and with increasingly large positive numbers | - interpret negative numbers in context <br> - round any number up to 1000000 to the nearest 10,100 , 1000, 10000 and 100 000 <br> - solve number problems and practical problems that involve all of the above | - round any whole number to a required degree of accuracy <br> - use negative numbers in context, and calculate intervals across zero <br> - solve number and practical problems that involve all of the above |
|  | Autumn 1 | Autumn 1 | Autumn 1 | Autumn 1 | Autumn 1 |

Addition \& Subtraction: Calculations

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - add and subtract one-digit and twodigit numbers to 20, including zero | - add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones a two-digit number and tens two two-digit numbers adding three onedigit numbers | - add and subtract numbers mentally, including: <br> a three-digit number and ones <br> a three-digit number and tens a three-digit number and hundreds <br> - add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction | - add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate | - add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) <br> - add and subtract numbers mentally with increasingly large numbers | - perform mental calculations, including with mixed operations and large numbers <br> - use their knowledge of the order of operations to carry out calculations involving the four operations |
| Autumn 2 <br> Spring 2 | Autumn 2 | Autumn 2 | Autumn 2 | Autumn 2 | Autumn 2 |

## Addition \& Subtraction: Problems

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| :---: | :---: | :---: | :---: | :---: | :---: |

Multiplication \& Division: Recall / Use

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | - recall and use multiplication and division facts for the 2,5 and 10 multiplication tables, including recognising odd and even numbers <br> - 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 facts for the 3, 4 and 8 multiplication tables | - recall multiplication and division facts for multiplication tables up to $12 \times 12$ <br> - 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 <br> - recognise and use factor pairs and commutativity in mental calculations | - identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers <br> - know and use the vocabulary of prime numbers, prime factors and composite (nonprime) numbers <br> - establish whether a number up to 100 is prime and recall prime numbers up to 19 <br> - recognise and use square numbers and cube numbers, and the notation for squared ( ${ }^{2}$ ) and cubed ( ${ }^{(3)}$ | - identify common factors, common multiples and prime numbers <br> - use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy |
|  | Spring 2 | Autumn 3 <br> Spring 1 | Autumn 4 Spring 1 | Autumn 3 | Autumn 2 |

Multiplication \& Division: Calculations

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | - calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division ( $\div$ ) and equals (=) signs | - write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for twodigit numbers times one-digit numbers, using mental and progressing to formal written methods | - multiply two-digit and three-digit numbers by a onedigit number using formal written layout | - multiply numbers up to 4 digits by a one- or twodigit number using a formal written method, including long multiplication for two-digit numbers <br> - multiply and divide numbers mentally drawing upon known facts <br> - 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 <br> - multiply and divide whole numbers and those involving decimals by 10 , 100 and 1000 | - multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication <br> - 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 <br> - 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 <br> - perform mental calculations, including with mixed operations and large numbers |
|  | Spring 2 | Autumn 3 <br> Spring 1 | Spring 1 | Autumn 3 <br> Spring 1 | Autumn 2 |

Multiplication \& Division: Problems

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - 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 | - solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts | - 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 | - 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 | - solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes <br> - solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates | - solve problems involving addition, subtraction, multiplication and division |
| Summer 1 | Spring 2 | Spring 1 | Spring 1 | Autumn 3 Spring 1 | Autumn 2 |

Multiplication \& Division: Combined

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | - solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the equals sign | - use their knowledge of the order of operations to carry out calculations involving the four operations |
|  |  |  |  | Spring 1 | Autumn 2 |

## Fractions: Recognise \& Write

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| :--- | :---: | :---: | :---: | :---: | :---: |

Fractions: Compare

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | - Recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ | - recognise and show, using diagrams, equivalent fractions with small denominators <br> - compare and order unit fractions, and fractions with the same denominators | - recognise and show, using diagrams, families of common equivalent fractions | - compare and order fractions whose denominators are all multiples of the same number | - use common factors to simplify fractions; use common multiples to express fractions in the same denomination <br> - compare and order fractions, including fractions > 1 |
|  | Summer 1 | Spring 3 | Spring 3 | Autumn 4 | Autumn 3 |

Fractions: Calculations

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | - write simple fractions for example, $\frac{1}{2}$ of $6=$ 3 | - add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7}+\frac{1}{7}=\frac{6}{7}$ ] | - add and subtract fractions with the same denominator | - add and subtract fractions with the same denominator and denominators that are multiples of the same number <br> - multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams | - add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions <br> - multiply simple pairs of proper fractions, writing the answer in its simplest form [for example,,$\left.\frac{1}{4} \times \frac{1}{2}=\frac{1}{8}\right]$ <br> - divide proper fractions by whole numbers [for example $\frac{1}{3} \div 2=\frac{1}{6}$ ] |
|  | Summer 1 | Summer 1 | Spring 3 | Autumn 4 <br> Spring 2 | Autumn 3 <br> Autumn 4 |

Fractions: Solve Problems

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :--- | :--- | :---: | :---: | :---: | :---: |
|  |  | - solve problems that <br> involve all of the <br> above | -solve problems <br> involving increasingly <br> harder fractions to <br> calculate quantities, <br> and fractions to <br> divide quantities, <br> including non-unit <br> fractions where the <br> answer is a whole <br> number |  |  |
|  |  | Spring 3 <br> Summer 1 | Spring 3 |  |  |

Decimals: Recognise, Write, Compare

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | - recognise and write decimal equivalents of any number of tenths or hundredths <br> - recognise and write decimal equivalents to $\frac{1}{4}, \frac{1}{2}, \frac{3}{4}$ <br> - round decimals with one decimal place to the nearest whole number <br> - compare numbers with the same number of decimal places up to two decimal places | - read and write decimal numbers as fractions [for example, $0.71=\frac{71}{100}$ ] <br> - recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents <br> - round decimals with two decimal places to the nearest whole number and to one decimal place <br> - read, write, order and compare numbers with up to three decimal places | - identify the value of each digit in numbers given to three decimal places |
|  |  |  | Spring 4 <br> Summer 1 | Spring 3 <br> Summer 3 | Spring 3 |

Fractions, Decimals \& Percentages

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | - solve simple measure and money problems involving fractions and decimals to two decimal places | - 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 <br> - solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}, \frac{1}{4}, \frac{1}{5}, \frac{2}{5}, \frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25 | - associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, $\frac{3}{8}$ ] <br> - recall and use equivalences between simple fractions, decimals and percentages, including in different contexts |
|  |  |  | Spring 3 <br> Spring 4 <br> Summer 1 | Spring 3 | Spring 3 Spring 4 |

Ratio \& Proportion

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | - solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts <br> - solve problems involving the calculation/use of percentages for comparison <br> - solve problems involving similar shapes where the scale factor is known or can be found <br> - solve problems involving unequal sharing and grouping using knowledge of fractions and multiples |
|  |  |  |  |  | Spring 1 |

Algebra

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7=$ - 9 | - recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems | - solve problems, including missing number problems |  |  | - use simple formulae <br> - generate and describe linear number sequences <br> - express missing number problems algebraically <br> - find pairs of numbers that satisfy an equation with two unknowns <br> - enumerate possibilities of combinations of two variables |
|  |  |  |  |  | Spring 2 |

## Using Measures

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - compare, describe and solve practical problems for: <br> $>$ lengths and heights <br> $>$ mass/weight <br> $>$ capacity and volume <br> $>$ time <br> - measure and begin to record the following: <br> $>$ lengths and heights <br> $>$ mass/weight <br> $>$ capacity and volume <br> $>$ time (hours, minutes, seconds) | - choose and use appropriate standard units to estimate and measure length/height in any direction ( $\mathrm{m} / \mathrm{cm}$ ); mass (kg/g); temperature $\left({ }^{\circ} \mathrm{C}\right)$; capacity (litres $/ \mathrm{ml}$ ) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels <br> - compare and order lengths, mass, volume/capacity and record the results using $\geqslant$, < and = | - measure, compare, add and subtract: lengths ( $\mathrm{m} / \mathrm{cm} / \mathrm{mm}$ ); mass (kg/g); volume/capacity ( $1 / \mathrm{ml}$ ) | - Convert between different units of measure [for example, kilometre to metre; hour to minute] <br> - estimate, compare and calculate different measures | - convert between different units of metric measure <br> - understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints <br> - use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling | - solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 d.p. where appropriate <br> - 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 d.p. <br> - convert between miles and kilometres |
| Spring 4 Spring 5 Summer 6 | Spring 3 <br> Spring 4 | Spring 2 <br> Spring 4 | Spring 2 <br> Summer 3 | Spring 4 <br> Summer 5 <br> Summer 6 | Autumn 5 |

Money

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - recognise and know the value of different denominations of coins and notes | - recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value <br> - find different combinations of coins that equal the same amounts of money <br> - solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change | - add and subtract amounts of money to give change, using both $£$ and $p$ in practical contexts | - estimate, compare and calculate different measures, including money in pounds and pence | - use all four operations to solve problems involving measure [for example, money] |  |
| Summer 5 | Spring 1 | Summer 2 | Summer 2 | Summer 3 |  |

Time

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] <br> - recognise and use language relating to dates, including days of the week, weeks, months and years <br> - tell the time to the hour and half past the hour and draw the hands on a clock face to show these times | - compare and sequence intervals of time <br> - 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 <br> - know the number of minutes in an hour and the number of hours in a day | - tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12 -hour and 24 -hour clocks <br> - 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 <br> - know the number of seconds in a minute and the number of days in each month, year and leap year <br> - compare durations of events [for example to calculate the time taken by particular events or tasks] | - read, write and convert time between analogue and digital 12-and 24-hour clocks <br> - solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days | - solve problems involving converting between units of time | - use, read, write and convert between standard units, converting measurements of time from a smaller unit of measure to a larger unit, and vice versa <br> Note - In the WRM schemes, time conversions are covered in Y5; the Y6 block concentrates on metric units. |
| Summer 6 | Summer 2 | Summer 3 | Summer 3 | Summer 5 | Autumn 5 |

Perimeter, Area, Volume

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Yeasure the <br> perimeter of simple <br> 2-D shapes |
| :--- | :--- | :--- | :--- | :--- | :--- |

## 2D Shapes

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - recognise and name common 2-D shapes [for example, rectangles (including squares), circles and triangles] | - identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line <br> - identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] <br> - compare and sort common 2-D shapes and everyday objects | - draw 2-D shapes | - compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes <br> - identify lines of symmetry in 2-D shapes presented in different orientations | - distinguish between regular and irregular polygons based on reasoning about equal sides and angles. <br> - use the properties of rectangles to deduce related facts and find missing lengths and angles | - draw 2-D shapes using given dimensions and angles <br> - compare and classify geometric shapes based on their properties and sizes <br> - illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius |
| Autumn 3 | Autumn 3 | Summer 4 | Summer 4 | Summer 1 | Summer 1 |

3D Shapes

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - recognise and name common 3-D shapes [for example, cuboids (including cubes), pyramids and spheres] | - recognise and name common 3-D shapes [for example, cuboids (including cubes), pyramids and spheres] <br> - compare and sort common 3-D shapes and everyday objects | - make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them |  | - identify 3-D shapes, including cubes and other cuboids, from 2-D representations | - recognise, describe and build simple 3-D shapes, including making nets |
| Autumn 3 | Autumn 3 | Summer 4 |  | Summer 1 | Summer 1 |

Angles \& Lines

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | - recognise angles as a property of shape or a description of a turn <br> - 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 <br> - identify horizontal and vertical lines and pairs of perpendicular and parallel lines | - identify acute and obtuse angles and compare and order angles up to two right angles by size <br> - identify lines of symmetry in 2-D shapes presented in different orientations <br> - complete a simple symmetric figure with respect to a specific line of symmetry | - know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles <br> - draw given angles, and measure them in degrees <br> identify: <br> angles at a point and one whole turn (total $360^{\circ}$ ) <br> angles at a point on a straight line and $\frac{1}{2}$ a turn (total $180^{\circ}$ ) other multiples of $90^{\circ}$ | - find unknown angles in any triangles, quadrilaterals, and regular polygons <br> - recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles |
|  |  | Summer 4 | Summer 4 | Summer 1 | Summer 1 |

Position \& Direction

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - describe position, direction and movement, including whole, half, quarter and three-quarter turns | - order and arrange combinations of mathematical objects in patterns and sequences <br> - 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 anticlockwise) |  | - describe positions on a 2-D grid as coordinates in the first quadrant <br> - describe movements between positions as translations of a given unit to the left/right and up/down <br> - plot specified points and draw sides to complete a given polygon | - 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 | - describe positions on the full coordinate grid (all four quadrants) <br> - draw and translate simple shapes on the coordinate plane, and reflect them in the axes |
| Summer 3 | Summer 4 |  | Summer 6 | Summer 2 | Summer 2 |

Present \& Interpret Date

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | - interpret and construct simple pictograms, tally charts, block diagrams and simple tables | - interpret and present data using bar charts, pictograms and tables | - interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs | - complete, read and interpret information in tables, including timetables | - interpret and construct pie charts and line graphs and use these to solve problems |
|  | Summer 3 | Summer 5 | Summer 5 | Spring 5 | Spring 6 |

Solve Statistical Problems

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | - ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity <br> - ask and answer questions about totalling and comparing categorical data | - 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 | - solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs | - solve comparison, sum and difference problems using information presented in a line graph | - calculate and interpret the mean as an average |
|  | Summer 3 | Summer 5 | Summer 5 | Spring 5 | Spring 6 |

