Place Value

	Year 1	Year 2	Year 3	Year 4
Place Value: Counting	• count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number • Count numbers to 100 in numerals; count in multiples of twos, fives and tens **Autumn 1 Autumn 4 Spring 2 Summer 4**	• count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward **Autumn 1**	• count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number **Autumn 1 Autumn 3**	• count in multiples of 6, 7, 9, 25 and 1000 • count backwards through zero to include negative numbers **Autumn 1 Autumn 4**
Place Value: Represent	• identify and represent numbers using objects and pictorial representations • read and write numbers to 100 in numerals • read and write numbers from 1 to 20 in numerals and words. **Autumn 1 Autumn 4 Spring 2 Summer 4**	• read and write numbers to at least 100 in numerals and in words • identify, represent and estimate numbers using different representations, including the number line **Autumn 1**	• identify, represent and estimate numbers using different representations • read and write numbers up to 1000 in numerals and in words **Autumn 1**	• identify, represent and estimate numbers using different representations • 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 **Autumn 1**

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	Year 1	Year 2	Year 3	Year 4
Place Value : Use PV and Compare	• given a number, identify one more and one less Autumn 1 Autumn 4 Spring 2 Summer 4	• recognise the place value of each digit in a two-digit number (tens, ones) • compare and order numbers from 0 up to 100; use <, > and = signs Autumn 1	• recognise the place value of each digit in a three-digit number (hundreds, tens, ones) • compare and order numbers up to 1000 Autumn 1	• find 1000 more or less than a given number • recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) • order and compare numbers beyond 1000 Autumn 1
Place Value: Problems& Rounding		• use place value and number facts to solve problems. Autumn 1	• solve number problems and practical problems involving these ideas Autumn 1	• round any number to the nearest 10, 100 or 1000 • solve number and practical problems that involve all of the above and with increasingly large positive numbers Autumn 1

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Addition and Subtraction

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	Year 1	Year 2	Year 3	Year 4
Addition & Subtraction: Recall, Represent, Use	• read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs • represent and use number bonds and related subtraction facts within 20 **Autumn 2** **Spring 1**	• recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 • show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot • recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems **Autumn 2**	• estimate the answer to a calculation and use inverse operations to check answers **Autumn 2**	• estimate and use inverse operations to check answers to a calculation **Autumn 2**

	Year 1	Year 2	Year 3	Year 4
Addition & Subtraction: Calculations	• add and subtract one-digit and two-digit numbers to 20, including zero **Autumn 2** **Spring 1**	• 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 one-digit numbers **Autumn 2**	• add and subtract numbers mentally, including: ➢ a three-digit number and ones ➢ a three-digit number and tens ➢ a three-digit number and hundreds • add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction **Autumn 2**	• add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate **Autumn 2**

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	Year 1	Year 2	Year 3	Year 4
Addition & Subtraction: Solve Problems	• solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = □ – 9 Autumn 2 Spring 1	• solve problems with addition and subtraction: ➢ using concrete objects and pictorial representations, including those involving numbers, quantities and measures ➢ applying their increasing knowledge of mental and written methods Autumn 2	• solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction Autumn 2	• solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why Autumn 2

Multiplication and Division

	Year 1	Year 2	Year 3	Year 4
Multiplication & Division: Recall, Represent, Use		• recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers • show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot **Autumn 4 Spring 1**	• recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables **Autumn 3**	• recall multiplication and division facts for multiplication tables up to 12 × 12 • 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 • recognise and use factor pairs and commutativity in mental calculations **Autumn 4 Spring 1**

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	Year 1	Year 2	Year 3	Year 4
Multiplication & Division: Calculations		• calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs Autumn 4 Spring 1	• 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 and progressing to formal written methods Autumn 3 Spring 1	• multiply two-digit and three-digit numbers by a one-digit number using formal written layout Spring 1

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	Year 1	Year 2	Year 3	Year 4
Multiplication & Division: Solve Problems	• 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 **Summer 1**	• solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts **Autumn 4 Spring 1**	• 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 **Spring 1**	• 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 **Spring 1**
Multiplication & Division: Combined Operations				

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Fractions, Decimals and Percentages

	Year 1	Year 2	Year 3	Year 4
Fractions: Recognise and Write	• recognise, find and name a half as one of two equal parts of an object, shape or quantity • recognise, find and name a quarter as one of four equal parts of an object, shape or quantity **Summer 2**	• recognise, find, name and write fractions $\frac{1}{3}, \frac{1}{4}, \frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity **Spring 4**	• 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 use fractions as numbers: unit fractions and non-unit fractions with small denominators **Spring 5**	• count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. **Spring 3**
Fractions: Compare		• Recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ **Spring 4**	• recognise and show, using diagrams, equivalent fractions with small denominators • compare and order unit fractions, and fractions with the same denominators **Summer 1**	• recognise and show, using diagrams, families of common equivalent fractions **Spring 3**

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	Year 1	Year 2	Year 3	Year 4
Fractions: Calculations		• write simple fractions for example, $\frac{1}{2}$ of 6 = 3 Spring 4	• add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$] Summer 1	• add and subtract fractions with the same denominator Spring 3
Fractions: Solve Problems			• solve problems that involve all of the above Spring 5 Summer 1	• 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 Spring 3

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	Year 1	Year 2	Year 3	Year 4
Decimals: Recognise and Write				• recognise and write decimal equivalents of any number of tenths or hundredths • recognise and write decimal equivalents to $\frac{1}{4}, \frac{1}{2}, \frac{3}{4}$ **Spring 4** **Summer 1**
Decimals: Compare				• round decimals with one decimal place to the nearest whole number • compare numbers with the same number of decimal places up to two decimal places **Summer 1**

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	Year 1	Year 2	Year 3	Year 4
Decimals: Calculations & Problems				• 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 **Spring 4**

	Year 1	Year 2	Year 3	Year 4
Fractions, Decimals and Percentages				• solve simple measure and money problems involving fractions and decimals to two decimal places **Spring 3** **Spring 4** **Summer 1**

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Algebra

	Year 1	Year 2	Year 3	Year 4
Algebra	• 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	

Note – although algebraic notation is not introduced until Y6, algebraic thinking starts much earlier as exemplified by the 'missing number' objectives from Y1/2/3

Measurement: Using Measures

	Year 1	Year 2	Year 3	Year 4
Measurement: Using Measures	• compare, describe and solve practical problems for: ➢ lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] ➢ mass/weight [for example, heavy/light, heavier than, lighter than] ➢ capacity and volume [for example, full/empty, more than, less than, half, half full, quarter] ➢ time [for example, quicker, slower, earlier, later] • measure and begin to record the following: ➢ lengths and heights ➢ mass/weight ➢ capacity and volume ➢ time (hours, minutes, seconds) **Spring 3** **Spring 4** **Summer 6**	• 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 • compare and order lengths, mass, volume/capacity and record the results using >, < and = **Spring 5** **Summer 4**	• measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) **Spring 4** **Summer 4**	• Convert between different units of measure [for example, kilometre to metre; hour to minute] • estimate, compare and calculate different measures **Autumn 3** **Spring 2** **Summer 3**

Measurement: Money

	Year 1	Year 2	Year 3	Year 4
Measurement: Money	• recognise and know the value of different denominations of coins and notes **Summer 5**	• recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value • find different combinations of coins that equal the same amounts of money • solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change **Autumn 3**	• add and subtract amounts of money to give change, using both £ and p in practical contexts **Spring 2**	• estimate, compare and calculate different measures, including money in pounds and pence **Summer 2**

Measurement: Time

	Year 1	Year 2	Year 3	Year 4
Measurement: Time	• sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] • recognise and use language relating to dates, including days of the week, weeks, months and years • tell the time to the hour and half past the hour and draw the hands on a clock face to show these times **Summer 6**	• compare and sequence intervals of time • 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 • know the number of minutes in an hour and the number of hours in a day **Summer 3**	• tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks • 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 • know the number of seconds in a minute and the number of days in each month, year and leap year • compare durations of events [for example to calculate the time taken by particular events or tasks] **Summer 2**	• read, write and convert time between analogue and digital 12- and 24-hour clocks • solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days **Summer 3**

Measurement: Perimeter, Area and Volume

	Year 1	Year 2	Year 3	Year 4
Measurement: Perimeter, Area, Volume			• measure the perimeter of simple 2-D shapes Spring 4	• measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres • find the area of rectilinear shapes by counting squares Autumn 3 Spring 2

Geometry: 2-D Shapes

	Year 1	Year 2	Year 3	Year 4
Geometry: 2-D Shapes	• recognise and name common 2-D shapes [for example, rectangles (including squares), circles and triangles] **Autumn 3**	• identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line • identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] • compare and sort common 2-D shapes and everyday objects **Spring 3**	• draw 2-D shapes **Summer 3**	• 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 **Summer 5**
Geometry: 3-D Shapes	• recognise and name common 3-D shapes [for example, cuboids (including cubes), pyramids and spheres] **Autumn 3**	• recognise and name common 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]. • compare and sort common 3-D shapes and everyday objects **Spring 3**	• make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them **Summer 3**	

Geometry: Angles and Lines

	Year 1	Year 2	Year 3	Year 4
Geometry: Angles & Lines			• recognise angles as a property of shape or a description of a turn • 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 • identify horizontal and vertical lines and pairs of perpendicular and parallel lines **Summer 3**	• identify acute and obtuse angles and compare and order angles up to two right angles by size • identify lines of symmetry in 2-D shapes presented in different orientations • complete a simple symmetric figure with respect to a specific line of symmetry **Summer 5**

Geometry: Position and Direction

	Year 1	Year 2	Year 3	Year 4
Geometry: Position & Direction	• describe position, direction and movement, including whole, half, quarter and three-quarter turns Summer 3	• order and arrange combinations of mathematical objects in patterns and sequences • 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) Spring 3 Summer 1		• describe positions on a 2-D grid as coordinates in the first quadrant • describe movements between positions as translations of a given unit to the left/right and up/down • plot specified points and draw sides to complete a given polygon Summer 6

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Statistics

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	Year 1	Year 2	Year 3	Year 4
Statistics: Present and Interpret		• interpret and construct simple pictograms, tally charts, block diagrams and simple tables **Spring 2**	• interpret and present data using bar charts, pictograms and tables **Spring 3**	• interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs **Summer 4**
Statistics: Solve Problems		• ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity • ask and answer questions about totalling and comparing categorical data **Spring 2**	• 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 **Spring 3**	• solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs **Summer 4**