



MATHEMATICS CURRICULUM YEAR A and B

UNIT	Year 1	Year 2	Year 3	Year 4
1	<p>Geometry</p> <p>Pupils will be taught to: Recognise and name common 2-D and 3-D shapes, including: 2-D shapes and 3-D shapes</p>	<p>Geometry- Properties of Shape</p> <p>Pupils will be taught to: Identify and describe the properties of 2-D shapes, including the number of sides, and line symmetry in a vertical line Compare and sort common 2-D and 3-D shapes and everyday objects Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces Identify 2-D shapes on the surface of 3-D shapes</p>	<p>Place Value</p> <p>Pupils will be taught to: 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 3-digit number (100s, 10s, 1s) Compare and order numbers up to 1,000 Identify, represent and estimate numbers using different representations Read and write numbers up to 1,000 in numerals and in words Solve number problems and practical problems involving these ideas</p>	<p>Place Value</p> <p>Pupils will be taught to: Count in multiples of 6, 7, 9, 25 and 1,000 Find 1,000 more or less than a given number Count backwards through 0 to include negative numbers Recognise the place value of each digit in a four-digit number (1,000s, 100s, 10s, and 1s) Order and compare numbers beyond 1,000 Identify, represent and estimate numbers using different representations Round any number to the nearest 10, 100 or 1,000 Solve number and practical problems that involve all of the above and with increasingly large positive numbers Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of 0 and place value</p>
2	<p>Place Value to 20</p> <p>Pupils will be taught to: Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than, most, least Count to and across 100, forwards and backwards, beginning with zero or 1, or from any given number Given a number, identify one more or less Read and write numbers from 1 to 20 in numerals and words</p>	<p>Place Value</p> <p>Pupils will be taught to: 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 Count in steps of 2, 3 and 5 from 0, and in 10s from any number, forward and backward Recognise the place value of each digit in a 2-digit number (tens, ones) Compare and order numbers from 0 up to 100; use < , > and = signs Use place value and number facts to solve problems</p>	<p>Addition and Subtraction</p> <p>Pupils will be taught to: Add and subtract numbers mentally, including: a three-digit number and 1s a three-digit number and 10s a three-digit number and 100s Add and subtract numbers with up to 3 digits, using formal written methods of columnar addition and subtraction Estimate the answer to a calculation and use inverse operations to check answers Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction</p>	<p>Addition and Subtraction</p> <p>Pupils will be taught to: Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate Estimate and use inverse operations to check answers to a calculation Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why</p>

<p>3</p>	<p>Addition and Subtraction to 20 Pupils will be taught to: Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs Represent and use number bonds and related subtraction facts within 20 Add and subtract 1-digit and 2-digit numbers to 20, including zero Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems</p>	<p>Addition and Subtraction Pupils will be taught to: Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a 2-digit number and 1s, a 2-digit number and 10s, two 2-digit numbers and adding three 1-digit numbers Solve problems with addition and subtraction Show that addition of 2 numbers can be done in any order (commutative) and subtraction of 1 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</p>	<p>Money Pupils will be taught to: Add and subtract amounts of money to give change, using both £ and p in practical contexts</p>	<p>Money Pupils will be taught to: Estimate, compare and calculate different measures, including money in pounds and pence</p>
<p>4</p>	<p>Length and Height Pupils will be taught to: Compare, describe and solve practical problems for lengths and height Measure and begin to record lengths and heights</p>	<p>Length and Height Pupils will be taught to: Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm) using rulers Compare and order lengths and heights</p>	<p>Multiplication and Division Pupils will be taught to: 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 they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems</p>	<p>Multiplication and Division Pupils will be taught to: 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 3 numbers Recognise and use factor pairs and commutativity in mental calculations Multiply two-digit and three-digit numbers by a one-digit number using formal written layout Solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by 1 digit, integer scaling problems and harder correspondence problems</p>
<p>5</p>	<p>Mass and Volume Pupils will be taught to: Compare, describe and solve practical problems for: mass, capacity and volume Measure and begin to record mass, capacity and volume</p>	<p>Mass, Capacity and Temperature Pupils will be taught to: Choose and use appropriate standard units to estimate and measure mass (kg/g), temperature (°C) and capacity (litres/ml) to the nearest appropriate unit, using scales, thermometers and measuring vessels Compare and order mass, capacity and record the results using >, < and =</p>	<p>Length and Perimeter Pupils will be taught to: Measure, compare, add and subtract: lengths (m/cm/mm) Measure the perimeter of simple 2-D shapes</p>	<p>Length, Perimeter and Area Pupils will be taught to: Convert between different units of measure Measure and calculate the perimeter of a rectilinear figure in centimetres and metres Find the area of rectilinear shapes by counting squares</p>

<p>6</p>	<p>Place Value to 50 Pupils will be taught to: Count to and across 100, forwards and backwards, beginning with zero or 1, or from any given number Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than, most, least Count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s Given a number, identify 1 more and 1 less</p>	<p>Multiplication and Division Pupils will be taught to: Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) sign 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 2, 5 and 10 multiplication tables, including recognising odd and even numbers Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts</p>	<p>Fractions Pupils will be taught to: 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 Recognise and show, using diagrams, equivalent fractions with small denominators Add and subtract fractions with the same denominator within one whole Compare and order unit fractions, and fractions with the same denominators Solve problems that involve all of the above</p>	<p>Fractions Pupils will be taught to: 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 100 and dividing tenths by 10 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 Add and subtract fractions with the same denominator Recognise and write decimal equivalents $\frac{1}{4}, \frac{1}{2}, \frac{3}{4}$ Solve simple measure and money problems involving fractions and decimals to 2 decimal places</p>
<p>7</p>	<p>Multiplication and Division Pupils will be taught to: Count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s Solve one-step problems involving multiplication and division by calculating the answer using concrete objects, pictorial representations and arrays with support</p>	<p>Money Pupils will be taught to: 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</p>	<p>Mass and Capacity Pupils will be taught to: measure, compare, add and subtract: mass (kg/g) and volume/capacity (l/ml)</p>	<p>Decimals Pupils will be taught to: Recognise and write decimal equivalents of any number of tenths or hundredths Solve simple measure and money problems involving fractions and decimals to 2 decimal places 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 Round decimals with 1 decimal place to the nearest whole number Compare numbers with the same number of decimal places up to 2 decimal places</p>

8	<p>Fractions</p> <p>Pupils will be taught to:</p> <p>Recognise, find and name a half as one of two equal parts of an object, shape or quantity</p> <p>Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity</p>	<p>Fractions</p> <p>Pupils will be taught to:</p> <p>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</p> <p>Write simple fractions, for example $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$</p>	<p>Time</p> <p>Pupils will be taught to:</p> <p>Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks</p> <p>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</p> <p>Know the number of seconds in a minute and the number of days in each month, year and leap year</p> <p>Compare durations of events</p>	<p>Time</p> <p>Pupils will be taught to:</p> <p>Read, write and convert time between analogue and digital 12- and 24-hour clocks</p> <p>Solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days</p>
9	<p>Place Value to 100</p> <p>Pupils will be taught to:</p> <p>Count to and across 100, forwards and backwards, beginning with zero or 1, or from any given number</p> <p>Count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s</p> <p>Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than, most, least</p>	<p>Time</p> <p>Pupils will be taught to:</p> <p>Compare and sequence intervals of time</p> <p>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</p> <p>Know the number of minutes in an hour and the number of hours in a day</p>	<p>Geometry- Properties of Shape</p> <p>Pupils will be taught to:</p> <p>Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them</p> <p>Recognise angles as a property of shape or a description of a turn</p> <p>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</p> <p>Identify horizontal and vertical lines and pairs of perpendicular and parallel lines</p>	<p>Geometry- Properties of Shape</p> <p>Pupils will be taught to:</p> <p>Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes</p> <p>Identify acute and obtuse angles and compare and order angles up to 2 right angles by size</p> <p>Identify lines of symmetry in 2-D shapes presented in different orientations</p> <p>Complete a simple symmetric figure with respect to a specific line of symmetry</p>
10	<p>Money</p> <p>Pupils will be taught to:</p> <p>Recognise and know the value of different denominations of coins and notes</p>	<p>Statistics</p> <p>Pupils will be taught to:</p> <p>Interpret and construct simple pictograms, tally charts, block diagrams and tables</p> <p>Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity</p> <p>Ask-and-answer questions about totalling and comparing categorical data</p>	<p>Statistics</p> <p>Pupils will be taught to:</p> <p>Interpret and present data using bar charts, pictograms and tables</p> <p>Solve one-step and two-step questions using information presented in scaled bar charts and pictograms and tables</p>	<p>Geometry- Position and Direction</p> <p>Pupils will be taught to:</p> <p>Describe positions on a 2-D grid as coordinates in the first quadrant</p> <p>Describe movements between positions as translations of a given unit to the left/right and up/down</p> <p>Plot specified points and draw sides to complete a given polygon</p>

<p>11</p>	<p>Time Pupils will be taught to: 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 Compare, describe and solve practical problems for time Measure and begin to record time (hours, minutes, seconds) Tell the time to the hour and half past the hour and draw the hands on a clockface to show these times</p>	<p>Geometry- Position and Direction Pupils will be taught to: 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)</p>		<p>Statistics Pupils will be taught to: Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs</p>
<p>12</p>	<p>Geometry- Position and Direction Pupils will be taught to: Describe position, direction and movement, including whole, half, quarter and three-quarter turns</p>			