

Key Learning in Mathematics – Year 3

Number – number and place value	Number – addition and subtraction	Number – multiplication and division
- Count from 0 in multiples of 4, 8, 50 and 100 - Count up and down in tenths - Read and write numbers up to 1000 in numerals and in words - Read and write numbers with one decimal place - Identify, represent and estimate numbers using different representations (including the number line) - Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) - Identify the value of each digit to one decimal place - Partition numbers in different ways (e.g. $146 = 100 + 40 + 6$ and $146 = 130 + 16$) - Compare and order numbers up to 1000 - Compare and order numbers with one decimal place - Find 1, 10 or 100 more or less than a given number - Round numbers to at least 1000 to the nearest 10 or 100 - Find the effect of multiplying a one- or two-digit number by 10 and 100, identify the value of the digits in the answer - Describe and extend number sequences involving counting on or back in different steps - Read Roman numerals from I to XII - Solve number problems and practical problems involving these ideas	- Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method) - Select a mental strategy appropriate for the numbers involved in the calculation - Understand and use take away and difference for subtraction, deciding on the most efficient method for the numbers involved, irrespective of context - Recall/use addition/subtraction facts for 100 (multiples of 5 and 10) - Derive and use addition and subtraction facts for 100 - Derive and use addition and subtraction facts for multiples of 100 totalling 1000 - 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 - 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	- Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method) - Understand that division is the inverse of multiplication and vice versa - Understand how multiplication and division statements can be represented using arrays - Understand division as sharing and grouping and use each appropriately - Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables - Derive and use doubles of all numbers to 100 and corresponding halves - Derive and use doubles of all multiples of 50 to 500 - 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 - Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy - Solve problems, including missing number problems, involving multiplication and division (and interpreting remainders), including positive integer scaling problems and correspondence problems in which n objects are connected to m objects
Number – fractions	Geometry – properties of shapes	Measures
- Show practically or pictorially that a fraction is one whole number divided by another (e.g. $\frac{3}{4}$ can be interpreted as $3 \div 4$) - Understand that finding a fraction of an amount relates to division - Recognise that tenths arise from dividing objects 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 [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$] - Compare and order unit fractions, and fractions with the same denominators (including on a number line) - Count on and back in steps of $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{1}{3}$ - Solve problems that involve all of the above	- 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 - 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	- Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) - Continue to estimate and measure temperature to the nearest degree (°C) using thermometers - Understand perimeter is a measure of distance around the boundary of a shape - Measure the perimeter of simple 2-D shapes - 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/read time with increasing accuracy to the nearest minute - Record/compare time in terms of seconds, minutes, hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon, 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] - Continue to recognise and use the symbols for pounds (£) and pence (p) and understand that the decimal point separates pounds/pence - Recognise that ten 10p coins equal £1 and that each coin is $\frac{1}{10}$ of £1 - Add and subtract amounts of money to give change, using both £ and p in practical contexts - Solve problems involving money and measures and simple problems involving passage of time
	Geometry – position and direction Describe positions on a square grid labelled with letters and numbers	
	Statistics - Use sorting diagrams to compare and sort objects, numbers and common 2-D and 3-D shapes and everyday objects - Interpret and present data using bar charts, pictograms and tables - 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	