

Key Learning in Mathematics – Year 3

Number – number and place value	Number – addition and subtraction	Number – multiplication and division
<ul style="list-style-type: none"> 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. <i>Read and write numbers with one decimal place.</i> Identify, represent and estimate numbers using different representations (<i>including the number line</i>). Recognise the place value of each digit in a three-digit number (hundreds, tens, ones). <i>Identify the value of each digit to one decimal place.</i> <i>Partition numbers in different ways (e.g. $146 = 100 + 40 + 6$ and $146 = 130 + 16$).</i> Compare and order numbers up to 1000. <i>Compare and order numbers with one decimal place.</i> Find 1, 10 or 100 more or less than a given number. <i>Round numbers to at least 1000 to the nearest 10 or 100.</i> <i>Find the effect of multiplying a one- or two-digit number by 10 and 100, identify the value of the digits in the answer.</i> <i>Describe and extend number sequences involving counting on or back in different steps.</i> <i>Read Roman numerals from I to XII.</i> Solve number problems and practical problems involving these ideas. 	<ul style="list-style-type: none"> <i>Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method).</i> <i>Select a mental strategy appropriate for the numbers involved in the calculation.</i> <i>Understand and use take away and difference for subtraction, deciding on the most efficient method for the numbers involved, irrespective of context.</i> <i>Recall/use addition/subtraction facts for 100 (multiples of 5 and 10).</i> <i>Derive and use addition and subtraction facts for 100.</i> <i>Derive and use addition and subtraction facts for multiples of 100 totalling 1000.</i> Add and subtract numbers mentally, including: <ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> <i>Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method).</i> <i>Understand that division is the inverse of multiplication and vice versa.</i> <i>Understand how multiplication and division statements can be represented using arrays.</i> <i>Understand division as sharing and grouping and use each appropriately.</i> Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. <i>Derive and use doubles of all numbers to 100 and corresponding halves.</i> <i>Derive and use doubles of all multiples of 50 to 500.</i> 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. <i>Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.</i> Solve problems, including missing number problems, involving multiplication and division (<i>and interpreting remainders</i>), including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.

Key Learning in Mathematics – Year 3

Number – fractions	Geometry – properties of shapes	Measurement
<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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 ($^{\circ}\text{C}$) 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 <ul style="list-style-type: none"> Describe positions on a square grid labelled with letters and numbers. 	
		Statistics <ul style="list-style-type: none"> 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.