

# Year 3

Number - place value	Addition and subtraction
<ul style="list-style-type: none"> <li>• <b>Count from 0 in multiples of 4, 8, 10, 50 and 100</b></li> <li>• <b>Continue to count in ones, tens or hundreds, forwards or backwards, from any 3 digit number</b></li> <li>• Count up and down in tenths</li> <li>• <b>Read and write numbers up to at least 1000 in numerals and in words</b></li> <li>• Read and write numbers with one decimal place</li> <li>• <b>Identify, represent and estimate numbers using different representations</b> (including the number line)</li> <li>• <b>Recognise the place value of each digit in a three-digit number (hundreds, tens, ones)</b></li> <li>• Identify the value of each digit to one decimal place</li> <li>• Partition <b>3 digit</b> numbers in different ways (e.g. <math>146 = 100 + 40 + 6</math> and <math>146 = 130 + 16</math>)</li> <li>• <b>Begin to partition numbers with one decimal place.</b></li> <li>• <b>Recognise that tenths arise from dividing an object into 10 equal parts and in dividing one digit numbers or quantities by 10</b></li> <li>• <b>Compare and order numbers up to 1000 using &lt;, &gt; and = signs</b></li> <li>• Compare and order numbers with one decimal place</li> <li>• <b>Find 1, 10 or 100 more or less than a given number</b></li> <li>• Round numbers to at least 1000 to the nearest 10 or 100</li> <li>• Find the effect of multiplying a one- or two-digit number by 10 and 100, identify the value of the digits in the answer</li> <li>• Describe and extend number sequences involving counting on or back in different steps</li> <li>• Read Roman numerals from I to XII</li> <li>• <b>Solve number problems and practical problems involving these ideas</b></li> <li>• <b>Estimate numbers</b></li> </ul>	<ul style="list-style-type: none"> <li>• Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)</li> <li>• <b>Understand the principles of the commutative and associative law with addition and know that they do not apply to subtraction</b></li> <li>• <b>Understand the inverse relationship between addition and subtraction</b></li> <li>• Select a mental strategy appropriate for the numbers involved in the calculation</li> <li>• Understand and use take away and difference for subtraction, deciding on the most efficient method for the numbers involved, irrespective of context</li> <li>• <b>Continue to recall and use addition and subtraction facts to 20 fluently.</b></li> <li>• Recall/use addition/subtraction facts for 100 (multiples of 5 and 10)</li> <li>• Derive and use addition and subtraction facts for 100 <b>and beyond e.g. <math>80 + 50</math>; <math>80 - 50</math>.</b></li> <li>• <b>Know pairs of 2 digit numbers to 100 and derive related subtraction facts</b></li> <li>• Derive and use addition and subtraction facts for multiples of 100 totalling 1000</li> <li>• <b>Add and subtract numbers mentally, including:</b> <ul style="list-style-type: none"> <li>- a three-digit number and ones</li> <li>- a three-digit number and tens</li> <li>- a three-digit number and hundreds</li> </ul> </li> <li>• <b>Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction</b></li> <li>• <b>Estimate the answer to a calculation and use inverse operations to check answers</b></li> <li>• <b>Use equivalent calculations to check answers</b></li> <li>• <b>Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction</b></li> </ul> <p>VOCABULARY:</p> <ul style="list-style-type: none"> <li>• <b>Understand, read and spell related to addition:</b> add, altogether, total,... more than..., plus, the sum of</li> <li>• <b>New for Year 3: increase</b></li> </ul>

	<ul style="list-style-type: none"> <li>Understand, read and spell vocabulary related to subtraction: Take away, subtract, how many are left, how many more to make, how many more, how many fewer, ...less than....., leave, how many have gone, minus, the difference between, how much more is...than, how much less is....than</li> <li>New for Year 3: <b>decrease</b></li> </ul>
<b>Multiplication and division</b>	<b>Fractions</b>
<ul style="list-style-type: none"> <li>Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)</li> <li>Relate division and fractions and begin to use scaling to compare</li> <li>Understand multiplication as: Repeated addition Describing an array Scaling Correspondence problems</li> <li>Understand that division is the inverse of multiplication and vice versa</li> <li>Understand commutativity and associativity for multiplication and that it does not apply to division.</li> <li>Understand how multiplication and division statements can be represented using arrays</li> <li>Understand division as sharing and grouping and use each appropriately</li> <li><b>Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables</b></li> <li>Count from 0 in multiples of 4, 8, 50 and 100</li> <li>Derive and use doubles of all numbers to 100 and corresponding halves</li> <li>Derive and use doubles of all multiples of 50 to 500</li> <li><b>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</b></li> <li>Use formal written methods for 2 digit numbers multiplied by 1 digit numbers (for known multiplication facts)</li> <li>Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy</li> <li>Use inverse operations to check answers</li> <li>Use equivalent calculations to check answers</li> </ul>	<ul style="list-style-type: none"> <li>Show practically or pictorially that a fraction is one whole number divided by another (e.g. <math>\frac{3}{4}</math> can be interpreted as <math>3 \div 4</math>)</li> <li>Understand that finding a fraction of an amount relates to division</li> <li><b>Count up and down in tenths; recognise that tenths arise from dividing objects into 10 equal parts and in dividing one-digit numbers or quantities by 10</b></li> <li><b>Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators</b></li> <li><b>Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators</b></li> <li><b>Recognise and show, using diagrams, equivalent fractions with small denominators</b></li> <li><b>Add and subtract fractions with the same denominator within one whole [for example, <math>\frac{5}{7} + \frac{1}{7} = \frac{6}{7}</math>]</b></li> <li><b>Compare and order unit fractions, and fractions with the same denominators</b> (including on a number line)</li> <li>Count on and back in steps of <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math> and <math>\frac{1}{3}</math></li> <li><b>Solve problems that involve all of the above</b></li> </ul>

<ul style="list-style-type: none"> <li>• Solve problems, including missing number problems, involving multiplication and division (and interpreting remainders <b>–rounding up or down</b>), including positive integer scaling problems and correspondence problems in which n objects are connected to m objects</li> </ul>	
<p>VOCABULARY</p> <p>Understand, read and spell the vocabulary involved in multiplying:  Double, pattern, array, row, column, groups of, lots of, multiple, multiply, times, table, once, twice, three, ten ...times as big, repeated addition  New for Year 3: <b>product</b></p> <p>Understand, read and spell the vocabulary involved in dividing:  Share, halve, array, row, column, equal groups of, divide, left over  New for Year 3: <b>in every, remainder</b></p>	<p>VOCABULARY</p>
<b>Measures</b>	<b>Statistics</b>
<ul style="list-style-type: none"> <li>• <b>Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)</b></li> <li>• Continue to estimate and measure temperature to the nearest degree (°C) using thermometers</li> <li>• Understand perimeter is a measure of distance around the boundary of a shape</li> <li>• <b>Measure the perimeter of simple 2-D shapes</b></li> <li>• <b>Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks</b></li> <li>• <b>Estimate/read time with increasing accuracy to the nearest minute</b></li> <li>• <b>Record/compare time in terms of seconds, minutes, hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon, midnight</b></li> <li>• <b>Know the number of seconds in a minute and the number of days in each month, year and leap year</b></li> <li>• <b>Compare durations of events [for example to calculate the time taken by particular events or tasks]</b></li> <li>• Continue to recognise and use the symbols for pounds (£) and pence (p) and understand that the decimal point separates pounds/pence</li> <li>• Recognise that ten 10p coins equal £1 and that each coin is <math>\frac{1}{10}</math> of £1</li> </ul>	<ul style="list-style-type: none"> <li>• Use sorting diagrams to compare and sort objects, numbers and common 2-D and 3-D shapes and everyday objects</li> <li>• <b>Interpret and present data using bar charts, pictograms and tables</b></li> <li>• <b>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</b></li> </ul> <p>Science:</p> <ul style="list-style-type: none"> <li>▪ gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</li> <li>▪ recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</li> <li>▪ reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</li> </ul>

<ul style="list-style-type: none"> <li>• <b>Add and subtract amounts of money to give change, using both £ and p in practical contexts</b></li> <li>• Solve problems involving money and measures and simple problems involving passage of time</li> </ul>	
<p style="text-align: center;"><i>Geometry - properties of shape</i></p>	<p style="text-align: center;"><i>Geometry - position and direction</i></p>
<ul style="list-style-type: none"> <li>• <b>Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them</b></li> <li>• <b>Recognise angles as a property of shape or a description of a turn</b></li> <li>• <b>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</b></li> <li>• <b>Identify horizontal and vertical lines and pairs of perpendicular and parallel lines</b></li> </ul>	<ul style="list-style-type: none"> <li>• Describe positions on a square grid labelled with letters and numbers</li> </ul>

Bold black = National Curriculum objectives

Black = Additional objectives added by Lgfl

Red = Additional objectives added by maths development group