**Key Learning in Mathematics – Year 3**

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| **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 |
| **Measures** |
| **Number – fractions** | **Geometry – properties of shapes** | * 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 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* |
| * *Show practically or pictorially that a fraction is one whole number divided by another (e.g. can be interpreted as 3 ÷ 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, + = ] * Compare and order unit fractions, and fractions with the same denominators *(including on a number line)* * *Count on and back in steps of , and* * 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 |
| **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 |