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| **Maths at Bowerham**  |
| Units of Maths (provisional – these may be subject to change) |
|  | **Autumn 1** | **Autumn 2**  |  **Spring 1**  | **Spring 2**  | **Summer 1** | **Summer 2**  |
| Week 1 | Place Value, addition and subtraction  | Multiplication tables ( 3x and 4x)  | Place Value, addition and subtraction  | 2D Shape  | Addition and Subtraction  | Place Value  |
| Week 2 | Multiplication  | Multiplication  | Addition, Subtraction and statistics  | Calculation  |
| Week 3 | Length and Perimeter  | Division  | Fractions Position and Direction  | Multiplication and Division  | Fractions  |
| Week 4 | Statistics  | Time  | Fractions  | 2D Shape  | Statistics  |
| Week 5 | Addition and Subtraction  | 3D Shape  | Division | Time  | Decimal place value  | Time  |
| Week 6 | Assess and Review  | Volume, capacity and mass | Assess and Review  | 3D Shape  | Assess and Review |
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| **Topic**  | **End of Year Expectation**  |
| Number and Place Value | * 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 threedigit 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 twodigit 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 concrete problems involving these ideas
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| 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)
* 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
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| Multiplication and Division | * 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
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| Number – Fractions | * Show practically or pictorially that a fraction is one whole number divided by another (e.g. 𝟑/𝟒 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 nonunit 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, 𝟓/𝟕 + 𝟏/𝟕 = 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 𝟏/𝟐 , 𝟏/𝟒 and ¾
* Solve problems that involve all of the above
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| Geometry – Properties of Shapes | * 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
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| Geometry – Position and Direction | * Describe positions on a square grid labelled with letters and numbers
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| Statistics  | * Use sorting diagrams to compare and sort objects, numbers and common 2-D and 3-D shapes
* 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
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| Measurement  | * 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 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
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