



Year 5 term 1 and 2

Oral and Mental calculation

- Read numbers to 100 000 in numerals and words Write numbers to 100 000 in numerals and words
- Order and compare whole numbers up to 1 000 000, negative numbers and decimals with up to one decimal places on a number line.
- Record using $<$ or $>$
- Know what each digit represents in numbers to 100 0000
- Read and write decimal numbers to one place and know what each number represents.
- Count on or back in steps of 0.01, 0.1, 1, 10, 100 or 1000 from any number including decimals
- Count on and back in fractions
- Know by heart facts for all multiplication tables up to 12×12
- *Use facts to 12×12 and partitioning to multiply larger numbers or divide numbers larger than 144 mentally or supported by jottings .*
- Add and subtract numbers mentally including decimals to one decimal place *with jottings.*
- *Use partitioning to double or halve any number, including decimals to one decimal place.*
- Derive related facts from known facts (e.g. 6×0.2 linked to 6×2 or $1 + 9 = 10$ linked to $0.1 + 0.9 = 1$)
- Multiply and divide whole numbers and decimals with up to one decimal place mentally by 10 or 100-*link to scaling up or down,*
- Round whole numbers to the nearest 10, 100 or 1000-*link to number line*
- Round a number with up to one decimal places to the nearest whole number-*link to number line.*

Week	Main focus of teaching
1 & 2	<p>Number – place value and counting</p> <ul style="list-style-type: none"> ● Step 16 - read, write and order numbers to at least 10 000 and determine the value of each digit. ● Step 16 - round any 5 digit number to the nearest 10, 100, 1000. ● Step 16 - read Roman numerals to 500 (I – D). ● Step 16 - read, write, order and compare numbers with 1 d.p. in a 5 digit number on an empty number line –supported by images or manipulatives. ● Step 16 - find complements for 1 with tenths (1 d.p.) ● Step 16 - add and subtract 0.1 mentally to other numbers to 1 d.p. ● Partition numbers into ones and tenths (for example, $6.4 = 6 + 0.4$) ● Step 16 - count forwards and backwards in 10 000 from any given number up to 1 000 000. ● Step 16 - count forwards and backwards through 0 including negative numbers. ● Step 16-18 - Solve problems involving numbers with up to two decimal places.
3	<p>Addition and subtraction</p> <ul style="list-style-type: none"> ● Step 16 - add and subtract numbers with 4 digits using formal written methods of columnar addition and subtraction where appropriate with or without regrouping any number of times. ● Step 16 - add and subtract mentally a four digit number and multiple of 10, 100 or 1000 or a combination of these (E.g +/- 2300) ● Step 16 - use rounding to estimate the answer to a calculation. ● Estimate answers



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	<ul style="list-style-type: none"> • <i>Consider the most appropriate strategy to solve a calculation: calculate mentally, use a jotting or a written method</i> • Step 16-18 - Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.
4 & 5	<p>Multiplication and division</p> <ul style="list-style-type: none"> • Step 16 - find factors for numbers to 50 and beyond. • Step 16 - recall and use multiplication and division facts for all tables up to 12 x 12 • Step 16 - divide 3-digit numbers by a 1-digit number using short division supported with concrete materials with remainders. • Step 16 - multiply up to 4 digit numbers by one digit numbers using the formal short multiplication method • Step 16 - tell whether a number up to 100 is a prime number and use the vocabulary of prime numbers • Step 16 - recognise square and cube numbers and their notation. • Step 16 - express non-integer answers to division as a remainder. • Estimate answers • <i>Consider the most appropriate strategy to solve a calculation: calculate mentally, use a jotting or a written method.</i> • Step 16-18 - Solve problems involving multiplication and division
6&7	<p>Fractions & Decimals</p> <ul style="list-style-type: none"> • Step 16 - Compare and order fractions whose denominators are the same using concrete materials and visual representations. E.g. <i>on a number line.i.e. $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{6}$ and $\frac{1}{12}$</i> • Step 16 - find equivalent fractions for a $\frac{1}{x}$ by multiplying the numerator and denominator by the same multiple. • Step 16 - understand mixed numbers and position them on a number line • Step 16 - recognise the percent symbol (%) and understand percent means number of parts per hundred • Step 16 - simplify fractions < 1 by dividing the numerator and denominator by the highest common factor. • Read and write decimal numbers as fractions <i>and vice versa</i> • Step 16-18 - <i>Solve problems involving fractions.</i>
8	<p>Geometry - Shape</p> <ul style="list-style-type: none"> • Step 16 - identify and use mathematical language to describe properties of 3D shapes. • Step 16 - measure given angles using a protractor to the nearest 5° • Step 16 - describe mathematical properties of regular and irregular polygons



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	<p>using precise vocabulary.</p> <ul style="list-style-type: none">• Step 16 - understand an angle on a point on a straight line is 180°• <i>Know how to use a protractor.</i>• Know angles are measured in degrees
9	<p>Geometry - position and direction</p> <ul style="list-style-type: none">• Step 16 - describe position using coordinates on a 2D-grid in the first quadrant after a translation to the left, right, up or down.
10	<p>Measurement - Time</p> <ul style="list-style-type: none">• <i>Continue to read, write and convert time between analogue and digital 12 hour clocks.</i>• <i>Know the link between the 12 hour and 24 hour clock</i>• <i>Read, write and convert time between analogue and digital 12 hour clock and 24 hour clock.</i>• Complete, read and interpret information in timetables <i>Solve problems involving interpreting time tables.</i>• Solve problems involving converting between units of time e.g. seconds and minutes, half past 12 and 13:30.
11	<p>Statistics</p> <ul style="list-style-type: none">• Step 16 - begin to choose which graphical representation to use with a set of continuous or discrete data.• Step 16 - know the vertical axis is referred to as the y axis and the horizontal axis is referred to as the x axis.• Step 16 - read data between marked scales on continuous graphs.• Step 16 - interpret and present discrete and continuous data using appropriate graphical methods.• Step 16-18 - Solve comparison, sum and difference problems using information presented in a line graph.
12	<p>Measurement</p> <ul style="list-style-type: none">• Step 16 - convert and use fluently between units of length (mm, cm, m, km).• Step 16 - find the perimeter of a rectangle given the length and width.• Step 16 - know and understand all metric units for measure• Step 16 - beginning to estimate volume.