



Year 5 term 5 and 6

Oral and Mental calculation

- Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit.
- Read, write, order and compare numbers with up to three decimal places.
- Round decimals with two decimal places to the nearest whole number.
- Round decimals with two decimal places to one decimal place
- Round whole numbers and decimal numbers to the nearest 10, 100, 1000.
- Know what each digit represents in any number or decimal number
- Count forwards and backwards in steps of 0.01, 0.1, 1, 10, 100, and 1000 from any positive number or decimal
- Count forwards and backwards with positive and negative whole numbers, including through zero.
- Count forwards and backwards in equal steps
- Count on and back in fractional steps including mixed numbers such as $1\frac{1}{2}$.
- Count on and back in decimal steps.
- Order and compare numbers, negative numbers, fractions or decimal numbers up to two decimal places.
- Know by heart facts for all multiplication tables up to 12 x 12
- Find all the factors pairs of a number,
- Find the common factors of two numbers.
- Add and subtract numbers mentally
- Find related facts from known addition, subtraction, multiplication or division facts
- Use partitioning to double or halve any decimal number
- Multiply and divide whole numbers and decimals by 10, 100 or 1000 and apply this to converting units of measurement.

Week	Main focus of teaching
1&2	<p>Number – Place value & Counting</p> <ul style="list-style-type: none"> • Step 18 & End of year expectations - read, write and order numbers to at least 100 000 and determine the value of each digit. • Step 18 put negative numbers onto a number line. • End of year expectations - interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers through 0. • Step 18 & End of year expectations - round any number up to 1 000 000 to the nearest 10, 100, 1,000, 10 000 and 100 000. • Step 18 & End of year expectations - recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents • Step 18 round decimals with two d.p. to the nearest whole number and to



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	<p>one d.p.</p> <ul style="list-style-type: none"> • Step 18 & End of year expectations - read, write, order and compare numbers with up to 3 d.p. • Step 18 solve problems involving numbers to three d.p. • End of year expectations - Read Roman numerals to 1,000 (M) and recognise years written in Roman numerals. • <i>Identify the value of each digit from millions to numbers with at least two decimal places using place value counters.</i> • <i>Create, complete and extend number sequences including those with multiplication and division steps Continue to order temperatures including those below 0°C.</i>
3	<p>Addition and subtraction to solve problems</p> <ul style="list-style-type: none"> • Step 18 & End of Year expectations - add and subtract mentally a six digit number and multiple of 10, 100 or 1000, 10 000 or a combination of these (E.g +/- 23 000) • Step 18 & End of Year expectations - estimate the answer to a calculation using rounding and say whether my answer is likely. • Step 18 & End of Year expectations - solve addition and subtraction two-step problems in contexts, deciding which operations to use and why. • Step 18 & End of Year expectations - solve more complex one-step problems in contexts, deciding which operations to use and why. • Step 18 - add and subtract numbers to 2 d.p. using the formal written method.
4&5	<p>Multiplication and division</p> <ul style="list-style-type: none"> • Step 18 - Recognise and use factor pairs and common factors of two numbers commutatively in mental calculations • Step 18 - recognise and use multiples in mental calculations • Step 18 & End of Year expectations - divide up to a four-digit number by a one-digit number using the formal short division method with remainders • Step 18 & End of Year expectations - multiply a 2 digit number by a 2 digit number using the formal long multiplication method. • Step 18 & End of Year expectations - recognise and use cube numbers and their notation. • Step 18 & End of Year expectations - recall prime numbers up to 19 and use the vocabulary of prime factors non-prime numbers • Step 18 - express non-integer answers to division as a decimal to 1 d.p. • End of Year expectations - can recognise and use square numbers and



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	<p>cube numbers and their notation.</p> <ul style="list-style-type: none"> • End of Year expectations - identify multiples and factors, including finding all factor pairs of a number and common factors of two numbers. • End of Year expectations - multiply and divide numbers mentally using known facts. • Estimate answers • <i>Consider the most appropriate strategy to solve a calculation: calculate mentally, use a jotting or a written method</i> • Interpret remainders in line with the context of the question. • Step 16-18 - Solve problems involving multiplication and division, including <ul style="list-style-type: none"> ➤ <i>scaling by numbers and simple fractions</i> ➤ <i>problems involving simple rates.</i> • Step 16-18 - Solve problems involving addition, subtraction, multiplication and division and combinations of these.
6&7	<p>Fractions & Decimals</p> <ul style="list-style-type: none"> • Step 18 - know the decimal equivalents of those with a denominator of a multiple of 5, 10 or 25. • Step 18 - multiply mixed numbers by a whole number using materials and diagrams. • Step 18 - beginning to use scaling to find equivalent decimal equivalents of non-unit fractions where the denominator is a factor of 100 or multiple of 10. (e.g. $4/20 = 2/10$ (0.2) or $20/100$ (0.2)) • End of Year expectations - compare and order fractions whose denominators are multiples of the same number. • End of Year expectations - add and subtract fractions with the same denominator and multiplies of the same number. • End of Year expectations - recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements <1 as mixed numbers e.g. $2/5 + 4/5 = 6/5 = 1 \frac{1}{5}$ • End of Year expectations - multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. • End of Year expectations - identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths. • End of Year expectations - read and write decimal numbers as fractions • Step 16-18 - Solve problems involving multiplications of fractions
8	<p>Percentages</p> <ul style="list-style-type: none"> • Step 18 - recognise the percent symbol (%) and understand percent means



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number of parts per hundred and write percentages as a fraction with a denominator 100 and as a decimal

- **End of Year expectations** - recognise the percent symbol (%) and understand percent means number of parts per hundred and write percentages as a fraction with a denominator 100 and as a decimal
- *understand the link between key fractions , decimals and percentages e.g. $\frac{1}{2}$,0.5 and 50%*
- **Step 16-18** - *solve problems with percentages' including those where it is necessary to work backwards and find 10%*
- **Step 16-18** - Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{1}{10}$
- **Step 16-18** - Solve problems which require knowledge of the decimal and percentage equivalent of and those fractions with a denominator of a multiple of 10 or 25

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Geometry – Properties of Shape & position and direction

- **Step 18** - estimate and compare acute, obtuse and reflex angles.
- **Step 18** - identify missing angles by using my knowledge of angles on a straight line or at a point.
- **Step 18** - use the facts I know about polygons to find missing facts.
- **Step 18** - use angle sum facts and other properties to find missing values.
- **Step 18** - use the fact that an angle on a single point is a whole turn to find internal angles of common polygons.
- **Step 18** - use the properties of rectangles to deduce related facts and find missing lengths and angles.
- **End of year expectations** - draw given angles and measure them in degrees
- **End of year expectations** - identify angles at a point and one whole turn (total 360°)
- **End of year expectations** - identify angles at a point on a straight line and $\frac{1}{2}$ turn (total 180°)
- **End of year expectations** - identify other multiples of 90° .
- **End of year expectations** - use the properties of rectangles to deduce related facts and find missing lengths and angles.
- **End of year expectations** - distinguish between regular and irregular polygons based on reasoning about equal sides and angles
- **End of year expectations** - identify, describe and represent the position of a shape following a reflection or translation, including the appropriate language, and know that the shape has not changed.



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10	<p>Measurement –Time</p> <ul style="list-style-type: none">• <i>Continue to read, write and convert time between analogue and digital 12 and 24-hour clocks.</i>• <i>Complete, read and interpret information in tables, including timetables.</i>• <i>Solve problems involving converting between units of time.</i>• <i>Solve comparison, sum and difference problems using information presented in all types of graph and tables including a line graphs</i>
11	<p>Measurement</p> <ul style="list-style-type: none">• Step 18 - use algebraic expressions to represent missing measure problems. (e.g. $4 + 2b = 20$, for a rectangle of side 2 and perimeter 20)• Step 18 & End of Year expectations - convert between different units of metric measure (e.g. km and m; cm and m; cm and mm; g and kg; l and ml).• Step 18 & End of Year expectations - measure and calculate the perimeter and area of composite rectilinear shapes in cm and m.• Step 18 & End of Year expectations - understand and use equivalences between metric units and common imperial units such as inches, pounds and pints.• Step 18 & End of Year expectations - calculate and compare the area of squares and rectangles including using standard units cm² and m² and estimate the area of irregular shapes.• Step 18 & End of Year expectations - estimate volume (e.g. using 1 cm³ blocks to build cubes and cuboids) and capacity (e.g. using water).• Step 16-18 - Use all four operations to solve problems involving measure (for example, mass, capacity and volume) using decimal notation, including scaling.
12	<p>Statistics</p> <ul style="list-style-type: none">• Step 18 - use line graphs to solve simple conversions problems. E.g. Km – m or hours to minutes.• Step 18 & End of Year expectations - solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and line graphs.• Step 18 & End of Year expectations - complete, read and interpret information in tables, including time tables.