

Year 6 term 3&4



Points in italics are either where statements have been moved from other year groups or to support progression where no statement is given

Oral and Mental calculation

- Read and write any integer and know what each digit represents.
- Read and write decimal notation for tenths, hundredths and thousandths and know what each digit represents.
- Order and compare whole numbers up to 1 000 000 including negative numbers, and decimals.
- Count forwards and backwards from any number including decimals
- ALGEBRA –generate and describe linear number sequences
- Know by heart and use all multiplication and division facts for tables up to 12 x 12.
- Find and use all the pairs of decimals with a sum of 0.1, 1 or 10.
- Find and use related facts from those already known e.g. “ If I know $3 \times 6=18$ or $10 +90 =100$..then what else do I know “
- Multiply and divide two-digit and single-digit numbers –*with jottings*.
- Double or halve any number-*use partitioning and jottings*.
- Multiply and divide two-digit decimals by a single digit number –*use jottings*.
- Mentally multiply and divide two-digit decimals by a single digit number, e.g., ($O.t \times O$ or $O.t \div O$)
- ALGEBRA –find pairs of numbers that satisfy number sequences involving two unknowns eg $x+y=12$.
- Convert between units of measurement by multiplying or dividing 10, 100 or 100
- Round whole numbers to the nearest 10, 100, 1000
- Round numbers with up to two decimal places to the nearest integer or number of decimal places
- Count in fractional steps including mixed numbers

Week	Main focus of teaching
1	<p>Number and place value to solve problems</p> <ul style="list-style-type: none"> • Read and write numbers up to 10 000 000 • Order random numbers including decimal numbers up to 10 000 000 <i>on a number line</i> • Order and compare positive and negative numbers- <i>on a number line</i> • Determine the value of each digit in numbers up to 10 000 000-<i>use place value counters</i> • <i>Identify the value of each digit in numbers to three decimal places</i> • Round any whole number to the nearest 10, 100, 1 000 or 10 000 <i>using a</i>

Year 6 term 3&4



Points in italics are either where statements have been moved from other year groups or to support progression where no statement is given

	<p><i>number line.</i></p> <ul style="list-style-type: none">• <i>Round decimals with three places to the nearest whole number or to one decimal place</i>• Use negative numbers in context and calculate intervals across zero.• Generate and describe <i>and extend or complete</i> number sequences.• Solve problems that involve all of the above
2	<p>Addition and subtraction to solve problems</p> <ul style="list-style-type: none">• Estimate answers• <i>Consider the most appropriate strategy to solve a calculation: calculate mentally, use a jotting or a written method</i>• <i>Add whole numbers and decimals using a formal written method.</i>• Solve addition multi-step problems in contexts, deciding which operations and methods to use and why.• <i>Subtract whole numbers and decimals using a formal written method</i>• Use inverse to check answers to calculations• Express missing number problems algebraically.• ALGEBRA- find pairs of number that satisfy number sequences involving two unknowns e.g. $x+y= 1.5$• Know how to calculate and interpret the mean as an average• Solve problems which require answers to be rounded to specified degrees of accuracy• Use their knowledge of the order of operations (<i>BODMAS</i>) to solve problems involving a combination of addition, subtraction, multiplication and/or division.• Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.• Solve problems involving a combination of addition, subtraction, multiplication and/or division. I.e. Calculate and interpret the mean (average).

Year 6 term 3&4



Points in italics are either where statements have been moved from other year groups or to support progression where no statement is given

3

Multiplication and division to solve problems

- Estimate answers
- *Consider the most appropriate strategy to solve a calculation: calculate mentally, use a jotting or a written method*
- Use inverse to check answers to calculations
- Multiply numbers with up to 4 digits by a two-digit whole number using a formal written method of long multiplication.
- Multiply one-digit numbers with up to two decimal places by whole numbers
- ALGEBRA- find pairs of number that satisfy number sequences involving two unknowns e.g. $a \times b = 36$
- Express missing number problems algebraically
- Divide numbers up to 4 digits by a two-digit number using a formal written method of short division *where appropriate*
- Divide numbers up to 4 digits by a two-digit whole number using a formal written method of long division
- Interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context.
- Divide one-digit numbers with up to two decimal places by whole numbers.
- Use their knowledge of the order of operations (*BODMAS*) to solve problems involving a combination of addition, subtraction, multiplication and/or division.
- Solve problems which involve multiplication and/or division
- RATIO AND PROPORTION- Solve problems involving unequal sharing and grouping using knowledge of multiples
- RATIO AND PROPORTION- solve problems involving the relative size of two quantities where missing values can be found by using multiplication or division facts
- Solve problems involving addition, subtraction, multiplication and /or division.

Year 6 term 3&4



Points in italics are either where statements have been moved from other year groups or to support progression where no statement is given

4	<p>Fractions to solve problems</p> <ul style="list-style-type: none">• Identify and use common factors to simplify fractions• Identify and use common multiples to turn two or more fractions to the same denomination• Identify use prime numbers.• Compare and order fractions (<i>such as 2/3, 3/4 and 5/6 by converting them to fractions with the same denominator</i>), including fractions >1 (<i>including on a number line</i>).• Estimate answers• <i>Consider the most appropriate strategy to solve a calculation: calculate mentally, use a jotting or a written method</i>• Add fractions with different denominators• Subtract fractions with different denominators• Add mixed numbers, using the concept of equivalent fractions• Subtract mixed numbers, using the concept of equivalent fractions• Link fractions with division• Find decimal equivalents for simple fractions• Solve problems involving fractions.• Multiply pairs of unit fractions, writing the answer in its simplest form (<i>using diagram or manipulatives</i>)• Divide a unit fraction by a whole number (<i>using diagrams or manipulatives</i>)• ALGEBRA- find pairs of number that satisfy number sequences involving two unknowns e.g. $x + y = 1/2$• RATIO AND PROPORTION -Solve problems involving unequal sharing and grouping using knowledge of fractions eg 3/5 of the class are boys
5	<p>Percentage solve problems</p> <ul style="list-style-type: none">• Recall and use equivalences between simple fractions, decimals and percentages• <i>Find simple percentages of amounts.</i>• Use percentages for comparison• RATIO AND PROPORTION -Solve problems involving the calculation of percentages

Year 6 term 3&4



Points in italics are either where statements have been moved from other year groups or to support progression where no statement is given

6	<p>Measures to solve problems</p> <ul style="list-style-type: none">• <i>Practical opportunities to use measures</i>• <i>Introduce concept of thousandths in context of accurate measurement</i>• Solve problems involving the calculation and conversion of units of measure (including money and time), using decimal notation up to three decimal places where appropriate• ALGEBRA- find pairs of number that satisfy number sequences involving two unknowns e.g. $a \times b = \frac{1}{2} \text{ Kg}$• Calculate, estimate and compare the volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3)• ALGEBRA -Use simple formulae <i>expressed in words</i>• Recognise when it is possible to use the formulae for the volume of shapes.• RATIO AND PROPORTION -Solve problems involving the calculation of percentages• <i>Tell the time on digital and analogue clock using the 24 hour clock</i>• <i>Read and use timetables using the 24 hour clock</i>• Solve problems involving measures
7	<p>Shape and position and direction to solve problems</p> <ul style="list-style-type: none">• <i>Describe positions on a coordinate grid (first quadrant).</i>• Describe positions on the full coordinate grid (all four quadrants).• Draw and translate simple shapes on the coordinate plane,• Draw 2-D shapes using given dimensions and angles.• Recognise, describe and build simple 3-D shapes, including making nets.• Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons• RATIO AND PROPORTION -Solve problems involving similar shapes where the scale factor is known or can be found• Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.• Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles• Solve problems with shapes and /or position and direction .

Year 6 term 3&4



Points in italics are either where statements have been moved from other year groups or to support progression where no statement is given

8	Statistics to solve problems <ul style="list-style-type: none">• <i>Link pie charts to angles</i>• Interpret and construct pie charts and use these to solve problems.• Interpret and construct line graphs <i>using continuous data</i> and use these to solve problems eg to convert between miles and kilometres• <i>Solve comparison, sum and difference problems using information presented in all types of graph.</i>
9	Ratio and proportion to solve problems <ul style="list-style-type: none">• Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts.
10	