



## Year 5 and 6

### PHASE 1

	<b>Number and Place Value</b>	<b>Addition and Subtraction</b>	<b>Multiplication and Division</b>	<b>Fractions</b>
<b>Y e a r 5</b>	<p>Read, write, order and compare numbers to at least 100,000 and determine the value of each digit.</p> <p>Round any number to the nearest 10,100, and 1000.</p> <p>Interpret negative numbers in context.</p>	<p>Add and subtract numbers mentally with increasingly large numbers.</p> <p>Add and subtract whole numbers with more than 4 digits using the formal written methods.</p>	<p>Multiply and divide numbers mentally drawing upon known facts.</p> <p>Multiply and divide whole numbers by 10,100 and 1000</p> <p>Identify multiples and factors.</p> <p>Recognise and use square numbers and cube numbers.</p> <p>Multiply numbers up to 3 digits by a 1 digit number using the formal written method.</p> <p>Divide numbers up to 3 digits by a 1 digit number using the formal written method.</p>	<p>Compare and order fractions whose denominators are all multiples of the same number.</p> <p>Recognise mixed numbers and improper fractions and convert from one form to the other.</p> <p>Add and subtract fractions with the same denominator and multiples of the same number.</p> <p>Multiply fractions by whole numbers.</p>
<b>Y e a r 6</b>	<p>Read, write, order and compare numbers to at least 10,000,000 and determine the value of each digit.</p> <p>Round any whole number to a required degree of accuracy.</p> <p>Use negative numbers in context, and calculate intervals across zero.</p>	<p>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</p>	<p>Identify common factors, common multiples and prime numbers.</p> <p>Use BIDMAS to carry out calculations involving the four operations.</p> <p>Multiply numbers up to 4 digits by a 2 digit number using the formal written method of long multiplication.</p> <p>Divide numbers up to 4 digits by a 1 digit number using the formal written method of short division and interpret remainders according to context.</p> <p>Interpret remainders as whole numbers, fractions or by rounding as appropriate for the context.</p>	<p>Use common factors to simplify fractions; use common multiples to express fractions in the same denomination</p> <p>Compare and order fractions, including fractions &gt;1.</p> <p>Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.</p> <p>Multiply simple pairs of proper fractions, writing the answer in its simplest form.</p>

## PHASE 2

	Number and Place Value	Addition and Subtraction	Multiplication and Division	Fractions	Measurement	Geometry	Statistics
Year 5	<p>Round decimals with two decimal places to the nearest whole number and to one decimal place.</p> <p>Solve problems involving numbers up to three decimal places.</p>	<p>Add and subtract decimal numbers using the formal written methods.</p>	<p>Multiply and divide decimals by 10, 100 and 1000</p>	<p>Solve problems which require knowing percentage and decimal equivalents of <math>\frac{1}{2}</math> (0.5), <math>\frac{1}{4}</math> (0.25), <math>\frac{1}{5}</math> (0.2), <math>\frac{2}{5}</math> (0.4), <math>\frac{4}{5}</math> (0.8) and those with a denominator of a multiple of 10 or 25.</p> <p>Recognise the per cent symbol (%) and understand that per cent relates to “number of parts per hundred”, and write percentages as a fraction with denominator 100, and as a decimal fraction.</p>	<p>Convert between different units of metric measure (e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)</p> <p>Recognise that shapes with the same areas can have different perimeters and vice versa</p> <p>Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.</p> <p>Solve problems involving converting between units of time.</p>	<p>Estimate and compare acute, obtuse and reflex angles.</p> <p>Draw given angles to the nearest degree.</p>	<p>Solve comparison, sum and difference problems using information presented in a line graph.</p> <p>Complete, read and interpret information in tables including timetables.</p> <p>Calculate the mean</p>
Year 6	<p>Identify the value of each digit in numbers given to three decimal places.</p> <p>Round decimals to specified degree of accuracy.</p>	<p>Use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.</p>	<p>Multiply decimals using the standard written method.</p> <p>Divide decimal numbers using the standard written method.</p>	<p>Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.</p>	<p>Use, read, write and convert between standard units, converting measurements of length and mass.</p> <p>Convert between miles and kilometres</p> <p>Calculate the area of parallelograms and triangles</p> <p>Calculate, estimate and compare volume of cubes and cuboids using standard units.</p>	<p>Describe positions on the full coordinate grid (all four quadrants).</p> <p>Draw 2D shapes using given dimensions and angles.</p> <p>Compare and classify geometric shapes based on their properties and sizes.</p> <p>Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.</p>	<p>Interpret and construct pie charts and line graphs and use these to solve problems.</p> <p>Calculate and interpret the mean as an average.</p>



## PHASE 3

	<b>Number and Place Value</b>	<b>Addition and Subtraction</b>	<b>Multiplication and Division</b>	<b>Fractions</b>	<b>Measurement</b>	<b>Geometry</b>
<b>Y e a r 5</b>	<p>Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit.</p> <p>Round any number to the nearest 10,100,1000,10000 and 100000.</p> <p>Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero.</p>	<p>Add and subtract whole numbers with more than 4 digits efficiently using the formal written methods.</p> <p>Add and subtract decimal numbers using the formal written methods efficiently.</p> <p>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use.</p>	<p>Multiply and divide whole numbers and decimals by 10,100 and 1000.</p> <p>Multiply numbers up to 4 digits by a 1 digit number using the formal written method of long multiplication.</p> <p>Divide numbers up to 4 digits by a 1 digit number using the formal written method of short division.</p>	<p>Solve problems which require knowing percentage and decimal equivalents of <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math>, <math>\frac{1}{5}</math>, <math>\frac{2}{5}</math>, <math>\frac{4}{5}</math> and those with a denominator of a multiple of 10 or 25.</p>	<p>Understand and use equivalences between metric units and common imperial units such as inches, pounds and pints.</p> <p>Estimate volume (e.g. using 1 cm<sup>3</sup> blocks to build cubes and cuboids) and capacity (e.g. using water)</p>	<p>Identify 3D shapes from 2D representations.</p> <p>Distinguish between regular and irregular shapes.</p> <p>Translate and reflect shapes on the grid.</p>
<b>Y e a r 6</b>	<p>The pupil can demonstrate an understanding of place value, including large numbers and decimals.</p>	<p>The pupil can calculate mentally, using efficient strategies such as manipulating expressions using commutative and distributive properties to simplify the calculation.</p> <p>The pupil can use formal methods to solve multi-step problems.</p> <p>The pupil can substitute values into a simple formula to solve problems.</p> <p>Algebra: express missing number problems algebraically</p> <p>Algebra: find pairs of numbers that satisfy number sentences involving two unknowns</p>	<p>The pupil can recognise the relationship between fractions, decimals and percentages and can express them as equivalent quantities</p> <p>The pupil can calculate using fractions, decimals or percentages.</p> <p>Ratio and Proportion: solve problems involving ratio and proportion; solve problems involving similar shapes where the scale factor is known or can be found; solve problems involving unequal sharing and grouping using knowledge of fractions and multiples</p>	<p>The pupil can calculate with measures.</p>	<p>The pupil can use mathematical reasoning to find missing angles.</p> <p>Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.</p>	

