

National Curriculum for Mathematics - Objectives - Year 6

	Number					Measurement			
POS	Number and place	Addition, subtraction, multiplication and division	Fractions (including decimals and percentages)	Ratio and Proportion	Algebra	Measurement	Properties of shapes	Position and direction	Statistics
LO	<ul style="list-style-type: none"> <li>-read, write, order and compare numbers up to 10 000 000 and determine the value of each digit.</li> <li>-round any whole number to a required degree of accuracy.</li> <li>-use negative numbers in context, and calculate intervals across zero.</li> <li>-solve number problems and practical problems that involve all of the above.</li> </ul>	<ul style="list-style-type: none"> <li>-multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.</li> <li>-divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context.</li> <li>-divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context.</li> <li>-perform mental calculations, including with mixed operations and large numbers.</li> <li>-identify common factors, common multiples and prime numbers.</li> <li>-use their knowledge of the order of operations to carry out calculations involving the four operations.</li> <li>-solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</li> <li>-solve problems involving addition, subtraction, multiplication and division.</li> <li>-use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.</li> </ul>	<ul style="list-style-type: none"> <li>-use common factors to simplify fractions; use common multiples to express fractions in the same denomination.</li> <li>-compare and order fractions, including fractions &gt;1.</li> <li>-add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.</li> <li>-multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. <math>1/4 \times 1/2 = 1/8</math>).</li> <li>-divide proper fractions by whole numbers (e.g. <math>1/3 \div 2 = 1/6</math>).</li> <li>-associate a fraction with division to calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. <math>3/8</math>).</li> <li>-identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places.</li> <li>-multiply one-digit numbers with up to two decimal places by whole numbers.</li> <li>- use written division methods in cases where the answer has up to two decimal places.</li> <li>-solve problems which require answers to be rounded to specified degrees of accuracy.</li> <li>-recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.</li> </ul>	<ul style="list-style-type: none"> <li>-solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts.</li> <li>-solve problems involving the calculation of percentages (for example, of measures, and such as 15% of 360) and the use of percentage for comparison.</li> <li>-solve problems involving similar shapes where the scale factor is known or can be found.</li> <li>-solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.</li> </ul>	<ul style="list-style-type: none"> <li>-use simple formulae</li> <li>-generate and describe linear number sequences.</li> <li>-express missing number problems algebraically.</li> <li>-find pairs of numbers that satisfy an equation with two unknowns.</li> <li>-enumerate possibilities of combinations of two variables.</li> </ul>	<ul style="list-style-type: none"> <li>-solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate.</li> <li>-use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to three decimal places.</li> <li>-convert between miles and kilometres.</li> <li>-recognise that shapes with the same areas can have different perimeters and vice versa.</li> <li>-recognise when it is possible to use the formulae for area and volume of shapes.</li> <li>-calculate the area of parallelograms and triangles.</li> <li>-calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (<math>\text{cm}^3</math>) and cubic metres (<math>\text{m}^3</math>) and extending to other units, such as <math>\text{mm}^3</math> and <math>\text{km}^3</math>.</li> </ul>	<ul style="list-style-type: none"> <li>-draw 2-D shapes using given dimensions and angles.</li> <li>-recognise, describe and build simple 3-D shapes, including making nets.</li> <li>-compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons.</li> <li>- illustrate and name parts of circles, including radius, diameter and circumference.</li> <li>-recognise angles where they meet at a point, are on a straight line, or are vertically opposite and find missing angles.</li> </ul>	<ul style="list-style-type: none"> <li>-describe positions on the full coordinate grid (all four quadrants).</li> <li>-draw and translate simple shapes on the coordinate plane, and reflect them in the axes.</li> </ul>	<ul style="list-style-type: none"> <li>-interpret and construct pie charts and line graphs and use these to solve problems.</li> <li>-calculate and interpret the mean as an average.</li> </ul>

Autumn Term 1

Autumn Term 2

Spring Term 1

Spring Term 2

Summer Term 1

Summer Term 2