



## Maths Targets

	Year 5	Evidence	Assessed
Problem Solving through all areas:	Reason following a line of enquiry.		
	Solve routine problems.		
	Solve non-routine problems.		
	Develop an argument, justification or proof using mathematical language.		
	Break down problems into simpler steps..		
	Persevere in seeking solutions.		
Number and Place Value	Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit.		
	Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000.		
	Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero.		
	Round any number to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000.		
	Solve number problems and practical problems that involve all of the above.		
	Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.		
Calculations	Add whole numbers with more than 4 digits, including using formal written methods.		
	Subtract whole numbers with more than 4 digits, including using formal written methods.		
	Multiply whole numbers with more than 4 digits, including using formal written methods.		
	Calculate mentally using all 4 operations with increasingly large numbers.		
	Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context.		
	Multiply whole numbers and those involving decimals by 10, 100 and 1000.		
	Divide whole numbers and those involving decimals by 10, 100 and 1000.		
	Solve multi-step problems in contexts, deciding which operations and methods to use and why.		
	Solve scaling problems by simple fractions and problems involving simple rates.		
	Identify multiples and factors, including finding all factor pairs of a number, an common factors of two numbers.		
	Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers.		
	Establish whether a number up to 100 is prime and recall prime numbers up to 19.		
	Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3).		
	Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes.		
Fractions	Solve problems which require knowing percentage and decimal equivalents.		
	Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.		
	Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements $> 1$ as a mixed number [for example, $2/5 + 4/5 = 6/5 = 1 \frac{1}{5}$ ].		
	Add and subtract fractions with the same denominator and denominators that are multiples of the same number.		
	Multiply proper fractions and mixed numbers by whole numbers, supported by		

	materials and diagrams.		
	Read and write decimal numbers as fractions [for example, $0.71 = 71/100$ ]		
	Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.		
	Round decimals with two decimal places to the nearest whole number and to one decimal place.		
	Compare and order fractions whose denominators are all multiples of the same number.		
	Read, write, order and compare numbers with up to three decimal places.		
	Solve problems involving number up to three decimal places.		
	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.		

Measures	Convert between different units of metric measure (e.g., kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre).			
	Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.			
	Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.			
	Calculate and compare the area of rectangles (oblongs and squares), and including using standard units, square centimetres (cm <sup>2</sup> ) and square metres (m <sup>2</sup> ) and estimate the area of irregular shapes.			
	Estimate volume [e.g., using 1 cm <sup>3</sup> blocks to build cuboids (including cubes)] and capacity [e.g., using water].			
	Use all four operations to solve problems involving measure [e.g., length, mass, volume, money] using decimal notation, including scaling and converting units of time.			
	Identify a range of 3-D shapes from 2-D representations.			
	Use the properties of rectangles (oblongs/squares) to deduce related facts and find missing lengths and angles.			
	Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.			
	Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.			
	Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.			
	Draw given angles, and measure them in degrees (°).			
	Identify angles at a point and one whole turn (total 360°), angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°) and other multiples of 90°.			
Statistics	Solve comparison, sum and difference problems using information presented in a line graph.			
	Complete, read and interpret information in tables, including timetables.			

Aut 1	Spr 1	Sum 1
Aut 2	Spr 2	Sum 2

Em - Emerging Understanding

Exp - Expected Understanding

D - Deep Understanding

## Maths Targets

	Year 6	Evidence	Assessed
Problem Solving through all areas:	Reason following a line of enquiry.		
	Solve routine problems.		
	Solve non-routine problems.		
	Develop an argument, justification or proof using mathematical language.		
	Break down problems into simpler steps..		
	Persevere in seeking solutions.		
Number and Place Value	Read, write, order and compare numbers up to 10,000, 000 and determine the value of each digit.		
	Round any whole number to a required degree of accuracy.		
	Use negative numbers in context, and calculate intervals across zero.		
	Generate and describe linear number sequences.		
	Express missing number problems algebraically.		
	Find pairs of numbers that satisfy an equation with two unknowns.		
	Enumerate possibilities of combinations of two variables.		
	Solve number and practical problems that involve all of the above.		
Calculations	Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.		
	Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long or short division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context.		
	Perform mental calculations, including with mixed operations and large numbers.		
	Identify common factors, common multiples and prime numbers.		
	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.		
	Use their knowledge of the order of operations to carry out calculations involving the four operations.		
	Solve multi-step problems involving addition, subtraction, multiplication and division.		
	Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.		
Fractions	Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.		
	Compare and order fractions, including fractions $> 1$ .		
	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions. M		
	Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$ .		
	Divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$ ].		

	Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, $\frac{3}{8}$ ].		
	Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places.		
	Multiply numbers with up to two decimal places by whole numbers.		
	Use written division methods in cases where the answer has up to two decimal places.		
	Solve problems which require answers to be rounded to specified degrees of accuracy.		
	Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.		
Measures	Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.		
	Convert between metric and imperial measures using formula (e.g. miles and kilometres)		
	Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres ( $\text{cm}^3$ ) and cubic metres ( $\text{m}^3$ ), and extending to other units [e.g., $\text{mm}^3$ and $\text{km}^3$ ].		
	Recognise that shapes with the same areas can have different perimeters and vice versa.		
	Recognise when it is possible to use formulae for area and volume of shapes.		
	Calculate the area of triangles (doubling into rectangles then halving) and parallelograms (breaking into rectangles and triangles).		
	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.		
	Describe positions on the full coordinate grid (all four quadrants).		
	Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.		
	Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.		
Statistics	Interpret and construct pie charts and line graphs and use these to solve problems.		
	Calculate and interpret the mean as an average.		

Aut 1	Spr 1	Sum 1
Aut 2	Spr 2	Sum 2

Em - Emerging Understanding      Exp - Expected Understanding      D - Deep Understanding