

 Year Five			
<b>Number Place Value</b>	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 through zero.		
	Round any number up 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.		
	<b>Number Addition &amp; Subtraction</b>	Add and subtract whole numbers with more than 4 digits, including using efficient written methods (columnar addition and subtraction).	
Add and subtract numbers mentally with increasingly large numbers.			
Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.			
Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.			
<b>Number Multiplication &amp; Division</b>	Identify multiples and factors, including finding all factor pairs of a number and 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.		
	Multiply numbers up to 4 digits by a one- or two-digit number using an efficient written method, including long multiplication for two-digit numbers.		
	Multiply and divide numbers mentally drawing upon known facts.		
	Divide numbers up to 4 digits by a one-digit number using the efficient written method of short division and interpret remainders appropriately for the context.		
	Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.		
	Recognise and use square numbers and cube numbers, and the notation for squared ( <sup>2</sup> ) and cubed ( <sup>3</sup> ).		
	Solve problems involving addition, subtraction, multiplication and division and a combination of these.		

	Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.		
<b>Number Fractions (including decimals and percentages)</b>	Compare and order fractions whose denominators are all multiples of the same number.		
	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.		
	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 (e.g. 0.71 = $\frac{71}{100}$ ).		
	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.		
	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 hundred, and as a decimal.		
Solve problems which require knowing percentage and decimal equivalents (of $\frac{1}{2}$ , $\frac{1}{4}$ , $\frac{1}{5}$ , $\frac{2}{5}$ , $\frac{4}{5}$ and those with a denominator of a multiple of 10 or 25).			

<b>Measurement</b>	Convert between different units of measure (e.g.km/m; cm/m; cm/mm; g/kg; l/ml).			
	Understand and use basic equivalences between metric and common imperial units (inches, pounds and pints).			
	Measure and calculate the perimeter of composite rectilinear shapes in cm and m.			
	Calculate and compare the area of rectangles and irregular shapes.			
	Estimate volume (e.g. using 1 cm <sup>3</sup> blocks to build cubes and cuboids) and capacity (e.g. using water).			
	Solve problems involving converting between units of time.			
	Solve problems using all four operations involving measure (e.g. length, mass, volume, money) using decimal notation.			
<b>Geometry – Properties of shape</b>	Identify 3-D shapes, including cubes and cuboids, from 2-D representations.			
	Know angles are measured in degrees; estimate and compare acute, obtuse and reflex angles.			
	Draw angles and measure them in degrees.			
	Identify: multiples of 90° angles at a point on a straight line and 1/2 a turn (total 180°), angles at a point and one whole turn (total 360°).			
	I can draw shapes using given dimensions and angles.			
	Use the properties of a rectangle (including 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.			
<b>Position and direction</b>	Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language.			
<b>Statistics</b>	Solve comparison, sum and difference problems using information presented in line graphs.			
	Complete, read and interpret information in tables, including timetables.			