Year 5 Mathematics Targets

Number and Place Value	Number – Addition & Subtraction	Number - Multiplication and Division	Number – Fractions (including decimals and percentages)
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 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.	**add and subtract whole numbers with more than 4 digits, including using formal 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.	**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 a formal 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 formal 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 (^{2}) and cubed (^{3}); **solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes;** solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign; **solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.**	**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 and write mathematical statements > 1 as a mixed number (for example, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$); 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; **read, write, order and compare numbers with up to three decimal places;** solve problems involving numbers 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; **solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5 and 4/5 those fractions with a denominator of a multiple of 10 or 25.**

Measurement	Geometry – Properties of shapes	Geometry - Position and Direction	Statistics

convert between different units of metric measure (for example, 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 (including squares), and including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes;
 estimate volume (for example, using 1 cm³ blocks to build cuboids (including cubes)) and capacity (for example, using water);
 solve problems involving converting between units of time;
 use all four operations to solve problems involving measure (for example, length, mass, volume, money) using decimal notation, including scaling.
	identify 3-D shapes, including cubes and other cuboids, from 2-D representations;
	 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 ½ turn (total 180°);
	     other multiples of 90°;
	 use the properties of rectangles 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.	solve comparison, sum and difference problems using information presented in a line graph;
			 complete, read and interpret information in tables, including timetables.