Year 5 Maths Knowledge and Skills Progression		
Working Towards	**Above**	**Above**
Round any number up to 10, 000 to the nearest 10, 100, 1000, 10 000 and 100 000	Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
Read Roman numerals to 500 and recognise years written in Roman numerals	Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000	Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and teach another child how interpret remainders appropriately for the context whilst linking them to decimals and fractions.
Know and use the vocabulary of prime numbers, prime factors and composite numbers	Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero	
Multiply numbers up to 4 digits by a one digit number using a formal written method		To solve problems including multiplying and dividing by whole numbers and those involving decimals by 10, 100 and 1000
Divide numbers up to 4 digits by a one-digit number using the formal written method of short division	Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000	Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes
Solve simple problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	Read Roman numerals to 1000 (M) and recognise years written in Roman numerals	Recognise and use cube numbers and the notation for cubed (3)
Compare and order fractions whose denominators are all multiples of the same number	Add and subtract whole numbers with more than 4 digits, including using formal written methods	Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates
Write equivalent fractions of a given fraction, represented visually, including tenths and hundredths	Add and subtract numbers mentally with increasingly large numbers	

Add and subtract fractions with the same denominator Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred' Know angles are measured in degrees	Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy Identify multiples and factors, including finding all factor pairs of a number, and common factors of two 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 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 the notation for squared (2) Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	

		Identify and name 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	
		Add and subtract fractions with 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	
		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	

	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, 4/5 and those fractions with a denominator of a multiple of 10 or 25

Convert between different units of metric measure

Understand and use approximate equivalences between metric units and common imperial units

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 e.g. using 1 cm³ blocks to build cuboids (including cubes) and capacity

Use all four operations to solve problems involving measure

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	
		Identify angles at a point on a straight line and 1/2 a turn	
		Identify 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	