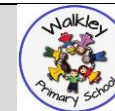


YEAR 5 MATHS CRUCIAL LEARNING



Year 5	Place Value	1. Count forwards and backwards in steps and powers of 10 from any given number up to 1,000,000; Count forwards and backwards with positive and negative whole numbers, including through 0. 2. Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit. 3. Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. 4. Read Roman Numerals to 1000 (I to CM) and recognise years written in Roman Numerals. 5. Interpret negative numbers in context 6. Round any number up to 1,000,000 to the nearest 10, 100, 1,00, 10,000 and 100,000
Year 5	Addition and Subtraction	1. Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. 2. Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) 3. Add and subtract mentally with increasingly large numbers (example $12,462 - 2300 = 10,162$) 4. Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.
Year 5	Multiplication and division	1. Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. 2. Know and use the vocabulary of prime numbers, prime factors and composite numbers; recall prime numbers up to 19 3. Recognise and use square numbers and cube numbers and the appropriate notation. 4. 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. 5. Multiply and divide numbers mentally drawing upon known facts. 6. 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. 7. Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. 8. Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign
Year 5	Fractions	1. Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths. 2. Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number (e.g., $2/5 + 4/5 = 6/5 = 1 \frac{1}{5}$) 3. Add and subtract fractions with the same denominator and denominators that are multiples of the same number. 4. Multiply proper fractions and mixed numbers by whole numbers supported by materials and diagrams.
Year 5	Decimals	1. Read and write decimal numbers as fractions [for example, $0.71 = 71/100$]. 2. Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. 3. Round decimals with 2 decimal places to the nearest whole number and to one decimal place. 4. Read, write, order and compare numbers with up to three decimal places.

		5. Solve problems involving number up to three decimal places. Recognise and write decimal equivalents of any number of tenths or hundredths.
Year 5	Using measures (converting units)	1. Convert between different units of metric measure. 2. Understand and use approximate equivalences between metric units and imperial units such as inches, pounds and pints. 3. Use all four operations to solve problems involving measure (e.g., length, mass, volume, money and time) using decimals notation including scaling.
Year 5	Perimeter, area and volume	1. Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres. 2. Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm²) and square metres (m²). 3. Estimate volume (e.g., using 1cm³ blocks to build cuboids) and capacity (e.g., using water)
Year 5	Properties of shape	1. Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. 2. Identify 3D shapes, including cubes and other cuboids, from 2D representations. 3. Estimate, compare, draw and measure angles in degrees. 4. Identify: angles at a point and one whole turn (total 360°); angles at a point on a straight line and ½ a turn (total 180°); other multiples of 90°.
Year 5	Position and Direction	1. 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.
Year 5	Present, interpret and solve problems	1. Complete, read and interpret information in tables, including timetables. 2. Solve comparison, sum and difference problems using information presented in a line graph.