

Year 5 Mathematics (Number) Meeting Expectations

- Count forwards and backwards in steps of power 10 for any given number up to 1,000,000
- Recognise and use thousandths and relate them to tenths, hundreds and decimal equivalents
- Recognise mixed numbers and improper fractions and convert from one to the other
- Read and write decimal numbers as fractions, for example, $0.47 = 47/100$
- Recognise the per cent symbol (%) and understand per cent relates to number of parts per hundred
- Write percentages as a fraction with denominator hundred, and as a decimal fraction
- Compare and add fractions whose denominators are all multiples of the same number
- Multiply and divide numbers mentally drawing upon known facts up to 12×12
- Round any number to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000
- Round decimals with 2dp to the nearest whole number and to 1 decimal place
- Recognise and use square numbers and cube numbers and the notation for squared (2) and cubed (3)
- Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000
- Multiply number up to 4-digit by a 1 or 2-digit number using formal written methods, including long multiplication for 2-digit numbers
- Divide numbers up to 4-digits by 1-digit numbers
- Solve problems involving multiplication and division where large numbers are used by decomposing them into factors
- Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why; solve problems involving 3 decimal places and problems which require knowledge of percentages and decimal equivalents

Year 5 Mathematics (Measurement, Geometry and Statistics) Meeting Expectations

- Know angles are measured in degrees: estimate and compare acute; obtuse and reflex angles
- Draw given angles and measure them in degrees ($^{\circ}$)
- Convert between different units of metric measures and estimate volume and capacity
- Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres
- Calculate and compare the area of squares and rectangles using standard units (cm^2 and m^2)
- Solve comparison, sum and difference problems using information presented in a line graph

Year 5 Mathematics Securing Expectations

- Have a concept of numbers well beyond 1,000,000 and their relative association to distances to planets; historical data and geographical aspects
- Divide whole numbers (up to 4 digits) by 2-digit numbers, using preferred method
- Use rounding as a strategy for quickly assessing what approximate answers ought to be before calculating
- Link working across zero for positive and negative numbers to work time between BC and AD in history
- Recognise the symbol for square root ($\sqrt{\quad}$) and work out square roots for numbers up to 100

- Calculate number problems algebraically, for example, $2x - 3 = 5$
- Use knowledge of measurement to create plans of areas around school, such as classroom , field, outside play area, etc.
- Relate imperial measures still used regularly in our society to their metric equivalents, for example, miles to Km and lbs to Kg
- Use a range of timetables to work out journey times on a fictional journey around the world, for example, 'How long would it take to reach the rainforests in the Amazon?'
- Collect own data on personal project and present information in formats of their choosing, charts, graphs and tables