A Year 5 Mathematician at Crabtree Junior School – main objectives

Number

I can count forwards and backwards in steps of powers of 10 for any given number up to 1,000,000.

I recognise and use thousandths and relate then to tenths, hundredths and decimals equivalents.

I recognise mixed numbers and improper fractions and can convert from one to the other.

I can read and write decimal numbers as fractions.

I recognise the % symbol and understand percent relates to a number of parts per hundred.

I can write percentages as a fraction with denominator hundred and as a decimal fraction.

I can compare and add fractions whose denominators are all multiples of the same number.

I can multiply and divide numbers mentally drawing on known facts up to 12 x 12.

I can round decimals with 2dp to the nearest whole number and to 1dp.

I recognise and use square numbers and cube numbers; and can use the notation ^{2} and ^{3}.

I can multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.

I can multiply numbers up to 4-digit by a 1 or 2-digit number using formal written methods, including long multiplication for a 2-digit number.

I can divide numbers up to 4-digits by a 1-digit number.

I can solve problems involving multiplication and division where large numbers are used by decomposing them into factors.

I can solve addition and subtraction multi-step problems in context, deciding which operations and methods to use and why.

I can solve problems involving numbers up to 3dp.

Measurement and geometry

I know that angles are measured in degrees.

I can estimate and compare acute, obtuse and reflex angles.

I can draw given angles and measure them in degrees.

I can convert between different units of metric measures and estimate volume and capacity.

I can measure and calculate the perimeter of composite rectilinear shapes in cm and m.

I can calculate and compare the areas of squares and rectangles including using standards units (cm^2 and m^2).

I can solve comparison, sum and difference problems using information presented in a line graph.

Enrichment Objectives

I have a concept of numbers well beyond 1,000,000 and their relative association to distances to planets; historical data and geographical aspects.

I can divide whole numbers (up to 4 digits) by 2-digit numbers, using my preferred method.

I can use rounding as a strategy for quickly assessing what approximate answers ought to be before calculating.

I can link working across zero for positive and negative numbers, for example, to work out time intervals between BC and AD in history

I can recognise the symbol for square root (√) and work out square roots for numbers up to 100.

I can calculate number problems algebraically, for example, $2x – 3 = 5$

I can use my knowledge of measurement to create plans of areas around school, such as the classroom, field, outside play area, etc.

I can relate the imperial measures still used regularly in our society to their metric equivalents, for example, miles to Km and lbs to Kg.

I can 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?”

I can collect my own data on a personal project and present information in formats of my choosing using charts, graphs and tables.