**Progression of Skills in Maths Year 5**

* Can read, write, order and compare numbers to at least 1,000,000 and know the value of each digit
* Count forwards or backwards in steps 10, 100, 1000, 10000 or 100000 for any given number up to 1000000
* Can use negative numbers in my work and can count backwards and forwards to and from negative numbers.
* Can round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000
* Can solve number problems and practical problems that involve numbers up to 1000000, negative numbers & rounding
* Can read Roman numerals to 1000 (M) and recognise years written in Roman numerals.
* Can add and subtract whole numbers with more than 4 digits using written methods such as column addition and subtraction
* Round numbers to check the accuracy of solutions.
* Can solve addition and subtraction multi-step problems, deciding which operations and methods to use and why
* Can 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.
* Know whether a number up to 100 is prime and recall prime numbers up to 19.
* Can multiply 4 digit numbers by a one- or two-digit number using a written method, including long multiplication
* Can multiply and divide numbers mentally, drawing upon times table knowledge and other number facts.
* Can divide 4 digit numbers by a one-digit number using the written method of short division and find the remainder.
* Can multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.
* Know what square numbers and cube numbers are, including the notation for squared (2) and cubed (3).
* Can solve multiplication and division problems using knowledge of factors and multiples, squares and cubes.
* Can compare and order fractions whose denominators are all multiples of the same number
* Can name and write equivalent fractions of a given fraction, and show these in a drawing (including tenths and hundredths).
* Know what mixed numbers and improper fractions are and can convert from one to the other (for example, 2/5 + 4/5 = 6/5 = 1 1/5).
* Can add and subtract fractions with the same denominator and denominators that are multiples of the same number.
* Use diagrams and some fraction tools to multiply proper fractions (7/10) and mixed numbers (1 7/10) by whole numbers.
* Can read and write decimal numbers as fractions (for example, 0.71 = 71/100).
* Know what thousandths are and how to use them with tenths, hundredths and decimals.
* Can round decimals with two decimal places to the nearest whole number and to one decimal place.
* Can read, write, order and compare numbers with up to three decimal places
* Can solve problems involving numbers with up to three decimal places.
* Know what the per cent symbol is (%) 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.
* Work on 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.
* Can convert between different units of metric measure
* Can change metric units to become imperial units such as inches, pounds and pints.
* Can calculate the perimeter of multi-shape shapes in centimetres and metres.
* Can calculate the area of rectangles in square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes.
* Can estimate volume (for example, using 1 cm³ blocks to build cuboids) and capacity (for example, using water).
* Can convert between the units of time.
* Can solve more difficult problems which involve units of measurement, decimal numbers and scales.
* Can reflect or translate a shape on a grid.
* Can identify 3-D shapes, including cubes and other cuboids, from 2-D drawings.
* Know that angles are measured in degrees and can estimate and compare acute, obtuse and reflex angles.
* Can draw a given angle (such as 47°), and then measure them in degrees (°).
* Know one whole turn - or a set of angles all around a point - measure a total of 360°.
* Know that a straight line - or angles that add up to a straight line - measure 180°.
* Can identify multiples of 90° (right angles).
* Can find the missing lengths and angles of a rectangle.
* Know regular shapes have equal sides and angles and irregular shapes do not have equal sides and angles
* Can solve problems using a line graph to find the answers.
* Can find the information I need from a timetable or large table of data