Year Five: An overview of what your child will be taught in Maths

Year 5 Autumn Term

Number and Place Value

•Read, write, order and compare numbers to 1000,000 and state the value of each digit
•Count forwards and backwards in powers of 10 from any given number up to 1000,000-e.g. 3000, 4000…
•Interpret negative numbers in context-e.g. temperature
•Count forwards and backwards with positive and negative whole numbers including through zero
•Round any number up to 1000,000 to the nearest 10, 100, 1000, 10,000 and 100,000
•Solve number and practical problems all of the above
•Read Roman numerals up to 1000 (M) and recognise years written in Roman numerals.

Number: Addition and Subtraction

•Add and subtract numbers mentally with increasingly large numbers
•Add and subtract whole numbers with more than 4 digits, including using formal column method
•Use rounding to check answers to calculations and check levels of accuracy
•Solve addition and subtraction multi-step problems in contexts deciding which operations to use and why

Statistics

•Solve comparison, sum and difference problems using a line graph

•Compete, read and interpret information in tables including timetables

Number: Multiplication and Division

•Multiply and divide numbers mentally using known facts
•Multiply and divide whole numbers by 10,100 and 1000
•Identify multiples and factors, including finding all factor pairs and common factors of two numbers-e.g. factors of 10 are 1,2,5 and 10 factors of 20 are 1,2,4,5,10 and 20 Common factors are 1,2,5 and 10
•Recognise and use square numbers-e.g. 25 is a square number because it is created by multiplying a number by itself-5x5
•Recognise and use cubed numbers-e.g. a number multiplied by itself three times-3x3x3=27 (27 is a cubed number)
•Use appropriate notation for both squared and cubed numbers
•Solve problems involving multiplication and division, including those involving factors, multiples, squared and cubed numbers. Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers
•Establish whether a number up to 100 is prime and recall prime numbers up to 19 e.g. 2, 3, 5, 7, 11, 13, 17, 19

Measurement: Area and Perimeter

•Measure and calculate the perimeter of a rectilinear shape in cm and m
•Calculate and compare the area of rectangles (including squares) and including using standard units of measure cm2 and m2
•Estimate the area of irregular shapes

Year 5 Spring Term

Number: Multiplication and Division

•Multiply and divide numbers mentally using known facts
•Multiply numbers up to 4 digits by a one or two-digit numbers using formal written methods, including long multiplication for 2 digits.
•Divide numbers up to 4 digits by a 1-digit number using formal written methods of short division (bus stop) and interpret remainders in the context of a question
•Solve problems involving addition, subtraction, multiplication and division

Number: Fractions

•Compare and order fractions whose denominators are multiples of the same number-e.g ¾, 5/8 and 8/12
•Identify, name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths.
•Recognise mixed numbers and improper fractions and convert between them-e.g. 8/6 is 1 2/6 or 2 2/3 is 8/3
•Add and subtract fractions with the same denominator and denominators that are multiples of the same number-e.g. 4/5 +3/5=7/5 or 3/5 + 4/10 =10/10 or 1 whole number
•Multiply proper fractions (numerator is smaller than denominator) and mixed numbers by whole numbers supported by equipment and images
•Read and write decimal numbers as fractions-e.g. 0.71 is 71/100
•Solve problem involving multiplication and division, including scaling by simple fractions

Number: Decimals and Percentages

•Read, write, order and compare decimal numbers up to three decimal places
•Recognise and use thousandths (0.001) and relate them to tenths, hundredths and decimal equivalents
•Round decimals with two decimal places (1.23) to the nearest whole number (1) and nearest tenth (1.2)
•Solve problem involving numbers up to three decimal places
•Recognise the % symbol and understand that this means the 'number of parts per 100'
•Relate percentages to fractions with a denominator of 100 and to decimal numbers
•Solve problems that involve knowing percentage and decimals equivalents of ½, ¼, 1/5, 2/5, 4/5 and those fractions with a denominator of 10 or 25

Year 5 Summer Term

Number: Decimals

•Recognise and write decimals equivalents of any number of tenths or hundredths-e.g. 78 hundredths is 0.78
•Find the effect of dividing a one or two-digit number by 10 or 100, identifying the value of each digit in the answer as ones, tenths and hundredths
•Solve simple money and measure problems involving fractions and decimals to two decimal places
•Convert between different units of measure-e.g. km to m

Geometry: Properties of Shape

•Identify 3D shapes, including cubes and cuboids from 2D representations
•Use the properties of rectangles to find missing lengths and angles.
•Know the difference between regular and irregular polygons by using an understanding of equal length lines and angles
•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 (360 degrees), angles at a point on a straight line and a ½ turn (180 degrees) other multiples of 90 degrees

Geometry: Position and Direction

•Identify, describe and represent the position of a shape following a reflection or translation using appropriate language

Measurement: Converting Units

•Convert between different units of metric measure (for example, km to m, cm to m, cm to mm, g to kg and ml to litres)
•Understand and use approximate equivalents between metric units and common imperial units such as inches, pounds and pints
•Solve problems involving converting between units of time

Measurement: Volume

•Estimate volume (using 1cm cubes to build cuboids) and capacity (using measuring cylinders)
•Use all four operations to solve problems involving measure