

## NEW MATHS CURRICULUM OBJECTIVES YEAR 5

<b>Number and Place Value</b>
To count forwards and backwards through zero, solving problems with negative numbers in
To read, write, order, compare and partition numbers up to a million
To count forwards or backwards in thousands, tens of thousands, hundreds of thousands, or millions.
To round to the nearest 10, 100, 1000, 10,000 or 100,000
To read roman numerals up to M (1000) and recognise years written in roman numerals

<b>Calculations</b>
<b>Addition and Subtraction</b>
To add and subtract whole numbers with more than 4 digits, including the formal written method
To add and subtract increasingly large numbers mentally
To use rounding to check answers, determining the level of accuracy
To solve addition and subtraction multi-step problems, choosing appropriate operations and methods
<b>Multiplication and Division</b>
To identify multiples and factors, including factor pairs and common factors of 2 numbers
To spot prime numbers up to 100, use vocabulary of prime factors and composite (non-prime) numbers
To recall prime numbers up to 19
To multiply a 4 digit number by a 1 or 2 digit number, using the formal written method
To multiply and divide numbers mentally, drawing upon facts
To divide 4 digit numbers by a 1 digit number, interpreting the remainder appropriately
To multiply or divide a whole number or decimal by 10,100 or 1000
To recognise and use square numbers and cube numbers
To solve problems involving addition, subtraction, multiplication and division
To understand the meaning of the equals sign
Solve problems using multiplication and division, including scaling by simple fractions and problems involving simple rates.

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<b>Fractions, Decimals and Percentages</b>
To compare and order fractions whose denominators are all multiples of the same number
To identify, name and write equivalent fractions of a given fraction, including tenths and hundredths
To recognise mixed numbers and improper fractions and convert from one form to another
To add and subtract fractions with the same denominator
To add and subtract fractions by finding a common denominator
To multiply proper fractions and mixed numbers
To read and write decimal numbers as fractions
To round decimals with two decimal places to the nearest whole number or to one d.p
To read, write, order and compare numbers with up to 3 decimal places
To know what percentage means and to write percentages as fractions or decimals. To convert fractions into percentages and decimals
To solve problems that involve fractions, decimals and percentages

<b>Measurement</b>
To convert between different units of measure
To measure and calculate the perimeters of shapes
To understand and use equivalences between metric units and imperial units, such as inches, pounds, pints
To measure and calculate the perimeters of shapes (including composite rectilinear shapes) using cm and m
To calculate and compare the area of squares and rectangles, using $\text{cm}^2$ , $\text{m}^2$
To estimate the area of irregular shapes
To estimate volume and capacity
To solve problems converting between units of time
To solve problems using money and measurements, using the four operations and decimal notation.

<b>Geometry</b>
To identify 3D shapes, including cubes and other cuboids, from 2D representations
To know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles
To draw given angles and measure them in degrees
To know that angles at a point add up to $360^\circ$
To know that angles on a straight line add up to $180^\circ$
To know that angles at a quarter turn add up to $90^\circ$ and that angles at a three-quarter turn add up to $270^\circ$

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To use the properties of rectangles to work out missing sides and missing angles

To know whether a shape is regular or irregular based on its sides and angles

To draw where a shape will be after it has been reflected in the mirror line.

To identify where a shape will be after it has been translated.  
To describe translations (the shape has not changed)

### **Statistics**

To solve comparison, sum and difference problems using data from a line graph

To complete, read and interpret information in tables and timetables