



St John's CE Middle School

Key Performance Indicators

Pupils who are working at age related expectations at the end of the year will have a secure knowledge of these Key Performance Indicators.

KS2 Year 6 Maths

Number and place value (decimals)
identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places
read, write, order and compare numbers up to 10 000 000 and determine the value of each digit
use negative numbers in context, and calculate intervals across zero
identify common factors, common multiples and prime numbers
solve problems which require answers to be rounded to specified degrees of accuracy
use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy
round any whole number to a required degree of accuracy
Number calculation (decimals)
perform mental calculations, including with mixed operations and large numbers
solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication
solve problems involving addition, subtraction and multiplication
use their knowledge of the order of operations to carry out calculations
divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division; interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context
divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context
use written division methods in cases where the answer has up to two decimal places · solve problems involving division
Fractions, decimals and percentages
use common factors to simplify fractions; use common multiples to express fractions in the same denomination

compare and order fractions, including fractions > 1
associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, $\frac{3}{8}$]
recall and use equivalences between simple fractions, decimals and percentages, including in different contexts
Measurement
recognise that shapes with the same areas can have different perimeters and vice versa
calculate the area of parallelograms and triangles
calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units [for example, mm^3 and km^3]
recognise when it is possible to use formulae for area and volume of shape
solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate
use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places
convert between miles and kilometres
Algebra
generate and describe linear number sequences
use simple formulae
enumerate possibilities of combinations of two variables
express missing number problems algebraically
find pairs of numbers that satisfy an equation with two unknowns
Ratio
solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts
solve problems involving similar shapes where the scale factor is known or can be found
solve problems involving unequal sharing and grouping using knowledge of fractions and multiples
Geometry: properties of shapes, position and direction
compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons
illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
draw 2-D shapes using given dimensions and angles
recognise, describe and build simple 3-D shapes, including making nets
recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles
describe positions on the full coordinate grid (all four quadrants)
draw and translate simple shapes on the coordinate plane, and reflect them in the axes
Statistics
interpret and construct pie charts and line graphs and use these to solve problems
calculate and interpret the mean as an average