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 5 Maths

Statistics (Measurements)
solve comparison, sum and difference problems using information presented in a line graph
solve problems involving converting between units of time
complete, read and interpret information in tables, including timetables
Number: Place Values/Decimals
read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit
read Roman numerals to 1000 (M) and recognise years written in Roman numerals
interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero
count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000
round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000
round decimals with two decimal places to the nearest whole number and to one decimal place
Calculating: Addition and subtraction, decimals
add and subtract numbers mentally with increasingly large numbers
add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)
solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy
Calculating : Multiplication and division, decimals
multiply and divide numbers mentally drawing upon known facts
and divide whole numbers and those involving decimals by 10, 100 and 1000
multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers

divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context, multiplication and division and a combination of these, including understanding the meaning of the equals sign
Calculating : Multiplication and division, prime numbers
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
establish whether a number up to 100 is prime and recall prime numbers up to 19
recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3})
solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes
Fractions
compare and order fractions whose denominators are all multiples of the same number
identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths
recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents
read and write decimal numbers as fractions [for example, 0.71 = 71/100]
read, write, order and compare numbers with up to three decimal places
recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, 2/5 + 4/5 = 6/5 = 1 1/5]
add and subtract fractions with the same denominator and denominators that are multiples of the same number
multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams
solve 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
solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates
Measures: perimeter, area and volume
convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)
understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints
use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling
measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres
estimate volume [for example, using 1 cm³ blocks to build cuboids (including cubes)] and capacity [for example, using water
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Percentages
recognise the per cent symbol (%) 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
Geometry: Shapes, Position and direction
identify 3-D shapes, including cubes and other cuboids, from 2-D representation
use the properties of rectangles to deduce related facts and find missing lengths and angles
distinguish between regular and irregular polygons based on reasoning about equal sides and angles

| identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed |
| **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 (total 360°); angles at a point on a straight line and 1/2 a turn (total 180°); other multiples of 90° |