

End of Year 3 Mathematics expectations

Calculation policy	To add numbers with 2 digits using formal methods
	To add numbers with 3 digits using formal methods
	To subtract numbers with 2 digits using formal methods
	To subtract numbers with 3 digits using formal methods
	To recall and use multiplication facts (2,10,5,3,4,6,8 multiplication tables)
	To solve problems involving multiplication (using materials, repeated addition and arrays)
	To multiply numbers up to 2 digits by a one-digit number (from the tables I know beginning with multiples of 10)
	To recall and use division facts (2,10,5,3,4,6,8 multiplication tables)
	To divide numbers up to 2 digits by a one-digit number (from the tables I know)
To begin to use short division to divide two digit numbers using familiar times tables.	
Mental Calculations	To have quick recall of 2, 5 and 10 multiplication tables and associated facts
	To develop efficient mental methods using associativity ( $4 \times 24 = 4 \times 20 = 4 \times 4$ )
	To develop efficient mental methods using commutativity ( $4 \times 12 \times 5 = 4 \times 5 \times 12 = 20 \times 12$ )
	To find the associated division statements for a given multiplication (number trios)
	To create links between the 2, 4 and 8 multiplication tables (using doubling)
	To increase confidence with complements to 100
	To have quick recall of doubles to at least 20
	To count from 0 in multiples of 50 and 100
	To count from 0 in multiples of 4 and 8
	To mentally find the difference between numbers by counting (including change)
	To add numbers mentally (three-digit number and ones, three-digit number and tens, three-digit number and hundreds)
	To subtract numbers mentally (three-digit number and ones, three-digit number and tens, three-digit number and hundreds)
Calculating	To solve number and practical problems involving numbers up to 1000
	To solve simple problems in context choosing from all four operations
	To solve problems, including missing number problems (using number facts, place value, and more complex addition and subtraction)
	To know the meaning of the equals sign
	To use the signs $<$ $>$ and $=$ when writing number statements
	To identify a number that could fill a gap using $<$ $>$ and $=$
	To solve integer scaling problems
	To estimate to check answers to a calculation
To use inverse operations to check answers to a calculation	
Place value	To read and write numbers up to 1000 in numerals and in words
	To compare and order numbers up to 1000
	To recognise the place value of each digit in a three-digit number
	To find 10 more or less than a given 2 or 3 digit number
	To find 100 more or less than a given 2 or 3 digit number
To multiply and divide numbers by 10	
Number system	To recognise the rule for 2 and 3 digit number sequences
	To continue number sequences from any 2 or 3 digit number
	To round two digit numbers to the nearest 10
	To round three digit numbers to the nearest 10
	To round lengths to the nearest division on the ruler when measuring
To read the time from clocks with Roman numerals	
Fractions	To know some fractions equivalent to $\frac{1}{2}$
	To know that shapes can be split into fractions in different ways
	To recognise, find and write unit fractions of a discrete set of objects
	To recognise non-unit fractions of a discrete set of objects (with small denominators)
	To connect tenths to place value, decimal measures and to division by 10
	To compare and order unit fractions (including on number lines)
	To compare and order fractions with the same denominators
	To solve simple problems involving fractions (unit fractions and non-unit fractions with small denominators)
	To recognise and show equivalent fractions with small denominators using diagrams
	To add fractions with the same denominator within one whole
To subtract fractions with the same denominator within one whole	

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Decimals	To read and write numbers with up to two decimal places in context (e.g. money or measure)
	To order and compare numbers with the same number of decimal places in context (up to 2d.p.)
	To count up and down in tenths
	To recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10
Measure and money	To use a range of measuring equipment with increasing accuracy
	To measure straight lines showing awareness of decimals
	To use a wide range of units to record measures (including mixed units e.g. L and ml)
	To measure: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml); temperature (°C)
	To compare: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml); temperature (°C)
	To add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml); temperature (°C)
	To scale measures (twice as long, 3 times as heavy)
	To become fluent in recognising the value of coins
	To record £ and p separately
	To add and subtract amounts of money in practical contexts (including mixed units)
	To give change using manageable amounts
	To estimate time with increasing accuracy to the nearest minute
	To read time from an analogue clock with increasing accuracy to the nearest minute
	To tell and write the time in 12 and 24-hour clocks
	To record time in terms of seconds, minutes and hours
	To compare time in terms of seconds, minutes and hours
To use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight	
To know the key time facts (number of seconds in a minute, the number of days in each month, year and leap year)	
To compare durations of events	
Shape	To name and describe simple 2-D shapes (angle size, side length, number of sides)
	To draw 2-D shapes
	To identify horizontal and vertical lines
	To identify pairs of perpendicular and parallel lines
	To make 3-D shapes using modeling materials
	To recognise 3-D shapes in different orientations
	To describe 3-D shapes
	To draw symmetrical patterns
	To recognise lines of symmetry in simple 2-D shapes
To identify if shapes are symmetrical or not	
Area and perimeter	To understand what is meant by the terms area and perimeter
	To measure the perimeter of rectangles
	To measure the perimeter of simple 2-D shapes
	To find the area of a rectangle by counting squares
Angles	To recognise angles as a property of shape or a description of a turn
	To identify right angles
	To begin to use the terms acute and obtuse for describing angles
	To identify whether angles are greater than or less than a right angle
	To recognise that two right angles make a half-turn
	To recognise that three right angles make three quarters of a turn
To recognise that four right angles make a complete turn	
Statistics	To solve one-step questions using bar charts and pictograms
	To solve two-step questions using bar charts and pictograms
	To solve one-step problems using tables
	To solve two-step problems using tables
	To present data in tables
	To present data in bar charts