St Mary's C of E (VA) Primary School

Mathematics Scheme of Work – YEAR 4

Mathematics Strand	NC Requirement	Resources/Time	Success Criteria (Outcome)
NUMBER **Number and place value**	**By the end of Year 4:** • count in multiples of 6, 7, 9, 25 and 1000 • find 1000 more or less than a given number • count backwards through zero to include negative numbers • recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) • order and compare numbers beyond 1000 • identify, represent and estimate numbers using different representations • round any number to the nearest 10, 100 or 1000 • solve number and practical problems that involve all of the above and with increasingly large positive numbers • read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.	• Number cards – 1000 • Place value cards (THTO) • Multilink • Base 10	• Children fluently order and compare exceeding 1000. • To secure counting in intervals of 6, 7, 25, and 1000. • To identify 1000 more and less. • To confidently count backwards into negative numbers. • To secure understanding of place value of 4 digit numbers. • To understand Roman numerals. • To round numbers to the nearest 10, 100 and 1000.
Addition and subtraction	• add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate • estimate and use inverse operations to check answers to a calculation • solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.	• Number cards, • Number lines 0-100, • Hundred squares. • Numicon • Place value cards (THTO) • Multilink • Base 10	• Add and subtract up to 4 digit numbers using the column method. • Estimate then solve addition and subtraction problems using the inverse to check answers. • To identify operation and

			solve 2 step problems.
Multiplication and division	• recall multiplication and division facts for multiplication tables up to 12 × 12 • use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers • recognise and use factor pairs and commutativity in mental calculations • multiply two-digit and three-digit numbers by a one-digit number using formal written layout • solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.	• Number cards, • Number lines 0-100, • Hundred squares. • Multiplication Squares • Numicon • Multilink • Base 10	• Children use various mental and written methods to solve multiplication and division problems. • To secure times table to 12x • To recognise and use factor pairs for mental calculations. • To solve integer scaling, distribution law and correspondence problems involving multiplication and division.
Fractions (including decimals)	• recognise and show, using diagrams, families of common equivalent fractions • count up and down in hundredths; recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten. • solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number • add and subtract fractions with the same denominator • recognise and write decimal equivalents of any number of tenths or hundredths • recognise and write decimal equivalents to 1/4; 1/2; ¾ • find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as units, tenths and	• Fraction fans/boards • Multilink • Base 10	• To confidently identify, count and compare fractions including hundredths. • Continue to secure understanding of equivalent fractions including common equivalent using diagrams. • To add and subtract fractions with the same denominator. • To solve measure and money based practical problems that include harder fractions and decimals. • To recognise and record decimal equivalents to quarter

	hundredths • round decimals with one decimal place to the nearest whole number • compare numbers with the same number of decimal places up to two decimal places • solve simple measure and money problems involving fractions and decimals to two decimal places.		• To round one decimal place numbers to the nearest whole number. • To compare decimal numbers to 2 decimal places.
MEASUREMENT	• Convert between different units of measure (e.g. kilometre to metre; hour to minute) • measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres • find the area of rectilinear shapes by counting squares • estimate, compare and calculate different measures, including money in pounds and pence • read, write and convert time between analogue and digital 12 and 24-hour clocks • solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.	• Metre rulers • Rulers • Tape measures • Scales • Balance scales • Measuring jugs/tubes • Numicon • 1p, 2p, 5p, 10p, 20p, 50p, £1, £2 coins • £5, £10 and £20 notes • Clocks (analogue & digital) • Calendars/timetables	• To convert between units of measurement. • To measure and calculate perimeter in cm and m. • To measure and calculate area using squares. • To estimate, compare and calculate measure. • To convert time between analogue and digital time. • To compare periods of time accurately and solve time based problems.
GEOMETRY **Properties of shapes**	• compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes • identify acute and obtuse angles and compare and order angles up to two right angles by size • identify lines of symmetry in 2-D shapes presented in different orientations • complete a simple symmetric figure with respect to a specific line of symmetry.	• 2D/3D shapes • 3D nets • Protractors • Compasses	• To compare and classify properties of geometric shapes. • To identify and compare angles within shapes and turns. • To identify lines of symmetry in different orientations.

Position and direction	• describe positions on a 2-D grid as coordinates in the first quadrant • describe movements between positions as translations of a given unit to the left/right and up/down • plot specified points and draw sides to complete a given polygon.	• 2D shapes	• To identify co-ordinates to the first quadrant. • To understand and create a polygon.
STATISTICS	• interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs • solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.	• Laptops/iPads • Rulers • Colouring pencils	• To collect and interpret data in different ways. • To solve comparison, sum and difference problems using collected data.