St Ann's R.C. Primary School – Knowledge & Skills Progression – Mathematics – KS1 & 2

Year Group	Number and Place Value	Addition, Subtraction, Multiplication and Division (Calculation)	Fractions, Decimals and Percentages	Measurement	Geometry (Properties of Shape, Position and Direction)	Statistics
Year 1 (Age 5-6)	• Count forwards and backwards to 100 • Read and write numbers to 20 in numerals and words • Identify one more and one less	• Use number bonds to 10 and 20 • Add and subtract one-digit and two-digit numbers to 20 • Solve simple problems using concrete objects and pictorial representations	• Recognise, find and name halves and quarters of objects and shapes • Understand part-whole relationships	• Compare, describe and solve practical problems for length, mass, capacity and time • Measure and begin to record using standard and non-standard units	• Recognise and name common 2D and 3D shapes • Describe position, direction and movement including whole, half, quarter and three-quarter turns	• Interpret and construct simple pictograms, tally charts, block diagrams and tables.
Year 2 (Age 6-7)	• Count in steps of 2, 3, and 5 from 0, and in tens from any number • Recognise place value in two-digit numbers	• Recall and use addition and subtraction facts to 20 fluently • Add and subtract numbers using concrete objects, pictorial	• Recognise, find, name and write fractions 1/3, 1/4, 2/4, ¾ • Understand simple equivalence of fractions	• Choose and use appropriate standard units to estimate and measure length, mass, temperature and capacity	• Identify and describe properties of 2D and 3D shapes • Identify lines of symmetry in shapes • Use mathematical vocabulary to	• Ask and answer simple questions by counting the number of objects in each category and sorting categories by quantity.

	• Compare and order numbers up to 100	representations and mentally • Understand multiplication as repeated addition and division as sharing		• Tell and write the time to five minutes • Recognise and use symbols for pounds (£) and pence (p)	describe position, direction and movement	
Year 3 **(Age 7-8)**	• Count from 0 in multiples of 4, 8, 50 and 100 • Recognise place value in three-digit numbers • Compare and order numbers up to 1000 • Find 10 or 100 more or less than a given number	• Add and subtract numbers mentally and with formal written methods • Recall and use multiplication and division facts for 3, 4 and 8 times tables • Solve problems involving all four operations	• Recognise and use unit and non-unit fractions • Compare and order fractions with the same denominator • Add and subtract fractions with the same denominator • Recognise and use tenths as decimals	• Measure, compare, add and subtract lengths, mass, volume/capacity • Measure perimeter of simple 2D shapes • Tell and write the time using 12-hour and 24-hour clocks	• Draw and describe 2D shapes and make 3D shapes • Identify right angles and recognise angles as a property of shape • Identify horizontal, vertical, perpendicular and parallel lines • Describe position on a grid	• Interpret and present data using bar charts, pictograms and tables • Solve one-step and two-step questions using information presented in scaled bar charts and pictograms.
Year 4 **(Age 8-9)**	• Count in multiples of 6, 7, 9, 25 and 1000 • Recognise place value in	• Add and subtract numbers with up to four digits using	• Recognise and show families of equivalent fractions • Add and subtract	• Convert between different units of measure (e.g. km to m)	• Classify geometric shapes, including quadrilaterals and triangles	• Interpret and present discrete and continuous data using appropriate

	four-digit numbers • Round numbers to the nearest 10, 100 or 1000 • Order and compare numbers beyond 1000	formal written methods • Recall multiplication and division facts up to 12 × 12 • Use formal written methods for multiplication and division • Solve two-step problems involving all four operations	fractions with the same denominator • Recognise and write decimal equivalents for tenths and hundredths • Round decimals with one decimal place to the nearest whole number	• Measure and calculate perimeter and area of rectilinear shapes • Read, write and convert time between analogue and digital 12- and 24-hour clocks	• Identify lines of symmetry in 2D shapes • Plot points and describe movements on a grid • Describe positions using coordinates in the first quadrant	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.
Year 5 **(Age 9-10)**	• Read, write, order and compare numbers to at least 1,000,000 • Interpret negative numbers in context • Round any number up to 1,000,000 to the nearest 10, 100, 1000,	• Add and subtract whole numbers with more than four digits • Use formal written methods for all four operations • Identify multiples, factors, prime, square and cube numbers	• Compare and order fractions whose denominators are all multiples of the same number • Identify, name and write equivalent fractions • Add and subtract fractions with	• Convert between different units of metric measure • Understand and use approximate equivalences between metric and imperial units • Calculate perimeter and area of	• Identify 3D shapes from 2D representations • Know angles are measured in degrees and estimate and compare acute, obtuse and reflex angles • Draw given angles and	• Complete, read and interpret information in tables, including timetables; • Solve comparison, sum and difference problems using information

	10,000 and 100,000 • Use Roman numerals to 1000 (M)	• Solve multi-step problems, including those involving scaling and correspondence	denominators that are multiples of the same number • Read and write decimals as fractions • Recognise and use thousandths • Understand and calculate percentages as fractions and decimals	composite rectilinear shapes • Estimate and compare volume • Solve problems involving money and time	measure them in degrees • Use the properties of rectangles to deduce related facts • Reflect and translate shapes on a grid	presented in a line graph.
Year 6 (Age 10-11)	• Read, write, order and compare numbers up to 10,000,000 • Round any whole number to a required degree of accuracy • Use negative numbers in context and calculate intervals across zero	• Perform mental calculations with mixed operations and large numbers • Use formal written methods for all four operations, including long multiplication and division • Identify common	• Use common factors to simplify fractions • Compare and order fractions, including those greater than 1 • Add and subtract fractions with different denominators and mixed numbers	• Solve problems involving the calculation and conversion of units • Use, read, write and convert between standard units, converting measurements of length, mass, volume and time	• Draw and classify shapes by properties and sizes • Find unknown angles in triangles, quadrilaterals and regular polygons • Illustrate and name parts of circles, including radius,	• Interpret and construct pie charts and line graphs and use these to solve problems; • Calculate and interpret the mean as an average.

	• Solve number and practical problems with increasingly large numbers	factors, common multiples and prime numbers • Solve multi-step problems, justifying and interpreting remainders • Use estimation to check answers	• Multiply and divide fractions by whole numbers • Associate a fraction with division and calculate decimal fraction equivalents • Solve problems involving the calculation of percentages	• Calculate area, perimeter and volume of shapes, including parallelograms and triangles • Use scale factors, ratio and proportion in measurement contexts	diameter and circumference • Describe positions on the full coordinate grid (all four quadrants) • Translate and reflect shapes in the four quadrants	