Crosby Primary School
Mathematics Progression Document – Years 3 and 4

	Year 3	Year 4
Fluency	• Count in multiples of 4, 8, 50,100 • Find 10 more and less than a given number • Recognise the place value of each digit in a 3 digit number • Identify, represent and estimate number using different representations • Read and write numbers to at least a 1000 in numerals and words • Compare and order numbers up to 1000 • Add and subtract numbers mentally, including a 3 digit number and ones/a 3 digit number and tens/a 3 digit number and hundreds • Add and subtract numbers with up 3 digits, progressing to formal written methods of columnar addition and subtraction • Recall and use multiplication and division facts 3,4 and 8 multiplication tables • Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know including 2 digit X 1 digit, using mental and progressing to formal written methods • Count up/ down in tenths; recognise tenths arise from dividing an object into 10 equal parts & in dividing 1 digit numbers or quantities by 10 • Compare and order unit fractions with the same denominators • Recognise, find and write fractions or a discrete set of objects; unit fractions & non-unit fractions with small denominators • Recognise and show, using diagrams, equivalent fractions with small denominators • Recognise and use fractions as numbers: unit fraction/non-unit fractions with small denominators • Add and subtract fractions with same denominator within one whole 5/7 + 1/7 = 6/7 • Measure, compare, add& subtract length cm/m/mm, mass kg/g , volume /capacity l/ml • Add& subtract amounts of money to give change using both £/d p in practical context • Tell and write the time from an analogue clock include Roman numerals from I to xii and 12/24 hour clock • Identify right angles, recognise that 2 right angles make a ½ a turn, three make ¾ & 4 make a whole turn, identify if angles are greater than or less than a right angle • Interpret and present data using; bar charts, tables and pictograms • Estimate & read with increasing accuracy to the nearest minute, secs, mins, hrs am/pm • Know No of seconds in a minute, days in a month /year leap year, compare durations to calculate time for an event or task • Measure the perimeter of a 2D shape • Recognise 3D shapes in different orientations and describe • Identify horizontal and vertical lines and pairs of perpendicular/ parallel lines	• Count backwards through zero to include negative numbers • Count in multiples of 6,7,9,25 & 100 • Compare/order numbers beyond 1000 • Round any number to the next 10, 100 and 1000 • Find 1000 more and less • Identify, represent and estimate number using different representation • Recognise the place value of each digit in a 4 digit • Read Roman numerals to 100 and understand that over time the number system change to include 0 place value • Add/subtract numbers with up to 4 digits using the formal written methods of columnar of add/subtraction where appropriate • Recall multiplication and division facts for tables up to 12 x12 • Recognise/use factor pairs/ commutativity in mental calculation • Multiply 2 digit and 3 digit numbers by a 1 digit number using a formal written layout • Use place value known and derived facts to multiply and divide mentally, include multiply by 0 and 1; dividing by 1; multiplying 3 numbers together • Recognise and show, using diagrams, families of common equivalent fractions • Count up and down in hundredths; recognise that hundredths are when dividing an object by a hundred and dividing tenths by 10 • Round decimals with 1 decimal place to nearest whole number • Recognise and write decimal equivalents tenths and hundredths • Recognise and write decimal equivalents to ¼, ½, ¾ • Find the effect of dividing 1 digit or 2 digit numbers by 10 & 100, identifying the value of the digits in the answer as units, tenths & hundredths • Add and subtract fractions with same denominator • Compare numbers with the same number of decimal places up to 2 decimal places • Convert between different units of measure e.g km to m; hr to min • Compare/classify geometric shapes include; quadrilateral & triangles based on their properties& size • Identify lines of symmetry in 2D shapes presented different orientations, complete a simple symmetric figure with a line of symmetry • Plot specified points and draw sides to complete a given polygon • Estimate, compare and calculate different ,measures • Measure and calculate the perimeter of rectilinear shapes • Find the area of a rectilinear shape counting the squares • Estimate, compare & calculate measures, include money £/p • Read, write and convert time between analogue & digital 12 & 24hour clock • Identify obtuse and acute angles, compare/order angles 2 right angles-size • Describe positions on a 2D grid coordinates in the first quadrant • Describe movement between translations, left/right up/down • Interpret and present discrete data using graphical methods, bar chart, time graph

	Year 3	Year 4
Reasoning	• Reason with multiples of 4, 8, 50,100 • Reason with 10 more and less than a given number • Reason with place value of 3 digit number • Reason with identifying, representing and estimating numbers using different representation • Reason with read and write numbers to at least a 1000 in numerals and words • Reason with compare and order numbers up to 1000 • Reason with add and subtract numbers mentally, including a 3 digit number and ones / a 3 digit number and tens/ a 3 digit number and hundreds • Reason with add and subtract numbers with up 3 digits, progressing to formal written methods of columnar addition and subtraction • Estimate the answer to a calculation and use the inverse operation to check answer • Reason with multiplication and division facts 3,4 and 8 multiplication tables • Reason with writing and calculating mathematical statements for multiplication and division using the multiplication tables that they know including 2 digit X 1 digit, using mental and progressing to formal written methods • Reason with: Count up/ down in tenths; recognise tenths arise from dividing an object into 10 equal parts & in dividing 1 digit numbers or quantities by 10 • Reason with compare and order unit fractions with the same denominators • Reason with fractions of a discrete set of objects; unit fractions & non-unit fractions with small denominators • Reason with, using diagrams, equivalent fractions with small denominators • Reasons with fractions as numbers: unit fraction/non-unit fractions with small denominators • Reason with add and subtract fractions with same denominator within one whole 5/7 + 1/7 = 6/7 • Reason with measure, compare, add& subtract length cm/m/mm, mass kg/g , volume /capacity l/ml • Reason with add& subtract amounts of money to give change using both £/d p in practical context • Reason with time from an analogue clock include Roman numerals from I to xii and 12/24 hour clock • Reason with right angles, recognise that 2 right angles make a ½ a turn, three make ¾ & 4 make a whole turn, identify if angles are greater than or less than a right angle • Reason with Interpret and present data using; bar charts, tables and pictograms • *Reason with estimate & read with increasing accuracy to the nearest minute, secs, mins, hrs am/pm* • *Reason with knowledge of No of seconds in a minute, days in a month /year leap year, compare durations to calculate time for an event or task* • *Reason with measure the perimeter of a 2D shape* • *Reason with recognise 3D shapes in different orientations and describe* • *Reason with horizontal and vertical lines and pairs of perpendicular/ parallel lines*	• Reason with count backwards through zero to include negative numbers • Reason with multiples of 6,7,9,25 & 100 • Reason with compare/order numbers beyond 1000 • Reason with rounding any number to the next 10, 100 and 1000 • Reason with 1000 more and less • Reason with different representations of numbers • Reason with place value of each digit in a 4 digit • Reason with Roman numerals to 100 and understand that over time the number system change to include 0 place value • Reason with add/subtract numbers with up to 4 digits using the formal written methods of columnar of add/subtraction where appropriate • Estimate and use inverse operations to check answers to a calculation • Reason with multiplication and division facts for tables up to 12 x12 • Reason with factor pairs/ commutativity in mental calculation • Reason with multiplication of 2 digit and 3 digit numbers by a 1 digit number using a formal written layout • Reason with place value known and derived facts to multiply and divide mentally, include multiply by 0 and 1; dividing by 1; multiplying 3 numbers together • Reason with, using diagrams, families of common equivalent fractions • Reason with hundredths; recognise that hundredths are when dividing an object by a hundred and dividing tenths by 10 • Reason with rounding decimals with 1 decimal place to nearest whole number • Reason with decimal equivalents tenths and hundredths • Reason with decimal equivalents to ¼, ½, ¾ • Reason with the effect of dividing 1 digit or 2 digit numbers by 10 & 100, identifying the value of the digits in the answer as units, tenths & hundredths • Reason with add and subtract fractions with same denominator • Reason with comparing numbers with the same number of decimal places up to 2 decimal places • Reason with converting different units of measure e.g km to m; hr to min • Reason with compare/classify geometric shapes include; quadrilateral & triangles based on their properties& size • Reason with lines of symmetry in 2D shapes presented different orientations, complete a simple symmetric figure with a line of symmetry • Reason with measure and calculate the perimeter of rectilinear shapes • Reason with area of a rectilinear shape counting the squares • Reason with estimate, compare & calculate measures, include money £/p • Reason with time between analogue & digital 12 & 24hour clock • Reason with Identifying obtuse and acute angles, compare/order angles 2 right angles-size • Reason with positions on a 2D grid coordinates in the first quadrant • Reason with movement between translations, left/right up/down • Reason with Interpreting and presenting discrete data using graphical methods, bar chart, time graph

	Year 3	Year 4
Solve Problems	• Use place value to solve number problems and practical problems • *Solves problems including missing number problems, number facts, place value and more complex addition and subtraction* • **Recall and use multiplication and division facts 3,4 and 8 multiplication tables** • **Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know including 2 digit X 1 digit, using mental and progressing to formal written methods** • Solves problem including missing number problems involving multiplication and division including integer scaling correspondence problems in which n objects are connected to m objects • Solve fraction problems • Solve one step and two step questions such as 'How many more?' 'How many fewer?' using information presented in a scaled bar chart and pictograms & tables	• Solve number and place value problems including practical problems • Solve add/subtraction two step problems in context, deciding which operation, methods to use and why • Solve problems involving multiplying and adding, include distributive law to multiply, 2-digit numbers x 1 digit, integer scaling problems such as n objects are connected to m objects • Solve simple problems with increasingly harder fractions to calculate quantities and fractions to divide quantities including non-unit fractions where the answer is a whole number • Solve simple measure and money problems involving fractions and decimals to 2 decimal places • Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs • Solve problems converting hours to minutes; minutes to seconds; weeks to days