St. Mary's CE Primary School

Curriculum Map: Overview for Mathematics

Plan: Maths Mastery (Power Maths)

Year: Year 4

Autumn Term			
Unit	Strands	NC Objectives	Lesson progression
1	Number and place value	1. Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) 2. Round any number to the nearest 10, 100 or 1,000 3. Count in multiples of 6, 7, 9, 25 and 1,000 4. Identify, represent and estimate numbers using different representations 5. Order and compare numbers beyond 1,000 6. 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	1. Numbers to 1,000 2. Rounding to the nearest 10 3. Rounding to the nearest 100 4. Counting in 1,000s 5. Representing 4-digit numbers 6. 1,000s, 100s, 10s and 1s 7. The number line to 10,000 (1) 8. The number line to 10,000 (2) 9. Roman numerals to 100
2	Number and place value	1. Find 1,000 more or less than a given number 2. Order and compare numbers beyond 1,000 3. Identify, represent and estimate numbers using different representations 4. Round any number to the nearest 10, 100 or 1,000 5. Solve number and practical problems that involve all of the above and with increasingly large positive numbers 6. Count in multiples of 6, 7, 9, 25 and 1,000 7. Count backwards through zero to include negative numbers 8. Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero	1. Finding 1,000 more or less 2. Comparing 4-digit numbers (1) 3. Comparing 4-digit numbers (2) 4. Ordering numbers to 10,000 5. Rounding to the nearest 1,000 6. Solving problems using rounding 7. Counting in 25s 8. Negative numbers (1) 9. Negative numbers (2)

3	Number – addition and subtraction	1. Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate 2. Solve number and practical problems that involve all of the above and with increasingly large positive numbers 3. Estimate and use inverse operations to check answers to a calculation 4. Round any number to the nearest 10, 100 or 1,000 5. Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	1. Adding and subtracting 1s, 10s, 100s, 1,000s 2. Adding two 4-digit numbers (1) 3. Adding two 4-digit numbers (2) 4. Adding two 4-digit numbers (3) 5. Subtracting two 4-digit numbers (1) 6. Subtracting two 4-digit numbers (2) 7. Subtracting two 4-digit numbers (3) 8. Subtracting two 4-digit numbers (4) 9. Equivalent difference 10. Estimating answers to additions and subtractions 11. Checking strategies 12. Problem solving – addition and subtraction (1) 13. Problem solving – addition and subtraction (2) 14. Problem solving – addition and subtraction (3) 15. Problem solving – addition and subtraction (4)
4	Measurement	1. Convert between different units of measure [for example, kilometre to metre; hour to minute] 2. Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres	1. Kilometres 2. Perimeter of a rectangle (1) 3. Perimeter of a rectangle (2) 4. Perimeter of rectilinear shapes (1) 5. Perimeter of rectilinear shapes (2)
5	Number – multiplication and division	1. Recall multiplication and division facts for multiplication tables up to 12 × 12 2. 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 3. Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.	1. Multiplying by multiples of 10 and 100 2. Dividing by multiples of 10 and 100 3. Multiplying by 0 and 1 4. Dividing by 1 5. Multiplying and dividing by 6 6. 6 times-table 7. Multiplying and dividing by 9 8. 9 times-table 9. Multiplying and dividing by 7 10. 7 times-table 11. 11 and 12 times-tables

Spring Term			
Unit	Strands	NC Objectives	Lesson progression
6	Number – multiplication and division	1. 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 2. Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign 3. Multiply two-digit and three-digit numbers by a one digit number using formal written layout 4. Recognise and use factor pairs and commutativity in mental calculations 5. 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	1. Problem solving – addition and multiplication 2. Problem solving – mixed problems 3. Using written methods to multiply 4. Multiplying a 2-digit number by a 1-digit number 5. Multiplying a 3-digit number by a 1-digit number 6. Problem solving – multiplication 7. Multiplying more than two numbers (1) 8. Multiplying more than two numbers (2) 9. Problem solving – mixed correspondence problems 10. Dividing a 2-digit number by a 1-digit number (1) 11. Division with remainders 12. Dividing a 2-digit number by a 1-digit number (2) 13. Dividing a 2-digit number by a 1-digit number (3) 14. Dividing a 3-digit number by a 1-digit number 15. Problem solving – division
7	Measurement	1. Find the area of rectilinear shapes by counting squares 2. Estimate, compare and calculate different measures, including money in pounds and pence	1. What is area? 2. Counting squares (1) 3. Counting squares (2) 4. Making shapes 5. Comparing area
8	Number – **fractions** (including decimals)	1. Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten 2. Recognise and show, using diagrams, families of common equivalent fractions 3. 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	1. Tenths and hundredths (1) 2. Tenths and hundredths (2) 3. Equivalent fractions (1) 4. Equivalent fractions (2) 5. Simplifying Fractions 6. Fractions greater than 1 (1) 7. Fractions greater than 1 (2)
9	Number – **fractions** (including decimals)	1. Add and subtract fractions with the same denominator 2. Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide	1. Adding fractions 2. Subtracting fractions (1) 3. Subtracting fractions (2)

		quantities, including non-unit fractions where the answer is a whole number	4. Problem solving – adding and subtracting fractions (1) 5. Problem solving – adding and subtracting fractions (2) 6. Calculating fractions of a quantity 7. Problem solving – fraction of a quantity (1) 8. Problem solving – fraction of a quantity (2)
10	Number – fractions (including **decimals**)	1. Recognise and write decimal equivalents of any number of tenths or hundredths 2. Solve simple measure and money problems involving fractions and decimals to two decimal places 3. 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 ones, tenths and hundredths 4. Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten	1. Tenths (1) 2. Tenths (2) 3. Tenths (3) 4. Dividing by 10 (1) 5. Dividing by 10 (2) 6. Hundredths (1) 7. Hundredths (2) 8. Hundredths (3) 9. Dividing by 100 10. Dividing by 10 and 100

Summer Term			
Unit	Strands	NC Objectives	Lesson progression
11	Number – fractions (including **decimals**)	1. Recognise and write decimal equivalents of any number of tenths or hundredths 2. Add and subtract fractions with the same denominator 3. 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 ones, tenths and hundredths 4. Compare numbers with the same number of decimal places up to two decimal places 5. Round decimals with one decimal place to the nearest whole number 6. Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ 7. Solve simple measure and money problems involving fractions and decimals to two decimal places	1. Making a whole 2. Writing decimals 3. Comparing decimals 4. Ordering decimals 5. Rounding decimals 6. Halves and quarters 7. Problem solving – decimals
12	Measurement – money	1. Estimate, compare and calculate different measures, including money in pounds and pence 2. Solve simple measure and money problems involving fractions and decimals to two decimal places	1. Pounds and pence 2. Pounds, tenths and hundredths 3. Ordering amounts of money 4. Rounding money 5. Using rounding to estimate money 6. Problem solving – pounds and pence 7. Problem solving – multiplication and division 8. Solving two-step problems 9. Problem solving – money
13	Measurement – time	1. Convert between different units of measure [for example, kilometre to metre; hour to minute]	1. Units of time (1) 2. Units of time (2) 3. Converting times (1) 4. Converting times (2) 5. Problem solving – units of time
14	Statistics	1. Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs 2. Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables	1. Charts and tables (1) 2. Charts and tables (2) 3. Line graphs (1) 4. Line graphs (2) 5. Problem solving – graphs

		and other graphs	
15	Geometry – properties of shapes	1. Identify acute and obtuse angles and compare and order angles up to two right angles by size 2. Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes 3. Identify lines of symmetry in 2D shapes presented in different orientations 4. Complete a simple symmetric figure with respect to a specific line of symmetry	1. Identifying angles 2. Comparing and ordering angles 3. Identifying regular and irregular shapes 4. Classifying triangles 5. Classifying and comparing quadrilaterals 6. Deducing facts about shapes 7. Lines of symmetry inside a shape 8. Lines of symmetry outside a shape 9. Completing a symmetric figure 10. Completing a symmetric shape
16	Geometry – position and direction	1. Describe positions on a 2D grid as coordinates in the first quadrant 2. Plot specified points and draw sides to complete a given polygon 3. Describe movements between positions as translations of a given unit to the left/right and up/down	1. Describing position (1) 2. Describing position (2) 3. Drawing on a grid 4. Reasoning on a grid 5. Moving on a grid 6. Describing a movement on a grid