Kingswood Parks
PRIMARY SCHOOL

Mathematics Medium Term Plan – Year 4

Unit	National Curriculum End of Year 4 Statutory Requirements	Learning Objectives	Small Steps
Autumn Term			
Place value	• To be able to count in multiples of 6, 7, 9, 25 and 1000 • To be able to find 1000 more or less than a given number • To be able to count backwards through zero to include negative numbers • To recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) • To be able to order and compare numbers beyond 1000 • To be able to identify, represent and estimate numbers using different representations • To be able to round any number to the nearest 10, 100 or 1000 • To be able to solve number and practical problems that involve all of the above and with increasingly large positive numbers	1.To be able to represent numbers to 1,000 2. To be able to partition numbers to 1,000 3. To be able to label, identify and find missing values on a number line to 1,000 4. To be able to explore numbers beyond 1,000 5. To be able to represent numbers to 10,000 6. To be able to partition numbers to 10,000 7. To be able to flexibly partition numbers to 10,000 8. To be able to find 1, 10, 100, 1,000 more or less than a number 9. To be able to label, identify and find missing values on a number line to 10,000 10. To be able to estimate on a number line to 10,000 11. To be able to compare numbers to 10,000 12. To be able to order numbers to 10,000 13. To be able to explore the similarities and differences between the Roman number system and our number system 14. To be able to round to the nearest 10 15. To be able to round to the nearest 100 16. To be able to round to the nearest 1,000 17. To be able to round to the nearest 10, 100 and 1,000	1. Represent numbers to 1,000 2. Partition numbers to 1,000 3. Number line to 1,000 4. Thousands 5. Represent numbers to 10,000 6. Partition numbers to 10,000 7. Flexible partitioning of numbers to 10,000 8. Find 1, 10, 100, 1,000 more or less 9. Number line to 10,000 10. Estimate on a number line to 10,000 11. Compare numbers to 10,000 12. Order numbers to 10,000 13. Roman numerals 14. Round to the nearest 10 15. Round to the nearest 100 16. Round to the nearest 1,000 17. Round to the nearest 10, 100 and 1,000

	• To be able to 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.		
Addition and subtraction	• To be able to add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate • To be able to estimate and use inverse operations to check answers to a calculation • To be able to solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.	1.To be able to add and subtract 1s, 10s, 100s and 1,000s 2. To be able to add up to 4-digit numbers with no exchange 3.To be able to add two 4-digit numbers with one exchange 4. To be able to add two 4-digit numbers with more than one exchange 5. To be able to subtract two 4-digit numbers with no exchange 6. To be able to subtract two 4-digit numbers with one exchange 7. To be able to subtract two 4-digit numbers with more than one exchange 8. To be able to choose an appropriate method to complete efficient subtraction 9. To be able to estimate by rounding to the nearest ten, hundred and thousand 10. To be able to explore the inverse between addition and subtraction	1. Add and subtract 1s, 10s, 100s and 1,000s 2. Add up to 4-digit numbers – no exchange 3. Add two 4-digit numbers – one exchange 4. Add two 4-digit numbers – more than one exchange 5. Subtract two 4-digit numbers – no exchange 6. Subtract two 4-digit numbers – one exchange 7. Subtract two 4-digit numbers – more than one exchange 8. Efficient subtraction 9. Estimate answers 10. Checking strategies
Measurement - area	• To be able to measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres • To be able to find the area of rectilinear shapes by counting squares	1.To be able to say that area is the amount of space taken up by a two-dimensional shape or surface 2. To be able to count the amount of squares in a shape to find out the area 3. To be able to make rectilinear shapes using a given number of squares 4. To be able to compare the areas of rectilinear shapes	1. What is area? 2. Count squares 3. Make shapes 4. Compare areas
Multiplication and division A	• To be able to recall multiplication and division facts for multiplication tables up to 12 × 12 • To be able to use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and	1. To be able to understand multiples of 3 in a range of contexts 2. To be able to multiply and divide a number by 6 3. To be able to recall the 6 times-table and know some division facts 4. To be able to multiply and divide a number by 9	1. Multiples of 3 2. Multiples and divide by 6 3. 6 times-table and division facts 4. Multiply and divide by 9 5. 9 times-table and division facts 6. The 3, 6, 9 times-table

	1; dividing by 1; multiplying together three numbers • To be able to recognise and use factor pairs and commutativity in mental calculations • To be able to multiply two-digit and three-digit numbers by a one-digit number using formal written layout • To be able to 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.	5. To be able to recall the 9 times-table and division facts 6. To be able to identify the relationship between the 3,6,9 times-table 7. To be able to multiply and divide a number by 7 8. To be able to recall the 7 times-table and division facts 9. To be able to recall the 11 times-table and division facts 10. To be able to recall the 12 times-table and division facts 11. To be able to multiply by 1 and 0 12. To be able to divide a number by 1 and itself 13. To be able to multiply by three numbers	7. Multiply and divide by 7 8. 7 times-table and division facts 9. 11 times-table and division facts 10. 12 times-table and division facts 11. Multiply 1 and 0 12. Divide a number by 1 and itself 13. Multiply by three numbers
Spring Term			
Multiplication and division B	• To be able to recall multiplication and division facts for multiplication tables up to 12 × 12 • To be able to 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 • To be able to recognise and use factor pairs and commutativity in mental calculations • To be able to multiply two-digit and three-digit numbers by a one-digit number using formal written layout • To be able to 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.	1.To be able to identify factors 2. To be able to use factor pairs to write equivalent equations 3. To be able to multiply by 10 4. To be able to multiply by 100 5. To be able to divide by 10 6. To be able to divide by 100 7. To be able to explore calculations using related facts of multiplication and division 8. To be able to use informal methods to multiply a 2-digit number by a one digit number 9. To be able to multiply a 2-digit number by a 1-digit number 10. To be able to multiply a 3-digit number by a 1-digit number 11. To be able to divide a 2-digit number by a 1-digit number 12. To be able to divide a 2-digit number by a 1-digit number 13. To be able to divide a 3-digit number by a 1-digit number	1. Factor pairs 2. Use factor pairs 3. Multiply by 10 4. Multiply by 100 5. Divide by 10 6. Divide by 100 7. Related facts – multiplication and division 8. Informal written methods for multiplication 9. Multiply a 2-digit number by a 1-digit number 10. Multiply a 3-digit number by a 1-digit number 11. Divide a 2-digit number by a 1 digit number (1) 12. Divide a 2-digit number by a 1 digit number (2) 13. Divide a 3-digit number by a 1 digit number 14. Correspondence problems

		14. To be able to use multiplication to work out the number of possible combinations of sets of items 15. To be able to choose and effective method to complete efficient multiplication	15. Efficient multiplication
Length and perimeter	• To be able to convert between different units of measure [for example, kilometre to metre; hour to minute] • To be able to measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres • To be able to find the area of rectilinear shapes by counting squares	1.To be able to measure in kilometres and metres 2. To be able to use equivalent lengths to convert kilometres into metres 3. To be able to find the perimeter on a grid 4. To be able to find the perimeter of a rectangle 5. To be able to find the perimeter of rectilinear shapes 6. To be able to find missing lengths in rectilinear shapes 7. To be able to calculate the perimeter of rectilinear shapes 8. To be able to find the perimeter of regular polygons 9. To be able to find the perimeter of polygons	1. Measure in kilometres and metres 2. Equivalent lengths (kilometres and metres) 3. Perimeter on a grid 4. Perimeter on a rectangle 5. Perimeter of rectilinear shapes 6. Find missing lengths in rectilinear shapes 7. Calculate the perimeter of rectilinear shapes 8. Perimeter of regular polygons 9. Perimeter of polygons
Fractions	• To be able to recognise and show, using diagrams, families of common equivalent fractions • To be able to count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. • To be able to 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 • To be able to add and subtract fractions with the same denominator •	1. To be able to understand the whole 2. To be able to count beyond 1 3. To be able to partition a mixed number 4. To be able to label fractions on a number line by identifying the number of intervals between each of the whole numbers 5. To be able to compare and order mixed numbers 6. To be able to understand improper fractions 7. To be able to convert mixed numbers to improper fractions 8. To be able to convert improper fractions to mixed numbers 9. To be able to use number lines to find equivalent fractions 10. To be able to identify equivalent fractions using bar models 11. To be able to add two or more fractions 12. To be able to add fractions and mixed numbers 13. To be able to subtract two fractions 14. To be able to subtract from whole amounts 15. To be able to subtract from mixed numbers	1. Understand the whole 2. Count beyond 1 3. Partition a mixed number 4. Number lines with mixed numbers 5. Compare and order mixed numbers 6. Understand improper fractions 7. Convert mixed numbers to improper fractions 8. Convert improper fractions to mixed numbers 9. Equivalent fractions on a number line 10. Equivalent fraction families 11. Add two or more fractions 12. Add fractions and mixed numbers 13. Subtract two fractions 14. Subtract from whole amounts 15. Subtract from mixed numbers

Decimals A	• To be able to recognise and write decimal equivalents of any number of tenths or hundredths • To be able to recognise and write decimal equivalents to ¼, ½, ¾ • To be able to 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 • To be able to round decimals with one decimal place to the nearest whole number • To be able to compare numbers with the same number of decimal places up to two decimal places • To be able to solve simple measure and money problems involving fractions and decimals to two decimal places.	1. To be able to explore tenths as a fraction 2. To be able to explore tenths as a decimal 3. To be able to explore tenths on a place value chart 4. To be able to explore tenths on a number line 5. To be able to divide a 1-digit number by 10 6. To be able to divide a 2-digit number by 10 7. To be able to explore hundredths as fractions 8. To be able to explore hundredths as decimals 9. To be able to explore hundredths on place value chart 10. To be able to divide a 1 or 2 digit number by 100	1. Tenths as fractions 2. Tenths as decimals 3. Tenths on a place value chart 4. Tenths on a number line 5. Divide a 1-digit number by 10 6. Divide a 2-digit number by 10 7. Hundredths as fractions 8. Hundredths as decimals 9. Hundredths on a place value chart 10. Divide a 1- or 2- digit number by 100
Summer Term			
Decimals B	• To be able to recognise and write decimal equivalents of any number of tenths or hundredths • To be able to recognise and write decimal equivalents to ¼, ½, ¾ • To be able to 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 • To be able to round decimals with one decimal place to the nearest whole number	1.To be able to make a whole with tenths 2. To be able to make a whole with hundredths 3. To be able to partition decimals 4. To be able to flexibly partition decimals 5. To be able to compare decimals 6. To be able to order decimals 7. To be able to round decimals to the nearest whole number 8. To be able to recognise and write halves and quarters as decimals	1. Make a whole with tenths 2. Make a whole with hundredths 3. Partition decimals 4. Flexibly partition decimals 5. Compare decimals 6. Order decimals 7. Round to the nearest whole number 8. Halves and quarters as decimals

	• To be able to compare numbers with the same number of decimal places up to two decimal places • To be able to solve simple measure and money problems involving fractions and decimals to two decimal places.		
Money	• To be able to estimate, compare and calculate different measures, including money in pounds and pence • To be able to convert between different units of measure [for example hour to minute]	1. To be able to write money using decimals 2. To be able to convert between pounds and pence 3. To be able to compare amounts of money 4. To be able to estimate with money 5. To be able to calculate with money 6. To be able to solve problems with money	1. Write money using decimals 2. Convert between pounds and pence 3. Compare amounts of money 4. Estimate with money 5. Calculate with money 6. Solve problems with money
Time	• To be able to read, write and convert time between analogue and digital 12- and 24-hour clocks • To be able to solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.	1.To be able to identify the relationships between a year, month, week and day 2. To be able to identify the relationships between hours, minutes and seconds 3. To be able to convert between analogue and digital times 4. To be able to convert to the 24 hour clock 5. To be able to convert from the 24 hour clock	1. Years, months, weeks and days 2. Hours, minutes and seconds 3. Convert between analogue and digital times 4. Convert to the 24 hour clock 5. Convert from the 24 hour clock
Shape	• To be able to compare and classify geometric shapes, including quadrilaterals and triangles**,** based on their properties and sizes • To be able to identify acute and obtuse angles and compare and order angles up to two right angles by size • To be able to identify lines of symmetry in 2-D shapes presented in different orientations • To be able to complete a simple symmetric figure with respect to a specific line of symmetry. •	1.To be able to understand full, quarter and half as a turn 2.To be able to identify angles 3. To be able to compare and order angles 4. To be able to explore different types of triangles 5. To be able to explore different types of quadrilaterals 6. To be able to explore different types of polygons 7. To be able to identify a line of symmetry in any direction 8. To be able to complete a symmetric figure	1. Understand angles as a turn 2. Identify angles 3. Compare and order angles 4. Triangles 5. Quadrilaterals 6. Polygons 7. Lines of symmetry 8. Complete a symmetric figure

Statistics	• To be able to describe positions on a 2-D grid as coordinates in the first quadrant • To be able to describe movements between positions as translations of a given unit to the left/right and up/down • To be able to plot specified points and draw sides to complete a given polygon. • To be able to describe positions on a 2-D grid as coordinates in the first quadrant • To be able to describe movements between positions as translations of a given unit to the left/right and up/down • To be able to plot specified points and draw sides to complete a given polygon.	1. To be able to interpret charts 2. To be able to solve comparison, sum and difference problems using discrete data 3. To be able to interpret line graphs 4. To be able to draw line graphs	1. Interpret charts 2. Comparison, sum and difference 3. Interpret line graphs 4. Draw line graphs
Position and direction	• To be able to describe positions on a 2-D grid as coordinates in the first quadrant • To be able to describe movements between positions as translations of a given unit to the left/right and up/down • To be able to plot specified points and draw sides to complete a given polygon.	1.To be able to describe position using coordinates 2.To be able to plot coordinates on a grid 3. To be able to draw 2-D shapes on a grid 4. To be able to translate points and shapes on a grid 5. To be able to describe translation on a grid	1. Describe position using coordinates 2. Plot coordinates 3. Draw 2-D shapes on a grid 4. Translate on a grid 5. Describe translation on a grid