KENSINGTON Primary School
Inspiring children for exciting futures

Year 5 Maths Curriculum Overview

Curriculum Strand	Learning Objectives	Areas of Fluency
Number Place Value	• Read numbers up to 1 000 000 and determine the value of each digit • Write numbers up to 1 000 000 and determine the value of each digit • Order numbers up to 1 000 000 and determine the value of each digit • Compare numbers up to 1 000 000 and determine the value of each digit • Count forwards in steps of powers of 10 for any given number up to 1 000 000 • Count backwards in steps of powers of 10 for any given number up to 1 000 000 • Interpret negative numbers in context, including scales • Count forwards with positive and negative whole numbers, including through zero • Count backwards with positive and negative whole numbers, including through zero • Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 • Recognise and describe linear number sequences • To find the nth term with a number sequence	• Read, write, order and compare numbers up to 1 000 000 and determine the value of each digit • Compare numbers to at least 1 000 000 • Count forwards in steps in different powers of 10 for any given number up to 1 000 000 • Count backwards in in different powers of powers of 10 for any given number up to 1 000 000 • Count forwards with positive and negative whole numbers, including through zero • Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000
Number Addition and Subtraction	• Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) • Add and subtract numbers mentally with increasingly large numbers • Understand and use estimation to check calculations	• Number bonds to 1 000 000 • Add numbers mentally with increasingly large numbers

	• Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	
Number Multiplication	• Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers • Multiply and divide numbers mentally drawing upon known facts • Know and use the vocabulary of prime numbers, prime factors and composite (nonprime) numbers • Establish whether a number up to 100 is prime and recall prime numbers up to 19 • Recognise and use square numbers and cube numbers, and the notation • Multiply numbers up to 4 digits by a one- or two-digit number using a short formal written method • Multiply numbers up to 4 digits by a one- or two-digit number using a long formal written method for two-digit numbers • Multiply whole numbers and those involving decimals by 10, 100 and 1000 • Use multiplication and division as inverses • Construct equivalence statements (for example, 4 x 35 = 2 x 2 x 35; 3 x 270 = 3 x 3 x 9 x 10 = 92 x 10).	• Identify multiples and factors • Recall square and cubed numbers • Recall prime numbers up to 19 • Multiply numbers mentally drawing upon known facts • Mentally multiply and divide whole numbers and those involving decimals by 1, 10, 100 and 1000
Number Division	• Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context • Divide whole numbers and those involving decimals by 10, 100 and 1000 • Interpret non-integer answers to division by expressing results in different ways according to the context, including with remainders, as fractions, as decimals or by rounding (for example, 98 ÷ 4 = 4 98 = 24 r 2 = 24 2 1 = 24.5 ≈ 25).	• Divide whole numbers and those involving decimals by 10, 100 and 1000

Number Fractions	• Understand percentages, decimals and fractions are different ways of expressing proportions. • Compare and order fractions whose denominators are all multiples of the same number • Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths • Recognise mixed numbers and improper fractions and convert from one form to the other • Recognise and use thousandths and relate them to tenths, hundredths • Write mathematical statements > 1 as a mixed number [for example, 2/5 + 4/5 = 6/5 = 1 1/5] • Add and subtract fractions with the same denominator • Add and subtract fractions with denominators that are multiples of the same number • Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams • Recognise and write decimal equivalents to 1/5, 1/10	• Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths • Add and subtract fractions with the same denominator • Recognise and write decimal equivalents to 1/5, 1/10
Number Decimals	• Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents • Read, write, order and compare numbers with up to three decimal places • Read and write decimal numbers as fractions [for example, 0.71 = 71/100] • Round decimals with two decimal places to the nearest whole number and to one decimal place	•
Number Percentages and Ratio	• Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred' • Write percentages as a fraction with denominator 100, and as a decimal • Calculate 10%, 25%, 50%, 75% and 100% of a number	•

Number Problem Solving	• Solve number problems and practical problems that involve objectives from the place value strand • Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. • Use and explain the equals sign to indicate equivalence, including in missing number problems (for example, 13 + 24 = 12 + 25; 33 = 5 x ?) • Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes • Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign • Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. • Solve problems involving number up to three decimal places • Solve problems, which require knowing percentage and decimal equivalents, and those with a denominator of a multiple of 10 or 25.	•
Measures	• Measure and calculate the perimeter of a rectilinear and composite figures (including squares) in centimetres and metres • Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes • Solve problems involving converting between units of time • Understand the value of pounds and pence • Find different combinations of coins that equal the same amounts of money • Add and subtract amounts of money to give change	• Understand the value of pounds and pence • Find different combinations of coins that equal the same amounts of money • Add and subtract amounts of money to give change • Convert between millilitres and litres and grams and kilograms • Estimate volume and capacity

	• Solve problems involving money • Choose and use appropriate standard units to measure mass and capacity. • Measure, compare, add and subtract: mass and capacity using the correct units • Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling	
Geometry Properties of Shape	• Identify 3-D shapes, including cubes and other cuboids, from 2-D representations • Know angles are measured in degrees: estimate and compare acute, • obtuse and reflex angles • Measure angles using a protractor • Draw given angles, and measure them in degrees (o) • identify: - angles at a point and one whole turn (total 360o) - angles at a point on a straight line and 2 1 a turn (total 180o) - other multiples of 90o • Use the properties of rectangles to deduce related facts and find missing lengths and angles • Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.	• Identify 3-D shapes, including cubes and other cuboids, from 2-D representations • Identify diagonal lines • identify: - angles at a point and one whole turn (total 360o) - angles at a point on a straight line and 2 1 a turn (total 180o) - other multiples of 90o
Geometry Position and Direction	• Identify, describe and represent the position of a shape following a reflection or translation (over two quadrants), using the appropriate language, and know that the shape has not changed.	• Describe the position of a shape following a reflection or translation
Algebra	• Understand the concept of a simple formulae • Use simple formulae to solve number and measures problems	

Statistics	• Solve comparison, sum and difference problems using information presented in a line graph • Complete, read and interpret information in tables, including timetables	• Read information in tables