Parklands LTP – Maths – **Year 5**

AUTUMN TERM	**Block 1** **Weeks 1-3** **PLACE VALUE**	**Block 2** **Weeks 4-5** **ADDITION AND SUBTRACTION**	**Block 3** **Weeks 6-8** **MULTIPLICATION AND DIVISION A**	**Block 4** **Weeks 9-12** **FRACTIONS A**
Small Step Objective from White Rose	▪ Roman numerals to 1,000 ▪ Numbers to 10,000 ▪ Numbers to 100,000 ▪ Numbers to 1,000,000 ▪ Read and write numbers to 1,000,000 ▪ Powers of 10 ▪ 10/100/1,000/10,000/100,000 more or less ▪ Partition numbers to 1,000,000 ▪ Number line to 1,000,000 ▪ Compare and order numbers to 100,000 ▪ Compare and order numbers to 1,000,000 ▪ Round to the nearest 10, 100 or 1,000 ▪ Round within 100,000 ▪ Round within 1,000,000	▪ Mental strategies ▪ Add whole numbers with more than four digits ▪ Subtract whole numbers with more than four digits ▪ Round to check answers ▪ Inverse operations (addition and subtraction) ▪ Multi-step addition and subtraction problems ▪ Compare calculations ▪ Find missing numbers	▪ Multiples ▪ Common multiples ▪ Factors ▪ Common factors ▪ Prime numbers ▪ Square numbers ▪ Cube numbers ▪ Multiply by 10, 100 and 1,000 ▪ Divide by 10, 100 and 1,000 ▪ Multiples of 10, 100 and 1,000	▪ Find fractions equivalent to a unit fraction ▪ Find fractions equivalent to a non-unit fraction ▪ Recognise equivalent fractions ▪ Convert improper fractions to mixed numbers ▪ Convert mixed numbers to improper fractions ▪ Compare fractions less than 1 ▪ Order fractions less than 1 ▪ Compare and order fractions greater than 1 ▪ Add and subtract fractions with the same denominator ▪ Add fractions within 1 ▪ Add fractions with total greater than 1 ▪ Add to a mixed number ▪ Add two mixed numbers ▪ Subtract fractions ▪ Subtract from a mixed number ▪ Subtract from a mixed number – breaking the whole
National Curriculum Reference	Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000	Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)	Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers	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

	Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 Solve number problems and practical problems that involve all of the above Read Roman numerals to 1000 (M) and recognise years written in Roman numerals	Add and subtract numbers mentally with increasingly large numbers Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	Establish whether a number up to 100 is prime and recall prime numbers up to 19 Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) 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	Recognise mixed numbers and improper fractions and convert from one form to the other and 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 and denominators that are multiples of the same number

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SPRING TERM	**Block 1** **Week 1-3** MULTIPLICATION AND DIVISION B	**Block 2** **Weeks 4-5** FRACTIONS B	**Block 3** **Weeks 6-8** DECIMALS AND PERCENTAGES	**Block 4** **Weeks 9-10** PERIMETER AND AREA	**Block 5** **Weeks 11-12** STATISTICS
Small Step Objective from White Rose	• Multiply up to a 4-digit number by a 1-digit number • Multiply a 2-digit number by a 2-digit number (area model) • Multiply a 2-digit number by a 2-digit number • Multiply a 3-digit number by a 2-digit number • Multiply a 4-digit number by a 2-digit number • Solve problems with multiplication • Short division • Divide a 4-digit number by a 1-digit number • Divide with remainders • Efficient division • Solve problems with multiplication and division	▪ Multiply a unit fraction by an integer ▪ Multiply a non-unit fraction by an integer ▪ Multiply a mixed number by an integer ▪ Calculate a fraction of a quantity ▪ Fraction of an amount ▪ Find the whole ▪ Use fractions as operators	▪ Decimals up to 2 decimal places ▪ Equivalent fractions and decimals (tenths) ▪ Equivalent fractions and decimals (hundredths) ▪ Equivalent fractions and decimals ▪ Thousandths as fractions ▪ Thousandths as decimals ▪ Thousandths on a place value chart ▪ Order and compare decimals (same number of decimal places) ▪ Order and compare any decimals with up to 3 decimal places ▪ Round to the nearest whole number ▪ Round to 1 decimal place ▪ Understand percentages ▪ Percentages as fractions	▪ Perimeter of rectangles ▪ Perimeter of rectilinear shapes ▪ Perimeter of polygons ▪ Area of rectangles ▪ Area of compound shapes ▪ Estimate area	▪ Draw line graphs ▪ Read and interpret line graphs ▪ Read and interpret tables ▪ Two-way tables ▪ Read and interpret timetables

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			▪ Percentages as decimals ▪ Equivalent fractions, decimals and percentages		
National curriculum reference	Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers Multiply and divide numbers mentally drawing upon known facts 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 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	Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	Read and write decimal numbers as fractions [for example, 0.71 = 71/100] Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents Round decimals with two decimal places to the nearest whole number and to one decimal place Read, write, order and compare numbers with up to three decimal places Solve problems involving number up to three decimal places Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal Solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5, and those fractions with a denominator of a multiple of 10 or 25.	Measure and calculate the perimeter of composite rectilinear shapes 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 comparison, sum and difference problems using information presented in a line graph Complete, read and interpret information in tables, including timetables.

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SUMMER TERM	**Block 1** **Week 1-3** **SHAPE**	**Block 2** **Weeks 4-5** **POSITION AND DIRECTION**	**Block 3** **Week 6-8** **DECIMALS**	**Block 4** **Week 9** **NEGATIVE NUMBERS**	**Block 5** **Weeks 10-11** **CONVERTING UNITS**	**Block 6** **Week 10** **VOLUME**
Small Step Objective from White Rose	• Understand and use degrees • Classify angles • Estimate angles • Measure angles up to 180° • Draw lines and angles accurately • Calculate angles around a point • Calculate angles on a straight line • Lengths and angles in shapes • Regular and irregular polygons • 3-D shapes	▪ Read and plot coordinates ▪ Problem solving with coordinates ▪ Translation ▪ Translation with coordinates ▪ Lines of symmetry ▪ Reflection in horizontal and vertical lines	▪ Use known facts to add and subtract decimals within 1 ▪ Complements to 1 ▪ Add and subtract decimals across 1 ▪ Add decimals with the same number of decimal places ▪ Subtract decimals with the same number of decimal places ▪ Add decimals with different numbers of decimal places ▪ Subtract decimals with different numbers of decimal places ▪ Efficient strategies for adding and subtracting decimals ▪ Decimal sequences	▪ Understand negative numbers ▪ Count through zero in 1s ▪ Count through zero in multiples ▪ Compare and order negative numbers ▪ Find the difference	▪ Kilograms and kilometres ▪ Millimetres and millilitres ▪ Convert units of length ▪ Convert between metric and imperial units ▪ Convert units of time ▪ Calculate with timetables	▪ Cubic centimetres ▪ Compare volume ▪ Estimate volume ▪ Estimate capacity

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			▪ Multiply by 10, 100 and 1,000 ▪ Divide by 10, 100 and 1,000 ▪ Multiply and divide decimals – missing values			
National Curriculum Reference	Identify 3-D shapes, including cubes and other cuboids, from 2-D representations 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. Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles Draw given angles, and measure them in degrees Identify angles at a point and one whole turn (total 360 degrees) Identify angles at a point on a straight line and half a turn (total 180 degrees) Identify other multiples of 90 degrees	Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed	Solve problems involving number up to three decimal places Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling	Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero	Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) Convert between different units of metric measure (for example, kilometre and millilitre) metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints Solve problems involving converting between units of time Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling	Estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water]