Year 5 Term 1

Week	Objectives	Small Learning Steps
1	**Place Value** • 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 • Multiply and divide whole numbers by 10, 100 and 1000 • Link with convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)	• Read and write numbers with 5 and 6 digits • Recognise the value of each digit in the number • Partition 5 and 6 digit numbers in lots of ways e.g. 123456 How many tens in this number? What is the value in the tens column? Know the difference between these two answers and why • Order 5 and 6 digit numbers and explain why including on number lines, tables, different representations • Order 5 and 6 digit numbers in context of measures and explain why • Count forwards and backwards in powers of 10 • Find missing numbers in sequences of powers of 10 • X numbers by 10, 100 and 1000 • X numbers in the context of conversion of measure – cm – mm, mm to m, m to km , g to kg, ml to l, money • ÷ numbers by 10,100 and 1000 • ÷ numbers in the context of conversion of measure – cm – mm, mm to m, m to km , g to kg, ml to l, money
2	**Place Value** • 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 • Multiply and divide decimals by 10, 100 and 1000 • Link with convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)	• Recognise the place value of within a number with 2 or 3 decimal places • Partition numbers into tenths, hundredths and thousandths • Partition decimal measures into tenths, hundredths and thousandths • Order and compare decimals include positions on number lines and graphs • Order and compare decimals in context of measures • X decimals by 10, 100 and 1000 • X decimals in the context of conversion of measure – cm – mm, mm to m, m to km , g to kg, ml to l • ÷ decimals by 10,100 and 1000 • ÷ decimals in the context of conversion of measure – cm – mm, mm to m, m to km , g to kg, ml to l
3	**Addition and Subtraction** • 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 problems mentally	• Mental addition/subtraction of 3 digit and 2 digit numbers or 4 digit and 2 digit numbers with exchanging/regrouping • Mental addition/subtraction of 3 digit and 3 digit numbers no exchanging, then with some exchanging/regrouping • Mental addition/subtraction of 3, 4, 5 digit numbers without exchanging • Mental addition/subtraction of 10s,100s,1000s,10 000s to a 4,5 or 6 digit number • Mental addition and subtraction of above in context of money and measure – integers only • Check mental strategies by estimating first • Checking calculations by rounding including measures • Empty box problems for all of the above • Multi step mental calculation problems

4	**Addition and Subtraction** • Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) • 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. • Decimal addition and subtraction in and out of measures contexts	• Revise written addition for 4 and 5 digit numbers • Number families e.g. 675843 + 56748 =…..what else do I know • Written addition with empty boxes to check calculation methods • Checking addition calculations by rounding and estimation • Measures problems using written addition both 1 step and 2 step • Revise written subtraction for 4 and 5 digit numbers • Number families e.g. 675843 - 56748 =…..what else do I know • Written subtraction with empty boxes to check calculation methods • Checking subtraction calculations by rounding and estimation • Measures problems using written addition both 1 step and 2 step • Addition and subtraction mixed problems from extracting information from a chart or table
5	**Number Properties** • Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) 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 for squared (2) and cubed (3) Link cubes to volume A **composite number** has more than two factors.	• Revise the terms odd, even, multiple, factor • Prime numbers up to 100 – what are they, why are they prime • Splitting numbers into prime factors e.g. 6 – 2 x3 , 20 = 2 x2 x 5 • Problem solve with prime numbers • Introduce square numbers through arrays or area of squares • Explore the sequence of square numbers, how to calculate the next square number • Cube numbers – use volume and cubes to explore • Explore sequences of cubed numbers and how to calculate the next cubed number • Explore other number sequences such as Fibonacci, Triangular numbers, • Solve problems with cube and square numbers
6	**Multiplication and Division** • Revise multiply 3 single digit numbers (Link Cube numbers to volume) • 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 • Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes	• Revise x 3 single digit numbers again link to volume of cubes and cuboids • Revise multiples of all tables • Find all the factor pairs of numbers - link to arrays and rectangles(area) • Find common factors of 2 numbers • Use known facts to solve 1450 ÷ 2, 4500÷ 9, 3450 x 2, 4231 x 2 • Use known facts patterns if I know 40 ÷ 2 = 20 then what is 40000 ÷ 2 , 6 x 2 = 12 then what is 60 x 20, 600 x 2 etc. • Revise and use commutativity • Introduce tests of divisibility for 2,3,4,5,10 • Use known facts for division for simple remainders e.g. 556 ÷ 5 will have a remainder of 1 because…
7	**Multiplication and Division** • 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 • Solve problems involving multiplication including using their knowledge of factors and multiples, squares and cubes	• Revise 1 x 3 digit number multiplication as formal method • Empty boxes for 1 x3 digit to check full understanding • Commutativity and estimation to solve 1 x 3 digit problems, use of known facts to check • Revise word problems through measures • Introduce 1 x 4 digit as a skill • Empty box for 1 x 4 digit, use of known facts to check • 1 x 4 digit in measures and word problems include empty box problems • Extend to 2 x3 and 2 x4 digit numbers for able.