**Maths Overview for the Autumn Term**

|  |  |  |
| --- | --- | --- |
| **Reception**  | **Year 1** | **Year 2** |
| Have a deep understanding of number to 10, including the composition of each number. Subitise (recognise quantities without counting) up to 5. Recognise the pattern of the counting system.Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 and some number bonds to 10, including double facts. | Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, leastCount to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number (to 20)Given a number, identify one more and one lessRepresent and use number bonds and related subtraction facts within 20Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signsSolve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = – 9Add and subtract one-digit and two-digit numbers to 20, including zeroRecognise and name common 2D and 3D shapes, including: 3D shapes [for example, cuboids (including cubes), pyramids and spheres]Non-statutory guidance: They recognise and create repeating patterns with objects and with shapes | Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number (Year 1)Read and write numbers from 1 to 20 in numerals and words (Year 1)Recognise the place value of each digit in a two-digit number (tens, ones)Identify, represent and estimate numbers using different representations, including the number lineRead and write numbers to at least 100 in numerals and in wordsCompare and order numbers from 0 up to 100; use and = signsCount in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backwardRecall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and onesSolve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measuresSolve problems with addition and subtraction: applying their increasing knowledge of mental and written methodsCompare and sort common 2D and 3D shapes and everyday objectsIdentify and describe the properties of 2D shapes, including the number of sides and line symmetry in a vertical lineOrder and arrange combinations of mathematical objects in patterns and sequencesIdentify and describe the properties of 3D shapes, including the number of edges, vertices and faces |

|  |  |
| --- | --- |
| **Year 3** | **Year 4** |
| Recognise the place value of each digit in a two-digit number (tens, ones) (Year 2)Identify, represent and estimate numbers using different representations, including the number lineCompare and order numbers up to 1,000Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given numberRecognise the place value of each digit in a three-digit number (hundreds, tens, ones)Recognise the place value of each digit in a three-digit number (100s, 10s, 1s)Add and subtract numbers mentally, including: a three-digit number and ones, a three-digit number and tens, a three-digit number and hundredsSolve problems, including missing number problems, using number facts, place value, and more complex addition and subtractionAdd and subtract numbers with up to three digits, using formal written methods of columnar addition and subtractionEstimate the answer to a calculation and use inverse operations to check answersWrite and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methodsRecall and use multiplication and division facts for the 3, 4 and 8 multiplication tablesSolve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects | Recognise the place value of each digit in a four-digit number (1,000s, 100s, 10s, and 1s)Count in multiples of 6, 7, 9, 25 and 1,000Identify, represent and estimate numbers using different representationsFind 1,000 more or less than a given numberCount from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given numberOrder and compare numbers beyond 1,000Round any number to the nearest 10, 100 or 1,000Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriateSolve number and practical problems that involve all of the above and with increasingly large positive numbersEstimate and use inverse operations to check answers to a calculationSolve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and whyFind the area of rectilinear shapes by counting squaresEstimate, compare and calculate different measures, including money in pounds and penceRecall multiplication and division facts for multiplication tables up to 12 × 12Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers |

|  |  |
| --- | --- |
| **Year 5**  | **Year 6** |
|  Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digitCount forwards or backwards in steps of powers of 10 for any given number up to 1,000,000Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000Add and subtract numbers mentally with increasingly large numbersAdd 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 accuracyEstimate and use inverse operations to check answers to a calculationSolve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and whyIdentify multiples and factors, including finding all factor pairs of a number, and common factors of two numbersKnow and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbersRecognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredthsRecognise 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 ]Compare and order fractions whose denominators are all multiples of the same numberAdd and subtract fractions with the same denominator and denominators that are multiples of the same number | Read, write, order and compare numbers up to 10,000,000 and determine the value of each digitSolve number and practical problemsRound any whole number to a required degree of accuracyUse negative numbers in context, and calculate intervals across zeroSolve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and whyIdentify common factors, common multiples and prime numbersUse their knowledge of the order of operations to carry out calculations involving the four operationsRecognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) (year 5)Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplicationDivide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the contextIdentify common factors, common multiples and prime numbersUse their knowledge of the order of operations to carry out calculations involving the four operationsPerform mental calculations, including with mixed operations and large numbersSolve problems involving addition, subtraction, multiplication and divisionAdd and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractionsMultiply proper fractions and mixed numbers by whole numbers, supported by materials and diagramsMultiply simple pairs of proper fractions, writing the answer in its simplest form [for example, 1/4 × 1/2 = 1/8]Divide proper fractions by whole numbers [for example, 1/3 ÷ 2 = 1/6]Use written division methods in cases where the answer has up to two decimal placesUse, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal placesSolve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriateConvert between miles and kilometres |