



Maths Progression Map – 2022

Four mathematical operations

Year group/ Expected level	Addition and subtraction			Multiplication and division		
Nursery	Solve real world mathematical problems with numbers up to 5. (M)			Solve real world mathematical problems with numbers up to 5 (Sharing). (M)		
Reception	- Understand the 'one more than/one less than' relationship between consecutive numbers. (M) - Automatically recall number bonds for numbers 0-10. (M) - Automatically recall (without reference to rhymes, counting or other aids, number bonds up to 5 and some number bonds up to 10 (including subtraction facts). (M)			Automatically recall (without reference to rhymes, counting or other aids, number bonds up to 5 and some number bonds up to 10 (including double facts). (M)		
Year 1	Term 1 - Know number bonds for numbers to at least 5 - Know number bonds for the number 10 - Add one-digit numbers to 20 - Subtract one-digit numbers to 20 - Know number bonds for the number 20 - Add one-digit numbers to two-digit numbers to 20	Term 2 - Add by reading and writing number sentences using exchanging and regrouping strategies - Subtract by reading and writing number sentences using exchanging and regrouping strategies - Subtract one-digit numbers to two-digit numbers to 20 - Use my knowledge of addition and subtraction to solve missing number problems e.g. $7 = ____ + 5$	Term 3 - Add multiples of 10 to one-digit numbers - Add multiples of 10 to two-digit numbers - Subtract multiples of 10 from two-digit numbers - Solve one step problems that involve addition and subtraction using objects or pictures	Term 1 - Know the doubles of all numbers to at least 10 - Know the doubles of all numbers to at least 20 - Know the halves of numbers to at least 20	Term 2 Combine groups of 2 - Share numbers into groups of 2 - Combine groups of 10 - Share numbers into groups of 10	Term 3 - Combine groups of 5 - Share numbers into groups of 5 - Solve one step problems that involve multiplication and division using objects or pictures - Record multiplication as repeated addition.

Year 2	Term 1 - Know my pairs of number bonds for numbers to 20 - Add and subtract one-digit and two-digit numbers mentally - Add and subtract multiples of 10 and two-digit numbers mentally - Understand adding and subtracting rules - addition of 2 numbers can be done in any order (commutative) and subtraction of 1 number from another cannot	Term 2 - Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems - Know multiples of 10 that add up to 100 - Add 2-digit numbers to two-digit numbers - Subtract 2-digit numbers from 2-digit numbers	Term 3 - Know pairs of numbers that make 100 - Add and subtract two two-digit numbers mentally - Solve problems with addition and subtraction using concrete objects and pictorial representations	Term 1 - Know the doubles of all numbers to at least 20 - Know the multiples of 2 - Know the halves of numbers to at least 20 - Know the multiples of 10	Term 2 - Know the multiples of 5 - Write multiplication statements - Write division statements - Understand multiplication and division rules - multiplication of 2 numbers can be done in any order (commutative) and division of 1 number by another cannot	Term 3 - Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers - Check my answers using inverse operations - Solve problems with multiplication and division, using an appropriate pictorial or written method
Year 3	Term 1 - Add and subtract numbers mentally including three-digit number and 1 and 10. - Add and subtract numbers with up to three-digits using formal methods	Term 2 - Solve addition and subtraction money problems using formal column method for addition and subtraction. - Estimate an answer and use inverses to solve a problem. (120 + _____ = 200. 125 - _____ = 80) - Add and subtract numbers mentally including 3- digit number and 1s,10s and 100s.	Term 3 Solve addition and subtraction word problems using formal column method for addition and subtraction-including missing number problems	Term 1 - Multiply a two- digit number by a one- digit number using formal column method - without exchange - Recall and use multiplication and division facts for x3 and x4 table. - Divide a one digit and a two- digit number by a one- digit number without a remainder - Know that division is the inverse of multiplication	Term 2 - Recall and use multiplication and division facts for x 8. - Know how to mentally multiply and halve numbers to 100. - Multiply a two- digit number by a one- digit number using formal column method to include exchange. - Divide a one digit and a two- digit number by a one- digit number to include a remainder	Term 3 - Know my 2x,3x, 4x, 5x , 8x, 10x tables. - Solve problems relating to multiplication and division, choosing an appropriate method for myself.
Year 4	Term 1 - Add four-digit numbers including money using formal methods - Subtract from four- digit numbers including money using formal methods	Term 2 - Add and subtract a two- digit number to/from a four- digit number mentally - Check my answers using estimation and inverse operations (2451 - _____ =2000, 5684 + _____ = 5580	Term 3 Solve two-step addition and subtraction problems in context	Term 1 - Know the multiples of 6 and 9 - Multiply and divide numbers mentally including 0 and 1 - Multiply two- and three- digit numbers by a one- digit number using a formal layout - Divide two- and three- digit numbers by a one-	Term 2 - Know my tables up to 12 x 12 - Multiply two- and three- digit numbers by a one-digit number using a formal layout and apply to a range of problems including two-step and missing number problems - Divide two- and three- digit numbers	Term 3 - Check my answers using number facts and rounding. - Round up or down after division depending on the context.

				digit number using a formal layout	by a one-digit number using a formal layout to include remainders and apply to a range of problems including two-step and missing number problems Find and use pairs of factors and multiples of two-digit numbers	
Year 5	Term 1 - Add and subtract mentally with integers, decimals and fractions - Begin to round any number up to 1000000 to the nearest 10, 100, 1000, 10,000 and 1,000,000 (Use rounding to check answers) - Add with more than four-digit numbers including money using an appropriate method - Subtract from more than four-digit numbers including money using an appropriate method	Term 2 Solve two- step addition and subtraction problems in context	Term 3 Solve multi step addition and subtraction problems in context	Term 1 - Find multiples and factors, including pairs of factors of two-digit numbers - Find common factors of two digit numbers. - Know the vocabulary of prime numbers, prime factors and composite numbers - Establish whether a number is prime and recall prime numbers up to 19 - Multiply and divide mentally using known facts - Multiply and divide whole numbers and decimals by 10 and 100 and 1000	Term 2 - Recognise and find square numbers - Recognise and find cube numbers - Scale numbers up or down and solve problems involving scaling and rates - Multiply numbers up to four-digit by one- or two-digit numbers using an appropriate method (Including word problems) - Divide numbers up to four-digits by a one-digit number using an appropriate method (to include interpreting remainders in the context) - Check my answers using number facts and rounding	Term 3 - Solve problems involving multiplication and division - Solve problems involving combinations of all four operations.
Year 6	Term 1 - Add and subtract mentally with integers, decimals and fractions - Use estimation to check answers	Term 2 Solve two-step addition and subtraction problems in context	Term 3 - Solve multi step addition and subtraction problems in context	Term 1 - Identify common factors, common multiples and prime numbers - Multiply and divide mentally with integers and decimals - Multiply multi-digit numbers - Divide numbers up to 4 digits by a two-digit number using an appropriate method	Term 2 - Multiply and divide whole numbers and decimals by 10 and 100 and 1000 - Scale numbers up or down to solve a problem - Solve word problems involving combinations of all four operations	Term 3 - Solve multi-step word problems involving combinations of all four operations - Use my knowledge of the order of operations to carry out calculations using the four operations

