



Calculation Strand

Reception	Year1	Year 2	Year 3	Year 4	Year 5	Year 6
Number ELG Children at the expected level of development will: - Have a deep understanding of number to 10, including the composition of each number; - Subitise (recognise quantities without counting) up to 5; - Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.	Read, write and interpret mathematical statements involving addition (+). Read, write and interpret mathematical statements involving subtraction (-). Understand equals (=) sign. Represent and use number bonds and related subtraction facts within 20. Add one-digit and two-digit numbers to 20, including zero. Subtract one-digit and two-digit numbers to 20, including zero. Solve one-step problems for addition using objects and	Solve problems with addition, using concrete objects and pictorial representations, including those involving numbers, quantities and measures. Solve problems with subtraction, using concrete objects and pictorial representations, including those involving numbers, quantities and measures. Apply their increasing knowledge of mental and written methods for addition. Apply their increasing knowledge of mental and written methods for subtraction.	Add numbers mentally including a three-digit number and ones. Add numbers mentally including a three-digit number and tens. Add numbers mentally including a three-digit number and hundreds. Subtract numbers mentally including a three-digit number and ones. Subtract numbers mentally including a three-digit number and tens. Subtract numbers mentally including a three-digit number and hundreds. Add numbers up to three digits, using formal written	Add numbers with up to four digits using column addition. Subtract numbers with up to four digits using column subtraction. Estimate to check answers to calculations. Use the inverse operation to check calculations. Solve addition two-step problems in context, deciding which operations and methods to use and why. Solve subtraction two-step problems in context, deciding which operations and methods to use and why. Recall multiplication	Use column addition for numbers with more than four digits. Use column subtraction for numbers with more than four digits. Add and subtract numbers mentally with increasingly large numbers. Use rounding to check answers to calculations. Solve addition and subtraction multi-step problems. Identify multiples and factors, including factor pairs and common factors. Know prime numbers, prime factors and composite (non-	Multiply up to four-digit numbers by two-digit numbers. Divide up to four-digit numbers by two-digit numbers. Perform mental calculations including multi-step calculations. Identify common factors. Identify common multiples. Identify prime numbers. Solve addition, subtraction, multiplication and division multi-step problems. Use estimation to check answers.

	pictorial representations. Solve one-step problems for subtraction, using objects and pictorial representations. Find missing number problems such as $7 = _ - 9$. Solve one-step problems with multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	Recall and use addition and subtraction facts to 20 fluently. Derive and use related facts up to 100. Add and subtract numbers using concrete objects, pictorial representations, and mentally, including a two-digit number and ones, a two-digit number and tens and two two-digit numbers. Add three one-digit numbers. Show that addition of two numbers can be done in any order (commutativity). Subtraction of one number from another cannot be done in any order.	methods of column addition. Subtract numbers up to three digits, using formal written methods of column subtraction. Estimate the answer to a calculation. Use inverse operations to check the answer. Solve problems including missing number problems. Use number facts, place value and more complex addition and subtraction. Recall and use multiplication facts for three times tables. Recall and use multiplication facts for the four times tables.	facts up to 12×12. Recall division facts for multiplication tables up to 12×12. Use place value and known/ derived facts to multiply mentally. Recognise and use factor pairs and commutativity in mental calculations. Multiply two-digit and three-digit numbers by a one-digit number, using a formal written method. Solve problems involving multiplying & adding, including integer scaling problems and correspondence problems.	prime) numbers. Multiply numbers up to four digits by a one-digit number, using a formal written method. Multiply numbers up to 4 digits by a two-digit number, using long multiplication. Multiply and divide numbers mentally, drawing upon known facts (e.g. $5 \times 80 = 400$). Divide numbers up to four digits by a one-digit number using the formal written method, including when there is a remainder. Multiply and divide by 10, 100 and 1,000, Recognise and use square and cube numbers. Solve problems	
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		Recognise and use the inverse relationship between addition and subtraction, and use this to check calculations and missing number problems. Recall and use multiplication and division facts for the 2, 5 and 10 times tables. Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication ($\times$), division ($\div$) and equals (=) symbols. Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.	Recall and use multiplication facts for the eight times tables. Write and calculate mathematical statements for multiplication using the multiplications that they know, including two-digit numbers multiplied by one-digit numbers. Write and calculate mathematical statements for division using the multiplications that they know. Solve problems including missing number problems involving multiplication and division including positive integer scaling problems.		involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes. Solve problems involving all four number operations, including understanding the meaning of the equals sign. Solve problems involving multiplication and division, including rounding when necessary.	
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		Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.				
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