National Strategy – Progression in Calculations

Foundation Stage	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Begin to relate addition to combining two groups of objects and subtraction to 'taking away'	Relate addition to counting on; recognise that addition can be done in any order; use practical and informal written methods to support the addition of a one-digit number or a multiple of 10 to a one-digit or two-digit number	Add or subtract mentally a one-digit number or a multiple of 10 to or from any two-digit number; use practical and informal written methods to add and subtract two-digit numbers	Add or subtract mentally combinations of one-digit and two-digit numbers	Add or subtract mentally pairs of two-digit whole numbers (e.g. 47 + 58, 91 - 35)	Extend mental-methods for whole-number calculations, for example to multiply a two-digit by a one-digit number (e.g. 12 × 9), to multiply by 25 (e.g. 16 × 25), to subtract one near-multiple of 1000 from another (e.g. 6070 - 4097)	Calculate mentally with integers and decimals: U.t ± U.t, TU × U, TU ÷ U, U.t × U, U.t ÷ U
In practical activities and discussion begin to use the vocabulary involved in adding and subtracting	Understand subtraction as 'take away' and find a 'difference' by counting up; use practical and informal written methods to support the subtraction of a one-digit number from a one digit or two-digit number and a multiple of 10 from a two-digit number	Understand that subtraction is the inverse of addition and vice versa; use this to derive and record related addition and subtraction number sentences	Develop and use written methods to record, support or explain addition and subtraction of two-digit and three-digit numbers	Refine and use efficient written methods to add and subtract two-digit and three-digit whole numbers and £.p	Use efficient written methods to add and subtract whole numbers and decimals with up to two places	Use efficient written methods to add and subtract integers and decimals, to multiply and divide integers and decimals by a one-digit integer, and to multiply two-digit and three-digit integers by a two-digit integer (EOY)
Count repeated groups of the same size	Solve practical problems that involve combining groups of 2, 5 or 10, or sharing into equal groups	Represent repeated addition and arrays as multiplication, and sharing and repeated subtraction (grouping) as division; use practical and informal written methods and related vocabulary to support	Multiply one-digit and two-digit numbers by 10 or 100, and describe the effect	Multiply and divide numbers to 1000 by 10 and then 100 (whole-number answers), understanding the effect; relate to scaling up or down	Use understanding of place value to multiply and divide whole numbers and decimals by 10, 100 or 1000	Relate fractions to multiplication and division (e.g. 6 ÷ 2 = $\frac{1}{2}$ of 6 = 6 × $\frac{1}{2}$); express a quotient as a fraction or decimal (e.g. 67 ÷ 5 = 13.4 or $13\frac{2}{5}$); find fractions and percentages of whole-number quantities (e.g. $\frac{5}{8}$ of

		multiplication and division, including calculations with remainders				96, 65% of £260)
Share objects into equal groups and count how many in each group	Use the vocabulary related to addition and subtraction and symbols to describe and record addition and subtraction number sentences	Use the symbols +, -, ×, ÷ and = to record and interpret number sentences involving all four operations; calculate the value of an unknown in a number sentence (e.g. ☐ ÷ 2 = 6, 30 - ☐ = 24)	Use practical and informal written methods to multiply and divide two-digit numbers (e.g. 13 × 3, 50 ÷4); round remainders up or down, depending on the context	Develop and use written methods to record, support and explain multiplication and division of two-digit numbers by a one-digit number, including division with remainders (e.g. 15 × 9, 98 ÷ 6)	Refine and use efficient written methods to multiply and divide HTU × U, TU × TU, U.t × U and HTU ÷ U	Use a calculator to solve problems involving multi-step calculations
			Understand that division is the inverse of multiplication and vice versa; use this to derive and record related multiplication and division number sentences	Find fractions of numbers, quantities or shapes (e.g. $\frac{1}{5}$ of 30 plums, $\frac{3}{8}$ of a 6 by 4 rectangle)	Find fractions using division (e.g. $\frac{1}{100}$ of 5 kg), and percentages of numbers and quantities (e.g. 10%, 5% and 15% of £80)	
			Find unit fractions of numbers and quantities (e.g. $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$ and $\frac{1}{6}$ of 12 litres)	Use a calculator to carry out one-step and two-step calculations involving all four operations; recognise negative numbers in the display, correct mistaken entries and interpret the display correctly in the context of money	Use a calculator to solve problems, including those involving decimals or fractions (e.g. find $\frac{3}{4}$ of 150 g); interpret the display correctly in the context of measurement	