



Mathematics Progression in Number

Based on NCETM Primary Mastery Professional Development materials and ready-to-progress criteria from the DfE Guidance 2020.

Year 1

Number, addition and subtraction	Multiplication and division	Fractions	Comments on sequencing
1.1 Comparison of quantities and measures			
1.2 Introducing 'whole' and 'parts': part-part-whole			
1.3 Composition of numbers: 0–5			
1.4 Composition of numbers: 6–10			
1.5 Additive structures: introduction to aggregation and partitioning			
1.6 Additive structures: introduction to augmentation and reduction			
1.7 Addition and subtraction: strategies within 10			
1.8 Composition of numbers: multiples of 10 up to 100			
1.9 Composition of numbers: 20–100			
1.10 Composition of numbers: 11–19			
	2.1 Counting, unitising and coins		2.1 includes counting in groups of 2, 5 and 10, so comes after children have learned about two-digit numbers in 1.9 and 1.10.
		All Key Stage 1 fraction content taught in Year 2.	



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Year 2

Number, addition and subtraction	Multiplication and division	Fractions	Comments on sequencing
1.11 Addition and subtraction: bridging 10			
1.12 Subtraction as difference			
1.13 Addition and subtraction: two-digit and single-digit numbers			
1.14 Addition and subtraction: two-digit numbers and multiples of ten			
	2.2 Structures: multiplication representing equal groups		
	2.3 Times tables: groups of 2 and commutativity (part 1)		
	2.4 Times tables: groups of 10 and of 5, and factors of 0 and 1		
	2.5 Commutativity (part 2), doubling and halving		
	2.6 Structures: quotitive and partitive division		
1.15 Addition: two-digit and two-digit numbers			
1.16 Subtraction: two-digit and two-digit numbers			



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		<p>3.0</p> <ul style="list-style-type: none"> Name the fractions 'one-half', 'one-quarter' and 'one-third' in relation to a fraction of a length, shape or set of objects. Read and write the fraction notation $\frac{1}{2}$, $\frac{1}{3}$ and $\frac{1}{4}$, and relate this to a fraction of a length, shape or set of objects. Find half of numbers. Find $\frac{1}{3}$ and $\frac{1}{4}$ of a number. Find $\frac{2}{4}$ and $\frac{3}{4}$ of an object, shape, set of objects, length or quantity; recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$. 	<p>Fractions are a key part of the Key Stage 2 curriculum. Due to this, Year 3 start again from first principles in teaching fractions so that firm foundations are embedded for the rest of the NC.</p>

The Key Stage 1 curriculum is scheduled to be finished before SATs. The remainder of the academic year should be used for securing any areas that need addressing in the first instance. Then, securing fluency in addition and subtraction facts, particularly bridging 10 (1.11) to best prepare the children for learning column addition and subtraction in Year 3.



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Year 3

Number, addition and subtraction	Multiplication and division	Fractions	Comments on sequencing
1.17 Composition and calculation: 100 and bridging 100			
1.18 Composition and calculation: three-digit numbers			
1.19 Securing mental strategies: calculation up to 999			
	2.7 Times tables: 2, 4 and 8, and the relationship between them		<p>A review of key multiplication/division concepts (unitising, repeated addition, equal grouping – 2.2 – 2.6) should be undertaken as part of this learning. 2.7 – 2.9 are blocked; however, regular practice should be undertaken outside the main Maths lesson to develop times-table facts fluency.</p> <p>Multiplication and division segments have been distributed throughout the year to allow children time to achieve fluency in these times-tables; preparation for the next times-tables should also begin through the practising of skip counting in the relevant multiples.</p>
1.20 Algorithms: column addition			
	2.8 Times tables: 3, 6 and 9, and the relationship between them		



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1.21 Algorithms: column subtraction			The gap between 1.20 and 1.21 is to minimise the chance of confusion between column addition and subtraction algorithms.
		3.1 Preparing for fractions: the part-whole relationship	Continue with separate times-tables facts sessions while teaching 3.1- 3.4.
		3.2 Unit fractions: identifying, representing and comparing	
		3.3 Non-unit fractions: identifying, representing and comparing	
		3.4 Adding and subtracting within one whole	
	2.9 Times tables: 7 and patterns within/across times tables		2.9 sequenced at end of the year to ensure opportunity to build fluency in individual times-tables before reviewing cross-table patterns.



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Year 4

Number, addition and subtraction	Multiplication and division	Fractions	Comments on sequencing
1.22 Composition and calculation: 1,000 and four-digit numbers			
	2.10 Connecting multiplication and division, and the distributive law		
	2.11 Times tables: 11 and 12		2.10 and 2.11 complete the learning of times-tables; however, work should continue throughout the year on maintaining fluency in times-tables facts.
	2.12 Division with remainders		
	2.13 Calculation: multiplying and dividing by 10 or 100		
1.23 Composition and calculation: tenths			
1.24 Composition and calculation: hundredths and thousandths			
1.25 Addition and subtraction: money			
	2.14 Multiplication: partitioning leading to short multiplication		During the period leading up to 2.14, ensure children have necessary time-table fluency to allow them to be confident with the short multiplication and division algorithms.
	2.15 Division: partitioning leading to short division		
	2.16 Multiplicative contexts: area and perimeter 1		
		3.5 Working across one whole: improper fractions and mixed numbers	



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		3.6 Multiplying whole numbers and fractions	
	2.17 Structures: using measures and comparison to understand scaling		There is overlap between 3.6 (equivalence in multiplying by a unit fraction and dividing by the denominator) and 2.7. Learning for these two units may be combined.



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Year 5

Number, addition and subtraction	Multiplication and division	Fractions	Comments on sequencing
1.26 Composition and calculation: multiples of 1,000 up to 1,000,000			
1.27 Negative numbers: counting, comparing and calculating			
1.28 Common structures and the part-part-whole relationship			
1.29 Using equivalence and the compensation property to calculate			
	2.18 Using equivalence to calculate		
	2.19 Calculation: \times/\div decimal fractions by whole numbers		
	2.20 Multiplication with three factors and volume		
	2.21 Factors, multiples, prime numbers and composite numbers		
	2.22 Combining multiplication with addition and subtraction		
		3.7 Finding equivalent fractions and simplifying fractions	2.21 is key for 3.7 as confidence in the concept of factors is required.
		3.8 Common denomination: more adding and subtracting	2.21 is key for 3.8 as confidence in the concept of common multiples is required.



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Year 6

Number, addition and subtraction	Multiplication and division	Fractions	Comments on sequencing
1.30 Composition and calculation: numbers up to 10,000,000			
	2.23 Multiplication strategies for larger numbers and long multiplication		
	2.24 Division: dividing by two-digit divisors		
	2.25 Using compensation to calculate		
		3.9 Multiplying fractions and dividing fractions by a whole number	3.9 and 3.10 taught early in year so learning can be applied in other contexts later on.
		3.10 Linking fractions, decimals and percentages	
	2.26 Mean average and equal shares		
	2.27 Scale factors, ratio and proportional reasoning		
	2.28 Combining division with addition and subtraction		
	2.29 Decimal place-value knowledge, multiplication and division		
	2.30 Multiplicative contexts: area and perimeter 2		
1.31 Problems with two unknowns			