

NCETM Maths Progression Document (Primary: Years 1–6)

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Aligned with NCETM Mastery principles and DfE Ready-to-Progress criteria

1. Purpose & How to Use This Document

This progression provides a coherent, year-by-year sequence for key domains in primary mathematics. It is aligned with the NCETM Mastery approach and the DfE Ready-to-Progress (RtP) criteria. Use it to inform long-term, medium-term and lesson planning, ensuring small steps and secure understanding before moving on.

2. NCETM Mastery Principles

Coherence – concepts are broken into small, connected steps and revisited in varied contexts.

Representation & Structure – consistent use of representations (e.g., tens/ones, arrays, number lines) to expose the underlying structure.

Mathematical Thinking – reasoning, generalising and making connections are integral to daily lessons.

Fluency – efficient, accurate and flexible recall and calculation, including number facts and methods.

Variation – conceptual and procedural variation to deepen understanding and flexibility.

3. Organisation of the Progression

Each domain below sets out the key knowledge, skills and reasoning to *secure in each year group (Y1–Y6)*. Where appropriate, cross-domain links (e.g., fractions ↔ decimals/percentages; geometry ↔ measures) are noted.

Domain	Year 1 Expectations	Year 2 Expectations	Year 3/4 Expectations	Year 5/6 Expectations
A: Number & Place Value	<ul style="list-style-type: none">Count forwards and backwards to 100 from any number; read/write numbers to 100.Understand 10 as a unit; compose/decompose 2-digit numbers using tens/ones.Compare/order numbers to 100; use number lines and $<$, $>$, $=$.Recognise patterns in the count (2s, 5s, 10s).	<ul style="list-style-type: none">Secure tens/ones and flexible partitioning (e.g., $47 = 40+7$ or $30+17$).Count in 2s, 3s, 5s, 10s; odd/even.Compare/order numbers to 100; locate on number lines; round to nearest 10.Use place value and related facts to solve problems.	<ul style="list-style-type: none">Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones).Count in multiples of 6, 7, 9, 25, and 1000.Find 1000 more or less than a given number.	<ul style="list-style-type: none">Read, write, order and compare numbers up to 10,000,000.Round any whole number to a required degree of accuracy.
B: Addition & Subtraction	<ul style="list-style-type: none">Secure number bonds within 10; bridge through 10 using concrete/visual methods.Add/subtract 1-digit numbers and 2-digit + 1-digit (no crossing tens, then supported)	<ul style="list-style-type: none">Automate bonds within 20; apply “think 10” and bridging 10.Add/subtract 2-digit numbers (regrouping tens/ones) using mental and written strategies.	<ul style="list-style-type: none">Add and subtract numbers with up to 4 digits using formal written methods.Estimate and use inverse operations to check answers.	<ul style="list-style-type: none">Perform mental calculations, including with mixed operations and large numbers.Use formal written methods for addition, subtraction, multiplication, and division.

	<ul style="list-style-type: none"> crossing). Understand inverse relationships; use fact families. 	<ul style="list-style-type: none"> Use bar models and equations to represent and solve problems. 		
C: Multiplication & Division	<ul style="list-style-type: none"> Count in 2s, 5s, 10s; begin equal groups and sharing using concrete objects. Double/halve small quantities; link arrays to repeated addition. 	<ul style="list-style-type: none"> Recall/derive facts for 2, 5, 10 times tables; relate multiplication and division. Use arrays, number lines and bar models; odd/even reasoning; simple scaling. 	<ul style="list-style-type: none"> Recall multiplication and division facts for multiplication tables up to 12×2. Use formal written methods for multiplication and division where appropriate. 	<ul style="list-style-type: none"> Multiply and divide numbers mentally using known facts. Multiply multi-digit numbers up to 4 digits by a two-digit whole number using formal written methods.
D: Fractions	<ul style="list-style-type: none"> Recognise, find and name halves and quarters of shapes and small quantities. Share small sets into equal parts; link to division and measures. 	<ul style="list-style-type: none"> Recognise, find, name and write $1/3$, $1/4$, $2/4$, $3/4$; fractions on a number line. Equivalence of $2/4$ and $1/2$; simple fractions of quantities. 	<ul style="list-style-type: none"> Recognise and show equivalent fractions. Add and subtract fractions with the same denominator. Count up and down in hundredths; recognise that hundredths arise when dividing an object by 100. 	<ul style="list-style-type: none"> Use common factors to simplify fractions. Compare and order fractions, including fractions >1. Add and subtract fractions with different denominators and mixed numbers. Solve problems involving percentages.
E: Measurement	<ul style="list-style-type: none"> Compare/describe/solve problems for length/height, mass/weight, capacity/volume, time. Measure/record using standard units; recognise coins/notes; sequence events; tell time to hour/half hour. 	<ul style="list-style-type: none"> Choose/use appropriate units (m/cm; kg/g; l/ml); read scales in 1s, 2s, 5s, 10s. Money: combine amounts; find change. Time: quarter to/past; minutes in an hour; hours in a day. 	<ul style="list-style-type: none"> Measure and calculate the perimeter of simple 2D shapes. Convert between different units of measure (e.g., km to m). 	<ul style="list-style-type: none"> Convert between metric units and imperial units. Calculate the area of parallelograms and triangles.
F: Geometry – Properties of Shapes	<ul style="list-style-type: none"> Recognise/name common 2D and 3D shapes; describe simple properties. 	<ul style="list-style-type: none"> Identify/describe properties of 2D and 3D shapes; sides, edges, vertices; symmetry in a vertical line. 	<ul style="list-style-type: none"> Identify acute and obtuse angles. Compare and classify geometric shapes based on their properties. 	<ul style="list-style-type: none"> Draw and measure angles accurately. Recognise, describe and build 3D shapes.
G: Geometry – Position & Direction	<ul style="list-style-type: none"> Use language of position, direction and movement (whole, half, quarter turns). 	<ul style="list-style-type: none"> Describe position on a grid (informal); order/patterns; rotations and reflections. 		
H: Statistics	(Not taught in Y1)	<ul style="list-style-type: none"> Interpret/construct simple pictograms, tally charts, block diagrams and tables; ask/answer questions; systematic listing. 	<ul style="list-style-type: none"> Interpret and present data using bar charts and time graphs. 	<ul style="list-style-type: none"> Calculate and interpret the mean as an average. Solve comparison, sum and difference problems using information presented in a line graph.
I: Ratio and Proportion	Earlier years build preparatory multiplicative understanding through scaling in measures and comparisons.			Year 6: <ul style="list-style-type: none"> Solve problems involving relative sizes of quantities; use fractions and

			<ul style="list-style-type: none"> multiples to scale up/down. Solve problems involving the calculation of percentages and percentage change; link to FDP equivalence. Use ratio language and notation (a:b) to describe relationships; solve correspondence problems. 	
J: Algebra	Foundations are laid earlier via generalising patterns, properties and relationships across domains.		<p>Year 6:</p> <ul style="list-style-type: none"> Use simple formulae and function machines; generate and describe linear number sequences. Express missing number problems algebraically; find pairs of numbers that satisfy equations with two unknowns. Enumerate possibilities of combinations (systematic listing). 	
K: Fluency & Number Facts	<ul style="list-style-type: none"> Automaticity with bonds to 10; subitising to 5 (and 10); doubles/halves to 10. Daily practice using structured images (rekenrek, tens frames). 	<ul style="list-style-type: none"> Bonds within 20; flexible bridging 10; rapid recall of 2, 5, 10 facts. Continue daily fluency sessions; introduce NumBots/TTRS where used. 	<ul style="list-style-type: none"> Recall and use core addition and subtraction facts (to 20 → to 100). Apply number facts to mental calculation with increasing efficiency. Recall and use multiplication and division facts (Y3: 3,4,8; Y4: all tables). Use inverse operations to check and solve problems. Derive new facts from known ones using place value, commutativity, and scaling. Demonstrate flexibility: choosing efficient strategies, not just performing procedures. 	<ul style="list-style-type: none"> Recall and use all multiplication and division facts with automaticity. Add, subtract, multiply, and divide using efficient mental strategies when appropriate. Use place value, structure, and known facts to derive new facts. Apply number-fact fluency to fractions, decimals, and percentages. Use inverse operations confidently to check and solve problems. Explain and justify strategy choices using mathematical reasoning. Demonstrate flexibility: selecting the most efficient method, not the most familiar one.
L: Assessment & Ready-to-Progress (RtP)	Use RtP criteria to identify essential concepts and prerequisites. Plan pre-teaching/keep-up support where gaps appear.			

Use low-stakes checks (exit tickets, mini-quizzes, hinge questions).
Combine NCETM Curriculum Prioritisation with RtP for planning.