Year 5/6 (Year A/B) Curriculum Prioritisation

Two-year rolling programme for mixed-age classes

These overviews provide a two-year rolling programme through the NCETM Curriculum Prioritisation materials (Year A and Year B) for both Year 3/4 and Year 5/6 classes. The materials aim to maintain the sequential, pre-requisite nature of the ready-to-progress criteria as far as practicable, with the benefit of teaching two year groups as a whole class.

The Curriculum Prioritisation units from both Year 5 and Year 6 have been sequenced across a two-year period, allowing teachers to teach the whole class together. This is achieved in upper Key Stage 2 through securing knowledge of fractions and multiplicative structures, whilst introducing decimal notation and calculating with integers, fractions, decimals and percentages; providing over-learning and scaffolding through 'anchor units' while using a teaching for mastery approach.

Anchor units

These units are essential to allow for sequential learning for all pupils, providing the core pre-requisites for future units. These units allow for new learning for the younger year group, and over-learning for the older year group. These units are noted with an anchor symbol (⚓).

Ongoing units

Ongoing units are taught in full in either Year A or Year B. The content from these units can be applied in context throughout both years which will support retention and application. The regularity and timing of this is at the discretion of teachers. These units are noted with a chevron symbol (»).

Where to start?

For schools looking to move towards the two-year rolling programme, we would recommend starting on Year B of the Year 5/6 cycle which predominantly covers Year 6 content; Year 5 pupils starting at this point will build on prior knowledge covering the Ready to Progress criteria.

Implementation Year Considerations

Whilst adopting the two-year curriculum, the older year group's previous learning must be considered, as they begin the sequence halfway through. The coverage of prior learning is school-curriculum dependent and must be considered carefully.

The Year 6 units covered towards the end of Year B consist mainly of ongoing units to give opportunity throughout the year to practise and apply the content. The only unit that is covered at the end of Year B which is not sited as an ongoing unit and must be considered by teachers (in the first year of implementation only) is:

Year 6 Unit 14: Draw, compose and decompose shapes
6G–1 Draw, compose, and decompose shapes according to given properties, including dimensions, angles and area, and solve related problems.

Some schools may decide to find alternative teaching time for these units, or find that their pupils have covered the content previously.

NCETM
NATIONAL CENTRE FOR EXCELLENCE IN THE TEACHING OF MATHEMATICS

Year 5/6 (Year A) Mixed aged planning materials with guidance

Interactive navigation	Unit	Considerations
1	**Decimal fractions** *(NCETM Year 5, Unit 1, 5 weeks)* ⚓ • 5NPV–1 Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1; Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01; Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01. • 5NPV–2 Recognise the place value of each digit in numbers with up to 2 decimal places, and compose and decompose numbers with up to 2 decimal places using standard and non-standard partitioning. • 5NPV–3 Reason about the location of any number with up to 2 decimals places in the linear number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each. • 5NPV–4 Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts. • 5NF–2 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth). • 1.23 Composition and calculation: tenths • 1.24 Composition and calculation: hundredths and thousandths	This unit is taught in full for all pupils, providing over-learning of the first learning outcomes for older pupils before moving onto new learning outcomes.
2	**Money** *(NCETM Year 5, Unit 2, 2 weeks)* • 1.25 Addition and subtraction: money	
3	**Negative numbers** *(NCETM Year 5, Unit 3, 2 weeks)* » • 1.27 Negative numbers: counting, comparing and calculating	This unit is taught in full for all pupils in Year A which will be applied in contexts where appropriate at the teacher's discretion throughout other units and Year B.
4	**Short multiplication and short division** *(NCETM Year 5, Unit 4, 4 weeks)* • 5MD–3 Multiply any whole number with up to 4 digits by any one-digit number using a formal written method. • 5MD–4 Divide a number with up to 4 digits by a one-digit number using a formal written method, and interpret remainders appropriately for the context. • 2.14 Multiplication: partitioning leading to short multiplication • 2.15 Division: partitioning leading to short division	
5	**Multiplication and division** (long multiplication and long division only) *(NCETM Year 6, Unit 5, 2 weeks)* ⚓ • 6AS/MD–2 Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding. • 2.23 Multiplication strategies for larger numbers and long multiplication • 2.24 Division: dividing by two-digit divisors	In Year A, multiplication and division is condensed into a two-week introduction and review unit. It is taught in full in Year B; combined, this allows for increased time given to this core concept. Teachers will use their discretion to identify which learning outcomes to use. In Unit 5, some teachers have chosen to cover Learning Outcomes 6-11 and 14-20 (Long Multiplication and Division).
6	**Fractions** *(NCETM Year 5, Unit 8, 5 weeks)* ⚓ • 5NPV–5 Convert between units of measure, including using common decimals and fractions. • 5F–1 Find non-unit fractions of quantities. • 5F–2 Find equivalent fractions and understand that they have the same value and the same position in the linear number system. • 5F–3 Recall decimal fraction equivalents for 1/2, 1/4, 1/5 and 1/10, and for multiples of these proper fractions. • 3.6 Multiplying whole numbers and fractions • 3.7 Finding equivalent fractions and simplifying fractions • 3.10 Linking fractions, decimals and percentages	This unit is taught in full for all pupils, providing over-learning of the first learning outcomes for older pupils before moving onto new learning outcomes.

Number and place value
Number facts
Addition and subtraction
Multiplication and division
Fractions
Geometry
Other

⚓ Anchor unit
» Ongoing unit

Dark grey references are ready-to-progress criteria from the DfE Guidance 2020

Light grey references are from the NCETM Primary Mastery Professional Development materials

Both are available online

Year 5/6 (Year A) Mixed aged planning materials with guidance

Interactive navigation	Unit	Considerations
7	**Fractions and percentages** *(NCETM Year 6, Unit 7, 1 week)* • **6F–1 Recognise when fractions can be simplified, and use common factors to simplify fractions.** • **6F–2 Express fractions in a common denomination and use this to compare fractions that are similar in value.** • **6F–3 Compare fractions with different denominators, including fractions greater than 1, using reasoning, and choose between reasoning and common denomination as a comparison strategy.** • 3.8 Common denomination: more adding and subtracting • 3.9 Multiplying fractions and dividing fractions by a whole number • 3.10 Linking fractions, decimals and percentages	In Year A, Fractions and Percentages is condensed into a one-week introduction and review unit. It is taught in full in Year B; combined, this allows for increased time given to this core concept. Teachers will use their discretion to identify which learning outcomes to use. In Unit 7, some teachers have chosen to cover Learning Outcomes 26-31 (Percentages).
8	**Calculating with decimal fractions** *(NCETM Year 5, Unit 6, 3 weeks)* • **5MD–1 Multiply and divide numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size.** • 2.19 Calculation: ×/÷ decimal fractions by whole numbers • 2.29 Decimal place-value knowledge, multiplication and division	
9	**Area and scaling** *(NCETM Year 5, Unit 5, 2 weeks)* • **5G–2 Compare areas and calculate the area of rectangles (including squares) using standard units.** • 2.16 Multiplicative contexts: area and perimeter 1 • 2.17 Structures: using measures and comparison to understand scaling	
	Revision for KS2 SATS (including content from Cycle B and light touch converting units of measure and angles) *(4 weeks)*	
	KS2 SATS *(1 week)*	
10	**Factors, multiples and primes** *(NCETM Year 5, Unit 7, 3 weeks)* • **5MD–2 Find factors and multiples of positive whole numbers, including common factors and common multiples, and express a given number as a product of 2 or 3 factors.** • 2.20 Multiplication with three factors and volume • 2.21 Factors, multiples, prime numbers and composite numbers	
11	**Converting units** *(NCETM Year 5, Unit 9, 2 weeks)* • **5NPV–5 Convert between units of measure, including using common decimals and fractions.**	
12	**Angles** *(NCETM Year 5, Unit 10, 3 weeks)* • **5G–1 Compare angles, estimate and measure angles in degrees (°) and draw angles of a given size.**	
	Ongoing units	
»	**Order of operations** *(NCETM Year 6, Unit 12)* • 2.22 Combining multiplication with addition and subtraction • 2.28 Combining division with addition and subtraction	This unit should be applied in context, where appropriate and at the teacher's discretion, throughout Year A. This unit is taught in full for all pupils in Year B.
»	**Solving problems with two unknowns** *(NCETM Year 6, Unit 11)* • **6AS/MD–4 Solve problems with 2 unknowns.** • 1.31 Problems with two unknowns	This unit should be applied in context, where appropriate and at the teacher's discretion, throughout Year A. This unit is taught in full for all pupils in Year B.
»	**Mean average** *(NCETM Year 6, Unit 13)* • 2.26 Mean average and equal shares	This unit should be applied in context, where appropriate and at the teacher's discretion, throughout Year A. This unit is taught in full for all pupils in Year B.

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Anchor unit
» Ongoing unit

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Year 5/6 (Year B) Mixed aged planning materials with guidance

Interactive navigation	Unit	Considerations
1	**Calculating using knowledge of structures (1)** *(NCETM Year 6, Unit 1, 4 weeks)* • **6AS/MD–1 Understand that 2 numbers can be related additively or multiplicatively, and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number).** • **6AS/MD–2 Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding.** • 1.28 Common structures and the part–part–whole relationship • 1.29 Using equivalence and the compensation property to calculate	This unit is fundamental to build pupils' understanding and application of additive and multiplicative structures. Learning from this unit will be built upon throughout Year 5/6 units.
2	**Multiples of 1,000** *(NCETM Year 6, Unit 2, 1 week)* • 1.26 Composition and calculation: multiples of 1,000 up to 1,000,000	This unit provides pre-requisite knowledge for Unit 3. It also builds on learning from Year 3/4 units: Numbers to 1,000 and Numbers to 10,000.
3	**Numbers up to 10,000,000** *(NCETM Year 6, Unit 3, 2 weeks)* • **6NPV–1 Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000).** • **6NPV–2 Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and non-standard partitioning.** • **6NPV–3 Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round numbers, as appropriate, including in contexts.** • **6NPV–4 Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts.** • 1.30 Composition and calculation: numbers up to 10,000,000	This unit builds on Year 3 and 4NPV RTP and Unit 2: Multiples of 1,000. There is some reference to tenths in this unit – Year 5 pupils will experience this for the first time, but can draw on knowledge from 4MD-1 to understand in this context.
4	**Decimal fractions** *(NCETM Year 5, Unit 1, 2 weeks)* ⚓ • **5NPV–1 Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1; Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01; Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01.** • **5NPV–2 Recognise the place value of each digit in numbers with up to 2 decimal places, and compose and decompose numbers with up to 2 decimal places using standard and non-standard partitioning.** • 1.23 Composition and calculation: tenths • 1.24 Composition and calculation: hundredths and thousandths	This unit is taught as an introduction for younger pupils, and a review for older pupils. Teachers will use their discretion to identify which learning outcomes to cover; some teachers have chosen to cover Learning Outcomes 1-10 for Y5 pupils whilst using application contexts covering content from Learning Outcomes 11-25 for Y6 pupils.
5	**Fractions** *(NCETM Year 5, Unit 8, 2 weeks)* ⚓ • **5F–1 Find non-unit fractions of quantities.** • 3.6 Multiplying whole numbers and fractions	This unit is taught as an introduction for younger pupils, and a review for older pupils. Teachers will use their discretion to identify which learning outcomes to use in this two-week unit; some teachers have chosen to cover Learning Outcomes 1-13 with application contexts for Year 6 pupils.
6	**Multiplication and division** *(NCETM Year 6, Unit 5, 4 weeks)* ⚓ • **6AS/MD–2 Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding.** • 2.18 Using equivalence to calculate • 2.23 Multiplication strategies for larger numbers and long multiplication • 2.24 Division: dividing by two-digit divisors • 2.25 Using compensation to calculate	This unit is taught in full for all pupils, providing over-learning of the first learning outcomes for older pupils before moving onto new learning outcomes.
7	**Area, perimeter, position and direction** *(NCETM Year 6, Unit 6, 2 weeks)* • 2.30 Multiplicative contexts: area and perimeter 2	

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Year 5/6 (Year B) Mixed aged planning materials with guidance

Interactive navigation	Unit	Considerations
8	**Fractions and percentages** *(NCETM Year 6, Unit 7, 5 weeks)* ⚓ • 6F–1 Recognise when fractions can be simplified, and use common factors to simplify fractions. • 6F–2 Express fractions in a common denomination and use this to compare fractions that are similar in value. • 6F–3 Compare fractions with different denominators, including fractions greater than 1, using reasoning, and choose between reasoning and common denomination as a comparison strategy. • 3.8 Common denomination: more adding and subtracting • 3.9 Multiplying fractions and dividing fractions by a whole number • 3.10 Linking fractions, decimals and percentages	
9	**Statistics** *(NCETM Year 6, Unit 8, 2 weeks)* This topic is part of the National Curriculum but is not included in the DfE 2020 guidance or the NCETM Mastery PD Materials.	
10	**Ratio and proportion** *(NCETM Year 6, Unit 9, 2 weeks)* • 6AS/MD–3 Solve problems involving ratio relationships. • 2.27 Scale factors, ratio and proportional reasoning	
	Revision for KS2 SATS (including content from Cycle A and light touch converting units of measure and angles) *(4 weeks)*	
	KS2 SATS *(1 week)*	
11	**Mean average** *(NCETM Year 6, Unit 13, 1 week)* » • 2.26 Mean average and equal shares	This unit is taught in full for all pupils in Year B which will be applied in contexts where appropriate at the teacher's discretion throughout other units and Year A.
12	**Draw, compose and decompose shapes** *(NCETM Year 6, Unit 4, 2 weeks)* • 6G–1 Draw, compose, and decompose shapes according to given properties, including dimensions, angles and area, and solve related problems.	
13	**Calculating using knowledge of structures (2)** *(NCETM Year 6, Unit 10, 2 weeks)* • 6AS/MD–2 Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding • 1.29 Using equivalence and the compensation property to calculate	
14	**Solving problems with two unknowns** *(NCETM Year 6, Unit 11, 1 week)* » • 6AS/MD–4 Solve problems with 2 unknowns. • 1.31 Problems with two unknowns	This unit is taught in full for all pupils in Year B which will be applied in contexts where appropriate at the teacher's discretion throughout other units and Year A.
15	**Order of operations** *(NCETM Year 6, Unit 12, 2 weeks)* • 2.22 Combining multiplication with addition and subtraction • 2.28 Combining division with addition and subtraction	This unit is taught in full for all pupils in Year B which will be applied in contexts where appropriate at the teacher's discretion throughout other units and Year A.
	Ongoing units	
»	**Negative numbers** *(NCETM Year 5, Unit 3)* » • 1.27 Negative numbers: counting, comparing and calculating	This unit should be applied in context, where appropriate and at the teacher's discretion, throughout Year B. This unit is taught in full for all pupils in Year A.

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Factual Fluency

Split inputs for each year group are recommended to provide sufficient time and opportunity to support the learning, consolidation and retention of number facts and strategies. Schools may choose to use the Mastering Number Programme to support this.

Mastering Number at Year 5
Supports the teaching and consolidation of the following ready-to-progress criteria:

4MD–1 Multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to making a number 10 or 100 times the size.
4NF–1 Recall multiplication and division facts up to 12 × 12, and recognise products in multiplication tables as multiples of the corresponding number.
4MD–3 Understand and apply the distributive property of multiplication.
5NF–1 Secure fluency in multiplication table facts, and corresponding division facts, through continued practice.
4NF–2 Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders, and interpret remainders appropriately according to the context. 4MD–2 Manipulate multiplication and division equations, and understand and apply the commutative property of multiplication.
5NPV–1 Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01. Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01.
5NF–2 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth).
5MD–1 Multiply and divide numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size.

Achieving Arithmetical Proficiency in Year 6
Schools to determine how to support pupils to consolidate the KS2 ready-to-progress criteria.