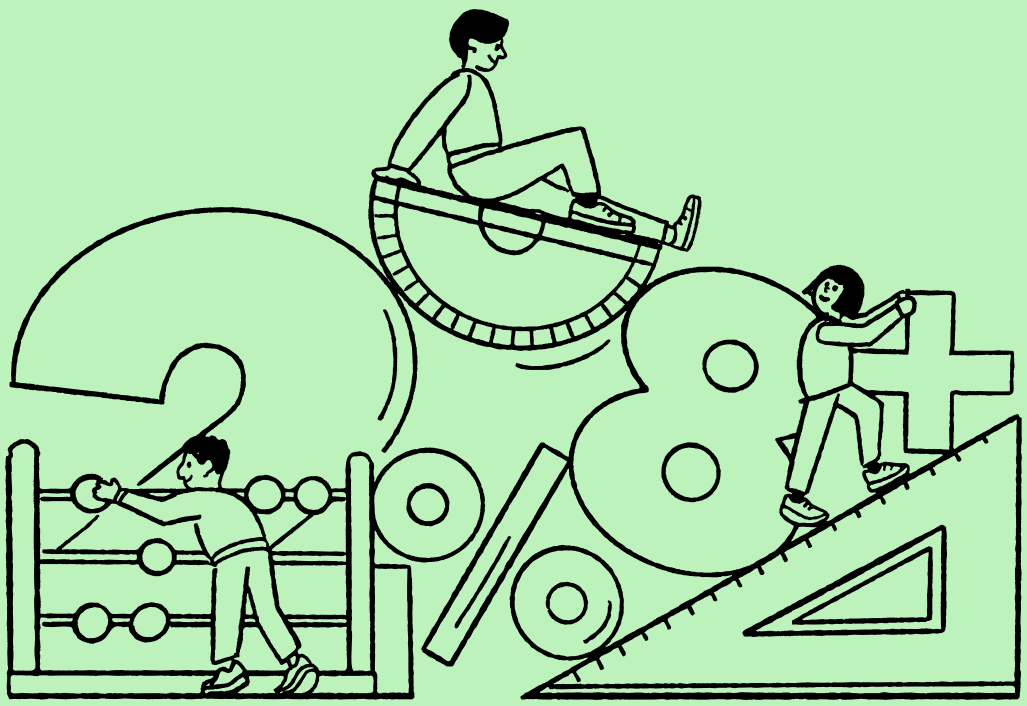
Oak National Academy

Primary maths

NCETM curriculum prioritisation mapping



Contents

Introduction

Each unit in our primary maths curriculum aligns both in sequence and recommended duration to the units in the Curriculum Prioritisation materials from the National Centre of Excellence in the Teaching of Mathematics (NCETM). They also correspond to the specific statements within the Ready-to-progress criteria within the Department for Education's non-statutory guidance.

This document will help you see where the alignment is and signpost you to the relevant units on our website. There, you can find a lesson overview and download adaptable teaching resources.

To support you in assessing your pupils' progress, at the start of each year group you'll find links to the non-statutory guidance assessment questions.

Year 1

Non-statutory guidance assessment questions

Oak Unit		NCETM Unit	
#	Title	#	Title
1	Counting, recognising and comparing numbers 0 - 10 (15 lessons)	1	**CP Materials:** Previous Reception experiences and counting within 100 (7 weeks) **"Ready-to-progress":** 1NPV–1 Count within 100, forwards and backwards, starting with any number **PD Materials:** 1.9 Composition of numbers: 20–100 (Teaching Point 1 only)
2	Counting to and from 20 (10 lessons)		
3	Counting in tens - decade numbers (5 lessons)		
4	Pattern in counting from 20 to 100 (5 lessons)		
5	Comparing quantities - part whole relationships (15 lessons)	2	**CP Materials:** Comparison of quantities and part–whole relationships (3 weeks) **"Ready-to-progress":** 1NPV–1 Count within 100, forwards and backwards, starting with any number. 1NPV–2 Reason about the location of numbers to 20 within the linear number system, including comparing using < > and = **PD Materials Links:** 1.1 Comparison of quantities and measures 1.2 Introducing 'whole' and 'parts': part–part–whole
6	Composition of numbers 0 to 5 (10 lessons)	3	**CP Materials:** Numbers 0 to 5 (2 weeks) **"Ready-to-progress":** 1NPV–2 Reason about the location of numbers to 20 within the linear number system, including comparing using < > and = 1AS–1 Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers **PD Materials:** 1.3 Composition of numbers: 0–5

Oak Unit		NCETM Unit	
#	Title	#	Title
7	Recognise, compose, decompose and manipulate 2D and 3D shapes (15 lessons)	4	**CP Materials (3 weeks):** Recognise, compose, decompose and manipulate 2D and 3D shapes **"Ready-to-progress":** 1G–1 Recognise common 2D and 3D shapes presented in different orientations, and know that rectangles, triangles, cuboids and pyramids are not always similar to one another. 1G–2 Compose 2D and 3D shapes from smaller shapes to match an example, including manipulating shapes to place them in particular orientations.
8	Composition of numbers 6 to 10 (15 lessons)	5	**CP Materials:** Numbers 0 to 10 (3 weeks) **"Ready-to-progress":** 1NPV–2 Reason about the location of numbers to 20 within the linear number system, including comparing using < > and = 1AS–1 Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers **PD Materials:** 1.4 Composition of numbers: 6–10
9	Additive structures: addition (10 lessons)	6	**CP Materials:** Additive structures (4 weeks) **"Ready-to-progress":** 1AS–2 Read, write and interpret equations containing addition (+), subtraction (-) and equals (=) symbols, and relate additive expressions and equations to real-life contexts. **PD Materials:** 1.5 Additive structures: introduction to aggregation and partitioning 1.6 Additive structures: introduction to augmentation and reduction
10	Additive structures: addition and subtraction (10 lessons)		

Oak Unit		NCETM Unit	
#	Title	#	Title
11	Addition and subtraction facts within 10 (15 lessons)	7	**CP Materials:** Addition and subtraction facts within 10 (3 weeks) **"Ready-to-progress":** 1NF–1 Develop fluency in addition and subtraction facts within 10 **PD Materials:** 1.7 Addition and subtraction: strategies within 10
12	Composition of numbers 11 to 19 (10 lessons)	8	**CP Materials:** Numbers 0 to 20 (4 weeks) **"Ready-to-progress":** 1NPV–2 Reason about the location of numbers to 20 within the linear number system, including comparing using < > and = **PD Materials:** 1.10 Composition of numbers: 11–19
13	Numbers 0 to 20 in different contexts (10 lessons)		
14	Unitising and coin recognition - counting in 2s, 5s and 10s (10 lessons)	9	**CP Materials:** Unitising and coin recognition (5 weeks) **"Ready-to-progress":** 1NF–2 Count forwards and backwards in multiples of 2, 5 and 10, up to 10 multiples, beginning with any multiple, and count forwards and backwards through the odd numbers **PD Materials:** 2.1 Counting, unitising and coins
15	Unitising and coin recognition - value of a set of coins (10 lessons)		
16	Solving problems in a range of contexts (5 lessons)		
17	Position and direction including fractions of turns (5 lessons)	10	**CP Materials:** Position and direction (1 week) *This topic is part of the National Curriculum but is not included in the DfE 2020 guidance or the NCETM Mastery PD Materials.*
18	Time - sequencing events and telling the time to the hour and half hour (10 lessons)	11	**CP Materials:** Time (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.*

Year 2

Non-statutory guidance assessment questions

Oak Unit		NCETM Unit	
#	Title	#	Title
1	Composition of multiples of 10 (10 lessons)	1	**CP Materials:** Numbers 10 to 100 (4 weeks) **"Ready-to-progress":** 2NPV–1 Recognise the place value of each digit in two-digit numbers, and compose and decompose two-digit numbers using standard and non-standard partitioning 2NPV–2 Reason about the location of any two-digit number in the linear number system, including identifying the previous and next multiple of 10 **PD Materials:** 1.8 Composition of numbers: multiples of 10 up to 100 1.9 Composition of numbers: 20–100
2	Counting and representing the numbers 20 to 99 (5 lessons)		
3	Comparing, ordering and partitioning 2-digit numbers (5 lessons)		
5	Calculating within 20 (15 lessons)	2	**CP Materials:** Calculations within 20 (3 weeks) **"Ready-to-progress":** 2AS–1 Add and subtract across 10 2AS–2 Recognise the subtraction structure of 'difference' and answer questions of the form, "How many more…?" **PD Materials:** 1.11 Addition and subtraction: bridging 10 1.12 Subtraction as difference
4	Secure fluency of addition and subtraction facts within 10 (5 lessons)	3	**CP Materials:** Fluently add and subtract within 10 (1 week) **"Ready-to-progress":** 2NF–1 Secure fluency in addition and subtraction facts within 10, through continued practice **PD Materials:** 1.7 Addition and subtraction: strategies within 10

Oak Unit		NCETM Unit	
#	Title	#	Title
6	Adding and subtracting ones and tens to and from 2-digit numbers (15 lessons)	4	**CP Materials:** Addition and subtraction of two-digit numbers (1) (2 weeks) **"Ready-to-progress":** 2AS–3 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract only ones or only tens to/from a two-digit number **PD Materials:** 1.13 Addition and subtraction: two-digit and single-digit numbers 1.14 Addition and subtraction: two-digit numbers and multiples of ten
7	Grouping objects in different ways and relating to multiplication (10 lessons)	5	**CP Materials:** Introduction to multiplication (7 weeks) **"Ready-to-progress":** 2MD–1 Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables **PD Materials:** 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
8	Representing counting in 2s, 5s and 10s as the 2, 5 and 10 times tables (10 lessons)		
9	Representing counting in 5s as the 5 times table and link to the 10 times tables (10 lessons)		
10	Multiplying by 2, doubling and halving (factors and products) (5 lessons)		
11	Introduction to division structures (10 lessons)	6	**CP Materials:** Introduction to division structures (2 weeks) **"Ready-to-progress":** 2MD–2 Relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to division equations (quotitive division) **PD Materials:** 2.6 Structures: quotative and partitive division

Oak Unit		NCETM Unit	
#	Title	#	Title
12	Shape: discuss and compare 2D and 3D shapes (10 lessons)	7	**CP Materials:** Shape (2 weeks) **"Ready-to-progress":** 2G–1 Use precise language to describe the properties of 2D and 3D shapes, and compare shapes by reasoning about similarities and differences in properties
13	Addition and subtraction of two 2-digit numbers (15 lessons)	8	**CP Materials:** Addition and subtraction of two-digit numbers (2) (3 weeks) **"Ready-to-progress":** 2AS–4 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two-digit numbers **PD Materials:** 1.15 Addition: two-digit and two-digit numbers 1.16 Subtraction: two-digit and two-digit numbers
14	Money: recognise coins and use £ and p symbols (5 lessons)	9	**CP Materials:** Money (1 week) *This topic is part of the National Curriculum but is not included in the DfE 2020 guidance or the NCETM Mastery Professional Development Materials.*
15	Fractions: identify equal parts and be familiar with halves, thirds and quarters (10 lessons)	10	**CP Materials:** Fractions (2 weeks) **"Ready-to-progress": **** **PD Materials:** 3.0 Guidance on the teaching of fractions in Key Stage 1
16	Time: write and tell the time to five minutes (5 lessons)	11	**CP Materials:** Time (1 week) *This topic is part of the National Curriculum but is not included in the DfE 2020 guidance or the NCETM Mastery Professional Development Materials.*

Oak Unit		NCETM Unit	
#	**Title**	**#**	**Title**
17	Position and direction (5 lessons)	12	**CP Materials:** Position and direction (1 week) *This topic is part of the National Curriculum but is not included in the DfE 2020 guidance or the NCETM Mastery Professional Development Materials.*
18	Doubling, halving, quotative and partitive division (15 lessons)	13	**CP Materials** (3 weeks): Multiplication and division – doubling, halving, quotitive and partitive division **"Ready-to-progress": **** **PD Materials:** 2.5 Commutativity (part 2), doubling and halving 2.6 Structures: quotitive and partitive division
19	Sense of measure - capacity, volume and mass (10 lessons)	14	**CP Materials:** Sense of measure – capacity, volume, mass (2 weeks) *This topic is part of the National Curriculum but is not included in the DfE 2020 guidance or the NCETM Mastery Professional Development Materials.*

Year 3

Non-statutory guidance assessment questions

Oak Unit		NCETM Unit	
#	Title	#	Title
1	Review strategies for adding and subtracting across 10 (10 lessons)	1	**CP Materials:** Adding and subtracting across 10 (2 weeks) **"Ready-to-progress":** 2AS–1 Add and subtract across 10 3NF–1 Secure fluency in addition and subtraction facts that bridge 10, through continued practice **PD Materials:** 1.11 Addition and subtraction: bridging 10
2	Securing place value to 100 and applying to addition and subtraction (10 lessons)	2	**CP Materials:** Numbers to 1,000 (10 weeks) **"Ready-to-progress":** 3NPV–1 Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three-digit multiples of 10 3NPV–2 Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning 3NPV–3 Reason about the location of any three-digit number in the linear number system, including identifying the previous and next multiple of 100 and 10 3NPV–4 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts. 3AS–1 Calculate complements to 100 3NF–3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10) **PD Materials:** 1.17 Composition and calculation: 100 and bridging 100 1.18 Composition and calculation: three-digit numbers
3	Bridging 100: counting on and back in 10s, adding/subtracting multiples of 10 (5 lessons)		
4	Measuring length and recording in tables (10 lessons)		
5	Representing 3-digit numbers, comparing and positioning on number lines (15 lessons)		
6	Measures: mass and capacity (10 lessons)		

Oak Unit		NCETM Unit	
#	**Title**	**#**	**Title**
7	Right angles (10 lessons)	3	**CP Materials:** Right angles (2 weeks) **"Ready-to-progress":** 3G–1 Recognise right angles as a property of shape or a description of a turn, and identify right angles in 2D shapes presented in different orientations
8	Informal and mental strategies for adding and subtracting two 3-digit numbers (10 lessons)	4	**CP Materials:** Manipulating the additive relationship and securing mental calculation (4 weeks) **"Ready-to-progress":** 3AS–3 Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the part–part–whole structure. Understand and use the commutative property of addition, and understand the related property for subtraction **PD Materials:** 1.19 Securing mental strategies: calculation up to 999
9	Understand additive relationships and apply them to rearrange equations (10 lessons)		
10	Column addition (10 lessons)	5	**CP Materials:** Column addition (2 weeks) **"Ready-to-progress":** 3AS–2 Add and subtract up to three-digit numbers using columnar methods **PD Materials:** 1.20 Algorithms: column addition

Oak Unit		NCETM Unit	
#	Title	#	Title
11	2, 4 and 8 times tables: using times tables to solve problems (15 lessons)	6	**CP Materials:** 2, 4, 8 times tables (3 weeks) **"Ready-to-progress":** 3MD–1 Apply known multiplication and division facts to solve contextual problems with different structures, including quotitive and partitive division 3NF–2 Recall multiplication facts, and corresponding division facts, in the 10, 5, 2, 4 and 8 multiplication tables, and recognise products in these multiplication tables as multiples of the corresponding number 3NF–3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10) **PD Materials:** 2.7 Times tables: 2, 4 and 8, and the relationship between them
12	Column subtraction (5 lessons)	7	**CP Materials:** Column subtraction (1 week) **"Ready-to-progress":** 3AS–2 Add and subtract up to three-digit numbers using columnar methods. **PD Materials:** 1.21 Algorithms: column subtraction
13	Unit fractions as part of a whole (10 lessons)	8	**CP Materials:** Unit fractions (5 weeks) **"Ready-to-progress":** 3F–1 Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts 3F–2 Find unit fractions of quantities using known division facts (multiplication tables fluency) **PD Materials:** 3.1 Preparing for fractions: the part–whole relationship 3.2 Unit fractions: identifying representing and comparing
14	Identify parts and wholes in different contexts (5 lessons)		
15	Compare and order unit fractions (5 lessons)		
16	Calculate the value of a part (fractions as operators) (5 lessons)		

Oak Unit		NCETM Unit	
#	Title	#	Title
17	Non-unit fractions (10 lessons)	9	**CP Materials:** Non-unit fractions (4 weeks) **"Ready-to-progress":** 3F–1 Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts 3F–3 Reason about the location of any fraction within 1 in the linear number system 3F–4 Add and subtract fractions with the same denominator, within 1 **PD Materials:** 3.3 Non-unit fractions: identifying, representing and comparing 3.4 Adding and subtracting within one whole
18	Composition of non-unit fractions: addition and subtraction (10 lessons)		
19	Parallel and perpendicular sides in polygons (and perimeter) (10 lessons)	10	**CP Materials:** Parallel and perpendicular sides in polygons (2 weeks) **"Ready-to-progress":** 3G–2 Draw polygons by joining marked points, and identify parallel and perpendicular sides
20	Tell the time to the nearest minute and compare units of time (7 lessons)	11	**CP Materials:** Time (1 week) *This topic is part of the National Curriculum but is not included in the DfE 2020 guidance or the NCETM Mastery PD Materials.*

Year 4

Non-statutory guidance assessment questions

<table>
<tr><th colspan="2">Oak Unit</th><th colspan="2">NCETM Unit</th></tr>
<tr><th>#</th><th>Title</th><th>#</th><th>Title</th></tr>
<tr><td>1</td><td>Review of column addition and subtraction
(15 lessons)</td><td rowspan="2">1</td><td rowspan="2">CP Materials:
Review of column addition and subtraction (4 weeks)

“Ready-to-progress”:
3AS–2 Add and subtract up to three-digit numbers using columnar methods

PD Materials:
1.20 Algorithms: column addition
1.21 Algorithms: column subtraction</td></tr>
<tr><td>2</td><td>Secure place value to 1000: apply to addition and subtraction: multiples of 100
(5 lessons)</td></tr>
<tr><td>3</td><td>Calculation and conversion of measures
(5 lessons)</td><td rowspan="3">2</td><td rowspan="3">CP Materials:
Numbers to 10,000 (5 weeks)

“Ready-to-progress”:
4NPV–1 Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100
4NPV–2 Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and non-standard partitioning
4NPV–3 Reason about the location of any four-digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each
4NPV–4 Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts
4NF–3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100)

PD Materials:
1.22 Composition and calculation: 1,000 and four-digit numbers</td></tr>
<tr><td>4</td><td>Comparing, ordering and rounding 4-digit numbers
(5 lessons)</td></tr>
<tr><td>5</td><td>Column addition and subtraction with 4-digit numbers
(5 lessons)</td></tr>
<tr><td>6</td><td>Perimeter
(10 lessons)</td><td>3</td><td>CP Materials:
Perimeter (2 weeks)

PD Materials:
2.16 Multiplicative contexts: area and perimeter 1</td></tr>
</table>

Oak Unit		NCETM Unit	
#	Title	#	Title
7	Represent counting in threes and sixes as the 3 and 6 times tables (5 lessons)	4	**CP Materials:** 3, 6, 9 times tables (4 weeks) **"Ready-to-progress":** 4NF–1 Recall multiplication and division facts up to 12×12, and recognise products in multiplication tables as multiples of the corresponding number **PD Materials:** 2.8 Times tables: 3, 6 and 9, and the relationship between them
8	Relationship between the 3 and 6 times tables and tests of divisibility (5 lessons)		
9	Represent counting in nines as the 9 times table (5 lessons)		
10	Relationship between the 3 and 9 times tables (5 lessons)		
11	7 times table: odd and even patterns, square numbers and tests of divisibility (10 lessons)	5	**CP Materials:** 7 times table and patterns (2 weeks) **"Ready-to-progress":** 4NF–1 Recall multiplication and division facts up to 12×12, and recognise products in multiplication tables as multiples of the corresponding number **PD Materials:** 2.9 Times tables: 7 and patterns within/ across times tables
12	Understand and represent multiplicative structures (5 lessons)	6	**CP Materials:** Understanding and manipulating multiplicative relationships (5 weeks) **"Ready-to-progress":** 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 4MD–2 Manipulate multiplication and division equations, and understand and apply the commutative property of multiplication 4MD–3 Understand and apply the distributive property of multiplication 4NF–3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100) **PD Materials:** 2.10 Connecting multiplication and division, and the distributive law 2.13 Calculation: multiplying and dividing by 10 or 100
13	Apply the distributive law to multiplication (5 lessons)		
14	Understand what happens when a number is multiplied or divided by 10 and 100 (15 lessons)		

Oak Unit		NCETM Unit	
#	Title	#	Title
15	Coordinates (10 lessons)	7	**CP Materials:** Coordinates (2 weeks) **"Ready-to-progress":** 4G–1 Draw polygons, specified by coordinates in the first quadrant, and translate within the first quadrant
16	Review of fractions (5 lessons)	8	**CP Materials:** Review of fractions (1 week) **"Ready-to-progress":** 3F–1 Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts **PD Materials:** 3.1 Preparing for fractions: the part–whole relationship
17	Composition of fractions greater than one (5 lessons)	9	**CP Materials:** Fractions greater than 1 (5 weeks) **"Ready-to-progress":** 4F–1 Reason about the location of mixed numbers in the linear number system 4F–2 Convert mixed numbers to improper fractions and vice versa 4F–3 Add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers **PD Materials:** 3.5 Working across one whole: improper fractions and mixed numbers
18	Compare and order mixed numbers and position on a number line (5 lessons)		
19	Addition and subtraction of fractions and mixed numbers (within a whole) (5 lessons)		
20	Convert improper fractions to mixed numbers and vice versa (5 lessons)		
21	Efficient strategies for adding and subtracting mixed numbers (crossing a whole) (5 lessons)		
22	Properties of 2D and 3D shapes and symmetry (10 lessons)	10	**CP Materials:** Symmetry in 2D shapes (2 weeks) **"Ready-to-progress":** 4G–3 Identify line symmetry in 2D shapes presented in different orientations. Reflect shapes in a line of symmetry and complete a symmetric figure or pattern with respect to a specified line of symmetry

Oak Unit		NCETM Unit	
#	**Title**	**#**	**Title**
23	Time: Convert between 12 and 24 hour clocks: analogue and digital (5 lessons)	11	**CP Materials:** Time (1 week) *This topic is part of the National Curriculum but is not included in the DfE 2020 guidance or the NCETM Mastery PD Materials.*
24	Division with remainders (10 lessons)	12	**CP Materials:** Division with remainders (2 weeks) **"Ready-to-progress":** 4NF–2 Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders **PD Materials:** 2.12 Division with remainders

Year 5

Non-statutory guidance assessment questions

Oak Unit		NCETM Unit	
#	Title	#	Title
1	Understand tenths as part of a whole, represent and calculate mentally (5 lessons)	1	**CP Materials:** Decimal fractions (5 weeks) **"Ready-to-progress":** 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) **PD Materials:** 1.23 Composition and calculation: tenths 1.24 Composition and calculation: hundredths and thousandths
2	Compose and calculate with decimals including column addition and subtraction (5 lessons)		
3	Understand hundredths as parts of a whole and represent (5 lessons)		
4	Use knowledge of decimals to solve problems in different contexts: length (10 lessons)		
5	Money: apply efficient strategies when calculating with money (10 lessons)		**CP Materials:** Money (2 weeks) **PD Materials:** 1.25 Addition and subtraction: money
6	Negative numbers (10 lessons)		**CP Materials:** Negative numbers (2 weeks) **PD Materials:** 1.27 Negative numbers: counting, comparing and calculating

Oak Unit		NCETM Unit	
#	Title	#	Title
7	Multiplication by partitioning leading to short multiplication (2 by 1-digit) (10 lessons)		**CP Materials:** Short multiplication and short division (6 weeks) **"Ready-to-progress":** 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 **PD Materials:** 2.14 Multiplication: partitioning leading to short multiplication 2.15 Division: partitioning leading to short division
8	Multiplication by partitioning leading to short multiplication (3 by 1-digit) (5 lessons)		
9	Division by partitioning leading to short division (2 and 3-digits by 1-digit) (15 lessons)		
10	Understand the concept of area (5 lessons)		**CP Materials:** Area and scaling (6 weeks) **"Ready-to-progress":** 5G–2 Compare areas and calculate the area of rectangles (including squares) using standard units **PD Materials:** 2.16 Multiplicative contexts: area and perimeter 1 2.17 Structures: using measures and comparison to understand scaling
11	Link area of rectangles to multiplication (10 lessons)		
12	Compare and describe measurements using knowledge of multiplication and division (10 lessons)		
13	Calculating with decimal fractions (15 lessons)		**CP Materials:** Calculating with decimal fractions (3 weeks) **"Ready-to-progress":** 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 **PD Materials:** 2.19 Calculation: ×/÷ decimal fractions by whole numbers 2.29 Decimal place-value knowledge, multiplication and division

Oak Unit		NCETM Unit	
#	Title	#	Title
14	Understand the concept of volume (5 lessons)		**CP Materials:** Factors, multiples and primes (4 weeks) **"Ready-to-progress":** 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 **PD Materials:** 2.20 Multiplication with three factors and volume 2.21 Factors, multiples, prime numbers and composite numbers
15	Multiply 3 or more numbers (commutative and associative laws) (5 lessons)		
16	Understand and use the concept of factorisation (square and prime numbers) (5 lessons)		
17	Use common factors and multiples to solve calculations efficiently (5 lessons)		
18	Multiply a proper fraction by a whole number (5 lessons)		**CP Materials:** Fractions (7 weeks) **"Ready-to-progress":** 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 **PD Materials:** 3.6 Multiplying whole numbers and fractions 3.7 Finding equivalent fractions and simplifying fractions 3.10 Linking fractions, decimals and percentages
19	Multiply improper fractions and mixed numbers by a whole number (5 lessons)		
20	Find unit and non-unit fractions of whole numbers exploring parts and wholes (10 lessons)		
21	Comparing fractions using equivalence and decimals (15 lessons)		
22	Converting units (10 lessons)		**CP Materials:** Converting units (2 weeks) **"Ready-to-progress":** 5NPV–5 Convert between units of measure, including using common decimals and fractions
23	Angles: compare, name, estimate and measure angles (15 lessons)		**CP Materials:** Angles (3 weeks) **"Ready-to-progress":** 5G–1 Compare angles, estimate and measure angles in degrees (°) and draw angles of a given size

Year 6

Non-statutory guidance assessment questions

Oak Unit		NCETM Unit	
#	Title	#	Title
1	Use knowledge of part-part-whole structure to solve additive problems (10 lessons)	1	**CP Materials:** Calculating using knowledge of structures (1) (6 weeks) **"Ready-to-progress":** 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 **PD Materials:** 1.28 Common structures and the part–part–whole relationship 1.29 Using equivalence and the compensation property to calculate
2	Use equivalence and compensation to simplify and solve addition calculations (10 lessons)		
3	Use equivalence and compensation to simplify and solve subtraction problems (10 lessons)		
4	Multiples of 1,000 (10 lessons)	2	**CP Materials:** Multiples of 1,000 (2 weeks) **PD Materials:** 1.26 Composition and calculation: multiples of 1,000 up to 1,000,000

Oak Unit		NCETM Unit	
#	Title	#	Title
5	Understand place value within numbers with up to 7 digits (5 lessons)	3	**CP Materials:** Numbers up to 10,000,000 (4 weeks) **"Ready-to-progress":** 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 **PD Materials:** 1.30 Composition and calculation: numbers up to 10,000,000
6	Order, compare and calculate with numbers up to 8 digits (10 lessons)		
7	Rounding and solving problems with numbers up to 7 digits (5 lessons)		
8	Draw, compose and decompose shapes (10 lessons)	4	**CP Materials:** Draw, compose and decompose shapes (2 weeks) **"Ready-to-progress":** 6G–1 Draw, compose, and decompose shapes according to given properties, including dimensions, angles and area, and solve related problems. (Including circles)

Oak Unit		NCETM Unit	
#	Title	#	Title
9	Using equivalence to calculate (5 lessons)	5	**CP Materials:** Multiplication and division (4 weeks) **"Ready-to-progress":** 6 AS/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 **PD Materials:** 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
10	Multiplying and dividing by 2-digit numbers (15 lessons)		
11	Area, perimeter, position and direction (10 lessons)	6	**CP Materials:** Area, perimeter, position and direction (2 weeks) **PD Materials:** 2.30 Multiplicative contexts: area and perimeter 2
12	Addition and subtraction of fractions (10 lessons)	7	**CP Materials:** Fractions and percentages (6 weeks) **"Ready-to-progress":** 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 **PD Materials:** 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
13	Comparing fractions (5 lessons)		
14	Multiplication and division of fractions (5 lessons)		
15	Understanding percentages (10 lessons)		

Oak Unit		NCETM Unit	
#	Title	#	Title
16	Statistics (5 lessons)	8	**CP Materials:** Statistics (1 week) *This topic is part of the National Curriculum but is not included in the DfE 2020 guidance or the NCETM Mastery PD Materials.*
17	Ratio and proportion (10 lessons)	9	**CP Materials:** Ratio and proportion (2 weeks) **"Ready-to-progress":** 6AS/MD–3 Solve problems involving ratio relationships **PD Materials:** 2.27 Scale factors, ratio and proportional reasoning
18	Calculating using knowledge of equivalence in addition and subtraction (5 lessons)	10	**CP Materials:** Calculating using knowledge of structures (2) (1 week) **"Ready-to-progress":** 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 **PD Materials:** 1.29 Using equivalence and the compensation property to calculate
19	Solving problems with two unknowns (10 lessons)	11	**CP Materials:** Solving problems with two unknowns (2 weeks) **"Ready-to-progress":** 6AS/MD–4 Solve problems with 2 unknowns **PD Materials:** 1.31 Problems with two unknowns *NB: Taught ongoing throughout year through FF*

Oak Unit		NCETM Unit	
#	**Title**	**#**	**Title**
20	Order of operations (5 lessons)	12	**CP Materials:** Order of operations (1 week) **PD Materials:** 2.22 Combining multiplication with addition and subtraction 2.28 Combining division with addition and subtraction *NB: Taught ongoing throughout year through FF*
21	Mean average (5 lessons)	13	**CP Materials:** Mean average (1 week) PD Materials:: 2.26 Mean average and equal shares *NB: Taught ongoing throughout year through FF*

Oak National Academy

Even with years of experience, some maths lessons are really hard to plan for. From proportional reasoning at primary to grappling with introducing trigonometry at secondary, it all takes time. A brilliant team of experienced teachers have done some of the hard work for you to give you that time back.

Together with our partners at MEI, we've developed our primary maths curriculum to give you a flexible starting point for planning lessons that build your pupils' confidence and development. Complete with sequenced teaching resources for every unit and lesson in the plan, it's designed to be easy to adapt to your classroom and context and is grounded in mastery approaches.

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