

Year 4 Maths Curriculum

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

Y4	1	2	3	4	5	6	7	8	9	10	11	12	13
C1	Unit 1			Unit 2				Unit 3		Unit 4			
	Review of column addition and subtraction			Numbers to 10,000				Perimeter and Right Angles		3, 6, 9 times tables			
FF	Recap Year 3 All Addition/Subtraction facts within 10. 2,5,4, 10 tts			8 times table 5 new facts (8x3, 8x6, 8x7, 8x8, 8x9)			All 8 times table Plus all previously learnt facts			3 times table 4 new facts (3x3, 6x3, 7x3, 9x3)			3 times table plus all previous facts
C2	Unit 4 3, 6, 9 times tables	Unit 5 7 times table and patterns		Unit 6				Unit 7 Coordinates		Unit 8 Review of fractions	Unit 9 Fractions greater than 1		
				Understanding and manipulating multiplicative relationships									
FF	All 3 times table Plus all previously learnt facts		6 times table 3 new facts (6x6, 7x6, 9x6)			All 6 times table Plus all previously learnt facts			9 times table 2 new facts (9x7, 9x9)	All 9 times table Plus all previously learnt facts		7 times tables 1 new fact (7x7)	7 times tables All facts now learnt
C3	Unit 9			Unit 10		Unit 11	Unit 12		MTC	*Unit 13*		Consolidation	
	Fractions greater than 1			Symmetry in 2D shapes		Time	Division with remainders			Transformations			
FF	All times tables up to 9x9		All to 9x9 practice for some			All in MTC for some			MTC	All to 9x9 practice for some and All in MTC for some			

Year 4	NC Objectives which feature in each unit
<p>1</p> <p>Review of column addition and subtraction</p> <ul style="list-style-type: none"> • 3AS–2 Add and subtract up to three-digit numbers using columnar methods. • 1.20 Algorithms: column addition • 1.21 Algorithms: column subtraction 	<p>Number – Addition and Subtraction</p> <ul style="list-style-type: none"> • add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate • estimate and use inverse operations to check answers to a calculation • solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why. <p>Non Statutory Notes NAS - Pupils continue to practise both mental methods and columnar addition and subtraction with increasingly large numbers to aid fluency (see Mathematics Appendix 1)</p>
<p>2</p> <p>Numbers to 10,000</p> <ul style="list-style-type: none"> • 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). • 1.22 Composition and calculation: 1,000 and four-digit numbers 	<p>Number – Number and Place Value</p> <ul style="list-style-type: none"> • count in multiples of 6, 7, 9, 25 and 1000 • find 1000 more or less than a given number • recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) • order and compare numbers beyond 1000 • identify, represent and estimate numbers using different representations • round any number to the nearest 10, 100 or 1000 • solve number and practical problems that involve all of the above and with increasingly large positive numbers <p>Number – Addition and Subtraction</p> <ul style="list-style-type: none"> • add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate • estimate and use inverse operations to check answers to a calculation • solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why. <p>Non Statutory Notes NPV - Using a variety of representations, including measures, pupils become fluent in the order and place value of numbers beyond 1000, including counting in tens and hundreds, and maintaining fluency in other multiples through varied and frequent practice. NPV - They connect estimation and rounding numbers to the use of measuring instruments NAS - Pupils continue to practise both mental methods and columnar addition and subtraction with increasingly large numbers to aid fluency (see Mathematics Appendix 1)</p>
<p>3</p> <p>Perimeter and Right Angles</p> <ul style="list-style-type: none"> • 4G–2 Identify regular polygons, including equilateral triangles and squares, as those in which the side-lengths are equal and the angles are equal. Find the perimeter of regular and irregular polygons. • 2.16 Multiplicative contexts: area and perimeter 1 	<p>Measure</p> <ul style="list-style-type: none"> • measure the perimeter of simple 2-D shapes (NC Y3 NCETM Y4) • measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres • convert between different units of measure [for example, kilometre to metre; hour to minute] • measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres (NC Y5 NCETM Y4) • distinguish between regular and irregular polygons based on reasoning about equal sides and angles (NC Y5 NCETM Y4)

		<p>Geometry – Properties of Shapes</p> <ul style="list-style-type: none"> compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes <p>Non Statutory Notes GPS - Perimeter can be expressed algebraically as $2(a + b)$ where a and b are the dimensions in the same unit. GPS - Pupils continue to classify shapes using geometrical properties, extending to classifying different triangles (for example, isosceles, equilateral, scalene) and quadrilaterals (for example, parallelogram, rhombus, trapezium). GPS - Pupils compare and order angles in preparation for using a protractor M - Pupils calculate the perimeter of rectangles and related composite shapes, including using the relations of perimeter or area to find unknown lengths. Missing measures questions such as these can be expressed algebraically, for example $4 + 2b = 20$ for a rectangle of sides 2 cm and b cm and perimeter of 20cm. (NC Y5 NCTEM Y4)</p>
4	<p>3, 6, 9 times tables</p> <ul style="list-style-type: none"> 4NF–1 Recall multiplication and division facts up to 12×12, and recognise products in multiplication tables as multiples of the corresponding number. 2.8 Times tables: 3, 6 and 9, and the relationship between them 	<p>Number – Number and Place Value</p> <ul style="list-style-type: none"> count in multiples of 6, 7, 9, 25 and 1000 <p>Number – Multiplication and Division</p> <ul style="list-style-type: none"> recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables (NC Y3 NCTEM Y4) recall multiplication and division facts for multiplication tables up to 12×12 <p>Non Statutory Notes NMD - Pupils continue to practise recalling and using multiplication tables and related division facts to aid fluency</p>
5	<p>7 times table and patterns</p> <ul style="list-style-type: none"> 4NF–1 Recall multiplication and division facts up to 12×12, and recognise products in multiplication tables as multiples of the corresponding number. 2.9 Times tables: 7 and patterns within/across times tables 	<p>Number – Multiplication and Division</p> <ul style="list-style-type: none"> recall multiplication and division facts for multiplication tables up to 12×12 <p>Non Statutory Notes NMD - Pupils continue to practise recalling and using multiplication tables and related division facts to aid fluency</p>
6	<p>Understanding and manipulating multiplicative relationships</p> <ul style="list-style-type: none"> 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) 2.10 Connecting multiplication and division, and the distributive law 2.13 Calculation: multiplying and dividing by 10 or 100 	<p>Number – Multiplication and Division</p> <ul style="list-style-type: none"> recall multiplication and division facts for multiplication tables up to 12×12 solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit <p>Non Statutory Notes NMD - Pupils write statements about the equality of expressions (for example, use the distributive law $39 \times 7 = 30 \times 7 + 9 \times 7$ and associative law $(2 \times 3) \times 4 = 2 \times (3 \times 4)$). They combine their knowledge of number facts and rules of arithmetic to solve mental and written calculations for example, $2 \times 6 \times 5 = 10 \times 6 = 60$.</p>
7	<p>Coordinates</p> <ul style="list-style-type: none"> 4G–1 Draw polygons, specified by coordinates in the first quadrant, and translate within the first quadrant. 	<p>Geometry – Position and Direction</p> <ul style="list-style-type: none"> describe positions on a 2-D grid as coordinates in the first quadrant describe movements between positions as translations of a given unit to the left/right and up/down plot specified points and draw sides to complete a given polygon

		<p>Non Statutory Notes Pupils draw a pair of axes in one quadrant, with equal scales and integer labels. They read, write and use pairs of coordinates, for example (2, 5), including using coordinate plotting ICT tools</p>
8	<p>Review of fractions</p> <ul style="list-style-type: none"> • 3F–1 Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts. • 3.1 Preparing for fractions: the part–whole relationship 	<p>See Year 3 Unit 8</p>
9	<p>Fractions greater than 1</p> <ul style="list-style-type: none"> • 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. • 3.5 Working across one whole: improper fractions and mixed numbers 	<p>Number – Fractions</p> <ul style="list-style-type: none"> • add and subtract fractions with the same denominator • They extend the use of the number line to connect fractions, numbers and measures. • recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, $\frac{7}{5} + \frac{4}{5} = \frac{6}{5} = 1 \frac{1}{5}$] (NC Y5 NCETM Y4) <p>Non Statutory Notes NF - Pupils practise adding and subtracting fractions to become fluent through a variety of increasingly complex problems. They extend their understanding of adding and subtracting fractions to calculations that exceed 1 as a mixed number. (NC Y5 NCETM Y4) NF - They practise counting using simple fractions and decimals, both forwards and backwards.(Daily Counting)</p>
10	<p>Symmetry in 2D shapes</p> <ul style="list-style-type: none"> • 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. 	<p>Geometry – Properties of Shapes</p> <ul style="list-style-type: none"> • compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes • identify lines of symmetry in 2-D shapes presented in different orientations • complete a simple symmetric figure with respect to a specific line of symmetry. <p>Non Statutory Notes GPS - Pupils draw symmetric patterns using a variety of media to become familiar with different orientations of lines of symmetry; and recognise line symmetry in a variety of diagrams, including where the line of symmetry does not dissect the original shape.</p>
11	<p>Time</p> <ul style="list-style-type: none"> • This topic is part of the National Curriculum but is not included in the DfE 2020 guidance or the NCETM Mastery PD Materials. 	<p>Measure</p> <ul style="list-style-type: none"> • convert between different units of measure [for example, kilometre to metre; hour to minute] • read, write and convert time between analogue and digital 12- and 24-hour clocks • solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days
12	<p>Division with remainders</p> <ul style="list-style-type: none"> • 4NF–2 Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders. • 2.12 Division with remainders 	<p>Number – Multiplication and Division</p> <ul style="list-style-type: none"> • recall multiplication and division facts for multiplication tables up to 12×12

Transformations

• This topic is part of the National Curriculum but is not included in the DfE 2020 guidance or the NCETM Mastery PD Materials.

Transformations

- identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed

Non Statutory Notes

Pupils recognise and use reflection and translation in a variety of diagrams, including continuing to use a 2-D grid and coordinates in the first quadrant. Reflection should be in lines that are parallel to the axes.