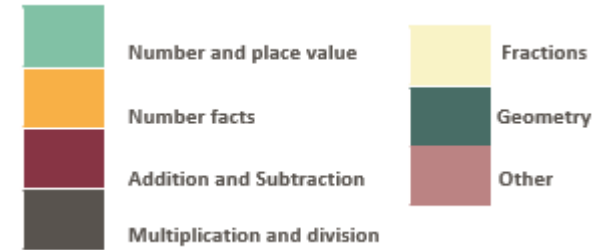


Year 5 and 6 Maths Curriculum

Year B



B	Year 5 and 6	NC Objectives which feature in each unit
1	<p>NCETM Y6 Unit 1 - Calculating using knowledge of structures (1)</p> <ul style="list-style-type: none"> 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 	<p>Algebra</p> <ul style="list-style-type: none"> use simple formulae express missing number problems algebraically <p>Non Statutory Notes A - Pupils should be introduced to the use of symbols and letters to represent variables and unknowns in mathematical situations that they already understand, such as: -missing numbers, lengths, coordinates and angles -formulae in mathematics and science -equivalent expressions (for example, $a + b = b + a$) -generalisations of number patterns -number puzzles (for example, what two numbers can add up to)</p>
2	<p>NCETM Y6 Unit 2 - Multiples of 1,000</p> <ul style="list-style-type: none"> 1.26 Composition and calculation: multiples of 1,000 up to 1,000,000 	<p>Number – Addition and Subtraction</p> <ul style="list-style-type: none"> add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) (NCY5 NCETM Y6) add and subtract numbers mentally with increasingly large numbers (NCY5 NCETM Y6) use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy (NCY5 NCETM Y6) solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why (NCY5 NCETM Y6) <p>Non Statutory Notes NAS - Pupils practise using the formal written methods of columnar addition and subtraction with increasingly large numbers to aid fluency (see Mathematics Appendix 1). (NCY5 NCETM Y6) NAS - They practise mental calculations with increasingly large numbers to aid fluency (for example, $12\,462 - 2300 = 10\,162$). (NCY5 NCETM Y6)</p>
3	<p>NCETM Y6 Unit 3 - Numbers up to 10,000,000</p> <ul style="list-style-type: none"> 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. 	<p>Number: Number and Place Value</p> <ul style="list-style-type: none"> read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit (NC Y5 Y6 NCETM Y6) count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 (NCY5 NCETM Y6) round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 (NCY5 NCETM Y6) solve number problems and practical problems that involve all of the above (NCY5 NCETM Y6) Pupils identify the place value in large whole numbers. (NCY5 NCETM Y6) round any whole number to a required degree of accuracy <p>Number – Addition and Subtraction, Multiplication and Division</p> <ul style="list-style-type: none"> add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) (NCY5 NCETM Y6) add and subtract numbers mentally with increasingly large numbers (NCY5 NCETM Y6) use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy (NCY5 NCETM Y6)

• 1.30 Composition and calculation: numbers up to 10,000,000

- solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why (NCY5 NCETM Y6)
- solve number and practical problems that involve all of the above
- perform mental calculations, including with mixed operations and large numbers
- solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
- solve problems involving addition, subtraction, multiplication and division
- use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.

Non Statutory Notes

NPV - Pupils use the whole number system, including saying, reading and writing numbers accurately.

NASMD - Pupils practise addition, subtraction, multiplication and division for larger numbers, using the formal written methods of columnar addition and subtraction, short and long multiplication, and short and long division (see [Mathematics Appendix 1](#)).

NASDM - They undertake mental calculations with increasingly large numbers and more complex calculations.

NASDM - Pupils round answers to a specified degree of accuracy, for example, to the nearest 10, 20, 50 etc., but not to a specified number of significant figures.

NCETM Year 5 Unit 1 - Decimal fractions

• 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 will be taught as an anchor unit in both the Year A and Year B cycle - teach Y5s Learning Outcomes 1-10.

Allow Y6s to deepen into reasoning and applying decimal fractions using Learning Outcomes 11-25 learnt in Year A

Number – Number and Place Value

Number – Multiplication and Division

- Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods (NC Y3 NCETM Y5)
- use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers (NC Y4 NCETM Y5)
- recognise and use factor pairs and commutativity in mental calculations (NC Y4 NCETM Y5)
- multiply two-digit and three-digit numbers by a one-digit number using formal written layout (NC Y4 NCETM Y5)

Number - Fractions

- count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 (NC Y3 NCETM Y5)
- count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. (NC Y4 NCETM Y5)
- round decimals with one decimal place to the nearest whole number (NC Y4 NCETM Y5)
- recognise and write decimal equivalents of any number of tenths or hundredths (NC Y4 NCETM Y5)
- compare numbers with the same number of decimal places up to two decimal places (NC Y4 NCETM Y5)
- solve simple measure and money problems involving fractions and decimals to two decimal places (NC Y4 NCETM Y5)
- read and write decimal numbers as fractions [for example, $0.71 = \frac{71}{100}$]
- recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents
- round decimals with two decimal places to the nearest whole number and to one decimal place
- read, write, order and compare numbers with up to three decimal places
- solve problems involving number up to three decimal places

Measurement

- use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.

Non Statutory Notes

NPV - They begin to extend their knowledge of the number system to include the decimal numbers and fractions that they have met so far. (NC Y4 NCETM Y5)

NMD - Pupils develop efficient mental methods, for example, using commutativity and associativity (for example, $4 \times 12 \times 5 = 4 \times 5 \times 12 = 20 \times 12 = 240$) and multiplication and division facts (for example, using $3 \times 2 = 6$, $6 \div 3 = 2$ and $2 = 6 \div 3$) to derive related facts (for example, $30 \times 2 = 60$, $60 \div 3 = 20$ and $20 = 60 \div 3$). (NC Y3 NCETM Y5)

NMD - Pupils develop reliable written methods for multiplication and division, starting with calculations of two-digit numbers by one-digit numbers and progressing to the formal written methods of short multiplication and division. (NC Y3 NCETM Y5)

NMD - Pupils practise mental methods and extend this to three-digit numbers to derive facts, (for example $600 \div 3 = 200$ can be derived from $2 \times 3 = 6$) (NC Y4 NCETM Y5)

Pupils practise to become fluent in the formal written method of short multiplication and short division with exact answers (see [Mathematics Appendix 1](#)). (NC Y4 NCETM Y5)

NF - Pupils connect tenths to place value, decimal measures and to division by 10. (NC Y3 NCETM Y5)

	<p>NF - Pupils should connect hundredths to tenths and place value and decimal measure. (NC Y4 NCETM Y5)</p> <p>NF - Pupils understand the relation between non-unit fractions and multiplication and division of quantities, with particular emphasis on tenths and hundredths. (NC Y4 NCETM Y5)</p> <p>NF - Pupils are taught throughout that decimals and fractions are different ways of expressing numbers and proportions. (NC Y4 NCETM Y5)</p> <p>NF - Pupils' understanding of the number system and decimal place value is extended at this stage to tenths and then hundredths. This includes relating the decimal notation to division of whole number by 10 and later 100. (NC Y4 NCETM Y5)</p> <p>NF - Pupils learn decimal notation and the language associated with it, including in the context of measurements. They make comparisons and order decimal amounts and quantities that are expressed to the same number of decimal places. They should be able to represent numbers with one or two decimal places in several ways, such as on number lines. (NC Y4 NCETM Y5)</p> <p>GPS - Pupils connect decimals and rounding to drawing and measuring straight lines in centimetres, in a variety of contexts (NC Y3 NCETM Y5)</p> <p>NPV - They continue to use number in context, including measurement. Pupils extend and apply their understanding of the number system to the decimal numbers and fractions that they have met so far.</p> <p>NPV - They should recognise and describe linear number sequences, including those involving fractions and decimals, and find the term-to-term rule.</p> <p>NPV - They should recognise and describe linear number sequences (for example, 3, 3 1/2, 4, 4 1/2 ...), including those involving fractions and decimals, and find the term-to-term rule in words (for example, add 1/2).</p> <p>NF - They extend their knowledge of fractions to thousandths and connect to decimals and measures</p> <p>NF - Pupils say, read and write decimal fractions and related tenths, hundredths and thousandths accurately and are confident in checking the reasonableness of their answers to problems.</p> <p>NF - They mentally add and subtract tenths, and one-digit whole numbers and tenths.</p> <p>NF - They practise adding and subtracting decimals, including a mix of whole numbers and decimals, decimals with different numbers of decimal places, and complements of 1 (for example, $0.83 + 0.17 = 1$).</p> <p>NB – This will be taught as an anchor unit in both the Year A and Year B cycle - teach Y5s Learning Outcomes 1-10. Allow Y6s to deepen into reasoning and applying decimal fractions using Learning Outcomes 11-25 learnt in Year A.</p>
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<p>5</p>	<p>Y5 Unit 8 - Fractions</p> <ul style="list-style-type: none"> • 5F-1 Find non-unit fractions of quantities. • 3.6 Multiplying whole numbers and fractions
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<p>Number Fractions</p> <ul style="list-style-type: none"> • recognise and show, using diagrams, equivalent fractions with small denominators (NC Y3 NCETM Y5) • recognise and show, using diagrams, families of common equivalent fractions (NC Y4 NCETM Y5) • solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number (NC Y4 NCETM Y5) • recognise and write decimal equivalents to 1/4, 1/2, 3/4 (NC Y4 NCETM Y5) • compare and order fractions whose denominators are all multiples of the same number • identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths • multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams <p>Non Statutory Notes</p> <p>NF - Pupils use factors and multiples to recognise equivalent fractions and simplify where appropriate (for example, $6/9 = 2/3$ or $1/4 = 2/8$). (NC Y4 NCETM Y5)</p> <p>NF - Pupils continue to develop their understanding of fractions as numbers, measures and operators by finding fractions of numbers and quantities.</p> <p>NF - Pupils use their understanding of the relationship between unit fractions and division to work backwards by multiplying a quantity that represents a unit fraction to find the whole quantity (for example, if 1/4 of a length is 36cm, then the whole length is $36 \times 4 = 144$cm). (NC Y6 NCETM Y5)</p>

<p>6</p>	<p>NCETM Y6 Unit 5 - Multiplication and division</p> <ul style="list-style-type: none"> • 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
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<p>Number – Addition and Subtraction, Multiplication and Division</p> <ul style="list-style-type: none"> • multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication • divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context • divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context • perform mental calculations, including with mixed operations and large numbers • solve number and practical problems that involve all of the above • perform mental calculations, including with mixed operations and large numbers

	<ul style="list-style-type: none"> ● solve problems involving addition, subtraction, multiplication and division ● use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. <p>Number - Fractions</p> <ul style="list-style-type: none"> ● use written division methods in cases where the answer has up to two decimal places ● solve problems which require answers to be rounded to specified degrees of accuracy <p>Non Statutory Notes</p> <p>NF - Pupils connect equivalent fractions > 1 that simplify to integers with division and other fractions > 1 to division with remainders, using the number line and other models, and hence move from these to improper and mixed fractions. (NC Y5 NCETM Y6)</p> <p>NASMD - Pupils practise addition, subtraction, multiplication and division for larger numbers, using the formal written methods of columnar addition and subtraction, short and long multiplication, and short and long division (see Mathematics Appendix 1).</p> <p>NASDM - They undertake mental calculations with increasingly large numbers and more complex calculations.</p> <p>NASDM - Pupils continue to use all the multiplication tables to calculate mathematical statements in order to maintain their fluency.</p>
<p>NCETM Y6 Unit 6 - Area, perimeter, position and direction</p> <ul style="list-style-type: none"> ● 2.30 Multiplicative contexts: area and perimeter 2 	<p>Geometry – Position and Direction</p> <ul style="list-style-type: none"> ● describe positions on the full coordinate grid (all four quadrants) ● draw and translate simple shapes on the coordinate plane, and reflect them in the axes. <p>Non Statutory Notes</p> <p>GPD - Pupils draw and label a pair of axes in all four quadrants with equal scaling. This extends their knowledge of one quadrant to all four quadrants, including the use of negative numbers.</p> <p>GPD - Pupils draw and label rectangles (including squares), parallelograms and rhombuses, specified by coordinates in the four quadrants, predicting missing coordinates using the properties of shapes. These might be expressed algebraically for example, translating vertex (a, b) to $(a - 2, b + 3)$; (a, b) and $(a + d, b + d)$ being opposite vertices of a square of side d.</p>
<p>NCETM Y6 Unit 7 - Fractions and percentages</p> <ul style="list-style-type: none"> ● 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 	<p>Number – Fractions</p> <ul style="list-style-type: none"> ● add and subtract fractions with the same denominator and denominators that are multiples of the same number (NC Y4 NCETM Y6) ● recognise the per cent symbol (%) and understand that per cent relates to ‘number of parts per hundred’, and write percentages as a fraction with denominator 100, and as a decimal (NC Y5 NCETM Y6) ● solve problems which require knowing percentage and decimal equivalents of $1/2$, $1/4$, $1/5$, $2/5$, $4/5$ and those fractions with a denominator of a multiple of 10 or 25 (NC Y5 NCETM Y6) <p>Fractions</p> <ul style="list-style-type: none"> ● use common factors to simplify fractions; use common multiples to express fractions in the same denomination ● compare and order fractions, including fractions > 1 ● add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions ● multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $1/4 \times 1/2 = 1/8$] ● divide proper fractions by whole numbers [for example, $1/3 \div 2 = 1/6$] ● associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, $3/8$] ● recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. <p>Non Statutory Notes</p> <p>NF - Pupils should be taught throughout that percentages, decimals and fractions are different ways of expressing proportions. (NC Y5 NCETM Y6)</p> <p>NF - Pupils should make connections between percentages, fractions and decimals (for example, 100% represents a whole quantity and 1% is $1/100$, 50% is $1/2$, 25% is $1/4$) and relate this to finding ‘fractions of’. (NC Y5 NCETM Y6)</p>

		<p>MND - Common factors can be related to finding equivalent fractions</p> <p>NF - Pupils should practise, use and understand the addition and subtraction of fractions with different denominators by identifying equivalent fractions with the same denominator. They should start with fractions where the denominator of one fraction is a multiple of the other (for example, $1/2 + 1/8 = 5/8$) and progress to varied and increasingly complex problems.</p> <p>NF - Pupils should use a variety of images to support their understanding of multiplication with fractions. This follows earlier work about fractions as operators (fractions of), as numbers, and as equal parts of objects, for example as parts of a rectangle.</p> <p>NF - They practise calculations with simple fractions and decimal fraction equivalents to aid fluency, including listing equivalent fractions to identify fractions with common denominators.</p>
9	<p>NCETM Y6 Unit 8 - Statistics</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>Statistics</p> <ul style="list-style-type: none"> • interpret and construct pie charts and line graphs and use these to solve problems • calculate and interpret the mean as an average. <p>Non Statutory Notes</p> <p>S - Pupils connect their work on angles, fractions and percentages to the interpretation of pie charts.</p> <p>S - Pupils both encounter and draw graphs relating two variables, arising from their own enquiry and in other subjects.</p> <p>S - They should connect conversion from kilometres to miles in measurement to its graphical representation.</p> <p>S - Pupils know when it is appropriate to find the mean of a data set</p>
10	<p>NCETM Y6 Unit 9 - Ratio and proportion</p> <ul style="list-style-type: none"> • 6AS/MD–3 Solve problems involving ratio relationships. • 2.27 Scale factors, ratio and proportional reasoning 	<p>Number – Multiplication and Division</p> <ul style="list-style-type: none"> • MND - solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects. (NC Y4 NCETM Y4, 5,6) <p>Ratio and Proportion</p> <ul style="list-style-type: none"> • solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts • solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison • solve problems involving similar shapes where the scale factor is known or can be found • solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. <p>Non Statutory Notes</p> <p>MND - Pupils solve simple problems in contexts, deciding which of the four operations to use and why. These include measuring and scaling contexts, (for example, four times as high, eight times as long etc.) and correspondence problems in which m objects are connected to n objects (for example, 3 hats and 4 coats, how many different outfits?; 12 sweets shared equally between 4 children; 4 cakes shared equally between 8 children). (NC Y3 NCETM Y5,6)</p> <p>MND - Pupils solve two-step problems in contexts, choosing the appropriate operation, working with increasingly harder numbers. This should include correspondence questions such as the numbers of choices of a meal on a menu, or three cakes shared equally between 10 children. (NC Y4 NCETM Y6)</p> <p>RP - Pupils recognise proportionality in contexts when the relations between quantities are in the same ratio (for example, similar shapes and recipes).</p> <p>RP - Pupils link percentages or 360° to calculating angles of pie charts.</p> <p>RP - Pupils should consolidate their understanding of ratio when comparing quantities, sizes and scale drawings by solving a variety of problems. They might use the notation a:b to record their work.</p> <p>RP - Pupils solve problems involving unequal quantities, for example, ‘for every egg you need three spoonfuls of flour’, ‘3/5 of the class are boys’. These problems are the foundation for later formal approaches to ratio and proportion</p>
11	<p>NCETM Y6 Unit 12 - Order of operations</p> <ul style="list-style-type: none"> • 2.22 Combining multiplication with addition and subtraction • 2.28 Combining division with addition and subtraction 	<p>Number – Multiplication and Division</p> <ul style="list-style-type: none"> • solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign (NC Y5 NCETM Y6) • use their knowledge of the order of operations to carry out calculations involving the four operations <p>Non Statutory Notes</p> <p>NASMD - Pupils explore the order of operations using brackets; for example, $2 + 1 \times 3 = 5$ and $(2 + 1) \times 3 = 9$.</p>
12	<p>NCETM Y6 Unit 11 - Solving problems with two unknowns</p> <ul style="list-style-type: none"> • 6AS/MD–4 Solve problems with 2 unknowns. • 1.31 Problems with two unknowns 	<p>Algebra</p> <ul style="list-style-type: none"> • use simple formulae • generate and describe linear number sequences















		<ul style="list-style-type: none"> ● express missing number problems algebraically ● find pairs of numbers that satisfy an equation with two unknowns ● enumerate possibilities of combinations of two variables. <p>Non Statutory Notes A - Pupils should be introduced to the use of symbols and letters to represent variables and unknowns in mathematical situations that they already understand, such as: -missing numbers, lengths, coordinates and angles -formulae in mathematics and science -equivalent expressions (for example, $a + b = b + a$) -generalisations of number patterns -number puzzles (for example, what two numbers can add up to)</p>
13	NCETM Y6 Unit 13 - Mean Average <ul style="list-style-type: none"> ● 2.26 Mean average and equal shares 	Statistics <ul style="list-style-type: none"> ● calculate and interpret the mean as an average. <p>Non Statutory Notes S - Pupils know when it is appropriate to find the mean of a data set</p>
14	NCETM Y6 Unit 4 - Draw, compose and decompose shapes <ul style="list-style-type: none"> ● 6G–1 Draw, compose, and decompose shapes according to given properties, including dimensions, angles and area, and solve related problems. 	Geometry – Properties of Shape <ul style="list-style-type: none"> ● draw 2-D shapes using given dimensions and angles ● recognise, describe and build simple 3-D shapes, including making nets ● compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons ● illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius ● recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. <p>Non Statutory Notes Pupils draw shapes and nets accurately, using measuring tools and conventional markings and labels for lines and angles. Pupils describe the properties of shapes and explain how unknown angles and lengths can be derived from known measurements. These relationships might be expressed algebraically for example, $d = 2 \times r$; $a = 180 - (b + c)$.</p>
15	NCETM Y6 Unit 10 - Calculating using knowledge of structures (2) <ul style="list-style-type: none"> ● 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 	Number – Multiplication and Division <ul style="list-style-type: none"> ● Pupils use and explain the equals sign to indicate equivalence, including in missing number problems (for example, $13 + 24 = 12 + 25$; $33 = 5 \times ?$). (NC Y5 NCETM Y6) <p>Non Statutory Notes</p>

Y5/6 B	1	2	3	4	5	6	7	8	9	10	11	12	13
C1	Unit 1 (NCETM Y6 Unit 1)				Unit 2 (NCETM Y6 Unit 2) Multiples of 1,000	Unit 3 (NCETM Y6 Unit 3) Numbers up to 10,000,000		Unit 4 (NCETM Y5 Unit 1) Decimal fractions		Unit 5 (NCETM Year 5 Unit 8) Fractions		Unit 6 (NCETM Y6 Unit 5) Multiplication and division	
	Calculating using knowledge of structures (1)												
Ongoing	Unit 11 (NCETM Y6 Unit 12) Order of operations and algebra											Unit 12 (NCETM Y6 Unit 11) Solving problems with two unknowns	
FF	Weekly Arithmetic Practice Application and Skills – Daily Arithmetic Practice												
C2	Unit 6 (NCETM Y6 Unit 5) Multiplication and division		Unit 7 (NCETM Y6 Unit 6) Area, perimeter, position and direction (including missing coordinates)		Unit 8 (NCETM Y6 Unit 7) Fractions and percentages					Unit 9 (NCETM Y6 Unit 8) Statistics		Unit 10 (NCETM Y6 Unit 9) Ratio and proportion	
Ongoing	Unit 12 (NCETM Y6 Unit 11) Solving problems with two unknowns			Recap: Year 5 Unit 3 - Negative Numbers						Unit 13 (NCETM Y6 Unit 13) Mean average			
FF	Weekly Arithmetic Practice Application and Skills – Daily Arithmetic Practice												
C3	Revision for KS2 SATS (including content from Cycle A and light touch converting units of measure and angles)				SATS	Unit 13 (NCETM Y6 Unit 13) Mean average	Unit 14 (NCETM Y6 Unit 4) Draw, compose and decompose shapes (including circles)		Unit 15 (NCETM Y6 Unit 10) Calculating using knowledge of structures (2)		Unit 12 (NCETM Y6 Unit 11) Solving problems with two unknowns	Unit 11 (NCETM Y6 Unit 12) Order of operations and algebra	
FF	Weekly Arithmetic Practice Application and Skills – Daily Arithmetic Practice												

[Ready to progress Criteria Year 5 and Year 6 with examples and assessment questions - page 208 onwards](#)

Year 5 and 6 Assessments:

Assess all throughout Summer Term and formatively assess during the year at following points:

RTP - Mixed Age Year 5 and 6 Year B	Last Taught in	Assess End of Cycle
<ul style="list-style-type: none"> •  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. 	 unit 4	1
<ul style="list-style-type: none"> •  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. 	 unit 4	1
<ul style="list-style-type: none"> •  5NPV-5 Convert between units of measure, including using common decimals and fractions. 	 unit 5	1
<ul style="list-style-type: none"> •  5NF-2 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth). 	 unit 4	1
<ul style="list-style-type: none"> •  5F-1 Find non-unit fractions of quantities. 	 unit 5	1
<ul style="list-style-type: none"> • 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). 	unit 3	1
<ul style="list-style-type: none"> • 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. 	unit 3	1
<ul style="list-style-type: none"> • 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. 	unit 3	1
<ul style="list-style-type: none"> • 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. 	unit 3	1
<ul style="list-style-type: none"> • 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). 	unit 1	1
<ul style="list-style-type: none"> •  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. 	unit 15	3
<ul style="list-style-type: none"> • 6AS/MD-3 Solve problems involving ratio relationships. 	unit 10	2
<ul style="list-style-type: none"> • 6AS/MD-4 Solve problems with 2 unknowns. 	unit 12	3
<ul style="list-style-type: none"> • 6F-1 Recognise when fractions can be simplified, and use common factors to simplify fractions. 	 unit 8	2
<ul style="list-style-type: none"> • 6F-2 Express fractions in a common denomination and use this to compare fractions that are similar in value. 	 unit 8	2
<ul style="list-style-type: none"> • 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. 	 unit 8	2
<ul style="list-style-type: none"> • 6G-1 Draw, compose, and decompose shapes according to given properties, including dimensions, angles and area, and solve related problems. 	unit 14	3
Foundational Fluency Year 5 and Year 6		
1. 5NF-1 Secure fluency in multiplication table facts, and corresponding division facts, through continued practice (and recognise products in multiplication tables as multiples of the corresponding number).	Year 4 FFF (Consolidate)	1,2,3

2.	Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding.	unit 5	2
3.	Use additive facts to find bonds within 1 and 0.1	unit 1	1
4.	Multiply and divide whole numbers and decimals by 10, 100, 1000	unit 1	1
5.	Calculate using formal written methods, incl decimals	Year 3 /4 and unit 3	2
6.	Calculate using decimals, fractions, percentages	unit 7	2
7.	Recall decimal fraction equivalents for $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$ and $\frac{1}{10}$, and for multiples of these proper fractions.	unit 8	2