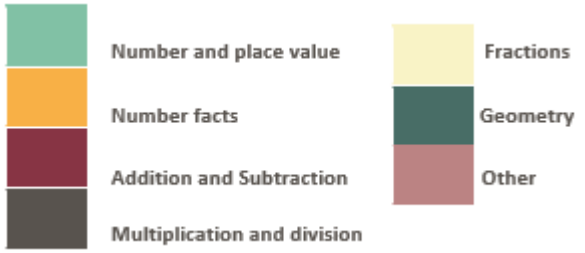
MATHSHUBS
YORKSHIRE RIDINGS

Year 2 Maths Curriculum



Unit	Year 2	NC Objectives which feature in each unit
1	**Numbers 10 to 100** • **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.** • **1.8 Composition of numbers: multiples of 10 up to 100** • **1.9 Composition of numbers: 20–100**	**Number and Place Value** • recognise the place value of each digit in a two-digit number (tens, ones) • identify, represent and estimate numbers using different representations, including the number line • compare and order numbers from 0 up to 100; use <, > and = signs • read and write numbers to at least 100 in numerals and in words • use place value and number facts to solve problems. • read and write numbers to 100 in numerals; (NC Y1 NCETM Y2) • recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 (Also in Y3) **Non Statutory Notes** NPV - Using materials and a range of representations, pupils practise counting, reading, writing and comparing numbers to at least 100 and solving a variety of related problems to develop fluency. They count in multiples of three to support their later understanding of a third. NPV - As they become more confident with numbers up to 100, pupils are introduced to larger numbers to develop further their recognition of patterns within the number system and represent them in different ways, including spatial representations. Pupils should partition numbers in different ways (for example, 23 = 20 + 3 and 23 = 10 + 13) to support subtraction. They become fluent and apply their knowledge of numbers to reason with, discuss and solve problems that emphasise the value of each digit in two-digit numbers. They begin to understand zero as a place holder. NPV - Pupils begin to recognise place value in numbers beyond 20 by reading, writing, counting and comparing numbers up to 100, supported by objects and pictorial representations. (NC Y1 NCETM Y2)
2	**Calculations within 20** • **2AS–1 Add and subtract across 10.** • **2AS–2 Recognise the subtraction structure of 'difference' and answer questions of the form, "How many more…?".** • **1.11 Addition and subtraction: bridging 10** • **1.12 Subtraction as difference**	**Number – Addition and Subtraction** • represent and use number bonds and related subtraction facts within 20 (NC Y1 NCETM Y2) • add and subtract one-digit and two-digit numbers to 20, including zero (NC Y1 NCETM Y2) **Solve problems with addition and subtraction:** • using concrete objects and pictorial representations, including those involving numbers, quantities and measures • applying their increasing knowledge of mental and written methods • Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: • adding three one-digit numbers • show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot **Non Statutory Notes** NAS - Pupils extend their understanding of the language of addition and subtraction to include sum and difference. NAS - Pupils practise addition and subtraction to 20 to become increasingly fluent in deriving facts such as using 3 + 7 = 10; 10 – 7 = 3 and 7 = 10 – 3 to calculate 30 + 70 = 100; 100 – 70 = 30 and 70 = 100 – 30. They check their calculations, including by adding to check subtraction and adding numbers in a different order to check addition (for example, 5 + 2 + 1 = 1 + 5 + 2 = 1 + 2 + 5). This establishes commutativity and associativity of addition.

3	**Fluently add and subtract within 10** • **2NF–1 Secure fluency in addition and subtraction facts within 10, through continued practice.** • **1.7 Addition and subtraction: strategies within 10**	**Number – Addition and Subtraction** • read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals • (=) signs (Cont from Y1) • solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = – 9. (Cont from Y1) • recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 (NC Y2 NCETM Y3)
4	**Addition and subtraction of two-digit numbers (1)** • **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.** • **1.13 Addition and subtraction: two-digit and single-digit numbers** • **1.14 Addition and subtraction: two-digit numbers and multiples of ten**	**Number – Addition and Subtraction** • Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: • a two-digit number and ones • a two-digit number and tens • add and subtract one-digit and two-digit numbers to 20, including zero (NC Y1 NCETM Y2) **Non Statutory Notes** NAS - Pupils extend their understanding of the language of addition and subtraction to include sum and difference. Pupils practise addition and subtraction to 20 to become increasingly fluent in deriving facts such as using 3 + 7 = 10; 10 – 7 = 3 and 7 = 10 – 3 to calculate 30 + 70 = 100; 100 – 70 = 30 and 70 = 100 – 30. They check their calculations, including by adding to check subtraction and adding numbers in a different order to check addition (for example, 5 + 2 + 1 = 1 + 5 + 2 = 1 + 2 + 5). This establishes commutativity and associativity of addition.
5	**Introduction to multiplication** • **2MD–1 Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables.** • **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**	**Number and Place Value** • count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward **Number – Multiplication and Division** • solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher. (NC Y1 NCETM Y2) • recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers • calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs • show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot • solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts **Non Statutory Notes** NMD - Through grouping and sharing small quantities, pupils begin to understand: multiplication and division; doubling numbers and quantities; and finding simple fractions of objects, numbers and quantities. (NC Y1 NCETM Y2) NMD - Pupils use a variety of language to describe multiplication and division. NMD - Pupils are introduced to the multiplication tables. They practise to become fluent in the 2, 5 and 10 multiplication tables and connect them to each other. They connect the 10 multiplication table to place value, and the 5 multiplication table to the divisions on the clock face. They begin to use other multiplication tables and recall multiplication facts, including using related division facts to perform written and mental calculations. NMD - Pupils work with a range of materials and contexts in which multiplication and division relate to grouping and sharing discrete and continuous quantities, to arrays and to repeated addition. They begin to relate these to fractions and measures (for example, 40 ÷ 2 = 20, 20 is a half of 40). They use commutativity and inverse relations to develop multiplicative reasoning (for example, 4 × 5 = 20 and 20 ÷ 5 = 4).

6	**Introduction to division structures** • **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).** • **2.6 Structures: quotitive and partitive division**	**Number – Multiplication and Division** • solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher. (NC Y1 NCETM Y2) • recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers • calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs • show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot • solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts **Non Statutory Notes** NMD - Through grouping and sharing small quantities, pupils begin to understand: multiplication and division; doubling numbers and quantities; and finding simple fractions of objects, numbers and quantities. (NC Y1 NCETM Y2) NMD - Pupils use a variety of language to describe multiplication and division. NMD - Pupils are introduced to the multiplication tables. They practise to become fluent in the 2, 5 and 10 multiplication tables and connect them to each other. They connect the 10 multiplication table to place value, and the 5 multiplication table to the divisions on the clock face. They begin to use other multiplication tables and recall multiplication facts, including using related division facts to perform written and mental calculations. NMD - Pupils work with a range of materials and contexts in which multiplication and division relate to grouping and sharing discrete and continuous quantities, to arrays and to repeated addition. They begin to relate these to fractions and measures (for example, 40 ÷ 2 = 20, 20 is a half of 40). They use commutativity and inverse relations to develop multiplicative reasoning (for example, 4 × 5 = 20 and 20 ÷ 5 = 4).
7	**Shape** • **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.**	**Geometry – Properties of Shape** • identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line • identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces • identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] • compare and sort common 2-D and 3-D shapes and everyday objects **Non Statutory Notes** Pupils handle and name a wide variety of common 2-D and 3-D shapes including: quadrilaterals and polygons, and cuboids, prisms and cones, and identify the properties of each shape (for example, number of sides, number of faces). Pupils identify, compare and sort shapes on the basis of their properties and use vocabulary precisely, such as sides, edges, vertices and faces. Pupils read and write names for shapes that are appropriate for their word reading and spelling. Pupils draw lines and shapes using a straight edge.
8	**Addition and subtraction of two-digit numbers (2)** • **2AS–4 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two-digit numbers.** • **1.15 Addition: two-digit and two-digit numbers** • **1.16 Subtraction: two-digit and two-digit numbers**	**Number – Addition and Subtraction** • Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: • two two-digit numbers **Non Statutory Notes** NAS - Pupils extend their understanding of the language of addition and subtraction to include sum and difference. Pupils practise addition and subtraction to 20 to become increasingly fluent in deriving facts such as using 3 + 7 = 10; 10 – 7 = 3 and 7 = 10 – 3 to calculate 30 + 70 = 100; 100 – 70 = 30 and 70 = 100 – 30. They check their calculations, including by adding to check subtraction and adding numbers in a different order to check addition (for example, 5 + 2 + 1 = 1 + 5 + 2 = 1 + 2 + 5). This establishes commutativity and associativity of addition. NAS - Recording addition and subtraction in columns supports place value and prepares for formal written methods with larger numbers.
9	**Money** • **This topic is part of the National Curriculum but is not included in the DfE 2020 guidance or the NCETM Mastery Professional Development Materials.**	**Measurement** • recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value • find different combinations of coins that equal the same amounts of money • solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change

		Non Statutory Notes Pupils become fluent in counting and recognising coins. They read and say amounts of money confidently and use the symbols £ and p accurately, recording pounds and pence separately
10	**Fractions** • 3.0 Guidance on the teaching of fractions in Key Stage 1	**Number – Fractions** • recognise, find and name a half as one of two equal parts of an object, shape or quantity (NC Y1 NCETM Y3) • recognise, find and name a quarter as one of four equal parts of an object, shape or quantity. (NC Y1 NCETM Y3) • recognise, find, name and write fractions 1/3 , 1/3 , 2/3 and 3/4 of a length, shape, set of objects or quantity (NC Y1 NCETM Y3) • write simple fractions for example, 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2 . (NC Y1 NCETM Y3) **Non Statutory Notes** NF - Pupils are taught 'fractions of' discrete and continuous quantities by solving problems using shapes, objects and quantities. For example, they could recognise and find half a length, quantity, set of objects or shape. Pupils connect halves and quarters to the equal sharing and grouping of sets of objects and to measures, as well as recognising and combining halves and quarters as parts of a whole (NC Y1 NCETM Y3) NF - They connect unit fractions to equal sharing and grouping, to numbers when they can be calculated, and to measures, finding fractions of lengths, quantities, sets of objects or shapes. They meet 3/4 as the first example of a non-unit fraction. Pupils should count in fractions up to 10, starting from any number and using the 1/2 and 2/4 equivalence on the number line (for example, 1 1/4 , 2 2/4 (or 1 1/2), 1 3/4 , 2). This reinforces the concept of fractions as numbers and that they can add up to more than one. (NC Y2 NCETM Y3)
11	**Time** • **This topic is part of the National Curriculum but is not included in the DfE 2020 guidance or the NCETM Mastery Professional Development Materials.**	**Measurement** • compare and sequence intervals of time • tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times • know the number of minutes in an hour and the number of hours in a day. **Non Statutory Notes** They become fluent in telling the time on analogue clocks and recording it.
12	**Position and direction** • **This topic is part of the National Curriculum but is not included in the DfE 2020 guidance or the NCETM Mastery Professional Development Materials.**	**Geometry - Position and Direction** • order and arrange combinations of mathematical objects in patterns and sequences • use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anticlockwise) **Non Statutory Notes** Pupils should work with patterns of shapes, including those in different orientations. Pupils use the concept and language of angles to describe 'turn' by applying rotations, including in practical contexts (for example, pupils themselves moving in turns, giving instructions to other pupils to do so, and programming robots using instructions given in right angles).
13	**Multiplication and division – doubling, halving, quotitive and partitive division** • 2.5 Commutativity (part 2), doubling and halving • 2.6 Structures: quotitive and partitive division	**Number – Multiplication and Division** • solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher. (NC Y1 NCETM Y2) • calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs • show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot • solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts **Non Statutory Notes**

		NMD - Through grouping and sharing small quantities, pupils begin to understand: multiplication and division; doubling numbers and quantities; and finding simple fractions of objects, numbers and quantities. (NC Y1 NCETM Y2) NMD - Pupils use a variety of language to describe multiplication and division. NMD - Pupils are introduced to the multiplication tables. They practise to become fluent in the 2, 5 and 10 multiplication tables and connect them to each other. They connect the 10 multiplication table to place value, and the 5 multiplication table to the divisions on the clock face. They begin to use other multiplication tables and recall multiplication facts, including using related division facts to perform written and mental calculations. NMD - Pupils work with a range of materials and contexts in which multiplication and division relate to grouping and sharing discrete and continuous quantities, to arrays and to repeated addition. They begin to relate these to fractions and measures (for example, 40 ÷ 2 = 20, 20 is a half of 40). They use commutativity and inverse relations to develop multiplicative reasoning (for example, 4 × 5 = 20 and 20 ÷ 5 = 4).
14	**Sense of measure – capacity, volume, mass** **• This topic is part of the National Curriculum but is not included in the DfE 2020 guidance or the NCETM Mastery Professional Development Materials.**	**Measure** • compare, describe and solve practical problems for: • mass/weight [for example, heavy/light, heavier than, lighter than] • capacity and volume [for example, full/empty, more than, less than, half, half full, quarter] • measure and begin to record the following: • mass/weight • capacity and volume • choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels • compare and order lengths, mass, volume/capacity and record the results using >, < and = (NC Y1 NCETM Y2) **Non Statutory Notes** The pairs of terms: mass and weight, volume and capacity, are used interchangeably at this stage. (NC Y1 NCETM Y2) Pupils move from using and comparing different types of quantities and measures using non-standard units, including discrete (for example, counting) and continuous (for example, liquid) measurement, to using manageable common standard units. (NC Y1 NCETM Y2) In order to become familiar with standard measures, pupils begin to use measuring tools such as a ruler, weighing scales and containers. (NC Y1 NCETM Y2) Pupils use standard units of measurement with increasing accuracy, using their knowledge of the number system. They use the appropriate language and record using standard abbreviations.
15	**Statistics** **• This topic is part of the National Curriculum but is not included in the DfE 2020 guidance or the NCETM Mastery PD Materials.**	**Statistics** • interpret and construct simple pictograms, tally charts, block diagrams and simple tables • ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity • ask and answer questions about totalling and comparing categorical data **Non Statutory Notes** Pupils record, interpret, collate, organise and compare information (for example, using many-to-one correspondence in pictograms with simple ratios 2, 5, 10).

Y2	1	2	3	4	5	6	7	8	9	10	11	12	13
C1	**Unit 1** Numbers 10 to 100 The Oaks Unit 19 – composition of multiples of 10 (10 lessons) The Oaks Unit 20 – counting & representing to 99 (5 lessons) The Oaks Unit 21 – comparing to 99 (5 lessons)				**Unit 3** Fluently add and subtract within 10 The Oaks Unit 22 (5 lessons)	**Unit 2** Calculations within 20 The Oaks Unit 23 (15 lessons)			**Unit 4** Addition and subtraction of two-digit numbers (1) The Oaks Unit 24 (15 lessons)			**Unit 5** Introduction to multiplication The Oaks Unit 25 (10 lessons)	
FF		**Mastering Number Weeks 1 - 5**						**Mastering Number Weeks 6 - 10**					
C2	**Unit 5** Introduction to multiplication The Oaks Unit 26 (10 lessons)		**Unit 6** Introduction to division structures The Oaks Unit 27 (10 lessons)		**Unit 7** Shape The Oaks Unit 28 (10 lessons)	**Unit 8** **Addition and subtraction of two-digit numbers (2)** The Oaks Unit			**Unit 9** Money The Oaks Unit	**Unit 10** Fractions The Oaks Unit		**Unit 11** Time The Oaks Unit 29 (5 lessons)	**Unit 12** Position and direction The Oaks Unit
FF	**Mastering Number Weeks 11 - 15**						**Mastering Number Weeks 16 - 20**						**MN Weeks 21 - 26**
C3	**Unit 13** Multiplication and division – doubling, halving, quotative and partitive division The Oaks Unit			**Unit 14** Sense of measure – capacity, volume, mass The Oaks Unit	**SATS**	***Unit 15*** Cross Curricular Statistics The Oaks Unit					***Unit 16*** Deeper Application and Consolidation Year 3 Ready The Oaks Unit		

FF	Mastering Number Weeks 21 - 26		Mastering Number Weeks 27 - 31		

[Ready to progress Criteria Year 2 with examples and assessment questions - page 48 onwards]

Year 2 Assessments:

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

RTP	Last Taught in	Assess at End of Cycle
• 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.	**Unit 1**	**1**
• 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.	**Unit 1**	**1**
• 2AS–1 Add and subtract across 10.	**Unit 2** NB: revisited in Y3	**1**
• 2AS–2 Recognise the subtraction structure of 'difference' and answer questions of the form, "How many more…?".	**Unit 2**	**1**
• 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.	**Unit 4**	**1**
• 2AS–4 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two-digit numbers.	**Unit 8**	**2**
• 2NF–1 Secure fluency in addition and subtraction facts within 10, through continued practice.	**Unit 3**	**1**
• 2MD–1 Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables.	**Unit 5**	**2**
• 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).	**Unit 6**	**2**
• • 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.	**Unit 7**	**2**
Foundational Fluency Facts (Additive Facts across 10 in 2NF - 1 and maintaining Year 1 FFFs)		
1. Adding 10 to a number (e.g. 5 + 10 and 10 + 5)	**unit 3**	**1,2,3**

Ready-to-progress criteria strands	Code
Number and place value	**NPV**
Number facts	**NF**
Addition and subtraction	**AS**
Multiplication and division	**MD**
Fractions	**F**
Geometry	**G**

2.	Near doubles (e.g. 3 + 4 and 4 + 3)	**unit 3**	**1,2,3**
3.	The ones without a family! 5 + 3, 3 + 5, 6 + 3, 3 + 6	**unit 3**	**1,2,3**