Year 2/3 yearly overview (2020)

This mixed-age plan follows the same progression as the White Rose Maths mixed age planning, except where divergence improves the alignment of the *Power Maths* lessons. The main aim of these plans is to allow teachers to cover the same topic with both groups more often than with our existing (2019) mixed age plans, which follow the *Power Maths* progression more strictly in each year group.

Note: Shaded colours refer to the strand colours used in the textbooks.

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|  **Year 2** | **Year 3**  | **Number of lessons** |
| **Autumn term** | **56** |
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| **Unit 1: Numbers to 100*** identify, represent and estimate numbers using different representations, including the number line
* count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens (Year 1 revision)
* count in steps of 2, 3, and 5 from 0, and in tens from any number, forwards and backwards
* recognise the place value of each digit in a two-digit number (tens, ones)
* compare and order numbers from 0 up to 100; use <, > and = signs
 | **Unit 1: Place value within 1,000*** recognise the place value of each digit in a three-digit number (hundreds, tens, ones)
* read and write numbers up to 1,000 in numerals and in words
* identify, represent and estimate numbers using different representations
* count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number
* solve number problems and practical problems involving these ideas
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| **Unit 2: Addition and subtraction (1)*** recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
* recognise the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems
* show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot
* add and subtract numbers using concrete objects, pictorial representations and mentally, including a two-digit number and ones
* count in steps of 2, 3, and 5 from 0, and in tens from any number, forwards and backwards
* solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures

**Unit 3: Addition and subtraction (2)*** add and subtract numbers using concrete objects, pictorial representations and mentally, including two two-digit numbers
* solve problems with addition and subtraction, applying increasing knowledge of mental and written methods
* solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures
 | **Unit 2: Addition and subtraction (1)*** add and subtract numbers mentally, including a three-digit number and ones, a three-digit number and tens, a three-digit number and hundreds
* solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction
* add and subtract numbers with up to three digits,

formal written methods of columnar addition and subtraction* add and subtract numbers mentally, including a three-digit number and ones, a three-digit number and tens, a three-digit number and hundreds

**Unit 3: Addition and subtraction (2)*** add and subtract numbers mentally, including a three-digit number and ones, a three-digit number and tens, a three-digit number and hundreds
* solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction
* estimate the answer to a calculation and use inverse operations to check answers
* add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction
* add and subtract numbers mentally, including a three-digit number and ones, a three-digit number

and tens, a three-digit number and hundreds | **30** |
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| **Unit 4: Money*** recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value
* recognise and know the value of different denominations of coins and notes (Year 1)
* 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
 | **Unit 6: Money*** add and subtract amounts of money to give change, using both £ and p in practical contexts
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| **Unit 5: Multiplication and division (1)*** solve one-step problems involving multiplication and division, by using concrete objects, pictorial representations and arrays, with the support of the teacher (Year 1)
* calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs
* solve problems involving multiplication and division, using materials, arrays, repeated addition, mental
 | **Unit 4: Multiplication and division (1)*** 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
* recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables
* solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and
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| methods, and multiplication and division facts, including problems in context* recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers
* consolidation and problem solving
 | correspondence problems in which *n* objects are connected to *m* objects |  |

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| **Year 2** | **Year 3** | **Number of lessons**  |
| **Spring term** | **56** |
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| **Unit 6: Multiplication and division (2)*** calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs
* recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers
* solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in context.
 | **Unit 5: Multiplication and division (2)*** 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
* recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables
* solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which *n* objects are connected to *m* objects
* solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign
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| **Unit 7: 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
 | **Unit 7: Statistics*** interpret and present data using bar charts, pictograms and tables
* solve one-step and two-step questions [for example, ‘How many more?’ and ‘How many fewer?’] using information presented in scaled bar charts and pictograms and tables
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| **Unit 8: Length and height*** compare and order lengths, mass, volume/capacity and record the results using >, < and =
* 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
* solve problems with addition and subtraction, using concrete objects and pictorial representations, including those involving numbers, quantities and measures
 | **Unit 8: Length*** measure, compare, add and subtract lengths (m/cm/mm), mass (kg/g), volume/capacity (l/ml)
* measure the perimeter of simple 2D shapes
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| **Unit 9: Properties of shape*** compare and sort common 2D and 3D shapes and everyday objects
* identify and describe the properties of 2D shapes, including the number of sides and line symmetry in a vertical line
* order and arrange combinations of mathematical objects in patterns and sequences
* identify and describe the properties of 3D shapes, including the number of edges, vertices and faces
 | **Unit 12: Angles and properties of shape*** recognise angles as a property of shape or a description of a turn
* identify right angles, recognise that two right angles make a half-turn, three make three-quarters of a turn and four make a complete turn; identify whether angles are greater than or less than a right angle
* draw 2D shapes and make 3D shapes using modelling materials; recognise 3D shapes in different orientations and describe them
* identify horizontal and vertical lines and pairs of perpendicular and parallel lines
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| **Unit 11: Position and direction*** 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 anti-clockwise)
* order and arrange combinations of mathematical objects in patterns and sequences
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| **Unit 10: Fractions*** recognise, find and name a half as one of two equal parts of an object, shape or quantity (Year 1)
* recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity
* write simple fractions, for example 1/2 of 6 = 3, and recognise the equivalence of 2/4 and 1/2
 | **Unit 9: Fractions (1)*** recognise and use fractions as numbers; unit fractions and non-unit fractions with small denominators
* 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
* compare and order unit fractions, and fractions with the same denominators
* solve problems that involve all of the above
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|  **Year 2** | **Year 3**  | **Number of lessons** |
| **Summer term****You may wish to switch these blocks around to accommodate preparation for SATs** | **35** |
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| **Unit 13: Time*** compare and sequence intervals of time
* tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. (Year 1)
* 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
 | **Unit 11: Time*** know the number of seconds in a minute and the number of days in each month, year and leap year
* estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o’clock, a.m./p.m., morning, afternoon, noon and midnight
* tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks
* compare durations of events [for example to calculate the time taken for particular events or tasks]
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| **Unit 12: Problem solving and efficient methods*** use place value and number facts to solve problems
* solve problems with addition and subtraction, using concrete objects and pictorial representations, including those involving numbers, quantities and measures
* recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems
* solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in context
* show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot
 | **Unit 10: Fractions (2)*** recognise and show, using diagrams, equivalent fractions with small denominators
* recognise and use fractions as numbers; unit fractions and non-unit fractions with small denominators
* add and subtract fractions with the same denominator within one whole [for example, 5/7 + 1/7 = 6/7]
* compare and order unit fractions and fractions with the same denominator
* solve problems that involve all of the above
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| **Unit 14: Weight, volume and temperature*** compare and order lengths, mass, volume/capacity and record the results using >, < and =
* 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

 | **Unit 13: Mass*** measure, compare, add and subtract lengths (m/cm/mm), mass (kg/g), volume/capacity (l/ml)
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| **Unit 14: Capacity*** measure, compare, add and subtract lengths (m/cm/mm), mass (kg/g), volume/capacity (l/ml)
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