Year 4/5 overview

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.

Note: The colours used in these charts refer to the strand colours used in the Textbook.

Year 4	Year 5	Number of lessons
Autumn term		**53**
Unit 1: Place value – 4-digit numbers (1) • Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number [Year 3]. • Count in multiples of 6, 7, 9, 25 and 1,000. • Find 1,000 more or less than a given number. • Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones). • Identify, represent and estimate numbers using different representations.	**Unit 1: Place value within 1,000,000 (1)** • Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit. • Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000. • Read Roman numerals to 1,000 (M) and recognise years written in Roman numerals.	**17**
Unit 2: Place value – 4-digit numbers (2) • Count in multiples of 6, 7, 9, 25 and 1,000. • Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones). • Order and compare numbers beyond 1,000. • Identify, represent and estimate numbers using different representations. • Round any number to the nearest 10, 100 or 1,000. • Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of 0 and place value.	**Unit 2: Place value within 1,000,000 (2)** • Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit. • Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000.	

Year 4	Year 5	Number of lessons
Unit 3: Addition and subtraction • Solve number and practical problems that involve all of the above and with increasingly large positive numbers. • 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.	**Unit 3: Addition and subtraction** • Estimate and use inverse operations to check answers to a calculation [Year 4]. • Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction). • Add and subtract numbers mentally with increasingly large numbers. • Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. • Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	**16**
Unit 4: Measure – area • Find the area of rectilinear shapes by counting squares. • Estimate, compare and calculate different measures, including money in pounds and pence.	**Unit 4: Multiplication and division (1)** • Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. • Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers. • Establish whether a number up to 100 is prime and recall prime numbers up to 19. • Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000. • Recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3}).	**20**

Year 4	Year 5	Number of lessons
	• Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes.	
Unit 5: Multiplication and division (1) • Recall multiplication and division facts for multiplication tables up to 12 × 12. • 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.	**Unit 7: Multiplication and division (2)** • Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers. • Multiply and divide numbers mentally drawing upon known facts. • Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context.	

Year 4	Year 5	Number of lessons
Spring term		**50**
Unit 8: Fractions (1) • Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators [Year 3]. • Recognise and show, using diagrams, equivalent fractions with small denominators [Year 3]. • Compare and order unit fractions, and fractions with the same denominators [Year 3]. • Recognise and show, using diagrams, families of common equivalent fractions.	**Unit 5: Fractions (1)** • 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. • 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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$].	**20**
Unit 9: Fractions (2) • Add and subtract fractions with the same denominator. • 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.	**Unit 6: Fractions (2)** • 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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$]. • Add and subtract fractions with the same denominator and denominators that are multiples of the same number.	

Year 4	Year 5	Number of lessons
Unit 6: Multiplication and division (2) • Recall multiplication and division facts for multiplication tables up to 12 × 12. • 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. • Recognise and use factor pairs and commutativity in mental calculations. • Multiply two-digit and three-digit numbers by a one-digit number using formal written layout. • 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.	**Unit 8: Fractions (3)** • 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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$]. • Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. **Unit 9: Decimals and percentages** • 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. • 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. • Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}, \frac{1}{4}, \frac{1}{5}, \frac{2}{5}, \frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25.	**22**

Year 4	Year 5	Number of lessons
Unit 7: Length and perimeter • Convert between different units of measure [for example, kilometre to metre; hour to minute]. • Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.	**Unit 10: Measure – perimeter and area** • Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres. • Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes.	**8**

Year 4	Year 5	Number of lessons
Summer term		**57**
Unit 10: Decimals (1) • Recognise and write decimal equivalents of any number of tenths or hundredths. • Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths.	**Unit 14: Decimals** • Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. • Read, write, order and compare numbers with up to three decimal places. • Solve problems involving number up to three decimal places.	**20**
Unit 11: Decimals (2) • Recognise and write decimal equivalents of any number of tenths or hundredths. • Recognise and write decimal equivalents to $\frac{1}{4}, \frac{1}{2}, \frac{3}{4}$. • Round decimals with one decimal place to the nearest whole number. • Compare numbers with the same number of decimal places up to two decimal places.	**Unit 15: Negative numbers** • Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero.	

Year 4	Year 5	Number of lessons
Unit 12: Money • Estimate, compare and calculate different measures, including money in pounds and pence.	**Unit 16: Measure – converting units** • Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre). • Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. • Solve problems involving converting between units of time. • Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.	**13**
Unit 13: Time • 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.	**Unit 17: Measure – volume** • Estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water].	

Year 4	Year 5	Number of lessons
Unit 14: Geometry – angles and 2D shapes • Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. • Identify acute and obtuse angles and compare and order angles up to two right angles by size. • Identify lines of symmetry in 2D shapes presented in different orientations. • Complete a simple symmetric figure with respect to a specific line of symmetry.	**Unit 12: Geometry – properties of shapes** • Identify horizontal and vertical lines and pairs of perpendicular and parallel lines. • Identify 3D shapes, including cubes and other cuboids, from 2D representations. • Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. • Draw given angles, and measure them in degrees (°). • Identify: - angles at a point and one whole turn (total 360°) - angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°) - other multiples of 90°. • Use the properties of rectangles to deduce related facts and find missing lengths and angles. • Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.	**12**
Unit 15: Statistics • Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. • Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.	**Unit 11: Graphs and tables** • Solve comparison, sum and difference problems using information presented in a line graph. • Complete, read and interpret information in tables, including timetables.	**6**

Year 4	Year 5	Number of lessons
Unit 16: Geometry – position and direction • Describe positions on a 2D 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.	**Unit 13: Geometry – position and direction** • Describe positions on a 2D grid as coordinates in the first quadrant [Year 4]. • Plot specified points and draw sides to complete a given polygon [Year 4]. • 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.	**6**