## Maths Curriculum Overview 2021/22 – Red Phase (4)

	Autumn		Spring		Summer	
Week	1	2	1	2	1	2
1	Assessment Week	Number – Place value Multiplication Can I identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 numbers? Do I know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers? Can I establish whether a number up to 100 is prime and recall prime numbers up to 19?	Assessment Week	Measure Money Can I 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 units, tenths and hundredths? Can I solve simple measure and money problems involving fractions and decimals to two decimal places?	Assessment Week	Measure Time Can I read, write and convert time between analogue and digital 12- and 24-hour clocks? Can solve problems involving converting between units of time?
2	Number – Place value Place Value Can I read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit? Can I count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000?	Number – Place value Place Value Can I count forwards and backwards in steps of powers of 10? Can I read Roman numerals to 1000 (M) and recognise years written in Roman numerals?	Geometry Position and Movement Can I describe movements between positions as translations of a given unit to the left/right and up/down? Can I 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?	Measure Measure Measurement Can I measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres? Can I calculate and compare the area of squares and rectangles including using standard units, square centimetres (m2) and square metres (m2) and estimate the area of irregular shapes? Can I estimate volume [for example, using 1 cm <sup>3</sup> blocks to build cuboids] and capacity [for example, using water]?	Statistics Complete, read and interpret information in tables, including timetables.	Measure Measurement Can I use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation including scaling?

3	Number – Place	Number – Place	Number – Place	Number – Place	Number – Place	Number – Place value
	value Place Value	value	value Place Value	value Place Value	value Decimals	Place Value
	Can I read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit? Can I interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero?	Can I multiply and divide numbers mentally, drawing upon known facts? Can I multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000?	Can I read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit? Can I solve number problems and practical problems that involve all of the above?	Can I read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit? Can I round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000, and 100,000?	Can I recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents? Can I round decimals with two decimals places to the nearest whole number and to one decimal place?	Can I read, write, order and compare numbers to at least 1000 000 and determine the value of each digit? Can I solve number problems and practical problems that involve all of the above?
4	Number – Place	Number – Place	Number – Place	Number – Place	Number – Place	Number – Place value
	value	value	value	value	value	Addition and
	Addition	Division	Addition and	Multiplication and	Fractions / Decimals	Subtraction
	Can I add whole numbers with more than 4 digits, including using formal written methods (columnar addition)?	Can I 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?	Subtraction Can I use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy? Can I solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why?	Division Can I recall multiplication and division facts for multiplication tables up to 12 × 12? Can I solve problems involving multiplication and division where larger numbers are used by decomposing them into their factors? Can I 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? Can I solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign? Can I solve problems involving multiplication and division, including understanding the meaning of the equals sign?	Percentages Do I 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 hundred, and as a decimal fraction? Can I solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5 and those with a denominator of a multiple of 10 or 25?	Can I add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)? Can I solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why?
5	Number – Place	Number – Place	Number – Place	Measure	Geometry	Number – Place value
	value	value	value	Time	Properties of shape	Multiplication and
	Subtraction	Fractions			Can I identify 3-D shapes, including cubes and other cuboids, from 2D	Division

	Can I subtract whole numbers with more than 4 digits, including using formal written methods (columnar subtraction)?	Can I compare and order fractions whose denominators are all multiples of the same number? Can I identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths?	Addition and Subtraction Can I add and subtract numbers mentally with increasingly large numbers? Can I use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy?	Can solve problems involving converting between units of time?	representations? Can I use the properties of rectangles to deduce related facts and find missing lengths and angles? Can I distinguish between regular and irregular polygons based on reasoning about equal sides and angles?	Can I 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? Can I solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign?
6	Number – Place value Addition and Subtraction Can I add and subtract numbers mentally with increasingly large numbers? Can I solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why?	Number – Place value Fractions Can I recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as a mixed number, e.g. 2/5 + 4/5 = 6/5 = 11/5? Can I add and subtract fractions with the same denominator and multiples of the same number?	Measure Time Can I read, write and convert time between analogue and digital 12- and 24- hour clocks?	Geometry Properties of shape Do I know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles? Can I draw given angles, and measure them in degrees (?)?	Geometry Position and Movement Can I 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?	Statistics Complete, read and interpret information in tables, including timetables.
7	Number – Place value Multiplication Can I recall multiplication facts for multiplication tables up to 12 x 12? Can I 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?	Geometry Properties of shape Can I identify 3-D shapes, including cubes and other cuboids, from 2D representations?				Measure Money Can I use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation including scaling?

## Topic coverage (number of weeks)

Addition & Subtraction – 6	Money – 2	Position & Movement – 2
Multiplication & Division – 6	Statistics – 2	Measurement - 2

Fractions/Decimals/Percentages – 4

Extended coverage through – mental maths, investigative questioning, next steps, interventions, cross-topic links