	YEAR 5 medium term plan 2023-24 Previous Y4 non-negotiable objectives in pink Objectives highlighted in yellow are 'Ready to Progress criteria'
Autumn 1	**Number – Place Value** • Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) • Round any number to the nearest 10, 100 or 1000 • 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 • Round any number up to 1 000 000 to the nearest 10, 100, 1000. 10000, 100000 • Read Roman numerals to 1000 (M) and recognise years written in Roman numerals • 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-1)** • Read and write decimal numbers as fractions • 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 **(5NPV-2)** • 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 • Reason about the location of any number up to 2 decimal places in the linear number system, including identifying the previous and next multiple of 1 and 0.1**(5NPV-3)** • Round decimals with two decimal places to the nearest whole number and to one decimal place**(5NPV-3)** • **Number – Addition and Subtraction** • Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) • 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 • Add and subtract numbers mentally with increasingly large numbers • Solve number problems and practical problems that relate to all of the above (number and place value)

Autumn 2	**Number-Multiplication and Division A** Recall multiplication and division facts for multiplication tables up to 12 × 12 Multiply two-digit and three-digit numbers by a one-digit number using formal written layout • Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth).**(5NF–2)** • Multiply and divide numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size. **(5MD-1)** • Multiply whole numbers by 1000 • Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers **(5MD-2)** • 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 • Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) **Number-Fractions A** • Find non-unit fractions of quantities **5F–1** • Find equivalent fractions and understand that they have the same value and the same position in the linear number system. **5F–2** including tenths and hundredths • Compare and order fractions whose denominators are all multiples of the same number • Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number • Compare and order fractions less than and greater than 1 Add and subtract fractions with the same denominator and denominators that are multiples of the same number, including mixed numbers
Spring 1	**Number-Multiplication and Division B** Recall multiplication and division facts for multiplication tables up to 12 × 12 Multiply two-digit and three-digit numbers by a one-digit number using formal written layout • 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 **(5MD-3)** • 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 **(5MD-4)** • Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes • Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign **Number-Fractions B** • Add and subtract fractions with the same denominator and denominators that are multiples of the same number, including mixed numbers • Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams

	• To use fractions as operators • Solve problems Involving multiplication and division, including scaling by simple fractions and problems involving simple ratio
Spring 2	**Number-Decimals** Find the value of dividing 1- or 2-digit numbers by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths Round decimals with one decimal place to the nearest whole number Recognise and write decimal equivalents of any number of tenths or hundredths Recognise and write decimal equivalents to 1/4 ;1/2 ; 3/4 • Recall decimal fraction equivalents for 1/2., ¼, 1/5, 1/10 and for multiples of these proper fractions. **5F–3** • 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 **Number-Percentages** • Recognise the per cent symbol (%) and understand that percent 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 ½, ¼, 1/5, 2/5, 4/5 and those fractions with a denominator of a multiple of 10 or 25. **Measurement -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 (cm2) and square metres (m2) and estimate the area of irregular shapes **(5G-2)** **Statistics** Interpret and present discrete data using bar charts and continuous data using line graphs • Solve comparison, sum and difference problems using information presented in a line graph • Complete, read and interpret information in tables, including timetables.
Summer 1	**Geometry – Properties of shape** Complete a simple symmetric figure with respect to a specific line of symmetry • Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles **5G-1** • Distinguish between regular and irregular polygons based on reasoning about equal sides and angles • Draw given angles, and measure them in degrees (°) **5G-1** • Identify: -angles at a point and one whole turn (total 360°) angles at a point on a straight line and a half turn (total 180°) -other multiples of 90° • Use the properties of rectangles to deduce related facts and find missing lengths and angles Identify 3-D shapes, including cubes and other cuboids, from 2-D representations **Geometry – Position and direction** Describe positions on a 2-D grid as coordinates in the first quadrant

	• 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. **Number-Decimals** Find the value of dividing 1- or 2-digit numbers by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths Round decimals with one decimal place to the nearest whole number Recognise and write decimal equivalents of any number of tenths or hundredths Recognise and write decimal equivalents to 1/4 ;1/2 ; 3/4 • To add and subtract wholes and decimal numbers • To multiply and divide decimal numbers by 10, 100, 1000
Summer 2	**Number-Decimals** Find the value of dividing 1- or 2-digit numbers by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths Round decimals with one decimal place to the nearest whole number Recognise and write decimal equivalents of any number of tenths or hundredths Recognise and write decimal equivalents to 1/4 ;1/2 ; 3/4 • Add and subtract decimal numbers mentally • Solve problems involving number up to three decimal places • To calculate sequences involving decimal numbers **Negative Numbers** • Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero **Measurement – Converting units** Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres Convert between different units of measure (e.g. kilometre to metre; hour to minute) Read, write and convert time between analogue and digital 12 and 24-hour clocks • 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 • To read and interpret timetables • 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. **Measurement - Volume** Estimate and calculate volume/capacity • Estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water] • Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.

Continuous Objectives **The continuous objectives are woven into the teaching continually during the year.** **Children are given continual and regular opportunities to apply their knowledge to problem solving and reasoning.**	Solve number problems and practical problems that relate to all of the above (number and place value) 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 Solve problems involving number up to three decimal places Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign Solve problems Involving multiplication and division, including scaling by simple fractions and problems involving simple ratio Solve problems which require knowing percentage and decimal equivalents of ½, ¼, 1/5, 2/5, 4/5 and those fractions with a denominator of a multiple of 10 or 25. 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.
Key Basic skills to be taught continuously through the year	Count forward and backwards in steps of powers of 10 for any given number up to 1 000 000 Read and write numbers up to 1 000 000 and determine the place value of each digit Recognise the place value in large whole numbers to at least 1 000 000 Compare and order numbers to at least 1 000 000 Partition numbers into place value columns Partition numbers in different ways Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 Use rounding to support estimation and calculation Use knowledge of place value to derive new addition and subtraction facts Secure fluency in multiplication table facts, and corresponding division facts, through continued practice (5NF-1) Identify multiples and common factors of two or more numbers Find factor pairs of a two-digit number Understand the terms multiple, factor, and prime, square and cube numbers and use them to construct equivalent statements 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 Can find the prime factors of a given number Read and recognise Roman numerals up to 1000 Recognise and use square and cube numbers Double any number between 1 and 1000 and find all corresponding halves Add and subtract mentally with increasingly large numbers to aid fluency e.g. TthTHTU ± THTU, TthTHTU ± HTU, HTU.t ± HTU.t Multiply and divide whole numbers including those involving decimals by 10, 100 and 1000 Use knowledge of inverse to derive associated multiplication and division facts Use known facts and knowledge of multiples to derive new facts Count up and down in tenths, hundredths and thousandths in decimals and fractions including bridging zero For fractions and decimals derive pairs with complements to 1 and to other whole numbers Identify equivalent fractions Recognise decimal equivalents of fractions with a denominator of ten, one

	hundred and one thousand Read and write decimal numbers with up to 3 decimal places as fractions Read, write order and compare numbers with up to three decimal places Round decimals with up to two decimal places to the nearest whole number and to one decimal place Know 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 Use knowledge of complements to 60 and that there are 60 minutes in an hour to convert time durations