Intent Year 4/Year 5

Block	Topic	Term	Number of Weeks	Retrieval Focus
1	**Number and Place Value**			
2	**Addition and Subtraction**			
3	**Multiplication and Division**			
4	**Fractions**			
5	**Decimals and Percentages**			
6	**Geometry/Position and Direction**			
7	**Statistics**			
8	**Measures**			

Intent Year 4/Year 5

Strand	Y4 NC ARE Including Ready to Progress	Y5 NC ARE Including Ready to Progress	Sequence of learning-Year 4 Detailed in Planning Overview	Sequence of learning-Year 5 Detailed in Planning Overview
Number and Place Value	Count in multiples of 6, 7, 9, 25 and 1000. Find 1000 more or less than a given number. Count backwards through zero to include negative numbers. Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones). NPV–2 Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and non-standard partitioning Order and compare numbers beyond 1000. NPV–3 Reason about the location of any four-digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each. NPV–4 Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in	Read, write, order & compare numbers to at least 1 000 000 & determine the value of each digit NPV–2 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. Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000. Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero. Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000. NPV–3 Reason about the location of any number with up to 2 decimals places in the linear number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each. Solve number problems and practical problems that involve all of the above. Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.	*Introduction- Recap of previous number range *Place value of 4 digit numbers * Standard and non-standard partitioning. * Find 1,000 more or less than a given number * Compare numbers beyond 1.000 * Order numbers beyond 1,000 * Counting in 1000s 500s, 100s, 50s and 25s * Positioning numbers on a blank and scaled number line * Rounding to the nearest 10, 100 and 1000 * Negative Numbers *Roman Numerals to 100	*Introduction- Recap of previous number range * Read and write, numbers to at least 1,000,000 and determine the value of each digit * Standard and non-standard partitioning. * Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000 * Compare numbers to at least 1,000,000 * Order and compare numbers to at least 1,000,000 * Problem solving and consolidating * Positioning numbers on a blank and scaled number line * Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000 * Interpret negative numbers in context * Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.

	multiples of 1,000 with 2, 4, 5 and 10 equal parts Identify, represent and estimate numbers using different representations. NPV–1 Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100 Round any number to the nearest 10, 100 or 1000. Solve number and practical problems that involve all of the above and with increasingly large positive numbers. Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.			

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Strand	Y4 NC ARE Including Ready to Progress	Y5 NC ARE Including Ready to Progress	Sequence of learning - Year 4 Detailed in Planning Overview	Sequence of learning - Year 5 Detailed in Planning Overview
Addition and Subtraction	Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate. 4NF–3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100), 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.	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. NF–2 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth) 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.	*Adding and Subtracting using known facts *Adding using place value *Adding multiples of 1, 10, 100 and 1,000 using partitioning to add *Adding multiples of 1, 10, 100 and 1,000 using partitioning *Adding and subtracting multiples of 1, 10, 100 and 1,000 using bridging *Apply bridging as a strategy to find the difference between two numbers *Use reordering as an efficient strategy to aid calculation *Adding using near doubles *Add and subtract numbers mentally -compensating *Use addition and subtraction fact families to calculate the inverse *Using estimating when calculating *Using a standard written method to add 4-digit numbers *Using a standard written method to subtract 4-digit numbers *Reflecting on the most appropriate strategies to use *Solve addition and subtraction two step problems in contexts, deciding which operations and methods to use and why	*Adding and Subtracting using known facts *Adding using place value *Adding increasingly large numbers using partitioning to add *Adding increasingly larger numbers using partitioning *Adding and Subtracting increasing large numbers using bridging *Apply bridging as a strategy to find the difference between two numbers *Use reordering as an efficient strategy to aid calculation with increasingly large numbers *Adding using near doubles *Add and subtract numbers mentally with increasingly large numbers -compensating and adjusting *Add and subtract numbers mentally with increasingly large numbers - fact families and inverse operations *Using estimating when calculating with large numbers *Add whole numbers with more than 4 digits, including using formal written methods (columnar addition) *Subtract whole numbers with more than 4 digits, including using formal written methods (columnar subtraction)

				*Solve addition and subtraction problems, deciding which operations and methods to use and why – selecting efficient methods *Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why – solving problems

Strand	Y4 NC ARE Including Ready to Progress	Y5 NC ARE Including Ready to Progress	Sequence of learning - Year 4 Detailed in Planning Overview	Sequence of learning-Year 5 Detailed in Planning Overview
Multiplication and Division	Recall multiplication and division facts for multiplication tables up to 12 × 12. NF–1 Recall multiplication and division facts up to 12x12 and recognise products in multiplication tables as multiples of the corresponding number. 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. 4NF–3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100) MD–3 Understand and apply the distributive property of multiplication Recognise and use factor pairs and commutativity in mental calculations. MD–2 Manipulate multiplication and division equations, and understand and apply the	Identify multiples and factors, including finding all factor pairs and common factors of two numbers. MD–2 Find factors and multiples of positive whole numbers, including common factors and common multiples, and express a given number as a product of 2 or 3 factors. Know & use the vocabulary of prime numbers, prime factors & composite (non-prime) numbers. Establish whether a number up to 100 is prime & recall prime numbers up to 19. Multiply numbers up to 4 digits by a one- or two-digit number using an formal written method, including long multiplication for two-digit numbers. MD–3 Multiply any whole number with up to 4 digits by any one-digit number using a formal written method. Multiply & divide numbers mentally drawing upon known facts. NF–1 Secure fluency in multiplication table facts, and corresponding division facts, through continued practice	*Recap of 2, 5, 10, 3, 4 and 8 times tables *6 times table *12 times table *9 and 11 times table *7 times table *links and development of multiplication * x by 10 and 100 Divide by 1, 10, 100 *Scaling known facts * Arrays and the link to division *Fact families *Halving and doubling *Compensating *Distributive law *Associative Law *Consolidating mental strategies * Finding factors *Correspondence and scaling problems *Written multiplication *Written division *Problem Solving	*Recap of all times tables and strategies to elicit unknown facts *Problem solving with times tables *Identifying common multiples * Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 * Multiply and divide numbers mentally drawing upon known facts – Related Facts *Halving and doubling *Compensating *Distributive law *Associative Law *Consolidating mental strategies * Identify factors, including finding all factor pairs of a number, and common factors of two numbers *Recognise and use language of square numbers *Know and use the vocabulary of prime numbers *Establish whether a number up to 100 is prime and recall prime numbers up to 19

	commutative property of multiplication. 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. NF–2 Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders	NF–2 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth) MD–1 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. Divide numbers up to 4 digits by a one-digit number using the formal written method of short division & interpret remainders appropriately for the context. MD–4 Divide a number with up to 4 digits by a one-digit number using a formal written method, and interpret remainders appropriately for the context. Multiply & divide whole numbers & those involving decimals by 10, 100 & 1000. Recognise and use square numbers and cube numbers, and the notation for squared and cubed. Solve problems involving multiplication and division using their knowledge of factors and multiples, squares and cubes. Solve problems involving addition, subtraction, multiplication and division and a combination of these, including		*Recognise and build cube numbers *Correspondence and Scaling *Written multiplication *Written division *Problem Solving

		understanding the meaning of the equals sign. Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple ratio.		

Intent Year 4/Year 5

Strand	Y4 NC ARE Including Ready to Progress	Y5 NC ARE Including Ready to Progress	Sequence of learning - Year 4 Detailed in Planning Overview	Sequence of learning - Year 5 Detailed in Planning Overview
Fractions	Recognise and show, using diagrams, families of common equivalent fractions. Solve problems involving increasingly harder fractions to calculate quantities, & fractions to divide quantities, including non-unit fractions where the answer is a whole no. + and -fractions with the same denominator. F–1 Reason about the location of mixed numbers in the linear number system F–2 Convert mixed numbers to improper fractions and vice versa. F–3 Add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers	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. F–2 Find equivalent fractions and understand that they have the same value and the same position in the linear number system. Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number. Add and subtract fractions with the same denominator & denominators that are multiples of the same number. Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.	*Introduction to fractions *Making a whole *Placing fractions on a number line *Equivalent fractions *Mixed numbers and improper fractions *Fractions of a quantity *Adding fractions *Subtracting fractions *Word problems relating to fractions	*Introduction to fractions *Making a whole *Placing fractions on a number line (recapping equivalence) *Equivalent fractions *Mixed numbers and improper fractions *Compare and order fractions *Find non-unit fractions of quantities. *Finding the whole when given the fraction *Add and subtract fractions with the same denominator and denominators that are multiples of the same number *Multiplying fractions by a whole number

Intent Year 4/Year 5

Strand	Y4 NC ARE Including Ready to Progress	Y5 NC ARE Including Ready to Progress	Sequence of learning - Year 4 Detailed in Planning Overview	Sequence of learning - Year 5 Detailed in Planning Overview
Decimals and Percentage	Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. Recognise and write decimal equivalents of any number of tenths or hundredths. Recognise and write decimal equivalents to ¼ , ½ and ¾ . 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. MD–1 Multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to making a number 10 or 100 times the size. 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.	Read and write decimal numbers as fractions [for example, 0.71 = 71/100]. F–3 Recall decimal fraction equivalents for ½ ,1/4 ,1/5 and 1/10, and for multiples of these proper fractions. Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. NPV–1 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. Round decimals with two decimal places to the nearest whole number and to one decimal place. NPV–3 Reason about the location of any number with up to 2 decimals places in the linear number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each. Read, write, order and compare numbers with up to three decimal places.	*Recapping tenths *Recognising hundredths as a fraction and a decimal *Linking money to decimals *Relating tenths to hundredths *Counting up and down the number system in tenths and hundredths *Positioning a decimal to 2dp on a number line *Comparing 2 numbers with up to 2dp *Rounding decimals to the nearest whole number *Multiplying and dividing a decimal by 10 and 100 *Solving problems with decimals including money *Linking common decimals to fractions	*Recapping tenths *Place value of hundredths *Linking money to decimals * Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. *Positioning decimals on a number line *Order and compare decimals (3dp) * Round decimals with two decimal places to the nearest whole number and to one decimal place. * Multiply & divide whole numbers & those involving decimals by 10, 100 & 1000. * Add and subtract decimals * Read and write decimal numbers as fractions [for example, 0.71 = $\frac{71}{100}$]. * Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred' *write percentages as a fraction with denominator 100, and as a decimal *Problem solve using F, D and P equivalences

	Solve simple measure and money problems involving fractions and decimals to 2 d.p.	NPV–2 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. NPV–4 Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts. Solve problems involving number 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 ½, ¼, 1/5, 2/5, 4/5 and those fractions with a denominator of a multiple of 10 or 25.		

Strand	Y4 NC ARE Including Ready to Progress	Y5 NC ARE Including Ready to Progress	Sequence of learning-Year 4 Detailed in Planning Overview	Sequence of learning-Year 5 Detailed in Planning Overview
Geometry Properties of Shape **Position and Direction**	Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. G–2 Identify regular polygons, including equilateral triangles and squares, as those in which the side-lengths are equal and the angles are equal. Find the perimeter of regular and irregular polygons. Identify acute and obtuse angles and compare and order angles up to two right angles by size. Identify lines of symmetry in 2-D shapes presented in different orientations. Complete a simple symmetric figure with respect to a specific line of symmetry. G–3 Identify line symmetry in 2D shapes presented in different orientations. Reflect shapes in a line of symmetry and complete a symmetric figure or pattern with respect to a specified line of symmetry.	Identify 3-D shapes, including cubes and other cuboids, from 2-D representations. Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. G–1 Compare angles, estimate and measure angles in degrees (°) and draw angles of a given size. 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 ½ 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. Identify, describe and represent the position of a shape following a reflection or translation, using the	*Recap of 2D shapes *Identify acute and obtuse angles * Compare and order angles up to two right angles by size * Recognising angles in shapes * Compare and classify and triangles based on their properties and sizes * Compare and classify geometric shapes * Identify lines of symmetry in 2- D shapes presented in different orientations * Complete a simple symmetric figure with respect to a specific line of symmetry * Describe positions on a 2-D grid as coordinates in the first quadrant * Describe movements between positions as translations of a given unit to the left/right and up/down	*Recap of 2D shapes *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 ½ 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. *Identify similar and congruent shapes *Identify 3-D shapes, including cubes and other cuboids, from 2-D representations *Coordinates revision *Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and

	Describe positions on a 2-D grid as coordinates in the first quadrant. Describe movements between positions as translations of a given unit to the left/right and up/down. G–1 Draw polygons, specified by coordinates in the first quadrant, and translate within the first quadrant Plot specified points and draw sides to complete a given polygon.	appropriate language, and know that the shape has not changed.		know that the shape has not changed.

Intent Year 4/Year 5

Strand	Y4 NC ARE Including Ready to Progress	Y5 NC ARE Including Ready to Progress	Sequence of learning–Year 4 Detailed in Planning Overview	Sequence of learning-Year 5 Detailed in Planning Overview
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.	Solve comparison, sum and difference problems using information presented in a line graph. Complete, read and interpret information in tables, including timetables.	*Draw and interpret pictograms *Draw and interpret bar charts *Solve comparison, sum and difference problems using information presented in charts *Interpret and present continuous data using line graphs. *Answer questions about a range of different graphs *Understands which is the best method of recording data	*Complete, read and interpret information in tables *Substantial Problem – Interpreting Data from a Table * Complete, read and interpret information in timetables * Solve comparison, sum and difference problems using information presented in a line graph

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Measures (Split across 3 planning overviews – measures, perimeter and area and time)	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. Find the area of rectilinear shapes by counting squares. Estimate, compare and calculate different measures, including money in pounds and pence. 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.	Convert between different units of metric measure (e.g., kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre). NPV–5 Convert between units of measure, including using common decimals and fractions. Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. 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. G–2 Compare areas and calculate the area of rectangles (including squares) using standard units.	*Recap tools and language of measure. Recap units of measure and which units are used to measure different things *Convert between different units of measure [for example, kilometre to metre, mm to cm] *Convert between different units of measure [g to kg] *Convert between different units of measure [l to ml] *Estimate, compare and calculate different measures *Substantial problem *Problem Solving in the context of measures (addition and subtraction, multiplication and division) *Calculate the perimeter of regular shapes *Measure and calculate the perimeter of a rectilinear figure *Find the area of rectangles shapes by counting squares *Problem solving with area and perimeter *Reading and writing time on 24- hour clocks and	*Recap tools and language of measure. Recap units of measure and which units are used to measure different things * Convert between different units of metric measure including decimals and fractions (km to m, mm to cm, g to kg, ml to l) *Understand and use approximate equivalence s between metric units and common imperial units converting between them * Estimate volume [for example, using $1cm^3$ blocks to build cuboids (including cubes)] and capacity [for example, using water *Problem Solving in the context of measures (addition and subtraction, multiplication and division) *Measure and calculate the perimeter of composite rectilinear shapes * Calculate the area of rectangles by using the formula L x W

		Estimate volume [e.g. using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [e.g. using water]. 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.	converting from 12-hour to 24-hour digital clocks and analogue clocks Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days *To calculate duration of events	* Calculate the area of other regular polygons (not rectilinear) *Estimate the area of irregular shapes *Reading and writing time on 24- hour clocks and converting from 12-hour to 24-hour digital clocks and analogue clocks * Solve problems involving converting between units of time *To calculate duration of events