Intent Year 5/Year 6

Block	Topic	Term	Number of Weeks	Notes
1	Number and Place Value			
2	Addition and Subtraction			
3	Multiplication and Division			
4	Statistics (Year 6 only)			
5	Fractions			
6	Decimals and Percentages			
7	Ratio and Proportion (Year 6 only)			
8	Algebra (Year 6 only)			
9	Geometry			
10	Measures			
11	Statistics			
12	Application and Consolidation			

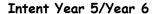| Strand	Y5 NC ARE Including Ready to Progress	Y6 NC ARE Including Ready to Progress	Sequence of learning- Year 5 Detailed in Planning Overview	Sequence of learning-Year 6 Detailed in Planning Overview
Number and Place Value	Read, write, order and compare numbers to at least 1 000 000 and determine the 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	Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit NPV–1 Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000). NPV–2 Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and non-standard partitioning. Round any whole number to a required degree of accuracy NPV–3 Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round numbers, as appropriate, including in contexts. NPV–4 Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts	*Reading and writing numbers up to 1,000,000 *Counting in powers of 10 to 1,000,000 *Understanding the relationships between powers of 10 *Standard and non-standard partitioning *Comparing and ordering numbers *Positioning numbers on a number line *Rounding numbers to the nearest 10, 100, 1000, 10,000 and 100, 000 *Counting forwards and backwards with positive and negative whole numbers, including through zero *Roman numerals to 1000	*Reading and writing numbers up to 10,000,000 Counting in powers of 10 to *10,000,000 *Understanding the relationships between powers of 10 *Standard and non-standard partitioning *Comparing and ordering numbers *Positioning numbers on a number line *Rounding numbers to a required degree of accuracy *Using negative numbers in context and calculate intervals across zero *Calculating with positive and negative numbers

	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.	Use negative numbers in context, and calculate intervals across zero Solve number and practical problems that involve all of the above		

| Strand | Y5 NC ARE

Including Ready to Progress | Y6 NC ARE

Including Ready to Progress | Sequence of learning - Year 5 Detailed in Planning Overview | Sequence of learning - Year 6 Detailed in Planning Overview |
|---|---|---|---|---|
| Addition and Subtraction | 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 | Perform mental calculations, including with mixed operations and large numbers

6AS/MD–1 Understand that 2 numbers can be related additively or multiplicatively, and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number).

6AS/MD–2 Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding.

Use their knowledge of the order of operations to carry out calculations involving the four operations

Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why

Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy | *Recapping basic mental facts rom previous curriculums
*Scaling known facts
*Using partitioning to calculate
*Using place value to calculate
*Using bridging to calculate
*Finding the difference by bridging to count on
*Reordering calculations
*Finding inverse calculations
*Using the inverse to check calculations
*Compensating
*Adjusting
*Solving addition and subtraction money problems
*Estimating answers to calculations
*Using a bar model to problem solve
*Formal written methods
*Multistep word problems | *Recapping basic mental facts rom previous curriculums
*Scaling known facts
*Using partitioning to calculate
*Using place value to calculate
*Using bridging to calculate
*Finding the difference by bridging to count on
*Reordering calculations
*Finding inverse calculations
*Using the inverse to check calculations
*Compensating
*Adjusting
*Solving addition and subtraction money problems
*Estimating answers to calculations
*Using a bar model to problem solve
*Formal written methods
*Multistep word problems |

Strand	Y5 NC ARE Including Ready to Progress	Y6 NC ARE Including Ready to Progress	Sequence of learning - Year 5 Detailed in Planning Overview	Sequence of learning-Year 6 Detailed in Planning Overview
Multiplication and Division	Identify multiples and factors, including finding all factor pairs of a number, 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 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 numbers up to 4 digits by a one- or two-digit number using a 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.	Perform mental calculations, including with mixed operations and large numbers AS/MD–1 Understand that 2 numbers can be related additively or multiplicatively, and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number) 6AS/MD–2 Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding. Identify common factors, common multiples and prime numbers Use their knowledge of the order of operations to carry out calculations involving the four operations Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication	*Times tables (if necessary) *Scaling known facts *Fact families, inverse and commutative *Applying doubling and halving to mental strategies *Partitioning to multiply *Reordering calculations *Multiples *Factors *Common factors *Prime numbers *Square and cube numbers *Written multiplication *Written division *Problem solving and consolidation	*Times tables (if necessary) *Scaling known facts *Fact families, inverse and commutative *Applying doubling and halving to mental strategies *Partitioning to multiply *Reordering calculations *Factorising *Multiples *Factors *Common factors *Prime numbers *Square and cube numbers *Written multiplication *Written division *Interpreting reminders as decimals *BODMAS/BIDMAS

Multiply and divide numbers mentally drawing upon known facts

NF–1 Secure fluency in multiplication table facts, and corresponding division facts, through continued practice

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 and 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 and divide whole numbers and those involving decimals by 10, 100 and 1000

Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context

Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context
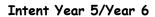
Solve problems involving addition, subtraction, multiplication and division

Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy

	Recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3}) 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.			

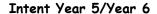| Strand	Y5 NC ARE Including Ready to Progress	Y6 NC ARE Including Ready to Progress	Sequence of learning - Year 5 Detailed in Planning Overview	Sequence of learning - Year 4 Detailed in Planning Overview
Statistics – Year 6	Year 5 to continue consolidating multiplication and division	Interpret and construct pie charts and line graphs and use these to solve problems Calculate and interpret the mean as an average.	Year 5 to continue consolidating multiplication and division	*Interpreting line graphs with more than one data set *Creating a pie chart looking at proportional sections *Creating a pie chart based around 36 votes – relating to 360 degrees in circle *Using percentages to create a pie chart for any data set *Interpreting pie charts *Mean average

| Strand | Y5 NC ARE

Including Ready to Progress | Y6 NC ARE

Including Ready to Progress | Sequence of learning - Year 5 Detailed in Planning Overview | Sequence of learning - Year 6 Detailed in Planning Overview |
|---|---|---|---|---|
| Fractions | 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.

5F-1 Find non-unit fractions of quantities.

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 and denominators that are multiples of the same number | Use common factors to simplify fractions; use common multiples to express fractions in the same denomination

F-1 Recognise when fractions can be simplified, and use common factors to simplify fractions.

Compare and order fractions, including fractions > 1

F-2 Express fractions in a common denomination and use this to compare fractions that are similar in value.

F-3 Compare fractions with different denominators, including fractions greater than 1, using reasoning, and choose between reasoning and common denomination as a comparison strategy

Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions | *Comparing and ordering fractions
*Equivalent fractions
*Mixed numbers and improper fractions
*Fraction of a quantity
* Adding fractions with mixed denominators
*Subtracting fractions with mixed denominators
*Multiplying fractions by a whole number
*Consolidation and problem solving | *Comparing and ordering fractions
*Equivalent fractions and expressing in the simplest form
*Mixed numbers and improper fractions
*Fraction of a quantity
* Adding fractions with mixed denominators
*Subtracting fractions with mixed denominators
*Multiplying fractions by a whole number
*Multiplying pairs of proper fractions
*Dividing fractions |

	Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	Multiply simple pairs of proper fractions, writing the answer in its simplest form Divide proper fractions by whole numbers		

Strand	Y5 NC ARE Including Ready to Progress	Y6 NC ARE Including Ready to Progress	Sequence of learning-Year 5 Detailed in Planning Overview	Sequence of learning-Year 6 Detailed in Planning Overview
Decimals and Percentages	Read and write decimal numbers as fractions F–3 Recall decimal fraction equivalents for $\frac{1}{2}$,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	Associate a fraction with division and calculate decimal fraction equivalents Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places NPV–1 Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000). NPV–2 Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and non-standard partitioning. NPV–4 Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts.	*Recapping tenths and hundredths *Thousandths as a decimal *Positioning decimals on a number line *Ordering and comparing decimals *Rounding decimals *Multiplying and dividing numbers by 10, 100 and 1000 *Writing decimal numbers as fractions *Adding and subtracting decimals *Linking decimals to measures understand that per cent relates to 'number of parts per hundred *fraction/decimal/percentage equivalents	*Recapping tenths and hundredths *Thousandths as a decimal *Positioning decimals on a number line *Ordering and comparing decimals *Rounding decimals *Multiplying and dividing numbers by 10, 100 and 1000 *Writing decimal numbers as fractions *Multiplying decimals *Linking decimals to measures understand that per cent relates to 'number of parts per hundred *fraction/decimal/percentage equivalents *Finding percentages of amounts

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

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 ½,1/4, 1/5, 2/5 and 4/5 and those fractions with a denominator of a multiple of 10 or 25.

Multiply one-digit numbers with up to two decimal places by whole numbers

Use written division methods in cases where the answer has up to two decimal places

Solve problems which require answers to be rounded to specified degrees of accuracy

NPV–3 Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round numbers, as appropriate, including in contexts.

Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts

Strand	Y5 NC ARE Including Ready to Progress	Y6 NC ARE Including Ready to Progress	Sequence of learning -Year 5 Detailed in Planning Overview	Sequence of learning - Year 6 Detailed in Planning Overview
Ratio and Proportion – Year 6 only	Year 5 to continue consolidating fractions/decimals and percentages	Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts AS/MD–1 Understand that 2 numbers can be related additively or multiplicatively, and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number). AS/MD–3 Solve problems involving ratio relationships. Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison Solve problems involving similar shapes where the scale factor is known or can be found Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.	Year 5 to continue consolidating fractions/decimals and percentages	*Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts * Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison * Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. * Solve problems involving similar shapes where the scale factor is known or can be found *Substantial problem

Strand	Y5 NC ARE Including Ready to Progress	Y6 NC ARE Including Ready to Progress	Sequence of learning -Year 5 Detailed in Planning Overview	Sequence of learning – Year 6 Detailed in Planning Overview
Geometry	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

Draw given angles, and measure them in degrees (°)

G–1 Compare angles, estimate and measure angles in degrees (°) and draw angles of a given size.

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. | Draw 2-D shapes using given dimensions and angles

G–1 Draw, compose, and decompose shapes according to given properties, including dimensions, angles and area, and solve related problems.

Recognise, describe and build simple 3-D shapes, including making nets

Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons

Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius

Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.

Describe positions on the full coordinate grid (all four quadrants) | *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
*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.
*Recap coordinate from year 4
Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know | *Recognise, describe and build simple 3-D shapes, including making nets
*Compare and classify geometric shapes based on their properties and sizes. find unknown angles in any triangles, quadrilaterals and regular polygons
*Draw 2-D shapes using given dimensions and angles
*Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
*Describe positions on the full coordinate grid (all four quadrants)
Draw and translate simple shapes on the coordinate plane, and reflect them in the axes. |

	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.	Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.	that the shape has not changed.	

Strand	Y5 NC ARE Including Ready to Progress	Y6 NC ARE Including Ready to Progress	Sequence of learning -Year 5 Detailed in Planning Overview	Sequence of learning - Year 6 Detailed in Planning Overview
Algebra (Year 6)		Use simple formulae AS/MD–1 Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding. Generate and describe linear number sequences Express missing number problems algebraically Find pairs of numbers that satisfy an equation with two unknowns Enumerate possibilities of combinations of two variables		

Strand	Y5 NC ARE Including Ready to Progress	Y6 NC ARE Including Ready to Progress	Sequence of learning-Year 5 Detailed in Planning Overview	Sequence of learning - Year 6 Detailed in Planning Overview
Measurement	Convert between different units of metric measure (for example, 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.	Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places Convert between miles and kilometres Recognise that shapes with the same areas can have different perimeters and vice versa Recognise when it is possible to use formulae for area and volume of shapes Calculate the area of parallelograms and triangles Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres	*Recap measuring with metric measures and how to convert between them with whole numbers *Convert between different units of metric measure including decimals and fractions *Understand and use approximate equivalences between metric units and common imperial units converting between them *Solve problems involving converting between units of time Find the perimeter of composite rectilinear shapes in cm and m *Calculate the area of rectilinear shapes by using the formula L x W for each rectangle *Calculate the area of other regular polygons (not rectilinear) *Use addition and subtraction to solve problems involving measure [for example, length, mass, volume, money] using decimal notation *Use multiplication and division to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling *Estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and	*Recap measuring with metric measures and how to convert between them with whole numbers *Converting metric measures using decimal notation up to 3dp *Convert between miles and kilometres *Use, read, write and convert measures of time *Find the perimeter of composite rectilinear shapes in cm and m *Recognise that shapes with the same areas can have different perimeters and vice versa *Calculate the area of other regular polygons (not rectilinear) *Calculate the area of triangles *Calculate the area of parallelograms *Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units [for example, mm3 and km3].

	Estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, 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.	(m^3), and extending to other units [for example, mm^3 and km^3].	capacity [for example, using water]	

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Statistics **Additional practice in different contexts for year 6 – see year 6 statistics plan**	Solve comparison, sum and difference problems using information presented in a line graph Complete, read and interpret information in tables, including timetables		*Recap types of data from previous curriculums *Interpreting line graphs *Answering questions about line graphs *Creating own line graphs *Reading data from a table *Adding information into a table *Interpreting and answering questions using data from timetables	

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Consolidation Use this block to consolidate areas of the curriculum that will benefit the cohort				