Mathematics Curriculum Progression – Year 3

When	Unit	National Curriculum Coverage	Progressive small steps of learning	Vocabulary to be recalled from prior learning	New Vocabulary
Autumn	**Adding and subtracting across 10**	Addition & Subtraction Number Facts	Pupils add 3 addends Pupils use a 'First... Then... Now" story to add 3 addends Pupils explain that addends can be added in any order Pupils add 3 addends efficiently Pupils add 3 addends efficiently by finding two addends that total 10 Pupils add two numbers that bridge through 10 Pupils subtract two numbers that bridge through 10	Sum Partition	Addend Minuend Subtrahend Commutative
	Numbers to 1000	Number & Place value Addition & Subtraction Number Facts	Pupils explain that 100 is composed of ten tens and one hundred ones Pupils explain that 100 is composed of 50s 25s and 20s Pupils use known facts to find multiples of ten that compose 100 Pupils will use known facts to find a two-digit number and a one- or two-digit number that compose 100 Pupils use known facts to find correct complements to 100 Pupils use known facts to find complements to 100 accurately and efficiently Pupils represent a three-digit number which is a multiple of ten using their numerals and names Pupils use place value knowledge to write addition and subtraction equations Pupils bridge 100 by adding or subtracting in multiples of ten Pupils use knowledge of addition and subtraction of multiples of ten bridging the hundreds boundary to solve problems Pupils count across and on from 100 Pupils represent a three-digit number up to 199 in different ways Pupils bridge 100 by adding or subtracting a single-digit number Pupils find ten more or ten less than a given number Pupils cross the hundreds boundary when adding and subtracting any two-digit multiple of ten Pupils become familiar with a metre ruler (marked and unmarked intervals, 1 x 1m, 10 x 10cm, 100 x 1cm) Pupils measure length and height from zero using whole metres and cm Pupils measure length and height from zero using cm Pupils convert between m and cm (include whole m to cm, cm to whole m and cm and vice versa) Pupils become familiar with a ruler in relation to cm and mm (marked and unmarked intervals, knowing 1cm = 10mm) Pupils measure length from zero using mm / whole cm and mm Pupils convert between cm and mm (include whole cm to mm, mm to whole cm and mm and vice versa) Pupils estimate a length/height, measure a length/height and record in a table Pupils use knowledge of place value to represent a three-digit number in different ways Pupils represent a three-digit number up to 1000 in different ways Pupils use knowledge of the additive relationship to solve problems Pupils count in hundreds and tens on a number line Pupils identify the previous, next and nearest multiple of 100 on a number line for a three-digit multiples of ten Pupils position three-digit numbers on number lines Pupils estimate the position of three-digit numbers on unmarked number lines Pupils compare one-, two- and three-digit numbers Pupils compare two three-digit numbers Pupils order sets of three-digit numbers Pupils use known facts to add or subtract multiples of 100 within 1000 Pupils write a three-digit multiple of 10 as a multiplication equation Pupils partition three-digit numbers in different ways Pupils use known facts to solve problems involving partitioning numbers Pupils use known facts to add or subtract to/from multiples of 100 in tens Pupils use known facts to add or subtract to/from multiples of 100 in ones Pupils add/subtract multiples of ten bridging 100 Pupils add/subtract to/from a three-digit number in ones bridging 100 Pupils find 10 more or less across any hundreds boundary Pupils use knowledge of adding or subtracting to/from three-digit numbers to solve problems Pupils count forwards and backwards in multiples of 2, 20, 5, 50 and 25 Pupils use knowledge of counting in multiples of 2, 20, 5, 50 and 25 to solve problems Pupils become familiar with different weighing scales up to 1kg (intervals of 100g, 200g, 250g and 500g) Pupils become familiar with the tools to measure volume and capacity up to 1 litre (intervals of 100ml, 200ml, 250ml and 500ml) Pupils measure mass from zero up to 1kg using grams Pupils measure mass from zero above 1kg using whole kg and grams	Multiple Sum Total Altogether Partition More/less/fewer	Composed Addend Equation Represent Bridge Interval Previous/next/nearest/closest Mass Volume Capacity

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			Pupils measure volume from zero up to 1 litre using ml Pupils measure volume from zero above 1 litre using whole litres and ml Pupils estimate mass in grams and volume in ml Pupils estimate a mass/volume, measure a mass/volume and record in a table		
Spring	Right angles	Geometry	Pupils rotate two lines around a fixed point to make different sized angles Pupils draw triangles and quadrilaterals and identify vertices Pupils learn that a right angle is a 'square corner' and identify them in the environment Pupils learn that a rectangle is a 4-sided polygon with four right angles Pupils learn that a square is a rectangle in which the four sides are equal length Pupils cut rectangles and squares on the diagonal and investigate the shapes they make Pupils join four right angles at a point using different right-angled polygons Pupils investigate and draw other polygons with right angles	Quarter turn Half turn Three quarter turn Triangle Vertices Rectangle Square Equal length Diagonal Pentagon Regular Irregular	Angle Quadrilateral Right angle Polygon At a point
	Manipulating the additive relationship and securing mental calculation	Addition & Subtraction	Pupils add two 3-digit numbers using partitioning Pupils add two 3-digit numbers using adjusting Pupils add a pair of 2- or 3-digit numbers using redistribution Pupils subtract a pair of 2- or 3-digit numbers, bridging a multiple of 10, using partitioning Pupils subtract a pair of 2-digit numbers, crossing a ten or hundreds boundary, by finding the difference between them Pupils subtract a pair of three-digit multiples of 10 within 1000 by finding the difference between them Pupils evaluate the efficiency of strategies for subtracting from a 3-digit number Pupils explain why the order of addition and subtraction steps in a multi-step problem can be chosen Pupils accurately and efficiently solve multi-step addition and subtraction problems Pupils understand and can explain that both addition and subtraction equations can be used to describe the same additive relationship (2-digit numbers) Pupils understand and can explain that both addition and subtraction equations can be used to describe the same additive relationship (3-digit numbers) Pupils use knowledge of the additive relationship to rearrange equations Pupils use knowledge of the additive relationship to identify what is known and what is unknown in an equation Pupils use knowledge of the additive relationship to rearrange equations before solving	Sum addend	Adjusting Inverse Efficient Redistribute
	Column addition	Addition & Subtraction	Pupils identify the addends and the sum in column addition Pupils add a pair of 2-digit numbers using column addition Pupils use their knowledge of column addition to solve problems Pupils add a pair of 2-digit numbers using column addition with regrouping in the ones column Pupils add a pair of 2-digit numbers using column addition with regrouping in the tens column Pupils add using column addition with regrouping Pupils use known facts and strategies to accurately and efficiently calculate and check column addition Pupils use their knowledge of column addition to solve problems		Addend Sum Equation Regroup Estimate Column Addition
	Connecting multiplication and division and the distributive law	Multiplication & Division Number Facts	Pupils explain what each factor represents in a multiplication equation Pupils explain how each part of a multiplication and division equation relates to a story Pupils explain where zero can be part of a multiplication or division expression and the impact it has Pupils partition one of the factors in a multiplication equation in different ways using representations (I) Pupils partition one of the factors in a multiplication equation in different ways using representations (II) Pupils explain which is the most efficient factor to partition to solve a multiplication problem Pupils use knowledge of distributive law to solve two-part addition and subtraction problems, efficiently Pupils use knowledge of distributive law to calculate products beyond known times tables facts	Multiples Partition Commutative	Factor Product Dividend Divisor Quotient Distributive law Adjacent
	Column Subtraction	Addition & Subtraction	Pupils identify the minuend and the subtrahend in column subtraction Pupils explain the column subtraction algorithm Pupils subtract from a 2-digit number using column subtraction with exchanging from tens to ones Pupils subtract from a 3-digit number using column subtraction with exchanging from hundreds to tens (1) Pupils subtract from a 3-digit number using column subtraction with exchanging from hundreds to tens (2) Pupils evaluate the efficiency of strategies for subtraction	Minuend Subtrahend	Exchanging Efficient strategy

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Summer	Unit Fractions	Fractions	Pupils identify a whole and the parts that make it up Pupils explain why a part can only be defined when in relation to a whole Pupils identify the number of equal or unequal parts in a whole Pupils identify equal parts when they do not look the same (i) Pupils explain the size of the part in relation to the whole Pupils construct a whole when given a part and the number of parts Pupils identify how many equal parts a whole has been divided into Pupils use fraction notation to describe an equal part of the whole Pupils represent a unit fractions in different ways Pupils identify parts and wholes in different contexts (i) Pupils identify parts and wholes in different contexts (ii) Pupils identify equal parts when they do not look the same (ii) Pupils compare and order unit fractions by looking at the denominator Pupils identify when unit fractions cannot be compared Pupils construct a whole when given one part and the fraction that it represents Pupils use knowledge of the relationship between parts and wholes in unit fractions to solve problems Pupils identify the whole, the number of equal parts and the size of each part as a unit fraction Pupils quantify the number of items in each part and connect to the unit fraction operator Pupils calculate the value of a part by using knowledge of division and division facts Pupils calculate the value of a part by connecting knowledge of division and division facts with finding a fraction of a quantity Pupils find fractions of quantities using knowledge of division facts with increasing fluency	**Whole** **Parts of a whole** **Equal Parts** **Fraction** **Numerator** **Denominator** **Fraction** **Part** **Whole** **Division** **Repeated addition**	**Unequal Parts** **Unit fraction** **Quantity**
	Non-Unit Fractions	Fractions	Pupils explain that non-unit fractions are composed of more than one unit fraction Pupils identify non-unit fractions Pupils describe, identify and label non-unit fractions, including using the correct notation Pupils use knowledge of non-unit fractions to solve problems Pupils use knowledge of unit fractions to find one whole Pupils place fractions between 0 and 1 on a numberline Pupils use repeated addition of a unit fraction to form a non-unit fraction Pupils use repeated addition of a unit fraction to form 1 Pupils compare using knowledge of non-unit fractions equivalent to one Pupils compare non-unit fractions with the same denominator Pupils compare unit fractions Pupils compare fractions with the same numerator Pupils add up fractions with the same denominator Pupils add on fractions with the same denominator Pupils add fractions with the same denominator using a generalised rule Pupils subtract fractions with the same denominator Pupils add and subtract fractions with the same denominator Pupils explain that addition and subtraction of fractions are inverse operations Pupils subtract fractions from a whole by converting the whole to a fraction Pupils represent a whole as a fraction in different ways and use this to solve problems involving subtraction	**Whole** **Parts of a whole** **Equal Parts** **Fraction** **Numerator** **Denominator** **Unit Fraction** **Quantity** **Inverse**	**Non-Unit Fraction** **Equivalent**
	Parallel & perpendicular sides in polygons	Geometry	Pupils make compound shapes by joining two polygons in different ways (same parts, different whole) Pupils investigate different ways of composing and decomposing a polygon (same whole, different parts) Pupils draw polygons on isometric paper Pupils use geostrips to investigate quadrilaterals with and without parallel and perpendicular sides Pupils make and draw compound shapes with and without parallel and perpendicular sides Pupils learn to extend lines and sides to identify parallel and perpendicular lines Pupils make and draw triangles on circular geoboards Pupils make and draw quadrilaterals on circular geoboards Pupils draw shapes with given properties on a range of geometric grids	**Quadrilateral** **Vertex** **Vertices** **Hexagon** **Triangle**	**Compound shape** **Quadrilateral** **Parallel** **Perpendicular** **Parallelogram**

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