Maths progression of skills – please see the White Rose progression document for a detailed breakdown of each unit

TERM	Autumn Term		Spring Term		Summer Term	
	1ˢᵗ half	2ⁿᵈ half	1ˢᵗ half	2ⁿᵈ half	1ˢᵗ half	2ⁿᵈ half
EYFS	**Getting to know you** Children will be given time to get to know their peers and adults through play. The provision is introduced and children use positional language to know where things belong. They learn key times of day and class routines. **Just like me!** Children learn how to match by finding objects and matching ones that are the same. They learn that collections of objects can be sorted in sets according to size, colour or shape. They begin to understand that the same set of objects can be sorted in different ways, and begin to say how they can sort them. They then move onto guessing a rule for sorting. Children begin to compare and order amounts, starting to know which set has more or fewer objects. Children begin to compare size, mass and capacity. They also start to look at how to copy, continue and create patterns.	**It's me 1, 2, 3!** Children identify representations of 1, 2 and 3. They subitise or count to find how many and make their own collections of 1, 2 and 3 objects. Children match number names to numerals and quantities. They begin to mark make to represent the amounts. Children begin to understand that the next number in sequence is more than the one before. They play with the numbers to understand that 1 and 1 is the same as 2. Children are introduced to circles and triangles, learning their properties. Positional language is introduced in play. **Light and dark** Children continue building knowledge of numbers including counting on and back with number 4 and then 5. They learn how to find one more and one less with concrete objects and a five frame. Children learn about squares and rectangles, and how they have 4 sides and 4 corners. They focus on how shapes can be in different orientations. Children talk about night and day, sequencing key events in their daily routine.	**Alive in 5** The children will learn the number name zero and the numeral 0 to represent the idea of 'nothing there' or 'all gone'. Children continue to understand that when comparing numbers up to 5, one quantity can be more than, the same as or fewer than another quantity. They will have direct comparisons of comparing weight and capacity. **Growing 6, 7, 8** Children continue to apply the counting principles when counting 6, 7 and 8. They build on their earlier work on matching to find and make pairs. Children begin to understand that a pair is two. They begin to notice that some quantities will have an odd one left over with no partner. Children begin to combine 2 groups to find out how many there are altogether. Children begin to use language to compare length and height. Children begin to order and sequence important times in their day and use language such as now, before, later, soon,	**Building 9 and 10** Children continue to apply the counting principles when counting to 9 and 10 (forwards and backwards). They represent 9 and 10 in different ways. Children notice that a 10 frame is full when there is 10. They begin to subitise groups of 9 and 10.	**To 20 and beyond** Encourage the children to build and identify to 20 (and beyond) using a range f resources. 10 frames, number shapes, towers of cubes and bead strings all support the children to see that larger numbers are composed of full 10s and part of the next 10. Provide opportunities for children to recognize that the numbers 1-9 repeat after every full 10. Children are also given opportunities to select and rotate shapes to fill a given space. They are encouraged to say why they chose a particular shape and why others wouldn't match. They also use positional language to describe where shapes are in relation to one another. **First, Then, Now** The children will use real objects to see that the quantity of a group can be changed by adding more. The first, then, now structure can be used to create mathematical stories in meaningful contexts. The children can use real objects to see that the	**Find my pattern** The children will learn that double means 'twice as many'. They are given opportunities to build doubles using real objects and mathematical equipment. Children will revisit sharing and be given opportunities to recognize and make equal groups. From this, they will begin to notice even and odd number shapes. Children make models and use positional language to describe where they are in relation to one another. **On the move** Children are given time and opportunities to engage in extended problem solving and to develop their critical thinking skills. They explore maps and how we use them to represent places and think about where things are in relation to each other.

			after, then and next to describe when events happen. They also use the language 'yesterday, today, tomorrow' to describe events.		quantity of a group can be changed by taking items away. This is also explored with the first, then, now structure. Children understand that shapes can be combined and separated to make new shapes.	
Year one	**Place Value** The children will count forwards and back from 100, read/write numbers to 100. They will identify 1 more or 1 less. They will use mathematical language: equal to, more, less, most, least. They can represent numbers using objects or pictures or a number line. **Additions and Subtraction (within 10)** The children will learn to use part whole models and write number sentences. They will write fact families and work systematically to solve various number bonds. They will learn to subtract using various methods including crossing out and on a number line.	**Additions and Subtraction (within 10)** The children will learn to use part whole models and write number sentences. They will write fact families and work systematically to solve various number bonds. They will learn to subtract using various methods including crossing out and on a number line. **Geometry:** **Shapes** The children will use ½,1/4 and ¾ when describing position, direction, and movement.	**Place Value (within 20)** The children will apply their place values knowledge to numbers within 20. **Additions and Subtraction (within 20)** The children will learn to use part whole models and write number sentences. They will write fact families and work systematically to solve various number bonds. They will learn to subtract using various methods including crossing out and on a number line.	**Place Value (within 50)** **Addition and subtraction** The children will use number bonds and facts to 20. They will read and write symbols, = ,+,-. They will learn to solve 1 step problems. **Measurement: Length and Height** **Measurement: Weight and Volume** The children will use comparative language relating to lengths and height, mass, capacity and volume and begin to measure and record them.	**Multiplication and division** The children will learn to count in multiples of 2, 5 and 10. They will state whether numbers are odd or even. Multiplication and division will be taught using arrays and concrete objects. They will double numbers and find simple fractions of objects and numbers. **Fractions** The children will recognise and name a half as one of two equal parts. They will know a quarter is one of four equal parts. They will know there as parts of an object, shape or quantity. **Geometry:** **Position and direction** Children will learn to describe position, direction and movement, including half, quarter and three-quarter turns.	**Place Value (within 100)** The children will apply their place value knowledge to numbers within 100. **Money** The children will recognize and know the values of different denominations of coins and notes. **Time** The children will sequence events in chronological order, measure and record time using hours, minutes and seconds. They will tell the time to the hour and half past the hour, and draw these hands on a clockface. They will use language relating to dates.
Year two	**Place Value** The children will count forwards and backwards in 10s, 2s, 3s and 5s. They will use < > =.	**Addition and subtraction** The children will be continuing learning to use number bonds to 20 to calculate number bonds to 100.	**Money** The children will recognise and use symbols for £ and p. They will be able to	**Fractions** The children will find, name and write fractions ½,1/3,1/4,2/4 and ¾ in	**Mass, capacity and temperature** In this unit we will be Comparing mass, measure	**Geometry:** **Position and direction** The children will use mathematical vocabulary to

	Addition and subtraction The children will be learning to use number bonds to 20 to calculate number bonds to 100. They will use concrete, pictorial and mental strategies to solve equations using 2-digit number and ones, 2 digit number and tens, two 2 digit numbers, three 1 digit numbers	They will use concrete, pictorial and mental strategies to solve equations using 2-digit number and ones, 2 digit number and tens, two 2 digit numbers, three 1 digit numbers. **Geometry: Shapes** Children name a wide variety of common 2D and 3D shapes, identifying and describing their properties. They will compare and sort common 2-D and 3-D shapes and everyday objects. They will also draw lines and shapes using a straight edge.	make totals using different combinations of coins. They will be able to give change. **Multiplication and division** The children will learn to count in 3s, and recall multiplication and division facts for 2, 5 and 10. They will half 1- and 2-digit numbers mentally. They will learn that division must be done in order. They will solve multiplication and division using arrays and repeated addition.	relation to length, shape, objects or quantity. They will begin to use equivalence and count in fractions up to 10 using a number line. **Measurement** The children will compare and order by length, capacity, mass using < > and =. They will choose and use appropriate standard units and tools to estimate and measure.	in grams, measure in kilograms, Four operations with mass , Compare volume and capacity , Measure in millilitres , Measure in litres. **Time** The children will tell and write the time to five minutes, including quarter past/to the hour. They will know the number of minutes in an hour and number of hours in a day. **Statistics** The children will make simple pictograms, tally charts, block diagrams and simple tables. They will be able to answer simple questions comparing them and stating the totals.	describe position, direction and movement including movement in a straight line. They will distinguish between rotation as a turn and in terms of a right angle for a quarter, half and three quarter turn. The children will order and arrange combinations of mathematical objects in patterns and sequences. **Consolidation**
Year three	**Place Value** The children will read, write and compare numbers up to 1000. They will count in multiples of 50 and 100 and find 10 or 100 more or less than a given number. **Addition and subtraction** The children will use their number bond knowledge and apply it to 3-digit numbers. They will add and subtract mentally a 3-digit number and ones, 3 digit number and tens, 3 digit number and hundreds.	**Multiplication and division** The children will count in multiples of 4, 8, 50 and 100. They will recall multiplication and division facts for 3-, 4- and 8-times table. They will estimate answers and use inverse to check. They will halve 2- and 3-digit numbers mentally. They will solve problems with missing numbers.	**Multiplication and division** The children will count in multiples of 4, 8, 50 and 100. They will recall multiplication and division facts for 3-, 4- and 8-times table. They will estimate answers and use inverse to check. They will halve 2- and 3-digit numbers mentally. They will solve problems with missing numbers. **Measure and Length** The children will measure, compare, add and subtract: lengths (m/cm/mm).	**Fractions** The children will be introduced to tenths. They will show equivalent fractions using diagrams. They will order unit fractions and fractions with the same denominator. They will learn to add and subtract fractions with the same denominators. **Measurement: Mass & Capacity** The children will measure, compare, add and subtract: mass (kg/g); volume/capacity (l/ml).	**Fractions** Children will count up and down in tenths, recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators and recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10. **Money** The children will add and subtract amounts of money to give change using £ and p. They will estimate and	**Time** They will use vocabulary such as a.m./p.m., afternoon, noon and midnight. They will tell the time using analogue clocks including those with Roman numerals, they will be using 12 and 24 hour clocks. They will learn the number of seconds in a minute, number of days in a month, year and leap year. **Geometry: Shapes** The children will learn to measure the perimeter of 2d shapes. **Statistics** The children will interpret and present data. They will solve 2

					compare measures including £ and p.	step problems involving bar charts, pictograms and tables.
Year four	**Place value** The children will learn to count in multiples of 25 and 1000. They will find 1000 more or less than a given number and read, write, and order numbers beyond 1000. **Addition and subtraction** The children will apply their number bond knowledge to 4-digit numbers. They will mentally find 10, 100 and 1000 more or less than a 4-digit number. They will complete column addition and subtraction with up to 4-digits. They will learn to double 4-digit numbers mentally.	**Measure- area** This is brand new learning for children. Opportunities for exploration of vocabulary is key. Children will cover larger surfaces and have a clear understanding of the concept of area before moving onto counting small squares **Multiplication and division** The children will learn to count in multiples of 6,7,9,11,12,25 and 1000. They will recall multiplication and division facts up to 12x12.	**Multiplication and division** Children will spend time exploring different representations of multiplication with no exchange before moving on. They will use manipulatives to support understanding and make links with repeated addition. Similarly, with division, children will first need to explore examples with no exchange or remainders, making links to the inverse. **Length and perimeter** Children will measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres	**Fractions** The children will recognise families of equivalent fractions e.g. 2/5,6/10,1/6. They will begin to simplify fractions. When adding and subtraction fractions with the same denominator the answer can be bigger than one whole. Problem solving questions will include money and measure. The children will fluently recall decimal/fraction equivalents of tenths. They will apply number bond knowledge to tenths. **Decimals A** They will learn to double numbers to 1 decimal place and recognise and write decimal equivalents of tenths or hundredths. They will explore and understand dividing by 10 and 100.	**Decimals B** They will apply number bond knowledge to tenths. They will learn to double numbers to 1 decimal place and recognise and write decimal equivalents of tenths or hundredths. They will explore and understand dividing by 10 and 100. **Money** The children will solve money problems involving fractions to 2 decimal places. They will convert time between analogue and digital 12- and 24-hour clocks. They will convert hours to minutes, minutes to seconds, years to months and weeks to days. **Time** Children will first recap telling the time to different degrees of accuracy from year 3 before moving on to new learning focused around converting between different units of time.	**Shapes** The children will describe positions on a 2-D grid as coordinates in the first quadrant. They will describe movements between positions as a translation of a given unit to the left/right and up/down. They will plot specified points and draw sides to complete a given polygon. **Statistics** The children will interpret and present continuous and discrete data using appropriate graphical methods. **Position and direction** 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.
Year five	**Place Value** The children will apply their number bond knowledge to decimals and whole numbers. They will add and subtract mentally and using column	**Multiplication and division** The children will know and use vocabulary of prime numbers and prime factors and composite numbers. They will establish when a number up to 100 is prime and recall prime numbers up to 19.	**Multiplication and division** The children will know and use vocabulary of prime numbers and prime factors and composite numbers. They will establish when a	**Decimals & percentages** The children will recognize % as parts of 100 and be able to write percentages as a fraction and as a decimal.	**Shapes** Children will Identify 3D shapes including cubes and other cuboids, from 2-D representations. They will use conventional markings for parallel lines and right	**Measurement** The children will understand and use equivalences between metric units and common imperial measures.

	addition, using numbers of more than 4-digits. **Addition and subtraction** The children will be introduced to negative numbers. They will count in 10s from a given number up to 1,000,000. They will read, write and order numbers up to 1,000,000. They will learn to round numbers up to a specified amount. They will learn to use Roman numerals.	They will multiply and divide whole numbers and decimals by 10, 100 and 1000. They will multiply numbers of up to 4 digits by 2 digits using a formal written method and divide 4 digits by a 1-digit number using short division and interpret remainders appropriately. They will learn about square and cube numbers. **Fractions A** The children will learn to make links between fractions and division including with remainders. They will recognise mixed number and improper fractions and convert from one form to another. They will multiply proper fractions by whole numbers with pictorial support.	number up to 100 is prime and recall prime numbers up to 19. They will multiply and divide whole numbers and decimals by 10, 100 and 1000. They will multiply numbers of up to 4 digits by 2 digits using a formal written method and divide 4 digits by a 1-digit number using short division and interpret remainders appropriately. They will learn about square and cube numbers **Fractions B** The children will learn to make links between fractions and division including with remainders. They will recognise mixed number and improper fractions and convert from one form to another. They will multiply proper fractions by whole numbers with pictorial support.	**Perimeter and area** Perimeter and area The children will identify different angles, measure them with protractors and begin calculating lengths and angles in shapes. **Statistics** The children solve comparison, sum and difference problems using information presented in a line graph.	angles and draw given angles, and measure them in degrees using a protractor (°). **Position and direction** The children will 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. **Decimals** The children will read, write and order numbers with up to three decimal places. **Negative numbers** Children will interpret negative numbers in context.	**Measurement volume** Children will estimate volume, using cubes and blocks, and capacity using water.
Year six	**Place Value** Children will represent, read, write, order and compare numbers up to ten million. Round numbers, make estimates and use this to solve problems in context. Solve multi-step problems involving addition and subtraction.	**Fractions B** They will multiply simple pairs of proper fractions writing the answer in the simplest form. They will divide proper fractions by whole numbers. They will be introduced to using symbols and letters to represent variables and unknowns.	**Ratio** Children will solve problems involving the relative sizes of two quantities where missing values can be found by using integer. They will solve problems involving similar shapes where the scale factor is known or can be found.	**Fractions, decimals and percentages** Children will be able to associate a fraction with division and calculate decimal fraction equivalents. They will calculate percentages of amounts Understand that per cent relates to "number of parts per hundred", and write	**Shape** Children will recognise, describe and build simple 3-D shapes, including making nets. They will illustrate and name parts of circles. They will draw 2-D shapes using given dimensions and angles and compare and classify geometric shapes	**Position and direction** The children will learn to describe position using all four quadrants. They will draw and translate shapes and reflect them in the axes. They will be introduced to the use of symbols and letters to represent variables and unknowns in familiar mathematical situations: missing co-ordinates

Addition, subtraction, multiplication and division Children will add and subtract integers. Identify, find and use: prime numbers, common factors, common multiples, square and cubed numbers. They will be use BIDMAS and estimation to check answers. They will multiply 4-digit numbers by2 digit and be use short and long division. They will solve multi-step problems using the four operations. **Fractions A** Children will be learning to add and subtract fractions with different denominators and mixed numbers. Children will compare fractions by both numerators and denominators. They will be introduced to using symbols and letters to represent variables and unknowns.	**Converting units** Children will 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. They will solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.	They will solve problems involving unequal sharing and grouping using knowledge of fractions and multiples **Algebra** Children will learn to express missing number problems algebraically, find pairs of numbers that satisfy number sentences involving two unknowns. They will enumerate all possibilities of combinations of two variables and use simple formulae for area and volume of shapes. **Decimals** Children will identify the value of each digit in numbers given to three decimal places and round decimals to any specified degree. They will solve problems which require answers to be rounded to specified degrees of accuracy. They will learn about rounding the decimal to three decimal places for simple fractions with recurring decimal.	percentages as a fraction with denominator 100 and as a decimal. They will be able to solve problems involving the calculation and the use of percentages for comparison. **Area, perimeter and volume** Children will calculate, estimate and compare volume of shapes using standard units, cubic metres and extending to other units such as mm3 and km. They will solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places. They will recognise when it is possible to use formulae for area and volume of shapes and be introduced to the use of symbols and letters to represent variables and unknowns in familiar mathematical situations. **Statistics** The children will interpret and construct pie charts and line graphs and use them to solve problems. They will calculate the mean as an average and solve problems involving the calculation of percentages	based on their properties and sizes. They will find unknown angles in any triangles, quadrilaterals, and regular polygons. They will draw shapes and nets accurately, using measuring tools and conventional markings and labels for lines and angles	**Themed projects, problem solving and consolidation learning**