Progression in Maths

Outlined below is the White Rose Maths progression in maths. This should be used alongside the Calculation and Maths Policy.

	EYFS	Y1	Y2	Y3	Y4	Y5	Y6
Place Value							
Counting	• Identify when a set can be subitised and when counting is needed. • Continue to develop their counting skills, counting larger sets as well as counting actions and sounds. • Join in with verbal counts beyond 20, hearing the repeated pattern within the counting numbers. • Continue to develop their understanding of the counting	• Count to and across 100, forwards and backwards, beginning with 0 or 1, from any given number • Count numbers to 100 in numerals; count in multiples of 2s, 5s and 10s.	• Count in steps of 2, 3 and 5 from 0 and in 10s from any number, forward and backward	• Count from 0 in multiples of 4,5,50 and 100; find 10 or 100 more or less than a given number	• Count in multiples of 6,7,9,25 and 1000 • Count backwards through zero to include negative numbers	• Count forwards or backwards in steps of powers of 10 for any given number up to 1000000 • Count forwards and backwards with positive and negative whole numbers including through zero.	

	sequence and link cardinality and ordinality through the 'staircase' pattern • Continue to identify when sets can be subitised and when counting is necessary. • Develop counting skills and knowledge, including: that the last number in the count tells us 'how many' (cardinality); to be accurate in counting, each thing must be counted once and once only and in any order; the need for 1:1 correspondence ; understanding that anything can be counted, including actions and sounds						

Represent	• Make different arrangements of numbers within 5 and talk about what they can see, to develop their conceptual subitising skills. • Spot smaller numbers 'hiding' inside larger numbers. • Connect quantities and numbers to finger patterns and explore different ways of representing numbers on their fingers.	• Identify and represent numbers using objects and pictorial representations • Read and write numbers to 100 in numerals • Read and write numbers from 1 to 20 in numerals and words	• Read and write numbers to at least 100 in numerals and words • Identify, represent and estimate numbers using different representations, including the number line	• Identify, represent and estimate numbers using different representations • Read and write numbers up to 1000 in numerals and in words	• Identify, represent and estimate numbers using different representations • read Roman numerals to 100 (I to C) and know that the numeral system changed to include the concept of zero and place value	• Read, write (order and compare) numbers to at least 1000000 and determine the value of each digit • Read Roman numerals to 1000 (M) and recognise years written in Roman numerals	• Read, write (order and compare) numbers up to 10,000,000 and determine the value of each digit
Use PV and Compare	• Subitise different arrangements, both unstructured and structured. • Continue to develop their subitising skills for numbers	• Give a number, identify one more and one less	• Recognise the place value of each digit in a two-digit number (tens and ones) • Compare and order numbers from 0 up to 100; use <,> and = signs	• Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) • Compare and order numbers up to 1000	• Find 1000 more or less than a given number • Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens and ones)	• (read, write) order and compare numbers up to 1,000,000 and determine the value of each digit	• (read, write) order and compare numbers up to 10,000,000 and determine the value of each digit

	within and beyond 5, and increasingly connect quantities to numerals. • Hear and join in with the counting sequence, and connect this to the 'staircase' pattern of the counting numbers, seeing that each number is made of one more than the previous number. • Compare sets of objects by matching. • Explore the structure of the numbers 6 and 7 as '5 and a bit' and connect this to finger patterns and the				• Order and compare numbers beyond 1000		

	Hungarian number frame. • Order numbers and play track games. • Continue to develop a sense of magnitude, e.g. knowing that 8 is quite a lot more than 2, but 4 is only a little bit more than 2. • Focus on equal and unequal groups when comparing numbers. • Compare quantities and numbers, including sets of objects which have different attributes						
Problems and Rounding	• Sort odd and even numbers according to their 'shape'		• Use place value and number facts to solve problems	• Solve number problems and practical problems	• Round any number to the nearest 10, 100 or 1000	• Interpret negative numbers in context	• Round any whole number to a required degree of accuracy

	• Develop conceptual subitising skills including when using a rekenrek			involving these ideas	• Solve number and practical problems that involve all of the above and with increasingly large positive numbers	• Round any number up to 1,000,000 to the nearest 10, 100, 1000, 10 000 and 100 000 • Solve number problems and practical problems that involve all of the above	• Use negative numbers in context and calculate intervals across zero • Solve number and practical problems that involve all of the above
Addition and Subtraction							
Recall, represent, use	• Explore a range of representations	• Read, write and interpret mathematical statements	• Recall and use addition and subtraction facts to 20 fluently and	• Estimate the answer to a calculation and use inverse	• Estimate and use inverse operations to	• Use rounding to check answers to calculations and determine,	

	of numbers, including the 10-frame, and see how doubles can be arranged in a 10-frame. •	involving addition, subtraction and equals signs • Represent and use number bonds and related subtraction facts within 20	derive and use related facts up to 100 • Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot • Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	operations to check answers	check answers to a calculation	in the context of a problem, levels of accuracy	
Calculations	• begin to identify missing parts for numbers within 5.	• Add and subtract one-digit and two-digit numbers to 20 including zero	• Add and subtract numbers using concrete objects, pictorial representations	• Add and subtract numbers mentally including:	• Add and subtract whole numbers up to four digits, including using formal written	• Add and subtract whole numbers with more than four digits, including using formal	• Perform mental calculations, including with mixed operations

	• Begin to generalise about 'one more than' and 'one less than' numbers within 10		and mentally, including: - Two-digit number and ones - A two-digit number and tens - Two two-digit numbers - Adding three one-digit numbers	- A three-digit number and ones - A three-digit number and tens - A three-digit number and hundreds • Add and subtract numbers with up to three digits using formal written methods of column addition and subtraction	methods (column) where appropriate	written methods (column) • Add and subtract numbers mentally with increasingly large numbers	and large numbers • Use their knowledge of the order of operations to carry out calculations involving the four operations
Solving Problems		• Solve one-step problems that involve addition and subtraction, using concrete	• Solve addition and subtraction problems: - Using concrete objects &	• Solve problems including missing number problems, using number facts,	• Solve addition and subtraction two-step problems in contexts,	• Solve addition and subtraction multi-step problems in contexts,	• Solve addition and subtraction multi-step problems in

		objects and pictorial representations and missing number problems such as 7 = - 9	pictorial representations, including those involving numbers, quantities and measure - Applying their knowledge of mental and written methods	place value and more complex addition and subtraction	deciding which operations and methods to use and why	deciding which operations and methods to use and why	contexts deciding which operations and methods to use and why
Multiplication and Division							
Recall, represent and use	• Understand that two equal groups can be called a 'double'		• Recall and use multiplication and division facts for 2, 5 and 10	• Recall and use multiplication and division facts for 3,4	• Recall multiplication and division	• Identify multiples and factors, including	• Identify common factors, common

	and connect this to finger patterns •		multiplication tables, including recognising odd and even numbers • Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.	and 8 multiplication tables	facts up to 12 x 12 • Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together 3 numbers • Recognise and use factor pairs and commutativity in mental calculations.	finding all factor pairs of a number and common factors of two numbers • Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) number • Establish whether a number up to 100 is a prime and recall prime numbers up to 19 • Recognise and use square numbers and cube numbers and the notation for squares (^{2}) and cubed (^{3})	multiples and prime numbers • Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy
Calculations			• Calculate mathematical statements for multiplication and division within	• Write and calculate mathematical statements for multiplication	• Multiply two-digit and three-digit numbers by a one digit number using a	• Multiply numbers up to 4 digits by a one or two-digit number	• Multiply multi-digit numbers up to 4 digits by a two-digit

			the multiplication tables and write them using the multiplication, division and equals signs.	and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.	formal written layout	using a formal written method, including long multiplication for two-digit numbers • Multiply and divide numbers mentally, drawing upon known facts • Divide numbers up to 4 digits by a one-digit number using the formal method of short division and interpret remainders for the context. • Multiply and divide whole numbers and those involving decimals by 10,100 and 1000	whole number using the formal method of long multiplication • Divide numbers up to 4 digits by a two-digit number using the formal method of long division, and interpret remainders as whole number remainders, fractions or by rounding, as appropriate. • Divide numbers up to 4 digits by a two-digit number using the formal method of short division interpreting remainders • Perform mental calculations, including with mixed

							operations and large numbers.
Solving Problems	•	• Solve one-step problems involving multiplcation and division by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher	• Solve problems including missing number problems, involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in context	• Solve problems including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.	• 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	• Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes • Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	• Solve problems involving the four operations
Combined Operations						• Solve problems involving addition, subtraction, multiplication and division and	• Use their knowledge of the order of operations to carry out calculations

						a combination of these, including understanding the meaning of the equals sign.	involving the four operations
Fractions, Decimals and Percentages							
Fractions: Recognise and Write	• Begin to develop the language of 'whole' when talking about	• Recognise, find and name a half as one of two equal parts of	• Recognise, find, name and write fractions $\frac{1}{3}$ $\frac{1}{4}$ $\frac{2}{4}$ and $\frac{3}{4}$ of a length,	• Count up and down in tenths; recognise that tenths arise from dividing an	• Count up and down in hundredths; recognise that hundredths	• Identify, name and equivalent fractions of a given fractions, represented	

	objects which have parts.	an object, shape or quantity • Recognise, find and name a quarter as pne of four equal parts of an object, shape or quantity	shape, set of objects or quantity	object into 10 equal parts and in dividing one-digit numbers or quantities by 10 • Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators • Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators	arise when dividing an object by one hundred and dividing tenths by ten.	visually, including tenths and hundredths • Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number ($\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$)	
Fractions: Compare		•	• Recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$	• Recognise and show using diagrams, equivalent fractions with small denominators	• Recognise and show, using diagrams, families of common equivalent fractions	• Compare and order fractions whose denominations are all multiples of the same number	• Use common factors to simplify fractions; use common multiples to express

				• Compare and order unit fractions and fractions with the same denominator			fractions in the same denomination • Compare and order fractions, including fractions > 1
Fractions: Calculations			• Write simple fractions for example $\frac{1}{2}$ of $6 = 3$	• Add and subtract fractions with the same denominator within one whole ($\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$)	• Add and subtract fractions with the same denominator	• Add and subtract fractions with the same denominator and denominators that are multiples of the same number • Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.	• Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions • Multiply simple pairs of proper fractions, writing the answer in its simplest form ($\frac{1}{4}$ x $\frac{1}{2} = \frac{1}{8}$) • Divide proper fractions by whole numbers ($\frac{1}{3} \div 2 = \frac{1}{6}$)
Fractions: Solve Problems				• Solve problems that involve all of the above	• Solve problems involving increasingly		

					harder fractions to calculate quantities and fractions to divide quantities, including non-unit fractions where the answer is a whole number		
Decimals: Recognise and Write					• Recognise and write decimal equivalents of any number of tenths or hundredths • Recognise and write decimal equivalents to $\frac{1}{4}, \frac{1}{2}, \frac{3}{4}$	• Read and write decimal numbers as fractions (e.g. 0.71 = $\frac{71}{100}$) • Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	• Identify the value of each digit in numbers given to three decimal places
Decimals: Compare					• Round decimals with one d.p. to the nearest whole number • Compare numbers with the same number of	• Round decimals with two d.p. to the nearest whole number and to one d.p. • Read, write, order and compare	

					decimal places up to two decimal places	numbers with up to three decimal places	
Decimals: Calculations and Problems					• 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.	• Solve problems involving number up to three decimal places	• Multiply and divide numbers by 10,100 and 1000 giving answers up to 3 d.p. • 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
Fractions, decimals and percentages					• Solve simple measure and money problems involving fractions and	• Recognise the percent symbol (%) and understand that per cent relates to	• Associate a fraction with division and calculate decimal fraction

					decimals to two decimal places.	'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 $\frac{1}{2}, \frac{1}{4}, \frac{1}{5}, \frac{2}{5}, \frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25	equivalents (e.g. 0.375) for a simple fraction (e.g. $\frac{3}{8}$) • Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts
Ratio and Proportion							
Solving problems							• 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 (e.g. of measures and such as, 15% of 360) and use these percentages for comparison. • Solve problems involving similar shapes where scale factor is known or can be found • Solve Problems involving unequal sharing and grouping using knowledge of fractions and multiples.

Algebra							
Note – although algebraic notation is not introduced until Y6, algebraic thinking starts much earlier as exemplified by the 'missing number' objectives from Y1/2/4		• Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = □ - 9	• Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems	• Solve problems, including missing number problems			• Use simple formulae • 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
Using Measures	• **Compare Size, Mass and Capacity** – The children learn that objects	• Compare, describe and solve practical problems for:	• Choose and use appropriate standard units to estimate and measure	• Measure, compare , add and subtract: lengths (m/cm/mm),	• Convert between different units of measure	• Convert between different units of metric measure (e.g.	• Solve problems involving the calculation and

	can be compared and ordered to their size. The children will use language such as big and little, large and small to describe a range of objects. More specific language such as tall, long and short will also be introduced. Children will compare and order objects and use vocabulary to explain what they notice. • **Compare Mass (2)** – The children will be encouraged to make direct comparisons holding items to estimate which feels the heaviest and then use the balance scales to check. They	- Length and height e.g. long/short, longer/shorter, tall/short, double/half - Mass/weight e.g. heavy/light, heavier than, lighter than - Capcatiy and volume e.g. full/empty, more than, less than, haf, half full, quarter - Time e.g. quicker/slower, earlier/later • Measure and begin to record the following: - Lengths and heights - Mass/weight - Capcatiy and volume - Time (hours, munutes, seconds)	length/height in any direction (m/cm), mass (kg/g), temperature (°C), capacity (L/ml) to the nearest approximate unit, using rulers, scales, thermometers and measuring vessels • Compare and order lengths, mass, volume/capacity and record the results using >, < and =	mass (kg/g), volume/capacity (l/ml)	(e.g. km to m, hour to minute) • Estimate, compare and calculate different measures	km and m, g and KG, l and ml) • Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints • Use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation, including scaling	conversion of units of measure, using decimal notation up to three decimal places • 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 up to 3 d.p. • Convert between miles and KM.

	will use the language of heavy, heavier than, heaviest, light, lighter than, lightest to compare items. • **Compare Capacity (2)** – The children will build on their understanding of full and empty. They will explore capacity using materials such as water, sand, rice and beads. They will make direct comparisons by pouring one container into another. • **Length and Height** – When making direct comparisons, the children will begin to use more specific mathematical vocabulary relating to length (longer,						

	shorter), height (taller, shorter), and breadth (wider, narrower).						
Money	•	• Recognise and know the value of different denominations of coins and notes	• Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value • Find different combinations of coins that equal the same amounts of money • Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	• Add and subtract amounts of money to give change, using both £ and p in practical contexts	• Estimate, compare and calculate different measures, including money in pounds and pence	• Use all four operations to solve problems involving measure e.g. money	

Time	• Children will talk about night and day and order key events in their daily routines. They use language to describe when events happen e.g. day, night morning, afternoon, before, after, today, tomorrow. Children will begin to measure time in simple ways e.g. counting the number of sleeps to an important event or using timers to measure durations of events. • The children will continue to order and	• Sequence events in chronological order using langauge e.g. before and after, first, next, today, yesterday, tomorrow, morning, afternoon and evening. • Recognise and use language relating to dates, including days of the week, weeks, motnhs and years • Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times	• Compare and sequence intervals of time • Tell and write the time of five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times • Know the number of minutes in an hour and the number of hours in a day	• Tell and write the time from an analogue clock including using Roman numerals from I to XII and 12-hour and 24 hour clocks • Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight • Know the number of seconds in a minute and the number of days	• Read, write and convert time between analogue and digital12 and 24 hour clocks • Solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days	• Solve problems involving converting between units of time	• Use, read, write and convert between standard units, converting measurements of time from a smaller unit of measure to a larger unit and vice versa

	sequence important times in their day and use language such as now, before, later, soon, after, then and next to describe when events happen. They will begin to recognise that regular events happen on the same day each week and use the vocabulary 'yesterday', 'today', and 'tomorrow' to describe when events happen. They will be able to describe significant events in their lives and talk about events they are looking forward to.			in each month, year and leap year • Compare durations of event e.g. to calculate the time taken by particular tasks or events			
Perimeter, area and volume				• Measure the perimeter of simple 2d shapes	• Measure and calculate the perimeter of a rectilinear	• Measure and calculate the perimeter of composite	• Recognise that shapes with the same areas can

					figure (including squares) in cm and m • Find the area of rectilinear shapes by counting squares	rectilinear shapes in cm and m • Calculate and compare the area of rectangles (including squares) and including using standard units, square centimetres and square metres and estimate the area of irregular shapes • Estimate volume (e.g. using 1cm³ blocks to build cuboids) and capacity (e.g. using water)	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 cm³ and m³ and extending to other units e.g. mm³ and km³
Geometry							

2D shapes	• **Circles and Triangles** – Children learn that circles have once curved side and triangles have 3 straight sides. They begin to recognise these shapes on everyday items in the classroom and outside. • **Shapes with 4 sides** – Children learn that squares and rectangles have 4 straight sides and 4 corners. They begin to recognise these shapes on everyday items in the classroom and outside. • **Spatial Reasoning (2) Compose and Decompose** – The children will understand that shapes be combined and separated to make new shapes. They will have opportunities to fit shapes together and break shapes apart and to notice	• Recognise and name common 2D shapes e,g, rectangles, squares, circles and trianges	• Identify and describe the properties of 2D shapes including the number of sides and line symmetry in a vertical line • Identify 2D shapes on the surface of a 3D shape e.g. a circle on a cylinder • Compare and sort common 2D shapes and everyday objects	• Draw 2D shapes	• Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes • Identify lines of symmetry in 2D shapes presented in different orientations.	• Distinguish between regular and irregular polygons based on reasoning about equal sides and angles • Use the properties of rectangles to deduce related facts and find missing lengths and angles	• Draw 2D shapes using given dimensions and angles • Compare and classify geometric shapes based on their properties and sizes • Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
		• Recognise and name common 3D shapes e.g. cuboids, cubes, pyramids and spheres.	• Recognise and name common 3D shapes e.g. cuboids, cubes, pyramids and spheres	• Make 3D shapes using modelling materials • Recognise 3D shapes in		• Identify 3D shapes including cubes and other cuboids, from	• Recognise, describe and build simple 3D shapes including making nets

3D shapes	the new shapes they have created. • **Exploring Pattern** – children copy, continue and create their own simple repeating patterns. The children will be given the opportunity to explore AB patterns in a range of contexts including shapes, colours, sizes, actions and sounds • **Pattern (2)** – The children will build on earlier AB pattern work by introducing more complex patterns. The children explore patterns which use items more than once in each repeat for example ABB, AAB, AABB, AABBB.		• Compare and sort common 3D shapes and everyday objects	different orientations and describe them		2D representations	

	•**3D – Shape** – Children will naturally explore and manipulate 3-D shapes through their block play and modelling. They will consider which shapes stack and which shapes roll and why that is. They will be given opportunities to build using a variety of shapes and to construct 3-D shapes in different ways. The children will be introduced to the names of the shapes and be given opportunities to explore similarities and differences between them as they play and sort them according to what they notice.						
Angles and lines				• Recognise angles as a property of shape or a	• Identify acute and obtuse angles and compare and order angles up	• Know angles are measured in degrees: estimate and compare acute,	• Find unknown angles in any triangles, quadrilaterals

				description of turn • Identify right angles, recognise that two right angles make a half-turn, three make a three quarter turn and four make a complete turn; identify whether areas are greater or less than a right angle • Identify horizontal and vertical lines and pairs of perpendicular and parallel lines	to two right angles by size • Identify lines of symmetry in 2D shapes presented in different orientations • Complete a simple symmetric figure with respect to a specific line of symmetry	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°	and regular polygons • Recognise angles where they meet at a point, are on a straight line or are vertically opposite, and find missing angles
Position and direction	• **Positional Language** – Children will hear and begin to use positional	• Describe position, direction and movemnt,	• Order and arrange combinations of mathematical		• Describe positions on a 2D grid as coordinates in	• Identify, describe and represent the position of a	• Describe positions on the full coordinate

	language to describe how items are positioned in relation to other items. They will build life-sized journeys outdoors and travel through them, exploring them from different perspectives. Children begin to represent real places they have visited or places in stories with their models, drawings or maps. • **Spatial Reasoning (1) Match, Rotate, manipulate** – The children will have regular opportunities to complete jigsaws and shape puzzles. They will begin to explain why they chose a particular shape and why a different shape wouldn't fit. The children will have	including whole, half, quareter and three quarter turns	objects in patterns and sequences • Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise)		the first quadrant • Describe movements between positions as translations of a given unit to the left/right and up/down • Plot specified points and draw sides to complete a given polygon	shape following a reflection or translation, using the appropriate language, and know that the shape has not changed	grid (all four quadrants) • Draw and translate simple shapes on the coordinate plane and reflect them in the axes

	opportunities to match arrangement of shapes, prompting them to use positional language to describe where the shapes are in relation to one another. • **Spatial Reasoning (3) Visualise and Build** - The children will begin to understand that places and models can be replicated and need to experience looking at these from different positions. Children will have opportunities to replicate simple constructions, models, real places and places in stories. They will use positional language to describe where objects are in relation to other items.						

	• **Spatial Reasoning (4)** Mapping - The children understand that we can make maps and plans to represent places and use these to see where things are in relation to other things. A range of maps and plans will be provided for the children to look at and discuss. What can they see on the map? Where would we put the carpet area on a map of our classroom? Children will have opportunities to create their own maps to represent the models they build, familiar places and places in stories.						
Statistics							
Present and interpret	•		• Interpret and construct simple pictograms, tally charts, block diagrams and simple tables	• Interpret and present data using bar charts, pictograms and tables	• Interpret and present discrete and continuous data using appropriate graphical methods,	• Complete, read and interpret information in tables, including timetables	• Interpret and construct pie charts and line graphs and use these to solve problems

					including bar charts and time graphs		
Solve Problems	•		• Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity • Ask and answer questions about totalling and comparing categorical data	• Solve one-step and two-step questions e.g. how many more? and how many fewer? Using information presented in scaled bar charts and pictograms and tables	• 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	• Calculate and interpret the mean as n average