Crawley Ridge Infant School – Maths Progression

(Sequence and Structure)

	Nursery	Year R	Year 1	Year 2
Number – Number and Place Value	• Develop fast recognition of up to 3 objects, without having to count them individually ('subitising'). • Recite numbers past 5. • Say one number for each item in order: 1,2,3,4,5. • Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). • Show 'finger numbers' up to 5. • Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. • Experiment with their own symbols and marks as well as numerals.	• Count objects, actions and sounds • Subitise. • Link the number symbol (numeral) with its cardinal number value. • Count beyond ten. • Compare numbers. • Understand the 'one more than/one less than' relationship between consecutive numbers. • Have a deep understanding of numbers to 10, including the composition of each number. (ELG) • Subitise (recognise quantities without counting) up to 5. (ELG) • Verbally count beyond 20, recognising the pattern of the counting system. (ELG) • Compare quantities up to 10 in different contexts, recognising when one	• Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number • Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens • Given a number, identify one more and one less • Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least • Read and write numbers from 1 to 20 in numerals and words.	• Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward • Recognise the place value of each digit in a two-digit number (tens, ones) • Identify, represent and estimate numbers using different representations, including the number line • Compare and order numbers from 0 up to 100; use and <, >, = signs • Read and write numbers to at least 100 in numerals and in words • Use place value and number facts to solve problems

	• Compare quantities using language: 'more than', 'fewer than'.	quantity is greater than, less than or the same as the other quantity. (ELG) • Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally. (ELG)		
Number – Addition and Subtraction	• Solve real world mathematical problems with numbers up to 5.	• Explore the composition of numbers to 10. • Automatically recall number bonds for numbers 0–5 and some to 10. • Have a deep understanding of numbers to 10, including the composition of each number. (ELG) • Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. (ELG)	• Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs • Represent and use number bonds and related subtraction facts within 20 • Add and subtract one-digit and two-digit numbers to 20, including zero • Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number	• Solve problems with addition and subtraction: - Using concrete objects and pictorial representations, including those involving numbers, quantities and measures - Applying their increasing knowledge of mental and written methods • Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 • Add and subtract numbers using concrete

		• Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally. (ELG)	problems such as 7 = __ – 9.	objects, pictorial representations, and mentally, including: ♣ - A two-digit number and ones - A two-digit number and tens - Two two-digit numbers - Adding three one-digit numbers • 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.
Number – Multiplication and Division	-	• Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally. (ELG)	• Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher	• Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers • Calculate mathematical statements for multiplication and

				division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs • Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot • Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.
Number - Fractions			• Recognise, find and name a half as one of two equal parts of an object, shape or quantity • Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.	• Recognise, find, name and write fractions 1/3 , 1/4 , 2/4 and 3/4 of a length, shape, set of objects or quantity • Write simple fractions for example, 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2

Measurement	• Make comparisons between objects relating to size, length, weight and capacity • Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...	• Compare length, weight and capacity.	• Compare, describe and solve practical problems for: - lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] - mass/weight [for example, heavy/light, heavier than, lighter than] - capacity and volume [for example, full/empty, more than, less than, half, half full, quarter] - time [for example, quicker, slower, earlier, later] • Measure and begin to record the following: - lengths and heights - mass/weight - capacity and volume - time (hours, minutes, seconds) • Recognise and know the value of different denominations of coins and notes • Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday,	• Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°c); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels • Compare and order lengths, mass, volume/capacity and record the results using >, < and = • 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 • Compare and sequence intervals of time

			tomorrow, morning, afternoon and evening] • Recognise and use language relating to dates, including days of the week, weeks, months 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.	• Tell and write the time to 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.
Geometry – Properties of shapes	• Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'. • Select shapes appropriately: flat surfaces for building, a triangular prism for a roof, etc. • Combine shapes to make new ones – an arch, a bigger triangle, etc.	• Select, rotate and manipulate shapes to develop spatial reasoning skills. • Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.	• Recognise and name common 2-D and 3-D shapes, including: - 2-D shapes [for example, rectangles (including squares), circles and triangles] - 3-D shapes [for example, cuboids (including cubes), pyramids and spheres].	• Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line • Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces • Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] • Compare and sort common 2-D and 3-D shapes and everyday objects.
Geometry – Position and Direction	• Talk about and identify the patterns around them. For example: stripes on clothes,	• Continue, copy and create repeating patterns.	• Describe position, direction and movement, including whole, half,	• Order and arrange combinations of mathematical objects in patterns and sequences

	designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs', etc. • Extend and create ABAB patterns – stick, leaf, stick, leaf. • Notice and correct an error in a repeating pattern. • Understand position through words alone – for example, "The bag is under the table," – with no pointing. • Describe a familiar route. • Discuss routes and locations, using words like 'in front of' and 'behind'.		quarter and three quarter turns.	• 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).
Statistics				• Interpret and construct simple pictograms, tally charts, block diagrams and simple tables • 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.