Number – number and place value

Lower Foundation	Upper Foundation	Year 1	Year 2
Uses some number names and number language spontaneously.	Recognise some numerals of personal significance.		
Uses some number names accurately in play.			
Recites numbers in order to 10.			
Knows that numbers identify how many objects are in a set.	Counts up to three or four objects by saying one number name for each item.	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.	Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward.
	Counts actions or objects which cannot be moved.		
	Counts objects to 10, and beginning to count beyond 10.		
	Counts out up to six objects from a larger group.		
	Counts an irregular arrangement of up to ten objects.		
	Estimates how many objects they can see and checks by counting them.		
Shows curiosity about numbers by offering comments or asking questions.			
Realises not only objects, but anything can be counted, including steps, claps or jumps.	ELG: Children count reliably with numbers from one to 20.	Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens.	Recognise the place value of each digit in a two-digit number (tens, ones).
	Says the number that is one more than a given number.	Given a number, identify one more and one less.	Identify, represent and estimate numbers using different representations, including the number line.
	Finds one more or one less from a group of up to five objects, then ten objects.		
	ELG: Children can say which number is one more or one less than a given number.		

Compares two groups of objects, saying when they have the same number.	Uses the language of 'more' and 'fewer' to compare two sets of objects.	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.	Compare and order numbers from 0 up to 100; use and = signs.
Shows an interest in numerals in the environment.	Recognises numerals 1 to 5.	Read and write numbers from 1 to 20 in numerals and words.	Read and write numbers to at least 100 in numerals and in words.
Shows an interest in representing numbers.	Selects the correct numeral to represent 1 to 5, then 1 to 10 objects.		
Beginning to represent numbers using fingers, marks on paper or pictures.	Records, using marks that they can interpret and explain.		
Sometimes matches numeral and quantity correctly.			
	Begins to identify own mathematical problems based on own interests and fascinations.		Use place value and number facts to solve problems.
	ELG: Children can place numbers to 20 in order.		

Number – addition and subtraction

Lower Foundation	Upper Foundation	Year 1	Year 2
Shows an interest in number problems.	In practical activities and discussion, beginning to use the vocabulary involved in adding and subtracting.	Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs.	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.
		Represent and use number bonds and related subtraction facts within 20.	Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.

Separates a group of three or four objects in different ways beginning to recognise that the total is still the same.	Finds the total number of items in two groups by counting all of them.
	
	ELG: Using quantities and objects children can add and subtract two single-digit numbers and count on or back to find the answer.
		Add and subtract one-digit and two-digit numbers to 20, including zero.	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:
			    a two-digit number and ones
			    a two-digit number and tens
			    two two-digit numbers

			Add 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.
		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.

Number – multiplication and division

Lower Foundation	Upper Foundation	Year 1	Year 2
			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.
	ELG: Solve problems, including doubling, halving and sharing.	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.	Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.

Number – fractions

Lower Foundation	Upper Foundation	Year 1	Year 2
		Recognise, find and name a half as one of two equal parts of an object, shape or quantity	Recognise, find, name and write fractions $\frac{1}{3}$ $\frac{1}{2}$ $\frac{1}{4}$ $\frac{2}{4}$ $\frac{3}{4}$ of a length, shape, set of objects or quantity
		Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.	Write simple fractions, for example $\frac{1}{2}$ of 6 = 3, and recognise the equivalence of $\frac{1}{2}$ and $\frac{2}{4}$

Number – measurement

Lower Foundation	Upper Foundation	Year 1	Year 2

	Orders two items by weight or capacity.
	
	ELG: Children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems.
		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]
			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

	Orders two or three items by length or height.	Measure and begin to record the following:
		    lengths and heights
		    mass/weight
		    capacity and volume
		    time (hours, minutes, seconds)
			Compare and order lengths, mass, volume/capacity and record the results using >, < and =

	Beginning to use everyday language related to 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.
	Orders and sequences familiar events.	Sequence events in chronological order using mathematical language. [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]	Find different combinations of coins that equal the same amounts of money.
	Uses everyday language related to time.	Recognise and use language relating to dates, including days of the week, weeks, months and years.	Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change
	Measures short periods of time in simple ways.	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 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 shape

Lower Foundation	Upper Foundation	Year 1	Year 2
Shows an interest in shape and space by playing with shapes or making arrangements with objects.	Beginning to use mathematical names for 'solid' 3D shapes and 'flat' 2D shapes, and mathematical terms to describe shapes.	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.
	Selects a particular named shape.		
Shows interest in shapes in the environment.			Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces.
Shows awareness of similarities of shapes in the environment.			
Shows interest in shape by sustained construction activity or by talking about shapes or arrangements.	Uses familiar objects and common shapes to create and recreate patterns and build models.		Identify 2-D shapes on the surface of 3-D shapes. [for example, a circle on a cylinder and a triangle on a pyramid]
Beginning to talk about the shapes of everyday objects, e.g. 'round' and 'tall'.	ELG: Children can recognise, create and describe patterns.		Compare and sort common 2-D and 3-D shapes and everyday objects.
Uses shapes appropriately for tasks.	ELG: Children explore characteristics of everyday objects and shapes and use mathematical language to describe them.		

Geometry – position and direction

Lower Foundation	Upper Foundation	Year 1	Year 2
Uses positional language.	Can describe their relative position such as 'behind' or 'next to'.	Describe position, direction and movement, including whole, half, quarter and three quarter turns.	Order and arrange combinations of mathematical 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 anticlockwise).

Statistics

Lower Foundation	Upper Foundation	Year 1	Year 2
			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.