Year 2 Maths	highlighted objectives → DfE Ready-to-Progress Criteria		
Place Value	**Key Vocabulary** tens, ones, place value grid, partition, more, fewer, greatest, smallest		
End of Year Objective	**'I know' statements**	**'I can' statements**	**Suggested manipulatives**
To read and write numbers to 100 using numerals or words, recognising the place value of each digit	• I know the value of each digit in a given number • I know that ten ones are equivalent to one ten • I know that zero is sometimes used as a placeholder	• I can represent numbers to 100 in different ways • I can write numbers to 100 using words, using appropriate spelling	Straw bundles Tens frames Base 10/place value grids (PV counters **should not** be used until children are secure with place value/base 10)
To partition two-digit numbers into tens and ones, including flexible partitioning	• I know that the first digit in a two-digit number represents the tens • I know that the second digit in a two-digit number represents the ones • I know that partition means 'to break up'	• I can group objects into 10s • I can partition numbers to 100 using standard partitioning (10s, 1s) • I can partition numbers to 100 using non-standard partitioning	Straw bundles Base 10 (PV counters **should not** be used until children are secure with place value/base 10) Tens frames Part whole models
To count in 10s from any number, forwards and backwards	• I know that multiples of 10 always end in 0 • I know that the tens digit will change when counting on/back in tens, but the ones digit will remain the same	• I can recognise if a number is a multiple of 10 • I can count on in multiples of 10 • I can find ten more or ten less than a given number	Base 10 Numicon
To place numbers to 100 on a number line, estimating where appropriate	• I know that gaps on a numberline are called intervals • I know that not all number lines use the same intervals • I know that number lines can have different start and end points • I know that estimating means having a sensible guess	• I can count in 1s and in 10s • I can label the intervals on a numberline • I can identify values on a numberline and mark given values • I can identify the intervals a given number will fall between (e.g. 34 is between 30 and 40) • I can estimate the position of numbers on a number line	Blank numberlines
To compare and order numbers to 100	• I know that < means less than • I know that > means greater than • I know that = means equal to	• I can compare two numbers by looking first at the 10s, then the 1s • I can order three or more two-digit numbers • I can use mathematical vocabulary to order and compare (most, fewer, least, greater)	Base 10 Numicon Split pin equality symbols

Addition and Subtraction	Key Vocabulary		
	tens, ones, add, subtract, difference, sum, 10 more, 10 less, fact family, number sentence, total, bar model, represent, number bonds, multiples, plus, minus		
End of Year Objective	**'I know' statements**	**'I can' statements**	**Suggested manipulatives**
To recall and use number facts to twenty fluently	• I know number bonds to twenty • I know that a fact family is a collection of calculations that describe the same relationship between three numbers	• I can recall number bonds to twenty • I can identify other calculations in a fact family for a given calculation	Tens frames Numicon (Manipulatives can be used initially but children do need to be fluent – this will reduce cognitive load for more complex addition and subtraction)
To use known facts to derive and use related number facts to 100	• I know which digits will change when adding 1s or 10s to a number • I know that addition is commutative, meaning it can be done in any order • I know that subtraction is the inverse of addition	• I can derive facts using number bonds (e.g. 10-8=2, 100-80=20) • I can make number bonds to 100 using multiples of ten	Base 10
To add ones or tens to a 2-digit number	• I know we can add ones by counting on • I know that the 'make 10 and then' strategy can be more efficient when crossing the tens boundary • I know which digits will change when adding 1s or 10s to a number	• I can identify what is needed to add to the next 10 (e.g. 26 + ___ = 30) • I can add ones to a two-digit number • I can add tens to a two-digit number	Number lines
To subtract ones or tens from a 2-digit number	• I know that we can subtract ones by counting back • I know which digits will change when subtracting 1s or 10s from a number	• I can subtract ones from a multiple of ten • I can subtract ones from a two-digit number • I can subtract tens from a two-digit number	Number lines
To add two 2-digit numbers together	• I know to add the ones first and then the tens	• I can add 2-digit numbers using an efficient strategy • I can exchange where appropriate • I can set out my calculations in an organised and clear way	Base 10 Number lines

To subtract a 2-digit number from another 2-digit number	• I know to subtract the ones first and then the tens	• I can subtract 2-digit numbers using an efficient strategy • I can exchange where appropriate • I can set out my calculations in an organised and clear way	Base 10 Number lines
To add three 1-digit numbers together	• I know that, to add three numbers, we need to add two numbers first and then add the third • I know that addition is commutative, meaning it can be done in any order	• I can add three one-digit numbers together • I can identify the most efficient way to solve a calculation	Tens frames Numicon
To solve problems involving addition and subtraction	• I know that there are different methods that can be used for addition and subtraction • I know that bar models can be useful for understanding problems	• I can identify whether I need to add or subtract to solve a problem • I can solve 'how many more…' or 'how many less…' style problems • I can solve missing number problems • I can use addition and subtraction in different contexts • I can solve problems involving up to two steps	

Multiplication and division	**Key Vocabulary**
	equal groups · multiplication (×) · grouping · odd · even times (×) · divide (÷) · division (÷) · sharing · unequal · array · times-table

End of Year Objective	'I know' statements	'I can' statements	Suggested manipulatives
To recognise, make and add equal groups	• I know that multiplication can be seen as 'repeated addition' • I know how to add up to three one-digit numbers • I know how to count in 2s, 5s and 10s	• I can identify if groups are equal or unequal • I can make, for example, '3 groups of 4' and '4 groups of 3', recognising similarities and differences • I can add equal groups to calculate the total number of objects • I can use arrays	counters, cubes or counting objects
To recall and use multiplication and division facts in the 2-, 5- and 10 times tables	• I know that multiplication is the inverse of division • I know that all multiples of 2 are even • I know that all multiples of 5 end in 5 or 0 • I know that all multiples of 10 end in 0	• I can count in steps of 2, 5 and 10, forwards and backwards • I can use manipulatives to represent calculations in the 2x, 5x and 10x table • I can spot patterns and links between these times tables	numicon number lines bead strings

To count in steps of 3, forwards and backwards	• I know how to count on in a given number • I know that number lines can be used to support counting on	• I can use manipulatives to support counting in steps of three • I can begin to spot patterns when counting in threes • I can count forwards and backwards in threes	number lines numicon
To recognise if numbers are odd or even (up to 100)	• I know that even numbers can be divided into two whole equal parts, while odd numbers can not • I know that even numbers have 0, 2, 4, 6 or 8 as their ones digit • I know that odd numbers have 1, 3, 5, 7 or 9 as their ones digit	• I can identify if a whole number is odd or even • I can explain what it means if a number is odd • I can explain what it means if a number is even	numicon number lines
To use x, ÷ and = symbols to write and calculate multiplication and division statements	• I know that multiplication can be seen as 'repeated addition' • I know that 'x' is the symbol for multiplication, and means 'lots of' • I know that '÷; is the symbol for division	• I can write multiplication and division sentences to represent a calculation	counters
To solve problems involving multiplication and division	• I know that bar models can be used to support understanding of a problem	• I can identify the calculations represented by a given bar model • I can use a bar model to represent a given calculation	various depending on problem

Fractions	**Key Vocabulary**
	half ($\frac{1}{2}$) · quarter ($\frac{1}{4}$) · third ($\frac{1}{3}$) · three quarters ($\frac{3}{4}$) · denominator · numerator · whole · equal parts · equivalent · non-unit fraction · unit fraction

End of Year Objective	'I know' statements	'I can' statements	Suggested manipulatives
To understand that fractions represent equal parts of a whole	• I know that the total in a group represents the 'whole' • I know that a whole can be split into parts • I know that parts of a whole can be equal or unequal • I know that fractions represent equal parts of a whole	• I can identify parts of a whole • I can identify if a whole has been split into equal or unequal parts • I can make equal groups from a whole amount or shape	
To count in fractions up to one whole	• I know that, when counting in fractions, the numerator increases but the denominator does not • I know that a fraction is equivalent to one whole when the numerator and denominator are equal	• I can represent fractions up to one whole • I can recognise patterns when counting up in fractions • I can count in quarters, halves and thirds up to one whole	Numicon

To identify and find $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$ and $\frac{3}{4}$ of a shape	• I know that the top digit in a fraction is the numerator, and this tells us the number of equal parts that are shaded/represented • I know that the bottom digit in a fraction is the denominator, and this tells us how many equal parts make up the whole • I know that shapes can be split into fractions in different ways	• I can find half of a shape by splitting it into two equal parts • I can find a quarter of a shape by splitting it into four equal parts • I can find a third of a shape by splitting it into three equal parts • I can recognise if a half, a third or a quarter of a shape has been shaded	paper shapes (for folding or cutting)
To identify and find $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$ and $\frac{3}{4}$ of a set of objects	• I know that the top digit in a fraction is the numerator, and this tells us the number of equal parts that are shaded/represented • I know that the bottom digit in a fraction is the denominator, and this tells us how many equal parts make up the whole • I know that to find a half of an amount, we need to divide by two, and so on	• I can find half of a set of objects by sharing into two equal groups • I can find a quarter of a set of objects by sharing into four equal groups • I can find a third of a set of objects by sharing into three equal groups • I can find three quarters of a set of objects	counters/cubes
To identify and find $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$ and $\frac{3}{4}$ of an amount	• I know that the top digit in a fraction is the numerator, and this tells us the number of equal parts that are shaded/represented • I know that the bottom digit in a fraction is the denominator, and this tells us how many equal parts make up the whole • I know that to find a half of an amount, we need to divide by two, and so on	• I can find half of an amount by sharing into two equal groups • I can find a quarter of an amount by sharing into four equal groups • I can find a third of an amount by sharing into three equal groups • I can find three quarters of an amount	counters/cubes
To recognise that $\frac{1}{2}$ is equivalent to $\frac{2}{4}$	• I know that a quarter is smaller than a half • I know that equivalent means ‘the same as’ or ‘equal to’	• I can recognise that two quarters is equivalent to one half	Cuisenaire rods paper shapes/strips (for folding or cutting)

Measurement	Key Vocabulary
	half past, minute hand, hour hand, mass, balance, weighing scales, quarter to, hours, minutes, grams (g), kilograms (kg), litres (l), length, centimetres (cm), millilitres (ml), volume, capacity, temperature, metres (m), longer, shorter, thermometer, degrees Celsius (°C), estimate, metre stick, height, width, o'clock, heavier than, lighter than, heaviest, compare, distance, quarter past, lightest, balance scales, pence (p), change, pounds (£), coins, notes

End of Year Objective	'I know' statements	'I can' statements	Suggested manipulatives
To measure length using cm or m, mass using g or kg, and capacity using l or ml	• I know that a ruler can be used to measure length and height in cm or m • I know that scales can be used to measure mass in g or kg	• I can line up my ruler correctly when measuring (from zero rather than the end of the ruler) • I can set up scales correctly so that my measurements are accurate	rulers/metre sticks balancing scales/circular scales measuring cylinders/beakers
To read and measure temperature accurately using a thermometer	• I know that temperature is measured using a thermometer using 'degrees Celsius' (°C) • I know that when the temperature is higher, the environment is warmer	• I can describe temperature using different vocabulary (e.g. 'hot', 'warm', 'cold') • I can measure temperature using thermometers with different scales	thermometers number lines
To compare and order lengths, masses and capacities using <, > and =	• I know that metres are greater than centimetres • I know that kilograms are greater than grams • I know that litres are greater than millilitres • I know that balance scales can be used to compare the mass of two objects	• I can use mathematical vocabulary to compare (e.g. 'longer than', 'taller than', 'shortest', 'heavier', 'lightest', 'full', 'empty') • I can use inequality symbols to compare different measurements given in the same unit • I can use inequality symbols to compare measurements in different units with the same numerical value (e.g. 3m and 3cm)	rulers/metre sticks balancing scales/circular scales measuring cylinders/beakers (It is important for children to have an idea of different measurements in order to compare – for example getting a feel for 1kg or seeing 1l of liquid compared to 1ml. Seeing everyday objects in these measurements would also be beneficial)

To read scales in divisions of 1s, 2s, 5s and 10s	• I know that scales do not always go up in ones	• I can read a range of scales to measure the volume of liquid or container or the mass of an object • I can estimate measurements when the arrow does not point to an exact number on the scale	number lines measuring cylinders/beakers
To use the symbols £ and p to represent pounds and pence, and combine these to make a particular value	• I know that £ = pounds and p = pence • I know to count pounds and pence separately before combining them	• I can combine amounts of pounds and pence as "£__ and __p" • I can select coins and notes to make a given amount	coins and notes
To find different combinations of coins that equal the same amount	• I know the value of different coins • I know that £1 = 100p	• I can identify different coins • I can count up in 1ps, 2ps, 5ps, 10ps and 20ps • I can add different coins together to find the total value of a set • I can find different ways of making the same amount • I can combine different coins to make £1	coins and notes
To compare amounts of money shown in the same units	• I know the value of different coins and notes • I know that pounds are worth more than pence • I know what <, > and = mean	• I can use inequality symbols to compare amounts of money • I can use mathematical language to compare (e.g. 'greater than', 'most', 'least)	coins and notes
To add and subtract money, including to give change	• I know there are different methods which can be used for addition and subtraction, such as counting on, partitioning and regrouping	• I can find the total cost of two or more items • I can find the difference in prices of two items • I can choose the most efficient strategy to calculate • I can solve problems involving money, including those with more than one step	coins and notes number lines
To tell the time to the nearest five minutes	• I know which hand is the hour hand and which is the minute hand • I know that when the minute hand is pointing to 12, it is 'o'clock' • I know that when the minute hand is pointing to 6, it is 'half past' • I know that when the minute hand is point to 3, it is 'quarter past' and when it is pointing to 9, it is 'quarter to' • I know that when the minute hand is between 12 and 6, we say the time is past the hour, and when it is between 6 and 12 we say it is to the hour • I know that each of the twelve sections on a clock corresponds to a five-minute interval	• I can tell the time on an analogue clock to the nearest five minutes • I can draw hands on a clock to represent a given time	individual interactive clocks
To recall the number of minutes in an hour and number of hours in a day	• I know that there are 60 minutes in an hour • I know that there are 24 hours in a day	• I can calculate how many minutes are in half an hour or a quarter of an hour • I can calculate how many minutes in a length of time greater than an hour (e.g 1hr20mins = 80mins)	time lines/schedules

		• I can suggest appropriate times for given events, and suggest appropriate events for given times (e.g. 8am = breakfast)	
Geometry: Properties of shapes	**Key Vocabulary** 		
End of Year Objective	**'I know' statements**	**'I can' statements**	**Suggested manipulatives**
To describe the properties of 2D shapes	• I know that 2D shapes are completely flat • I know the names of common 2D shapes • I know that a vertex is formed when two sides meet • I know that the number of vertices is equal to the number of sides in a 2D shape	• I can recognise and name 2D shapes in different orientations • I can count the number of vertices on a 2D shape • I can count the number of sides on a 2D shape, marking the sides to ensure I count them all	2D shapes
To describe the properties of 3D shapes	• I know that 3D shapes are not flat, but sold, and take up space • I know the names of common 3D shapes • I know that a face is a flat surface on a 2D shape, and that curved surfaces are not faces • I know that edges are formed where two faces meet	• I can recognise and name 3D shapes in different orientations • I can count the number of faces on a 3D shape, marking them to ensure I count them all • I can count the number of edges on a 3D shape • I can count the number of vertices on a 3D shape	3D shapes
To identify lines of symmetry in 2D shapes	• I know that a shape is symmetrical when both sides are the same	• I can identify vertical lines of symmetry in a shape • I can begin to notice other lines of symmetry in 2D shapes • I can use lines of symmetry to complete shapes	Paper 2D shapes (to cut and fold) Mirrors
To compare and sort common 2D shapes	• I know that 2D shapes are completely flat • I know the names of different 2D shapes, including when they are in different orientations	• I can notice similarities and differences between 2D shapes (e.g. size, colour, number of sides) • I can sort shapes into groups • I can identify how given groups have been sorted	2D shapes
To order and arrange objects and shapes in patterns and sequences	• I know the names of 2D shapes • I know the names of 3D shapes	• I can identify the next shape in a pattern • I can create and follow repeating patterns • I can create and follow symmetrical patterns	2D shapes 3D shapes

Geometry: Position and direction	Key Vocabulary		
	clockwise, anticlockwise, forwards, turn, half turn, quarter turn, backwards, left, right, middle, three-quarter turn		
End of Year Objective	**'I know' statements**	**'I can' statements**	**Suggested manipulatives**
To describe position, movement and turns using mathematical language	• I know which way is left and which way is right • I know which way is clockwise and which way is anti-clockwise	• I can describe position using mathematical language (e.g. 'above', 'below', 'between') • I can describe movement using mathematical language (e.g. 'up', 'down', 'forwards', 'backwards') • I can follow instructions to move from one area to another • I can identify a turn that an object has performed • I can draw what an object or shape would look like after a turn	blank grids bee-bots
Statistics	**Key Vocabulary**		
	tally chart, pictogram, key, table, block diagram		
End of Year Objective	**'I know' statements**	**'I can' statements**	**Suggested manipulatives**
To present and interpret information in pictograms, tally charts, block diagrams or tables	• I know that, in a tally chart, tallies can be bundled together into groups of 5 • I know that each block in a block diagram represents one • I know that pictograms need to use the same symbol for each category • I know the symbols in pictograms may represent more than one, and that the key in a pictogram states the value of each symbol.	• I can work out totals from tallies, and use tallies to represent given amounts • I can draw pictures to match information shown in a table and vice versa • I can represent and interpret simple information using a block diagram • I can represent and interpret information using pictograms	cubes or sticky notes (for making block diagrams) counters (for making pictograms)
To ask and answer questions simple questions around totalling and comparing data	• I know that block diagrams, tallies and tables can be used to represent data	• I can use tables and tally charts to ask and answer questions about data shown • I can ask and answer questions about information shown in pictograms and block diagrams • I can compare information shown in different ways	