

Maths KS1 Progression Map

Maths lessons will start with warm ups/maths meeting in order to keep concepts simmering - going over concepts learnt in the previous lesson, previous week, previous term and previous year. Whilst we use the White Rose and NCETM spines as a guide and resources - we adapt medium term plans according to cohort needs.

	EYFS 30 – 50 months 40 – 60 months Early Learning Goals	Year 1	Year 2	Year 3
Place value Counting	<p>To recite numbers in order to 10</p> <p>To realise not only objects, but anything can be counted including steps, claps or jumps.</p> <p>To count up to three or four objects by saying one number name for each item.</p> <p>To count out up to six objects from a larger group.</p> <p>To count actions or objects which cannot be moved.</p> <p>To count objects to 10 and beginning to count beyond 10.</p> <p>To count an irregular arrangement of up to ten objects.</p> <p>To estimate how many objects they can see and check by counting them.</p> <p>To count reliably with numbers from one to 20.</p>	<p>Count to and across 100, forwards and backwards beginning with 0 or 1 or from any given number.</p> <p>Count numbers to 100 in numerals; count in multiples of 2, 5, and 10's.</p> <p>Recognise odd and even numbers.</p>	<p>Count in steps of 2,3 and 5 from 0 and in tens from any number forward and backwards</p>	<p>Count from) in multiples of 4,8, 50 and 100; find 10 or 100 more or less than a given number.</p>

<p>Place value Represent</p>	<p>To show an interest in numerals in the environment. To show curiosity about numbers by offering comments or asking questions. To use some number names accurately in play.</p> <p>To recognise some numerals of personal significance. To recognise numerals 1 to 5</p>	<p>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</p>	<p>Read and write numbers to at least 100 in numerals and words Identify, represent and estimate numbers using different representations, including the number line.</p>	<p>Identify, represent and estimate numbers using different representations. Read and write numbers up to 1000 in numerals and in words</p>
<p>Place value Use PV and compare</p>	<p>To say the number that is one more than a given number. To find one more or one less from a group of up to five objects, then ten objects. To say which number is one more or one less than a given number from one to 20 To compare two groups of objects, saying when they have the same number. To use the language of 'more' and 'fewer' to compare two sets of objects. To place numbers one to 20 in order.</p>	<p>Given a number, identify one more and one less.</p>	<p>Recognise the place value of each digit in a two- digit number (tens, ones) Compare and order numbers from 0 up to 100; use < > and = signs.</p>	<p>Recognise the place value of each digit a three-digit number (hundreds, tens, ones) Compare and order numbers to 1000</p>
<p>Place value Problems and rounding</p>	<p>To show an interest in number problems. To begin to identify own mathematical problems based on own interests and fascinations.</p>		<p>Use place value and number facts to solve problems</p>	<p>Solve number problems and practical problems involving these ideas</p>
<p>Addition and Subtraction Recall, represent and use</p>	<p>To find the total of items in two groups by counting all of them. To begin to use the vocabulary involved in adding and subtracting</p>	<p>Read, write and interpret mathematical statements involving addition (+) subtraction (-) and equals (=) signs</p>	<p>Recall and use addition and subtraction facts to 20 fluently and derive and use related facts to 100 Show that addition of two numbers can be done in any</p>	<p>Estimate the answer to a calculation and use inverse operations to check answers</p>

	<p>in practical activities and discussion.</p> <p>To add and subtract two single-digit numbers and count on and back to find the answer using quantities and objects.</p>	Represent and use number bonds and related subtraction facts within 20	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	
Addition and subtraction Calculations		Add and subtract one digit and two digit numbers to 20 including zero	Add and subtract numbers using concrete 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	Add and subtract numbers mentally including: a three digit number and ones a three digit numbers and tens a three digit numbers and hundreds Add and subtract numbers with up to three digits using formal written methods of columnar addition and subtraction.
Addition and Subtraction Solve problems	To solve problems, including doubling, halving and sharing.	Solve one -step problems that involve addition and subtraction, using concrete objects and pictorial representations and missing numbers such as $7 = \dots - 9$	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	solve problems including missing numbers using number facts, place value and more complex addition and subtraction
Multiplication and division Recall, represent and use			Recall and use multiplication and division facts for the 2,5 and 10 times tables Show that multiplication can be done in any order (commutative) and division cannot	Recall and use multiplication and division facts for the 3,4 and 8 times tables

Multiplication and division Calculations			Calculate mathematical statements for multiplication and division within the multiplication tables and write them using multiplication (x) and division (÷) and equals (=) signs	Write and calculate mathematical statements for multiplication 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.
Multiplication and division Solve problems		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 and 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 such as n objects are connected to m objects
Fractions Recognise and write		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 the four equal parts of an object shape or quantity.	Recognise, find, name and write fractions $\frac{1}{3}, \frac{1}{4}, \frac{2}{4}, \frac{3}{4}$ of a length, shape set of objects or quantity	count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal part 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.
Fractions Compare			Recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$	Recognise and show using diagrams, equivalent fractions with small denominators Compare and order unit fractions, and fractions with the same denominator.

Fractions Calculations			Write simple fractions for example $\frac{1}{2}$ of 6 = 3	Add and subtract fractions with the same denominator within one whole e.g. $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$
Fractions Solve problems				Solve problems that involve all of the above
Algebra (notation not until Yr 6 but algebraic thinking earlier)		Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations and missing numbers problems such as $7 = \dots - 9$	Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	Solve problems including number problems
Measurements Using measures	<p>To order two or three items by length or height.</p> <p>To order two items by weight or capacity.</p> <p>To use everyday languages to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and solve problems.</p>	<p>Compare, describe and solve practical problems for:</p> <p>Length and heights e.g. long/short longer/shorter tall/short double/half</p> <p>Mass/weight e.g. heavy/light heavier than lighter than</p> <p>Capacity and volume e.g. full/empty more than less than half half full quarter</p> <p>Time e.g. quicker slower , later, earlier.</p> <p>Measure and begin to record the following</p> <p>Length and height</p> <p>Capacity and Volume</p> <p>Mass and weight</p> <p>Time (hours minutes seconds)</p>	<p>Choose and use appropriate standard units to estimate and measure length/height in any direction(m/cm) mass (kg/g) temperature($^{\circ}$C) capacity/litres (litres/ml) to the nearest appropriate unit. using rulers, scales, thermometers and measuring vessels</p> <p>Compare and order length, mass, volume/capacity and record the results using $><$ and =</p>	<p>Measure, compare, add and subtract lengths (m/cm/mm) mass (kg/g) volume/capacity (l/ml)</p>
Measurement Using money	To use everyday languages to talk about size, weight, capacity, position, distance, time and money	Recognise and know the value of different	Recognise and use symbols for pounds £ and pence p	Add and subtract amounts of money to give change, using

	to compare quantities and objects and solve problems.	denominations of coins and notes.	combine amounts to make a particular value Find different combinations of coins that equal the same amounts of money Solve simple problems in a context involving addition and subtraction of money of the same unit, including giving change	both £ and p in practical contexts
Measurement Time	.To use everyday language related to time.To order and sequence familiar events.To measure short periods of time in simple ways.To use everyday languages to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and solve problems	Sequence events in chronological order using language such as before and after,next, first, today, tomorrow, yesterday, 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.	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 the 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 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 in each month, year and leap year. Compare durations of events such as to calculate the taken by particular events or tasks.
Measurement Area, perimeter volume				Measure the perimeter of simple 2D shapes
Geometry 2D shapes	To show an interest in shape and space by playing with shapes or making arrangements with	Recognise and name common 2D shapes such as rectangles, squares, circles and triangles	Identify and describe the properties of 2D shapes including the number of sides	Draw 2D shapes

	<p>objects. To show interest in shape by sustained construction activity or by talking about shapes or arrangements. To show interest in shapes in the environment. To use shapes appropriately for tasks. To begin to talk about shapes in everyday objects, e.g. 'round' and 'tall'. To show awareness of similarities of shapes in the environment. To begin to use mathematical names for 'solid' 3D shapes and 'flat' 2D shapes, and mathematical terms to describe shapes. To select a particular named shapes. To explore characteristics of everyday objects and shapes and use mathematical language to describe them</p> <p>Patterns</p> <p>To use familiar objects and common shapes to create and recreate patterns and build models. To recognise, create and describe patterns.</p>		<p>and line symmetry in a vertical line</p> <p>Identify 2D shapes on the surface of 3D shapes such as a circle on a cylinder and a triangle on a pyramid</p> <p>Compare and sort common 2D shapes and everyday objects</p>	
Geometry 3D shapes		<p>Recognise and name common 3D shapes including cuboids, cubes, pyramids and spheres</p>	<p>Recognise and name common 3D shapes such as cuboids cubes, pyramids and spheres. Compare and sort common 3D shapes and everyday objects</p>	<p>Make 3D shapes using modelling materials; recognise 3D shapes in different orientations and describe them</p>
Geometry Angles and lines				<p>Recognise angles as a property of a shape or a description of a turn</p> <p>Identify right angles, recognise that two right angles make a half-turn three make three quarter turn and four a complete turn; identify whether angles are greater or less than a right angle</p>

				Identify horizontal and vertical lines and pairs of perpendicular and parallel lines
Geometry Position and direction	To use positional language. To 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 in a straight line and distinguishing between rotation as a turn in terms of right angles for quarter, half and three quarter turns - anticlockwise and clockwise	
Statistics Present and interpret	To record, using marks that they can interpret and explain.		interpret and construct simple pictograms, tally charts, block diagrams and simple tables.	interpret and present bar charts pictograms and tables.
Statistics 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? How many fewer? using information presented in scaled bar charts and pictograms and tables.
Vocabulary	To build up vocabulary that reflects the breadth of their experiences. To extend vocabulary, especially by grouping and naming, exploring the meaning and sounds of new words.	To read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at year 1.	To read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at key stage 1.	To read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling.