

Concept	DM	ELG	Y1	Y2	Y3
Number - Number and Place Value	<p>Counting Recite numbers past 5</p> <p>Say one number name for each item in order</p> <p>Know the last number reached when counting a small set of objects tells you the total (cardinal principle)</p>	<p>Number Have a deep understanding of number to 10, including the composition of each number</p> <p>Subitise (recognise quantities without counting) up to 5</p> <p>Numerical patterns Verbally count beyond 20, recognising the pattern of the counting system</p>	<p>count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number</p> <p>count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens</p> <p>given a number, identify one more and one less</p> <p>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</p> <p>read and write numbers from 1 to 20 in numerals and words</p>	<p>count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward</p> <p>recognise the place value of each digit in a two-digit number (tens, ones)</p> <p>identify, represent and estimate numbers using different representations, including the number line</p> <p>compare and order numbers from 0 up to 100; use <, > and = signs</p> <p>read and write numbers to at least 100 in numerals and in words</p> <p>use place value and number facts to solve problems</p>	<p>count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number</p> <p>recognise the place value of each digit in a three-digit number (hundreds, tens, ones)</p> <p>compare and order numbers up to 1000</p> <p>identify, represent and estimate numbers using different representations</p> <p>read and write numbers up to 1000 in numerals and in words</p> <p>solve number problems and practical problems involving these ideas</p>
Number - Addition and Subtraction	<p>Automatically recall number bonds for numbers 0–5 and some to 10</p> <p>Explore the composition of numbers to 10</p> <p>Understand the 'one more than/one less than' relationship between consecutive numbers</p> <p>Compare numbers</p>	<p>Number 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.</p> <p>Numerical patterns Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity</p>	<p>read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs</p> <p>represent and use number bonds and related subtraction facts within 20</p> <p>add and subtract one-digit and two-digit numbers to 20, including zero</p> <p>solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as</p> <p>$7 = ? - 9$</p>	<p>solve problems with addition and subtraction:</p> <ul style="list-style-type: none"> using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods <p>recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100</p> <p>add and subtract numbers using concrete objects, pictorial representations, and mentally, including:</p> <ul style="list-style-type: none"> a two-digit number and ones a two-digit number and tens two two-digit numbers adding three one-digit numbers <p>show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot</p> <p>recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems</p>	<p>add and subtract numbers mentally, including:</p> <ul style="list-style-type: none"> a three-digit number and ones a three-digit number and tens a three-digit number and hundreds <p>add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction</p> <p>estimate the answer to a calculation and use inverse operations to check answers</p> <p>solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction</p>

Number-Fractions (decimals and percentages)			<p>recognise, find and name a half as one of two equal parts of an object, shape or quantity</p> <p>recognise, find and name a quarter as one of four equal parts of an object, shape or quantity</p>	<p>recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity</p> <p>write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$</p>	<p>count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10</p> <p>recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators</p> <p>recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators</p> <p>recognise and show, using diagrams, equivalent fractions with small denominators</p> <p>add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$]</p> <p>compare and order unit fractions, and fractions with the same denominators solve problems that involve all of the above</p>
Number - Multiplication and Division		<p>Numerical patterns Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally</p>	<p>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</p>	<p>recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers</p> <p>calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals (=) signs</p> <p>show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot</p> <p>solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts</p>	<p>recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables</p> <p>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</p> <p>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</p>

Ratio and Proportion	Continue, copy and create repeating patterns				
Algebra			<p>Understand the power of the = sign</p> <p>Solve balancing calculations</p> <p>Recognise and use number sentences written in different ways</p> <p>Solve missing number calculations</p> <p>What's the same? What's the difference? questions</p>	<p>Understand < and ></p> <p>Understand the power of the = sign</p> <p>Solve balancing calculations</p> <p>Recognise and use number sentences written in different ways</p> <p>Solve missing number calculations</p> <p>What's the same? What's the difference? questions</p>	<p>Understand < and ></p> <p>Understand the power of the = sign</p> <p>Solve balancing calculations</p> <p>Recognise and use number sentences written in different ways</p> <p>Solve missing number calculations</p> <p>What's the same? What's the difference? Questions</p>
Measurement	<p>Make comparisons between objects relating to size, length, weight and capacity.</p> <p>Time: Begin to describe a sequence of events, real or fictional, using words such as first, then</p>		<p>compare, describe and solve practical problems for:</p> <ul style="list-style-type: none"> 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] <ul style="list-style-type: none"> time [for example, quicker, slower, earlier, later] <p>measure and begin to record the following:</p> <ul style="list-style-type: none"> lengths and heights mass/weight capacity and volume time (hours, minutes, seconds) <p>recognise and know the value of different denominations of coins and notes</p> <p>sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]</p> <p>recognise and use language relating to dates, including days of the week, weeks, months and years</p> <ul style="list-style-type: none"> tell the time to the hour and half past the hour and draw the hands on a clock face to show these times 	<p>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</p> <p>compare and order lengths, mass, volume/capacity and record the results using >, < and =</p> <p>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</p> <p>solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change</p> <p>compare and sequence intervals of time</p> <p>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</p> <p>know the number of minutes in an hour and the number of hours in a day</p>	<p>measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)</p> <p>measure the perimeter of simple 2-D shapes</p> <p>add and subtract amounts of money to give change, using both £ and p in practical contexts</p> <p>tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks</p> <p>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, a.m./p.m., morning, afternoon, noon and midnight</p> <p>know the number of seconds in a minute and the number of days in each month, year and leap year</p> <p>compare durations of events [for example to calculate the time taken by particular events or tasks]</p>

Geometry – properties of shapes	<p>Talk about and explore 2-D and 3-D shapes, circles, rectangles, cuboids, etc. using informal and mathematical language (sides, corners, straight, flat, round)</p> <p>Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can</p> <p>Select, rotate and manipulate shapes to develop spatial reasoning skills</p>		<p>recognise and name common 2-D and 3-D shapes, including:</p> <ul style="list-style-type: none"> • 2-D shapes [for example, rectangles (including squares), circles and triangles] • 3-D shapes [for example, cuboids (including cubes), pyramids and spheres] 	<p>identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line</p> <p>identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces</p> <p>identify 2-D shapes on the surface of 3-D shapes [for example, a circle on a cylinder and a triangle on a pyramid]</p> <p>compare and sort common 2-D and 3-D shapes and everyday objects</p>	<p>draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them</p> <p>recognise angles as a property of shape or a description of a turn</p> <p>identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle</p> <p>identify horizontal and vertical lines and pairs of perpendicular and parallel lines</p>
Geometry – position and direction	<p>Understand position through words alone – “The bag is under the table” without pointing.</p> <p>Describe a familiar route</p> <p>Discuss routes and locations using words like ‘in front of’ and ‘behind’</p> <p>Draw information from a simple map</p>		<p>describe position, direction and movement, including whole, half, quarter and three-quarter turns.</p>	<p>order and arrange combinations of mathematical objects in patterns and sequences</p> <p>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)</p>	<p>Recap Y2 objectives and prepare for Y4 objectives</p>
Statistics			<p>Prepare for Y2 objectives</p>	<p>interpret and construct simple pictograms, tally charts, block diagrams and simple tables</p> <p>ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity</p> <p>ask and answer questions about totalling and comparing categorical data</p>	<p>interpret and present data using bar charts, pictograms and tables</p> <p>solve one-step and two-step questions [for example, ‘How many more?’ and ‘How many fewer?’] using information presented in scaled bar charts and pictograms and tables</p>