



## Vertical progression – Mathematics – Number & Numerical Patterns - Maths overview

Playing & Exploring - Engagement		Active Learning - Motivation		Creating & Thinking Critically - Thinking		
<ul style="list-style-type: none"><li>Finding out &amp; exploring</li><li>Playing with what they know</li><li>Being willing to 'have a go'</li></ul>		<ul style="list-style-type: none"><li>Being involved &amp; concentrating</li><li>Keep on trying</li><li>Enjoying achieving what they set out to do</li></ul>		<ul style="list-style-type: none"><li>Having their own ideas (creative thinking)</li><li>Making links (building theories)</li><li>Working with ideas (critical thinking)</li></ul>		
<b>ELG</b>						
<b>Number</b>						
<b>- Have a deep understanding of number to 10, including the composition of each number</b>						
<b>- Subitise (recognise quantities without counting) up to 5</b>						
<b>- 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</b>						
<b>Numerical Patterns</b>						
<b>- Verbally count beyond 20, recognising the pattern of the counting system</b>						
<b>- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity</b>						
<b>- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally</b>						
Focus	Place Value: Counting	Place Value: Represent	Place Value: Use & compare	Addition & Subtraction: Recall, represent, use	Addition & Subtraction: Calculations	Addition & Subtraction: Solve problems
Reception	<ul style="list-style-type: none"><li>Enjoys reciting numbers from 0 to 10 (and beyond) and back from 10 to 0</li><li>Counts out up to 10 objects from a larger group</li></ul>	<ul style="list-style-type: none"><li>Engages in subitising numbers to four and maybe five</li><li>Increasingly confident at putting numerals in order 0 to 10 (ordinality)</li><li>Matches the numeral with a group of items to show how many there are (up to 10)</li></ul>	<ul style="list-style-type: none"><li>Uses number names and symbols when comparing numbers, showing interest in large numbers</li><li>Estimates of numbers of things, showing understanding of relative size</li></ul>	<ul style="list-style-type: none"><li>Begins to explore and work out mathematical problems, using signs and strategies of their own choice, including (when appropriate) standard numerals, tallies and + or -</li><li>Shows awareness that numbers are made up (composed) of smaller numbers, exploring partitioning in different ways with a wide range of objects</li></ul>	<ul style="list-style-type: none"><li>In practical activities, adds one and subtracts one with numbers to 10</li></ul>	<ul style="list-style-type: none"><li>Begins to conceptually subitise larger numbers by subitising smaller groups within the number, e.g. sees six raisins on a plate as three and three</li></ul>
Year 1	<ul style="list-style-type: none"><li>Count to &amp; across 100, forwards &amp; backwards, starting from 0, or 1, or from any given number</li><li>Count numbers to 100 in numerals; count in multiples of twos, fives &amp; tens</li></ul>	<ul style="list-style-type: none"><li>Identify &amp; represent numbers using objects &amp; pictorial representations</li><li>Read &amp; write numbers to 100 in numerals</li><li>Read &amp; write numbers from 1 to 20 in numerals &amp; words</li></ul>	<ul style="list-style-type: none"><li>Given a number, identify one more &amp; less</li></ul>	<ul style="list-style-type: none"><li>Read, write &amp; interpret mathematical statements involving addition, subtraction &amp; equals signs</li><li>Represent &amp; use number bonds &amp; related subtraction facts within 20</li></ul>	<ul style="list-style-type: none"><li>Add &amp; subtract one-digit &amp; two-digit numbers to 20, including zero</li></ul>	<ul style="list-style-type: none"><li>Solve one-step problems that involve addition &amp; subtraction, using concrete objects &amp; pictorial representations, &amp; missing number problems</li></ul>



Bolton Primary School Curriculum - Vertical progression – Mathematics – Shape, Space & Measures - Maths overview				
Playing & Exploring - Engagement		Active Learning - Motivation		Creating & Thinking Critically - Thinking
<ul style="list-style-type: none"><li>Finding out &amp; exploring</li><li>Playing with what they know</li><li>Being willing to 'have a go'</li></ul>		<ul style="list-style-type: none"><li>Being involved &amp; concentrating</li><li>Keep on trying</li><li>Enjoying achieving what they set out to do</li></ul>		<ul style="list-style-type: none"><li>Having their own ideas (creative thinking)</li><li>Making links (building theories)</li><li>Working with ideas (critical thinking)</li></ul>
ELG None				
Focus	Spatial Awareness	Shape	Pattern	Measures
Nursery	<ul style="list-style-type: none"><li>Responds to and uses language of position and direction</li><li>Predicts, moves and rotates objects to fit the space or create the shape they would like</li></ul>	<ul style="list-style-type: none"><li>Chooses items based on their shape which are appropriate for the child’s purpose</li><li>Responds to both informal language and common shape names</li><li>Shows awareness of shape similarities and differences between objects</li><li>Enjoys partitioning and combining shapes to make new shapes with 2D and 3D shapes</li><li>Attempts to create arches and enclosures when building, using trial and improvement to select blocks</li></ul>	<ul style="list-style-type: none"><li>Creates their own spatial patterns showing some organisation or regularity</li><li>Explores and adds to simple linear patterns of two or three repeating items, e.g. stick, leaf (AB) or stick, leaf, stone (ABC)</li><li>Joins in with simple patterns in sounds, objects, games and stories dance and movement, predicting what comes next</li></ul>	<ul style="list-style-type: none"><li>In meaningful contexts, finds the longer or shorter, heavier or lighter and more/less full of two items</li><li>Recalls a sequence of events in everyday life and stories</li></ul>
Reception	<ul style="list-style-type: none"><li>Uses spatial language, including following and giving directions, using relative terms and describing what they see from different viewpoints</li><li>Investigates turning and flipping objects in order to make shapes fit and create models; predicting and visualising how they will look (spatial reasoning)</li><li>May enjoy making simple maps of familiar and imaginative environments, with landmarks</li></ul>	<ul style="list-style-type: none"><li>Uses informal language and analogies, (e.g. heart-shaped and hand-shaped leaves), as well as mathematical terms to describe shapes</li><li>Enjoys composing and decomposing shapes, learning which shapes combine to make other shapes</li><li>Uses own ideas to make models of increasing complexity, selecting blocks needed, solving problems and visualising what they will build</li></ul>	<ul style="list-style-type: none"><li>Spots patterns in the environment, beginning to identify the pattern “rule”</li><li>Chooses familiar objects to create and recreate repeating patterns beyond AB patterns and begins to identify the unit of repeat</li></ul>	<ul style="list-style-type: none"><li>Enjoys tackling problems involving prediction and discussion of comparisons of length, weight or capacity, paying attention to fairness and accuracy</li><li>Becomes familiar with measuring tools in everyday experiences and play</li><li>Is increasingly able to order and sequence events using everyday language related to time</li><li>Beginning to experience measuring time with timers and calendars</li></ul>
Year 1	<ul style="list-style-type: none"><li>Describe position, direction &amp; movement including whole, half, quarter &amp; three-quarter turns</li></ul>	<ul style="list-style-type: none"><li>Recognise &amp; name common 2D shapes</li><li>Recognise &amp; name common 3D shapes</li></ul>		<ul style="list-style-type: none"><li>Compare, describe &amp; solve practical problems involving: Lengths / heights Mass / weight Capacity / volume Time</li><li>Measure &amp; record the following: Lengths / heights Mass / weight</li></ul>



				<p>Capacity / volume</p> <p>Time</p> <ul style="list-style-type: none"><li>• Recognise &amp; know the value of different denominations of coins &amp; notes</li><li>• Sequence events in chronological order using language</li><li>• Recognise &amp; use language relating to dates</li><li>• Tell the time to the hour &amp; half past the hour &amp; draw the hands on a clock face to show these times</li></ul>
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