

# Practical experiences, visual imagery and problem solving at the heart of good practice in mathematics

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This document highlights some of the key points from the recent Ofsted report ‘Good practice in primary mathematics: evidence from 20 successful schools’. The following tables correlate these points with the Numicon approach to mathematics, which creates the opportunity for active learning, problem solving and mathematical conversation through the use of structured apparatus.

Some of the key findings of good practice from the HMI Ofsted report on maths	How Numicon helps deliver good practice	Page in report
<b>Emphasis on Practical Experiences</b>		
<b>A clear emphasis on practical hands-on experiences...</b>	With Numicon, children are using structured apparatus every day in practical ways, which means that they can really ‘see’ the numbers	<b>6</b>
<b>A high profile given to developing mathematical language and mental mathematics...</b>	A key feature of Numicon is the focus on maths conversation with ideas to encourage mathematical development throughout the pre-school setting upwards, to give children a sound start to their mathematical understanding.	<b>9</b>
<b>The schools emphasised practical hands-on activities with a high profile given to developing mathematical language and mental mathematics, coupled with visual images and physical representations of sharing, grouping, arrays and patterns...</b>	The Numicon approach emphasises doing and seeing alongside speaking and listening and this multi-sensory approach enables teachers to deepen pupils’ mathematical understanding.	<b>14</b>
<b>Many [schools] draw on a wide range of practical resources, particularly in developing fluency through a depth of experience in the EYFS and KS1 and return to them when developing new ideas in KS2...</b>	Numicon offers a multi-sensory approach to maths teaching that raises children’s achievement and increases their confidence.	<b>26</b>

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Some of the key findings of good practice from the HMI Ofsted report on maths	How Numicon helps deliver good practice	Page in report
<b>Emphasis on Problem Solving</b>		
<p><b>Pupils' confidence, fluency and versatility are nurtured through a strong emphasis on problem-solving...</b></p>	<p>Problem-solving is at the heart of Numicon; it offers teachers a fresh approach to problem-solving with all the activities starting from a real life or mathematical context.</p>	<p><b>6</b></p>
<p><b>Pupils' extensive experience of solving problems deepens their understanding and increases their fluency and sense of number...</b></p>	<p>Numicon investigations offer the opportunity to challenge pupils further and the resources contain stretching activities for the most gifted and talented children.</p>	<p><b>20</b></p>
<b>Emphasis on Professional Development</b>		
<p><b>Careful teaching aims to secure pupils' understanding and skills...</b></p>	<p>Numicon support teachers' subject knowledge of key mathematical ideas and provides suggestions for teaching approaches, organisation and the learning environment.</p>	<p><b>26</b></p>
<p><b>A crucial element is the involvement of all staff in professional development...</b></p>	<p>Participants at Numicon courses often feel inspired, confident and keen to start using Numicon straight away, whether in the classroom, in support groups or on a one to one basis.</p>	<p><b>30</b></p>
<p><b>A key feature of the best practice is that schools make sure that all staff (teachers and teaching assistants) work together on mathematics to develop their expertise and understanding of progression in aspects of mathematics...</b></p>	<p>Numicon's TDA and NCETM accredited professional development helps education professionals deliver even more effective teaching.</p>	<p><b>32</b></p>

**Read the full Ofsted report 'Good Practice in Primary Mathematics' online.**

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