

Supporting the Curriculum for Excellence

First experiences and
outcomes in Numicon Kit 3

Transforming the way
children understand number

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First experiences and outcomes in Numicon Kit 3

The Numicon Teaching Programme is a quality first teaching approach, designed to give children the understanding of number ideas and number relationships that are essential for success in maths. The multi-sensory resources cover the key mathematical ideas that are essential foundations for all further mathematical thinking.

We have correlated Numicon Kit 3 focus activities to the First experiences and outcomes in the Curriculum for Excellence to support teachers in their planning. These correlations will be useful whether schools choose to follow the focus activities in the order outlined in the **Numicon Kit 3 Activity Handbook**, or prefer to dip in and out of the teaching materials for different topics.

Key: In this correlation chart, 2.1 in the Pattern and Algebra column represents the Pattern and Algebra strand within Numicon, and refers to Activity Group 2, focus activity 1, etc.

Teaching Materials Featured in this Correlation:

Numicon Kit 3 Activity Handbook
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Curriculum for Excellence: First

Numeracy and mathematics: experiences and outcomes	Numicon Kit 3 Focus Activity Reference		
	Pattern and Algebra Strand	Numbers and the Number System Strand	Calculating Strand
NUMBER, MONEY AND MEASURE			
<p>Estimation and rounding</p> <p><i>I can share ideas with others to develop ways of estimating the answer to a calculation or problem, work out the actual answer, then check my solution by comparing it with the estimate.</i></p> <p>MNU 1-01a</p>	–	1.1, 1.3 • 2.5 • 5.8, 5.9 • 6.5, 6.6, 6.7, 6.9	1.4, 1.6 • 8.2
<p>Number and number processes</p> <p><i>I have investigated how whole numbers are constructed, can understand the importance of zero within the system and can use my knowledge to explain the link between a digit, its place and its value.</i></p> <p>MNU 1-02a</p>	2.1, 2.6 • 3.1, 3.5, 3.6, 3.7 • 4.7	1.1, 1.2, 1.3, 1.4 • 2.1, 2.2, 2.3, 2.4, 2.5 • 3.1, 3.3, 3.4, 3.5 • 4.1, 4.2, 4.3, 4.4 • 5.1, 5.2, 5.5, 5.6, 5.7, 5.8, 5.9, 5.10, 5.11	2.2 • 8.4, 8.6, 8.7 • 12.1, 12.2, 12.3, 13.1, 13.2, 13.3, 13.4, 13.5 • 15.6
<p><i>I can use addition, [subtraction, multiplication and division] when solving problems, making best use of the mental strategies and written skills I have developed.</i></p> <p>MNU 1-03a*</p>	1.1, 1.2, 1.3, 1.4, 1.5 • 4.4 • 5.2, 5.3, 5.5, 5.6	–	1.1, 1.2, 1.4, 1.5, 1.6 • 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.9, 2.10 • 3.1, 3.2, 3.3 • 8.1, 8.3, 8.4, 8.5, 8.6, 8.7 • 9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 9.7, 9.8, 9.9, 9.12 • 12.1, 12.2, 12.3, 12.4, 12.6, 12.7, 12.8 • 13.1, 13.2, 13.3, 13.4, 13.5, 13.6 • 14.1
<p><i>I can use [addition,] subtraction, [multiplication and division] when solving problems, making best use of the mental strategies and written skills I have developed.</i></p> <p>MNU 1-03a*</p>	1.1, 1.2, 1.3, 1.4, 1.5 • 4.4, 4.5, 4.6, 4.7	–	1.3 • 2.4, 2.6, 2.8, 2.9, 2.10 • 4.1, 4.2, 4.3, 4.4, 4.5 • 8.2, 8.4, 8.5, 8.6, 8.8 • 9.1, 9.2, 9.4, 9.6, 9.7, 9.10 • 12.1, 12.2, 12.3, 12.5, 12.9 • 14.1, 14.2, 14.3, 14.4, 14.5
<p><i>I can use [addition, subtraction,] multiplication [and division] when solving problems, making best use of the mental strategies and written skills I have developed.</i></p> <p>MNU 1-03a*</p>	5.4	–	5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7 • 6.1, 6.2, 6.3, 6.4 • 7.4, 7.5 • 10.1, 10.2, 10.3, 10.4, 10.5, 10.6 • 11.1, 11.3 • 15.1, 15.2, 15.4, 15.5, 15.6
<p><i>I can use [addition, subtraction, multiplication and] division when solving problems, making best use of the mental strategies and written skills I have developed.</i></p> <p>MNU 1-03a*</p>	–	–	7.1, 7.2, 7.3, 7.4, 7.5, 7.6 • 9.4 • 11.1, 11.2, 11.3, 11.4 • 15.3, 15.5, 15.6 • 16.3

***MNU 1-03a** – This statement has been broken down into the four operations in order to correlate it to the most relevant focus activities.

Numeracy and mathematics: experiences and outcomes	Numicon Kit 3 Focus Activity Reference		
	Pattern and Algebra Strand	Numbers and the Number System Strand	Calculating Strand
NUMBER, MONEY AND MEASURE (continued)			
<p>Fractions, decimal fractions and percentages</p> <p><i>Having explored fractions by taking part in practical activities, I can show my understanding of:</i></p> <ul style="list-style-type: none"> • how a single item can be shared equally • the notation and vocabulary associated with fractions • where simple fractions lie on the number line. <p style="text-align: right;">MNU 1-07a</p>	–	6.1, 6.2, 6.3 • 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9 • 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7, 8.8, 8.9	–
<p><i>Through exploring how groups of items can be shared equally, I can find a fraction of an amount by applying my knowledge of division.</i></p> <p style="text-align: right;">MNU 1-07b</p>	–	8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7, 8.8, 8.9	9.4 • 15.3 • 16.1, 16.2, 16.3, 16.4, 16.5, 16.6, 16.7
<p><i>Through taking part in practical activities including use of pictorial representations, I can demonstrate my understanding of simple fractions which are equivalent.</i></p> <p style="text-align: right;">MTH 1-07c</p>	–	7.2, 7.8, 7.9 • 8.3, 8.6, 8.7, 8.8, 8.9	–
<p>Money</p> <p><i>I can use money to pay for items and can work out how much change I should receive.</i></p> <p style="text-align: right;">MNU 1-09a</p>	1.5	–	2.10 • 8.2, 8.3, 8.4, 8.5, 8.6, 8.7, 8.8 • 9.1
<p><i>I have investigated how different combinations of coins and notes can be used to pay for goods or be given in change.</i></p> <p style="text-align: right;">MNU 1-09b</p>	5.3	4.2, 4.3, 4.4	7.3 • 8.1, 8.5 • 13.5
<p>Measurement</p> <p><i>I can estimate how long or heavy an object is, or what amount it holds, using everyday things as a guide, then measure or weigh it using appropriate instruments and units.</i></p> <p style="text-align: right;">MNU 1-11a</p>	–	5.3, 5.4 • 6.4, 6.5, 6.8	–
<p>Mathematics – its impact on the world, past, present and future</p> <p><i>I have discussed the important part that numbers play in the world and explored a variety of systems that have been used by civilisations throughout history to record numbers.</i></p> <p style="text-align: right;">MTH 1-12a</p>	–	3.1, 3.5	13.4

Numeracy and mathematics: experiences and outcomes	Numicon Kit 3 Focus Activity Reference		
	Pattern and Algebra Strand	Numbers and the Number System Strand	Calculating Strand
NUMBER, MONEY AND MEASURE (continued)			
<p>Patterns and relationships</p> <p>I can continue and devise more involved repeating patterns or designs, using a variety of media. MTH 1-13a</p> <p>Through exploring number patterns, I can recognise and continue simple number sequences and can explain the rule I have applied. MTH 1-13b</p>	<p>–</p> <p>2.1, 2.2, 2.3, 2.4, 2.5, 2.6 • 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7 • 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7 • 5.5, 5.6</p>	<p>–</p> <p>–</p>	<p>5.3 • 15.4, 15.5, 15.6</p> <p>9.9, 9.10 • 10.2, 10.3, 10.4, 10.5, 10.6</p>
<p>Expressions and equations</p> <p>I can compare, describe and show number relationships, using appropriate vocabulary and the symbols for equals, not equal to, less than and greater than. MTH 1-15a</p> <p>When a picture or symbol is used to replace a number in a number statement, I can find its value using my knowledge of number facts and explain my thinking to others. MTH 1-15b</p>	<p>1.1, 1.4</p> <p>1.5 • 4.6</p>	<p>5.3, 5.5, 5.7 • 7.5</p> <p>–</p>	<p>2.3, 2.5 • 3.1, 3.2, 3.3 • 6.4 • 8.2, 8.3, 8.4 • 9.3 • 16.3</p> <p>2.3, 2.9, 2.10 • 6.4 • 9.12</p>
INFORMATION HANDLING			
<p>Data and analysis</p> <p><i>I have explored a variety of ways in which data is presented and can ask and answer questions about the information it contains.</i> MNU 1-20a</p> <p><i>I have used a range of ways to collect information and can sort it in a logical, organised and imaginative way using my own and others' criteria.</i> MNU 1-20b</p> <p>Using technology and other methods, I can display data simply, clearly and accurately by creating tables, charts and diagrams, using simple labelling and scale. MTH 1-21a</p>	<p>3.3, 3.4, 3.6 • 5.1, 5.2, 5.3, 5.4, 5.5</p> <p>5.1, 5.2, 5.3, 5.4, 5.5</p> <p>3.3, 3.4, 3.6 • 5.3, 5.4, 5.5</p>	<p>3.2 • 5.3 • 6.2 • 7.5</p> <p>3.2 • 5.3 • 6.2</p> <p>3.2 • 5.3 • 6.2</p>	<p>1.2, 1.3, 1.4 • 5.6 • 7.1 • 12.9</p> <p>–</p> <p>5.6 • 8.5</p>

The Numicon approach primarily supports children in learning about number and number relationships. As a result, the focus activities in the **Numicon Kit 3 Activity Handbook** have not been correlated with certain First experiences and outcomes from the Curriculum for Excellence. These are: Time; Shape, position and movement; Ideas of chance and uncertainty; and one Measurement objective (*I can estimate the area of a shape by counting squares or other methods*).

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About the Numicon Project

The Numicon Project is a collaborative endeavour to facilitate children's understanding and enjoyment of maths.

The Project was founded in the daily experience of intelligent children having real difficulty with maths, the frequent underestimation of the complexity of the ideas that we ask young children to face and a recognition of the importance of maths to them and to society as a whole.

We appreciate the complexity of these early number ideas and seek to foster the self-belief necessary to achieve in the face of difficulty; we are not about 'making maths easy'.

We believe that the combination of action, imagery and conversation helps children to structure their experiences, which is such a vital skill for both their mathematical and their overall development.

By watching and listening to what children do and say, we and many others are finding that our developing multi-sensory approach provides learners with the opportunity to play to their strengths, thereby releasing their potential to enjoy, understand and achieve in maths. This enjoyment in achievement is also shared by teachers and parents.

We strive to support teachers' subject knowledge and pedagogy with teaching materials, professional development and on-going feedback as we continue to develop a better understanding of how we can work together to encourage all learners in the vital early stages of their own mathematical journey.