

Numicon Software for the Interactive Whiteboard v2.0 Getting Started Guide

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Introduction

Thank you for choosing the Numicon Software for the Interactive Whiteboard. We hope you find it a useful enhancement to the Numicon approach. This short guide gives an introduction to the features and functions which will help make whole class sessions more dynamic.

Multi-sensory teaching

This software is designed to supplement the Numicon approach. It is intended as a tool to introduce concepts and ideas in whole class or group sessions rather than for pupils to interact with alone.

Many of the activities from the Numicon teaching programme can be adapted to include the whole class. We highly recommend that the multi-sensory approach is maintained as mathematical concepts and activities are introduced and discussed. To encourage this we suggest that, in whole class sessions, each child has a set of Numicon Shapes which they can hold up in response to questions. This is also a great way for teachers to see when children are starting to understand key ideas and make an assessment of an individual's progress.

Single sets of Numicon Shapes (ISBN 978-0-19-848731-9) and Sets of 30 Numicon Shapes (ISBN 978-0-19-848732-6) are available to order separately. For more information or to place an order please call +44 (0)1536 741171 or visit www.numicon.com.



Getting Started

Menus

First select the desired workspace from the drop down menu. Once a workspace has been selected, the resource drop down menu will only display the resources relevant to that particular workspace.

The Numicon Number Line

This scrolls from 0–21. Tap a Numicon Shape to add it to the work area. Use the scroll bar along the bottom of the screen to reveal the higher numbers. To add more than one of a Shape to the work area use the left and right arrows to increase and decrease the amount of Shapes added.

Edit Palette

Move mode

Once added to a workspace, a Shape or object needs to be touched in order for it to be selected. Once selected, objects and Shapes will show a magenta highlight. Selected objects can be moved around the workspace, flipped and rotated. If more than one object is selected then movements and transformations will apply to all objects in a group. To deselect an object, touch the workspace background. The delete buttons allow you to delete either all objects from the workspace or just those that are selected.

Draw mode

Click on the 'draw' tab of the edit palette to enter 'draw mode'. Once 'draw mode' has been entered, functionality becomes limited to either drawing or erasing. When finished drawing, exit 'draw mode' and re-enter 'move mode' by touching the bottom portion of the screen or selecting the move tab in the edit palette.

Background options

It is also possible to choose between 'white', 'buff' and 'grid' workspace backgrounds and choose to hide and reveal palettes on the workspace. The 'buff' background may be more suitable for children with certain learning difficulties.

Workspaces

Blank

If 'blank' is selected from the workspace menu any of the resources can be added to the work area.

Balance

Relevant resources
Number rods, numeral pad, words, symbols

How to use it

Add Numicon Shapes or number rods to either side of the balance to show equivalence. These should be added one at a time rather than in groups.

The number pad, symbols and words palettes can be used to create number sentences that describe what is happening in the balance.

Numicon 10s Number Line

Relevant resources
Numeral pad, pegs, spinners, coins, words, symbols, fractions

How to use it

Numicon Shapes appear horizontally when added to this workspace so they can be easily superimposed onto the 10s Number Line. Use this workspace for demonstrating a number of mathematical ideas including division, multiplication and factors. Use the scroll bar to reveal the higher numbers.

Workspaces

The screenshot shows the 'Workspaces' interface. At the top, there are tabs for 'Menu', 'Workspaces', and 'Resources'. The main area contains a large grid of dots. The first four columns are blue, each containing 10 dots. The fifth column is red and contains 7 dots. To the right of the grid, the equation $47 + 1 = 48$ is written in a large, handwritten font. Below the grid is a horizontal number line from 0 to 100, with a red segment from 0 to 47 and a green segment from 47 to 48. At the bottom, there is a palette of colored dots (0-9) and a scroll bar.

0–100cm Number Line

Relevant resources

Number rods, numeral pad, pegs, shapes, pictures, subtraction covers, spinners, coins, words, symbols, fractions

How to use it

Decade sections are shown in alternating blue and red. This workspace is primarily intended for use with number rods but is useful to show the relative position of numbers, demonstrating addition and subtraction, bridging through decades and showing the rules of multiplication and division. Use the scroll bar to reveal the higher numbers.

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Number Rod Track

Relevant resources

Number rods, numeral pad, shapes, pictures, spinners, coins, words, symbols, fractions

How to use it

Number rods can be placed on or above the number line. This can be used in similar ways to the 0–100cm number line.

Workspaces

Menu Workspaces Resources

numicon
a clear image for maths

signs X numeral pad X edit

+ - =
< > £
X ÷ p

7 8 9
4 5 6
1 2 3
X 0 ✓

move draw
rotate objects
flip objects
delete selection
delete all
hide other palettes

$72 + 6 = 78$

0 72 78 100

0 1 2 3 4 5 6 7 8 9 10

Add < | >

Empty Number Line

Relevant resources

Number rods, numeral pad, pegs, shapes, pictures, spinners, coins, words, symbols, fractions

How to use it

Use the pen tool to mark your own points on the number line. Objects added will remain in place as the number line is scrolled left to right.

Menu Workspaces Resources

numicon
a clear image for maths

edit

move draw
rotate objects
flip objects
delete selection
delete all
hide other palettes

32		36		40
	44		48	
52		56		60
	64		68	
72		76		80
	84		88	
92		96		100

0 4 8 12 16 20 24 28

0 1 2 3 4 5 6 7 8 9 10

Add < | >

100 Square

Relevant resources

Numeral pad, pegs, shapes, pictures, subtraction covers, spinners, coins, words, symbols, fractions

How to use it

This workspace is ideal for showing patterns in multiplication. When selected, the 100 square appears as a blank array. Touch a square to reveal its number, touch again to highlight and once more to clear it. Touch the end of each row to reveal all the numbers in that row. Each row can be dragged to the scrolling area to form a 1–100 number line that can be scrolled.

Workspaces

Menu Workspaces Resources

numicon
a clear image for maths

pegs X edit
move draw
rotate objects
flip objects
delete selection
delete all
hide other palettes

0 1 2 3 4 5 6 7 8 9 10
Add < | >

Baseboard

Relevant resources

Numeral pad, pegs, shapes, pictures, subtraction covers, spinners, coins, words, symbols, fractions

How to use it

Use the pegs to create different types of repeating patterns and to practise copying the Numicon patterns. This workspace can also be used for showing decimals and percentages.

Menu Workspaces Resources

numicon
a clear image for maths

number rods X edit
move draw
rotate objects
flip objects
delete selection
delete all
hide other palettes

trays X
1-Tray
2-Tray
3-Tray
4-Tray
5-Tray
6-Tray
7-Tray
8-Tray
9-Tray
10-Tray
20-Tray

0 1 2 3 4 5 6 7 8 9 10
Add < | >

Number Rod Trays

Relevant resources

Number rods, numeral pad, shapes, pictures, subtraction covers, spinners, coins, words, symbols, fractions

How to use it

This workspace is useful for pattern making and number bonds. The colour of each tray matches the corresponding number rod. Once a tray has been added to the workspace, move it by selecting and dragging the edge.

Workspaces

HTU/TU Frames

Relevant resources

Number rods, numeral pad, pegs, shapes, pictures, subtraction covers, spinners, coins, words, symbols, fractions

How to use it

Demonstrate ideas around place value by adding Numicon Shapes and number rods to the different columns.

TU x U, TU x TU Multiplication Grids

Relevant resources

Number rods, numeral pad, pegs, shapes, pictures, subtraction covers, spinners, coins, words, symbols, fractions

How to use it

Use with the numeral pad and pen tool to demonstrate multiplication using the grid method.

Workspaces

Sorting Rings

Relevant resources

Number rods, numeral pad, pegs, shapes, pictures, subtraction covers, spinners, coins, words, symbols, fractions

How to use it

Select either a single ring or double rings. Create different areas into which Numicon Shapes, number rods and other objects can be sorted. Select the border to highlight and move a ring.

Calculation Boxes

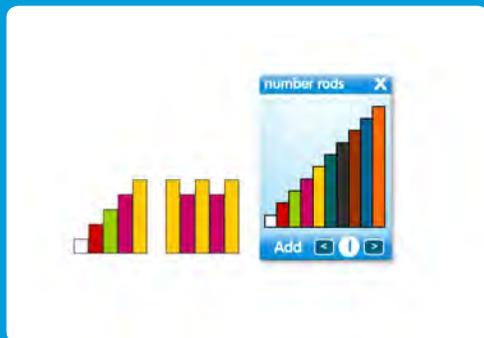
Relevant resources

Number rods, numeral pad, shapes, pictures, subtraction covers, spinners, coins, words, symbols, fractions

How to use it

Select either 3 or 4 boxes from the workspace menu. The symbols between the boxes can be changed to allow a wide choice of calculations to be demonstrated. The arrow on the right hand side can be used to reveal up to 5 rows of boxes for showing different calculations at one time. Use the numeral pad or pen tool to input numerals into the boxes.

Resources Menu



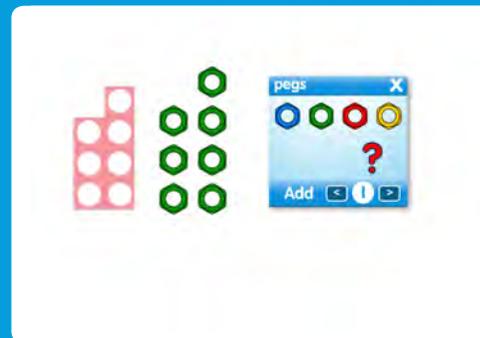
Number Rods

Use with a variety of workspaces instead of or with the Numicon Shapes. Touch a rod to add it to the workspace. Use the arrows to select the required quantity of a particular rod.



Numeral Pad

Touch the numerals to generate any three-digit number. Touch the green tick to add a number to the workspace or the red cross to clear it.



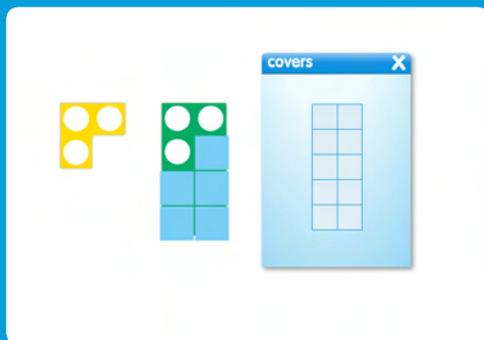
Pegs

Use with a wide variety of workspaces for pattern and counting activities. Touch a peg to add it to the workspace. Use the arrows to select the required quantity of a particular peg. Touch the question mark to add a random selection of pegs.



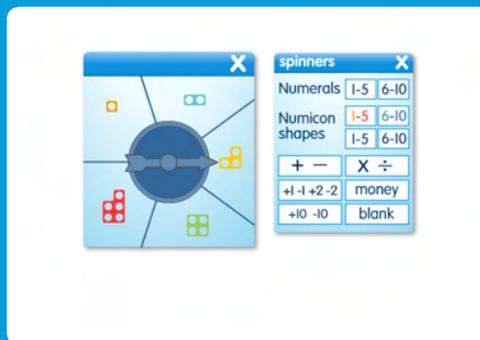
Shapes and Pictures

Use with a wide variety of workspaces for pattern, counting and sorting activities. Touch a shape or picture to add it to the workspace. Use the arrows to select the required quantity of a particular shape or picture. Touch the question mark to add a random selection of either shapes or pictures.



Subtraction Covers

Subtraction covers are used to model subtraction by covering parts of Numicon Shapes. Move over the squares to highlight the shape of the cover you need. Covers can be rotated and flipped in the same way as other objects.



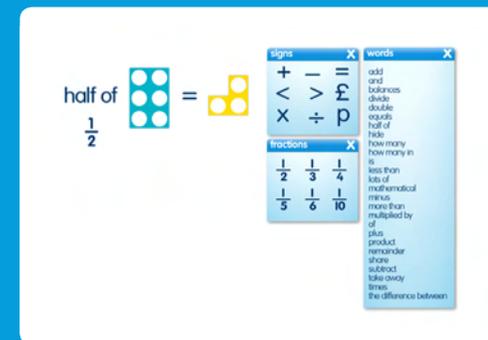
Spinners

There are 12 types of spinners for randomly selecting numbers, Numicon Shapes, sterling coins, calculation symbols and addition and subtraction of 2 and 10. There is also a blank spinner which can be adapted using the pen tool.



Coins

Sterling, euros and dollars can be added to a variety of workspaces for use with activities that involve money. As with other resource palettes, different amounts of coins can be added by using the arrow buttons.



Words, Symbols, Fractions

These three palettes can be used in a variety of ways with different workspaces. They are particularly useful for introducing important mathematical vocabulary and can be used with the numeral pad to create number sentences.