

## An Introduction to Numicon for parents and children



## Numicon



In Reception each child starting in September will receive a set of Numicon to take home.

Numicon is a multi-sensory maths resource that focuses on imagery, action and conversation. Numicon uses a series of structured patterns – numicon shapes – to represent numbers as part of a progressive teaching. It is designed to give children the understanding of number ideas and number relationships that are essential for success in maths.

Children's early experiences of maths at home have a huge impact on their later achievement.

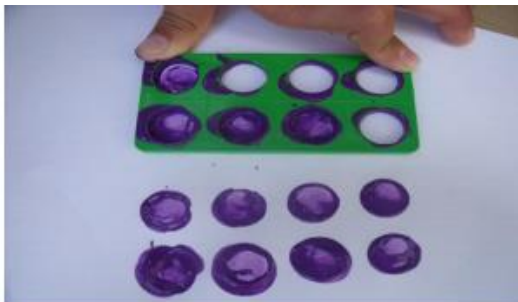
In this booklet you will find lots of different activities using numicon to be completed at home with your child. Each activity will encourage conversation and maths talk, as well as helping your child to become familiar with this resource.

Each activity has a photo to help explain how to carry out the task.

## Painting



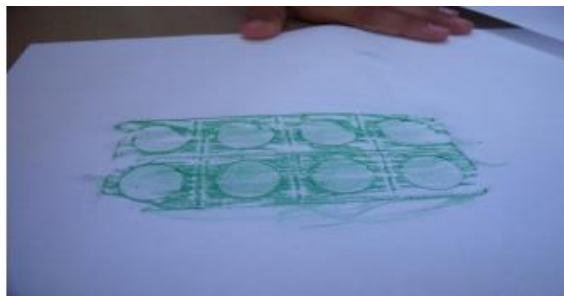
Finger printing patterns.



Using the Numicon pieces to print with.

## Rubbings

Hide a piece of Numicon under a sheet of paper. Ask your child to make a rubbing of it to find out which piece is hidden.



Make a rubbing using tin foil, which piece is under the foil.



## Numicon stairs



Can you lay out the Numicon pieces to create a staircase?



Ask your child to cover their eyes. Remove one or two pieces of Numicon. Ask your child if they can spot which piece is missing. Ask them to explain how they know?

## Playdough



Can you match your shape and impressions? Can you make a number line to help with adding and subtracting?



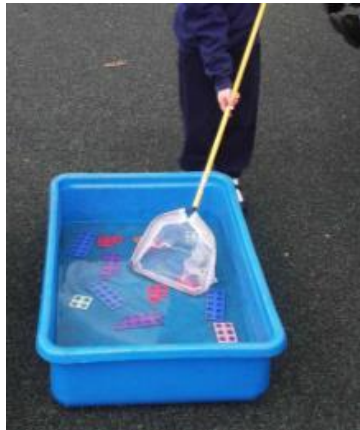
Can you make a number sentence with shapes and impressions?

## Marbles



Can you count out the marbles using the spaces in the shapes?  
Count them and impress them into the playdough to confirm your counting.

## Fishing in the bath



Numicon pieces are great to use in water. Set them off finding pieces in the bath.

Even more fun, if the bath has bubbles can you feel around and find a Numicon piece with 3 holes?

Find two Numicon pieces, which has more/less holes?

## Dice



Match the number thrown to the Numicon piece?

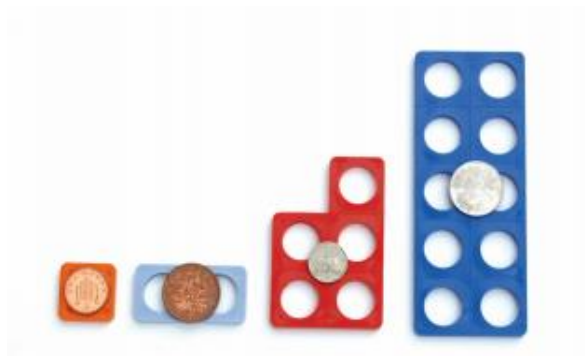
## Dice



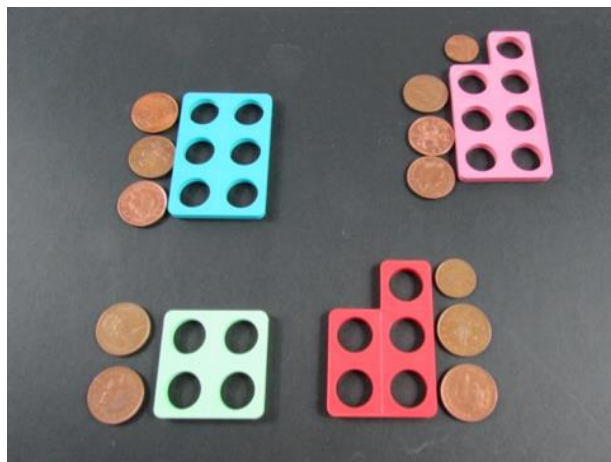
How many altogether? Who has more/less?

## Matching coins

Can you match the coins to the shapes?



## Money



Can you make the same amount with money and shapes?

## Have Fun!

The list of ideas is not exhaustive. Numicon is very versatile.

Have fun using Numicon with your child at home. We look forward to hearing and seeing all of your lovely ideas and photos.

If you come up with new ideas we could include them in our booklet for our next year's Reception children to enjoy.



## Contents

- 30 double sided lily pad lines: side one printed 1-10, and the reverse with blank lily pads that can be used with dry wipe pens or as black lines.
- 30 frogs; one to use with each number line.
- 2 photocopyable activity sheets for recording activities.

## Suggested Activities

The following activities use the 1-10 printed side. It is important to explain to the children, that they only count as the frog actually jumps from one number to another.

### Number recognition

Call out a number and have the children place their frogs on the corresponding number. Alternatively hold up a number card and have the children place their frogs on the matching lily pad.

### One more/one less

Ask the children to place their frogs on a given number eg 6 then ask them to jump on 1 more ie to 7, or to jump back to the number which is one less ie 5.

### Counting on/counting back

Start with the frog at the beginning of the line in front of the numbers and ask the children to make him take 1 jump into the line ie on to number 1. Ask them to return him to the start and take 2 jumps ie on to number 2. Repeat for all the numbers to 10 in order.

Repeat the above exercise in reverse starting at 10 and jumping back 1,2,3 places etc

Use the frog to solve a range of counting on/back calculations eg. 6 count on 2 is?, 5 count on 3 is ?, 9 count back 4 is? How many jumps from 3 to 7?

The following activities involve using the blank side of the line. Numbers can also be written on the pads vertically thus giving an alternative version.

### Number recognition beyond 10

Prepare the lines by writing 11-20 on the lily pads, ask the children to place their frogs on requested numbers or show them a number on a line and ask them to find the corresponding number on their line.

### Counting on/counting back

Repeat the activities as described above for the 1-10 line but now using the numbers 11-20. If appropriate children can use two lines, one side 1-10 and the other side 11-20 and the questions can involve them working across the full range of numbers.

The lily pads can be prepared by numbering them with any ten numbers thus enabling a varied range of numbers to be explored eg.0-60, 80-90, or the numbers may go across the groups of ten.

Children may work with up to 10 cards, labelling and using them when working with numbers up to 100. This is ideal for children working in pairs or small groups and initially the lines may be pre-numbered for them to order.

The blank side could be set up as 1-10 but working in the opposite direction. Children have to remember that counting on means going to a higher number not just going left to right and vice versa for counting back.

### Using Multiples

The blank side can be set up with multiples as appropriate for the group eg. multiples of four; 4 8 12 16 20 24 28 32 36 40

Ask children to put their frog on 6 x 4 (children who do not know the answer can work it out by counting along).

Ask a range of questions eg. If the frog is on 3 x 4 (they work it out and place him) how many jumps will he make to get to 4 x 4? What number will he be on? Place the frog on 40. How many x4 is he on? Now go back to 8 x 4. How many jumps did he make? etc

### Visualising numbers

Using the blank side of the line tell the children that the 1<sup>st</sup> lily pad is number 11 and the last one is number 20 then ask them to put their frog on the lily pad they think will be 15. This activity can be carried out with any set of numbers – the children just need to know the relationship between the numbers (one step, multiple etc) and the first and last number. Again this activity can be developed/extended through use of the photocopyable sheets and is excellent preparation for mental calculations.