

# Welcome to 1<sup>st</sup> Steps with Numicon – At Home Kit

This kit is designed for parents and children to enjoy learning about numbers at home. For 3–5 year olds.

## Numicon is designed to help your child see connections between numbers

Children are usually very quick to notice patterns. The pattern in the Numicon Shapes helps children see the connections between numbers. The connections your child sees will provide a firm foundation for their mathematics understanding – particularly their mastery of mental arithmetic.

## Numicon supports the early maths teaching your child will be meeting in kindergarten and in school

Most people who are good at maths have developed their own mental imagery of number and understand how numbers relate to one another. Working with Numicon encourages all children to visualize numbers and understand number relationships.

### NOTES

*Although the activities at first glance seem simple, through them children are meeting important mathematical ideas which lay the foundation for all their later understanding of number. These key ideas are explained briefly in the notes on each page.*

### LANGUAGE

*The mathematical language that your child can learn through each activity is signalled. What's important here is that children are learning to use familiar words such as 'before' and 'after' in a mathematical context, where the meaning may be subtly different.*

## Numicon patterns follow a system

You will see that the holes in the Numicon shapes are arranged to correspond to the numbers 1 to 10. The pattern of holes for each number follows the same basic system of arranging holes 'in pairs'. So when Numicon patterns are arranged in order, children can begin to notice important connections between numbers - that each number is 'one more' than the last, and 'one fewer' than the next, for example. Later on, your child will be able to see with Numicon patterns how two fours make eight, and three twos make six, etc.

## Numicon uses a multi-sensory approach

Your child will learn through both seeing and feeling how Numicon patterns connect with each other. By physically building constructions, making arrangements and patterns with Numicon and playing games with the feely bag, your child will experience both with hands and eyes how numbers fit together.

## What's in the Box



### The Numicon Shapes

32 in total. These are designed to represent number ideas and how numbers relate to one another, in a way not provided by written numerals.

### The Baseboard and Overlays

The 10 x 10 Baseboard, designed to hold the Numicon Shapes and Pegs, is used in many activities. The Picture Overlays fit on the Baseboard to make four different matching puzzles.

### The Feely Bag

Important in our multi-sensory approach! When children 'feel' for a 'number' in the bag, they have to visualize Numicon patterns, an important step in developing their own mental imagery of numbers.

### The Pegs

The 52 Pegs come in only four colours, because children need to move beyond matching only by colour. The Pegs are useful for making patterns both by threading them onto the Bootlace, or by arranging them on the Baseboard. They can also be fitted into the holes of the Numicon Shapes and used to build number towers.

### The Numeral Cards

The 0–10 laminated Numeral Cards are used in later activities once children are familiar with the Numicon Shapes.

### The Zig-Zag Book

This plays an important part in your child's work with Numicon. You will see that it is a counting book on one side and on the other there is what teachers call a 'number line'.

# Before you get started...



**The activities in this kit offer the potential for you to give a firm foundation to your child's understanding of number. However, to get the most from this kit please take a few moments to read the guidance below.**

## **Numicon is part of your child's wider experience with numbers**

It is important that your child has plenty of experience of and talk about counting and recognizing numerals alongside his or her play with Numicon. Encourage your child to count anything and everything around him or her, including the holes in Numicon Shapes. Draw your child's attention to all the written numerals in the world around us – house numbers, page numbers, telephone numbers, road signs, birthday cards, sports scores, etc.

## **Young children do their most important learning through playing**

It is important not to try to rush your child through the Numicon activities in this pack. In fact it is always helpful to be prepared to let your child experiment, make up his or her own games, and generally play with the patterns, Pegs, and Baseboard even if what he or she does looks pointless to you. If your child is engrossed in his or her experiments with Numicon, then you can be sure your child is learning something valuable.

## **Show by example**

When you want to introduce your child to a new activity, show by your own example. Begin the activity yourself and then let your child carry on or take over as they work out what you are doing. Teachers call this 'modelling'.

Don't put pressure on your child to advance too quickly; let them enjoy repeating the things they have learned over and over. Try not to let any concern of yours for your child's success create unhelpful pressure as this can put them off. We all enjoy repeating things we do well, and children are no exception – celebrate their successes and encourage them to repeat these often.

## **Let your child play with Numicon independently, as well as gradually following the teaching activities**

On the following pages you will find several different teaching activities (games!) for you to follow with your child using the materials provided. There is more than a whole year's activity here. Your child will also enjoy playing with Numicon independently and this type of exploratory play is important. Through their independent play with Numicon children gain confidence and familiarity that will be important for them as activities become more advanced.

## **Work through the stages of activities in order**

Allowing plenty of time for your child's independent play with Numicon, work through the various stages of activities on the cards gradually, in order. Allow your child plenty of time to become confident with the type of activity on each card before moving on – repeating successes, over and over again, is very important for young children's feelings of confidence and mastery over their world.

## **Encourage your child to develop a mental picture of the Numicon Shapes**

The Numicon patterns offer children a visual picture of numbers and their relationships. Playing some activities by touch encourages children to develop mental imagery. It is helpful to say to your child 'let your fingers be your eyes' and 'try to see the Shapes in your mind's eye'.

## **Help your child to count, as well**

Counting things (anything and everything) is a very important accompaniment to your child's work with Numicon. Count with your child to begin with, and then gradually allow him or her to take over the counting more and more – your child learns from your example. Ask 'How many of these do we have?' frequently, and gradually encourage counting of bigger and bigger collections.

## **Keep the Zig-Zag Book on view**

The Numicon Zig-Zag book is a very important continuing background to your child's work with Numicon. It is double-sided with the numberline on one side and the counting book on the other. The groups of objects in the counting book are linked to the appropriate Numicon Shape. The book should also be on display, close by and available whenever your child is working on Numicon activities with you. Best of all, the Numicon Zig-Zag Book should be kept with the collection of all your child's other books.