

Let's visit Numberland

A solid bridge from the inborn mathematical understanding to the formal language of basic math



playful - highly emotional - embracing - scientifically proven - widely accepted

Mathematical understanding and more

For a solid understanding of math, children need the chance to consistently build on their existing knowledge, interest and skills. 'Let's visit Numberland' emotionally addresses the evolving interest of children in mathematical coherences. It supports them to **acquire a profound, well structured mathematical understanding** of all aspects of the numbers 0 to 10, shapes and the numerals to 20.

Yet the **children benefit far beyond**: Language (mother tongue/second language), self-esteem, concentration and cognition, motivation and creativity, social, motor and music skills are enhanced as well.

The edge of 'Let's visit Numberland' lies within the **embracing approach**: The concept allows a child to experience the entire aspects of numbers with the entire self, i.e. body, mind and spirit. This way, children in their daily play develop a multi-faceted, positive image and a deep, lasting understanding which they can build on.

As an **open and didactic concept**, 'Numberland' is not a programme but rather a central theme that helps structuring. The specific elements encourage both children and staff to bring in own ideas. It can be easily adapted to individual needs and age brackets. Popular and established activities can be brought in and „Numberland“ can be a trigger for the further exploration of topics, e.g. bees with their six legs and their hexagonal combs.

Basic thoughts

'Let's visit Numberland' combines findings from brain research, developmental psychology, educational science and didactics of mathematics. It is **consistently designed from a child's perspective** and, therefore, considers how small children see the world, builds on what they know already, what they can understand, like and need. This explains why 'Let's visit Numberland' is so highly motivating for children.

It is very natural for children to travel to a country where numbers live: For a while, children regard everything around them as being alive. Anything magic strongly appeals to small children and going with that is a strong emotional thinking.

In addition, children of that age need **emotional, tangible experiences** of the inherent abstract character of mathematics.

The concept

On their fantastic, cheerful journey to 'Numberland', the children meet the numbers 1 to 10 as nice, living characters who motivate them to deal with mathematical aspects and coherences. Number Lane shows the way to Number Town where each number lives in its characteristic, geometrically shaped garden. The children furnish these gardens with houses, towers, and other things going with the number.

There is a cheeky goblin messing around and a nice fairy sorting things out. Tales and music, lots of active games and other things children love complement the experiences.

Scientifically proven

We could prove that within only ten weeks children aged 3 to 6 gained the mathematical competence and understanding they normally would have achieved only within one year. The same was true for the language competence of the children - a highly important finding since language is the key to education.

The findings were also true for underprivileged children with partly very poor understanding of the German language. A second study from the University of Heidelberg confirmed our results.

Widely accepted

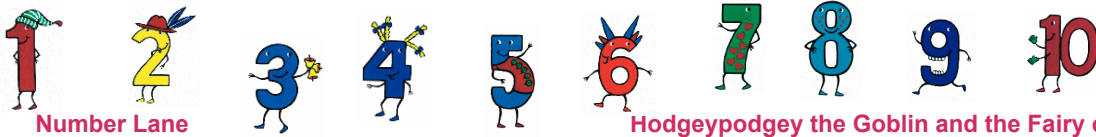
Preschools, kindergartens, primary schools and special schools apply 'Numberland' to their special needs. They frequently use it to teach mother tongue or second language. The first book sold 40.000 times. 'Numberland' has started to find its way to the USA, Poland, Romania, Thailand, India and others.

School teachers approve the concept as an optimal preparation for first grade. In areas with many underprivileged children, teachers diagnose a higher base level and more self-esteem, leading to more motivation and participation.

Kindergarten and preschool teachers alike are enthusiastic about the all-embracing advancement of the children. They appreciate how well the open concept can be combined with their schedule and how individually it can be realized.

Children usually get completely absorbed in a "Numberland" project and transfer it into their daily play.





Number Lane

Number Lane shows the figures 0 to 10 (or 20) and leads the way to Number Town. By moving on Number Lane and playing numerous fun games on it, children become familiar with the ordinal aspect of the basic numbers.

Walking forward and backwards, the children make first experiences in addition and subtraction. The important knowledge of successor and predecessor is easily adapted.

Number Lane can also be used to combine ordinal and cardinal aspect.

The Number Puppets

Number puppets animate the abstract numbers, communicating that numbers are something nice and lovable.

They may tell a tale, help arranging their garden, or be part of role plays.

The Number Gardens

The Number Gardens correspond to the geometric aspect and are arranged in a circle, representing Number Town. Access is strictly limited! Children may pick 4 bricks, 4 pens, or 4 beans and place them in the garden. Thus, they experience the cardinal aspect as well as invariance.

A horse is also allowed due to its 4 legs. Yet it also has 1 tail, 2 eyes, 2 nostrils...

Children are strongly motivated to find out, discuss, and decide where to put an object. This fosters cognition, language skills, social competence - and general knowledge.

The Number Houses

Each number needs a house and, obviously, Number One's house has 1 window, Number Two's has 2, and so on.

The trick is that as of Number Six, each number gets two houses: Number Six' house has 5+1 windows, Number Seven has 5+2, etc.

This concept corresponds directly to the children's hands. It transports the idea that numbers can be decomposed. And, highly important, it supports children acquire simultaneous entry of quantities.

The Number Towers

The children build a Number Tower in each garden which gives a linear visualization of the number.

If realized as four-colored bricks, the children can make experiences with various aspects of numbers as well as possible decompositions.



Hodgepodgey the Goblin and the Fairy of the Numbers

These two figures account for the magic thinking of children. Especially Hodgepodgey the Goblin is very popular because ever and again he messes around in Numberland. The children love to find out what is wrong and to correct the mistakes. The goblin is also a perfect scape goat for own mistakes...

But there is also the Fairy of the Numbers who can be called with a spell and who helps to get things right again.

The Number Tales

Children love tales and enjoy stories about numbers. For example, to cure the sick Four, a tea is made out of four bits of four different herbs out of her square herb garden. After four minutes brewing time, four spoons of honey are added and stirred four times - curing immediately...

The children can listen, talk about the tales, make role plays, and so on. Interesting details for the general knowledge are embedded in the tales and, possibly, picked up later on. Or how about making up your own number tale?

The Number Songs

Rhymes, music, and singing have highest value for children. We composed a refrain and songs for each number. Their beat and number of tones correspond to the number as well as the content does to our number tales.

As an alternative or in addition, popular nursery rhymes or songs can be included as well.

My Book of Numbers

'Let's visit Numberland' offers lots of areas of creative work. A folder going along with the project is highly treasured by the children and a good document of a child's development.

Games and Creativity

Each visit to Numberland can be the basis for lots of activities around the specific 'number of the week'. Fun games, related songs or rhymes, designing or moulding, exploring specific questions, sports or outdoor activities...

Hands-on guide

Complete with background, ideas for the schedule, practical tips, tales, songbook and CD with songs.

Trainings

Get the full picture of the range of possibilities in a hands-on seminar. On site trainings available.



About us

We aim to facilitate thorough overall mathematic competency for all children of various backgrounds in order to allow the best possible start into their educational career. We develop and teach didactic concepts especially designed for early childhood needs.

Gerhard Friedrich - PhD in education, private lecturer and teacher for mathematics. Leads a research project on early math education in Lahr, Germany. Hobby musician, father of four.

Barbara Schindelbauer - MBA (Germany) and MSc (Scotland), additional studies in psychology. Involved in preschool and in school on a honorary basis. Hobby musician, mother of two.

Viola de Galgoczy - University degree in vocal arts, teacher for vocal arts, vocalist.

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