



## Come with me to Numberland

**The concept** translates the abstract number range up to 10 into a number landscape, where children can grasp and comprehend numbers as something concrete. The numberland concept has been developed continuously since the 1950's – notably by the author of this game, private lecturer Dr. Gerhard Friedrich and his team. He speaks to several thousand teachers and scientists every year in courses and lectures. The concept has been scientifically evaluated and learning progress is remarkable.

**The game:** Numberland consists of 10 number houses, in each of which a number lives. Numberland has to be completed correctly. But Jumble is on his way from mistake forest to bring disorder to Numberland. Can you stop him and build Numberland? Luckily you have the number fairy to help you.

**Special education focus:** The game allows children to discover and grasp the most important number aspects of numbers 0 to 10. The children thus acquire the basic skills needed for arithmetic and mathematics while playing, which is the ideal way to prepare them for school.

### Concept

The basic idea for this game is taken from the German bestseller “Komm mit ins Zahlenland” (“Come with me to Numberland”). The concept presented in this book shows the tactile and integral way children grasp the number range from 0 to 10. The number range becomes a numberland where numbers, the number pixie and the number fairy live.

A comprehensive scientific study has demonstrated the effectiveness of “Come with me to Numberland”. It has been a resounding success particularly as regards preparation for school and as a learning companion during the first school year.

This does not come as a surprise, as the concept and the game encourage central basic skills needed to become proficient in calculating. In the language of mathematical didactics these are called number aspects.

### Cardinal number aspect (quantity aspect):

Numbers are used to indicate the number or cardinality of the elements of a set (e.g. 6 apples, 3 pine cones).

### Ordinal number aspect (order aspect):

Numbers are used to indicate position in an ordered set (e.g. first, third etc.).

### Arithmetic aspect:

Numbers indicate the result of an arithmetic operation, e.g. an addition (e.g.  $5 = 3 + 2$ )

### Geometric number aspect:

Numbers are used to identify geometric shapes (e.g. pentagon, triangle).

### Numeric image:

Numbers are represented with the aid of numeral and dice images.

The book: “Komm mit ins Zahlenland” by Friedrich, de Galgóczy. Published by Urania



### Material description

In mysterious Numberland we find:

10 floors of number houses where the numbers live

10 roofs of number houses where ravens sit

55 pillars which support the roofs

10 house numbers

Number path, consisting of 11 steps from 0 (mistake forest) to 10 (door to Numberland)

Number pixie Jumble

Number fairy Forget-me-not

1 Numberland die

### Aim of the game

The aim of the game is to build Numberland completely from 1 to 10. Perfect order would prevail if it wasn't for that cheeky number pixie who always jumbles things up! Thank goodness we have the good number fairy to help us put everything back in its right place.

### Note

The game can be played with small children using numbers e.g. only up to 5 or 7. Please read the game instructions completely!

### Game preparation

- Before beginning the game, punch out all the parts and insert the number pixie, the number fairy and the 10 house numbers into the stands.
- Place the floors of the houses in ascending order with the writing face up (playing instructions!) on the table. Begin with 1, then 2 etc.
- Place steps 0 – 10 consecutively as a number path anywhere on the table and place the number pixie Jumble in the mistake forest (on 0).
- The good number fairy Forget-me-not is also placed on the table (e.g. beside the number path).
- Spread the rest of the material out randomly on the table.
- The game supervisor, or a player who can already read, reads the playing instructions of each of the floors from 1-10 out loud, turning each one over afterwards, so that everyone can see the "inhabitants".

### Playing instructions

1. Dear children, welcome to Numberland! In beautiful Numberland every number lives in a very special house. The house with house number 1 has a corner and a pillar. One lives there. The house with house number 2 has two corners and two pillars. Two lives there, etc. Numberland has not been completed yet. You must all help to build the houses in Numberland before the number pixie Jumble reaches the door to Numberland – 10 on the number line! Because Jumble is full of mischief. First of all, you build all the pillars, then all the roofs and then all the house numbers.
2. You play in turns. The youngest player starts. Roll the Numberland die! If you roll a Numberland symbol, you may build. Start with house 1 and place exactly one pillar on the marking. The next player places – if he also rolls a Numberland symbol – two pillars on the marking in house two, all three pillars in house 3 etc.
3. When the pillars have been built in the last house – house 10, then you start building the roofs. Start with house 1 and place the 1 corner roof with 1 raven sitting on it on



the house. The next player places the 2 corner roof with 2 ravens sitting on it on house 2, etc.

4. When the right roof has been placed on house 10, then the house numbers are added. First house 1 gets house number 1, house 2 gets house number 2, etc. When you have put house number 10 onto house 10, Numberland has been completely built and there is no building material left.
5. What happens if you roll the number pixie Jumble? Jumble means mixed up – and that is exactly what he likes doing most! First move Jumble one step forward on the number path. Now you may be Jumble yourself and muddle things up in Numberland: Switch the order of the houses, move pillars around or change house numbers, etc. (Only exception: where there is no pillar or house number yet, Jumble is not allowed to place any pillars or house numbers). Then it is the next player's turn.

When Jumble has mixed up the order of the houses, you must pay special attention: carry on building where the next highest number lives! And sometimes you have to balance the roofs carefully, when Jumble has taken away pillars. What a jumble! The disorder remains until the number fairy Forget-me-not is rolled.

6. If you roll the number fairy Forget-me-not, you may rearrange Numberland and put everything back into its right position. The other children may help you do this. If a child sees a place in Numberland which is still mixed up, it is allowed to let the number fairy hover above it to give you a hint, until everything is neat and tidy again. When everything is tidy again, then it is the next player's turn.
7. When you have completely built Numberland, the game is over:
  - Is everything tidy and in the right place?! Great, you have stopped Jumble making a mess in Numberland! You have won!
  - Is Numberland still in a jumble? Then the die decides: Take turns throwing the dice until either the number fairy or the number pixie is rolled. If "number fairy" shows, you may tidy up Numberland and have conquered Jumble! But if you roll Jumble, Numberland stays untidy and Jumble has won. Have another try to win against Jumble. Next time you're sure to win.
8. Jumble can also win, before Numberland has been completed: As soon as he reaches the door to Numberland – 10 on the number path – he has won. Then the game is over, and you can have another go at trying to win against the cheeky pixie.
9. Alternative game versions:
  - Easier version for young children:** If you can't count that far yet, just take the houses up to number 5 or 7. Remember that the number path only goes as far as number 5 or 7 as well! (Note for adults: understanding of numbers can be systematically extended in this way: first 5, then 6 to 10.)
  - More difficult version:** While Jumble is mixing things up, all the children close their eyes! Can you still find what has been switched around? Jumble can make it a bit easier by giving clues like tapping 5 times if he has switched something in house 5.
  - Creative version:** Replace the house numbers with suitable household items, e.g. a three-pronged cake fork for "3", nine peas for "9", etc.
10. Have lots of fun and success in your Numberland! Off you go!