



123

PUZZLE

NUMBERS
QUANTITIES
SEQUENCES

The material contained in the package is useful for familiarizing children with numbers by developing the recognition of both numbers and quantities, and the ability to sequence and sort the numbers in a progressive and regressive way, reconstructing a real number index.

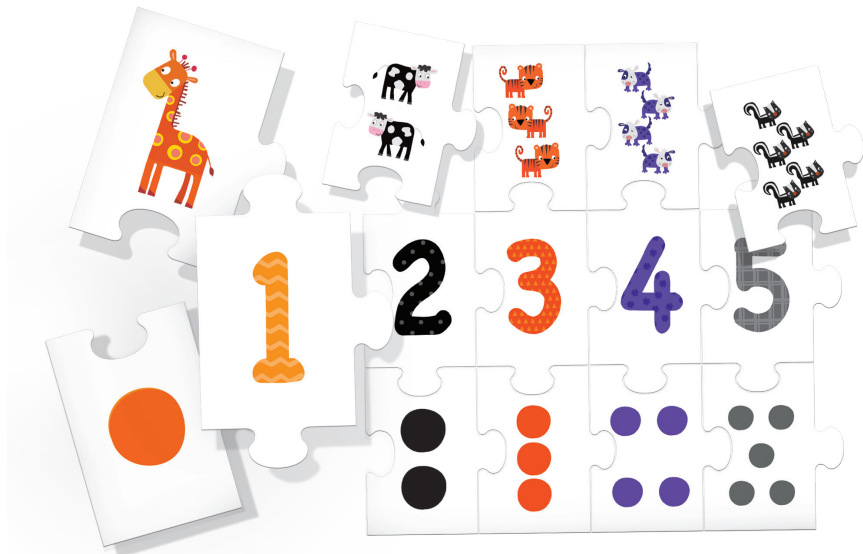
Note: the didactic activities and suggestions below do not constitute a structured didactic program on the learning of numbers. Each parent or educator, on the basis of the age, skill and competency level of the children, can decide to propose the activities and games suggested in a personal way, choosing those that they consider to be the most appropriate and above all leaving the child maximum autonomy and freedom in the handling of the teaching material provided.

FIRST STEPS: FROM QUANTITIES TO NUMBERS

The first activity that is recommended is the representation of quantities. Children spontaneously perceive the difference between two quantities, especially if they are presented with a piece with only one element on it, for example "a giraffe", and then pieces with more than one element on them (for example, "three cats" or "four dogs").

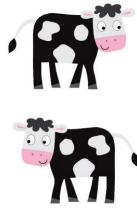
If children are only a little over 3 years old, we strongly recommend that you first introduce the pieces with the animals on them, saying aloud how many there are and indicating the amount represented with your finger. After observing different quantities, continue to play with the children by comparing two quantities and asking them which piece has more elements on it and which one has less. Repeat the same activities with the pieces with colored dots on them to facilitate the development of abstraction. Later, guide children to associate each quantity with the number that represents it: first by associating the pieces with the animals to the numbers, and then by associating the pieces with the numbers expressed by the dots.

This activity is made easier by the recognition of the colors of the numbers and quantities and the self-correcting joints of the cardboard pieces.



LEARN TO COUNT

When children have learned the relationship between numbers and quantity, it will be more meaningful (and fun) for them to start counting. Try to count out loud the subjects of the pieces (or the colored symbols) and, in correspondence with the last element, ask the child to associate the group with the number that represents the whole quantity. For example, choose to count how many skunks there are. Count them by pointing to them with your finger, pronouncing each time the name of the number out loud: "one, two, three, four and ... five!" After a few tries, the child will understand that, when one counts, the last word has a certain characteristic: it represents the numerical quantity equivalent to that of the whole.



PUT TOGETHER THE NUMBER INDEX

Place all the pieces on a table and, to make the activity more stimulating, guide the game by formulating stimulus questions such as: "How many giraffes are there?", "How many cows are there?", "What's the total number of cats?" Repeat the activity by also associating the quantities represented by the dots to the numbers by asking the same questions ("How many orange dots are there?", "How many black dots?", "How many red dots?"). Gradually present all the quantities, making sure that the children slowly put the number index together by putting quantities (and numbers) from the smallest to the largest, and subdividing the game into two phases: first, ask them to associate quantities to the numbers from 1 to 5, then to the numbers 6 to 9.

Parents or educators should limit themselves to providing only simple suggestions (such as those indicated above) and should not take the place of the children in the carrying out of the individual actions. It will be quite natural and spontaneous, in the end, to ask children to consider the fact that, by combining numbers with quantities, they will also have reconstructed the entire number index. Children can repeat the activity of putting together the number index autonomously to consolidate their learning.

THE RACING GAME

Once the number index has been put together, organize a small racing game using the number sequence as a board that is also a line of numbers. Get a die and some game pieces (as many as there are players). Place all the game pieces on the number 1 piece and invite one of the players to roll the die. The player moves their game piece by as many squares as the die indicates. Game proceeds clockwise and the first player to reach the number nine box with an exact number of rolls wins, otherwise they go backwards as many squares as they are in excess of the exact number. This game develops the ability to count in a progressive and regressive sense.

