

# HOME ECONOMICS GUIDE

FEB 10 1982



Published by the University of Missouri-Columbia  
Extension Division  
College of Home Economics

## Learning Is Child's Play

### Number Puzzle

*Clyde T. Mounter*  
Area Child and Family Development Specialist

*Marilyn Coleman*  
Child and Family Development Chairperson



Parents of young children should take the time to play and talk to them. This is the way children learn about themselves, about the world, and about the concepts that will help them adjust to life.

Playing with children can and should be an enjoyable way of providing learning experiences. We often think about children's play only in relation to their playing with other children. Too many times the opportunities of adults playing games with children are overlooked. Parents are usually the most influential force on the child. They are children's first and best teachers. If children learn by playing, and if parents are influential, a wonderful opportunity for learning is available for parents who play games with their child.

Children love to play with numbers and should be encouraged to do so. But, when someone says preschool children can count, it probably means children can recall numbers in order just as they can recall nursery rhymes.

Actually, children may have little understanding of the meaning of "number" or "counting". Memorizing numbers in order is not really counting. Only when children can match the numbers with the quantities or amounts they represent can they be said to be counting.

There are many ways to teach numerals, quantities, and number sequence. The *Number Puzzle* is one toy that can be used to provide this kind of learning experience for children.

#### Description

The *Number Puzzle* consists of 11 rectangles representing the numbers 0 through 10. Each rectangle has notches on the left side that equal the preceding number and notches on the right side that equal the numeral on that rectangle. This means that the rectangles only fit together in proper order or numerical sequence. On the right side of the rectangle there are also peg holes which

represent the numeral on the rectangle. The pegs fit into these holes so that counting a numerical quantity is part of this game.

If you are interested in making a *Number Puzzle*, each of the 11 rectangular pieces should be 3 x 5 inches in size. Masonite works well for constructing these rectangles.

Each notch or cut should be  $\frac{1}{2}$  inch across and the hole drilled by each notch should be  $\frac{1}{8}$  inch in diameter. The pegs should be  $\frac{1}{8}$  inch in diameter at the large end and  $\frac{1}{16}$  inch in diameter at the small end and  $\frac{3}{4}$  inch in overall length. These can be made from  $\frac{3}{8}$  inch dowel rods available at your local lumber yard or hardware store. Golf tees might also be used.

## Purpose

The *Number Puzzle* helps the child learn to match numerals with the quantities they represent and to identify name, and count numbers in sequence from 0 to 10.

## Game I

Pick up the number 1 rectangle of the number puzzle and while pointing to the numeral say, "This is the number 1. How many pegs are there? Let's count them." Then pick up the number 2 rectangle and while pointing to the numeral say, "This is the number 2. How many pegs are there? Let's count them."

This game can progress taking the number 3 rectangle next, then the number 4 rectangle and so on until you have counted all 10 sections of the puzzle. As you play this game, it is well to remember not to rush. Children should not get disturbed if they don't count along with you. Your child may even take the pegs out and put them back in the holes in the rectangles - this serves to reinforce the counting procedure and gives practice in eye-hand coordination at the same time.

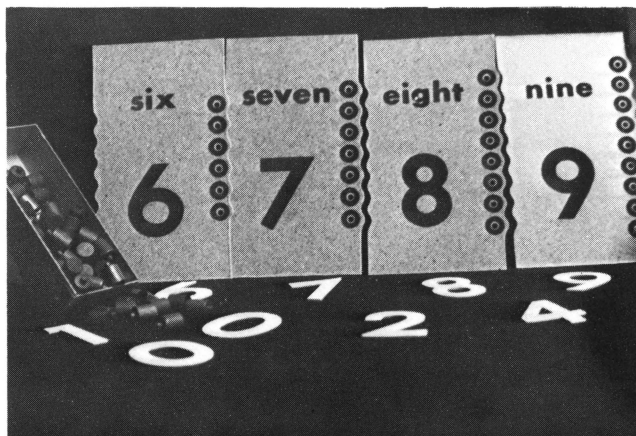
## Game II

The object of a second game that can be played with the *Number Puzzle* is to teach number sequence.

Take the number 1 rectangle of the number puzzle saying, "This is the numeral 1 and here is one peg. What numeral comes next?"

If the child picks the number 2 rectangle, say "Yes, that is correct, the numeral 2 comes next. Do you want to count the pegs?"

If the child picks the wrong numeral, pick up the number 2 rectangle and say the numeral 2 comes next and



*Number Puzzle*

ask if they should count the pegs. In other words, if the child makes a mistake, tell the correct answer rather than saying that the answer was wrong. You should proceed through all of the numbers in order while playing this game with the child.

One purpose of this toy is to help the child learn that the numerals 1, 2, 3, 4, etc. represent certain quantities and have a certain order or sequence. These two concepts are stressed in the two games described.

This toy will probably require more practice than the others unless the child has had a lot of previous experience in counting. Don't be discouraged if it takes a long time to understand; counting is a difficult skill to learn. It may be easier if you break it down into smaller tasks and use only puzzle pieces 0 to 5 at first. Once the child has mastered identifying, naming, and counting those numbers you can add more.

There are many things available in most homes that can be used for teaching about numbers such as building blocks, clocks, etc.

The child's own body can be used to help learn about numbers. For example say, "You have one nose." "You have two eyes." "You have two ears." "You have two hands." "You have 10 fingers." "You have 10 toes." Count them with the child. You can probably think of many other number learning activities yourself.

There are many games and variations of games that can be played with the *Number Puzzle*. Application of number games can be made to other objects, situations, and activities in the home. Don't overlook these. The child is learning all the time. It's up to us as mothers and fathers to provide good learning experiences for our children.