



## Children and Mathematics

For a child, an understanding of quantity is the first mathematical problem he/she is faced with. At a certain point in a child's development, an "awakening" occurs in the child's mathematical mind. The child graduates from purely sensorial explorations to measuring and counting. Typical questions are "how much?" or "how many?" The child must attain a certain level of intellectual maturity that cannot be taught, but that will occur naturally.

Although Dr. Montessori devoted almost her entire professional career to the study of Early Childhood Education, it took her twenty years to discover that a child who could successfully comprehend the numbers one

through ten was also capable of working with 100's and 1000's at the same level. If a child can count from 1 to 9, he can just as easily count from 10 to 90. In order to present the material this way, 90 simply had to be easily divided into nine equal parts. Thus, she invented the ten-bead bar.

Similarly, 100 could be presented in the form of a hundred square, made up of ten ten-bead bars. The 1000 cube was formed by joining ten 100 squares together. After developing this material based on the decimal system, children that could count to ten could just as easily count to 2687 using, for example, two 1000 cubes, eight 100 squares, six tens, and seven ones.

## What the children learn in mathematics includes, but is not limited to:

### **Zero Activity**

The numbers 0 through 10 correspond to the Memory Game of Numbers.

### **Short Bead Stair**

These coloring reinforcement pages correspond to the Short Bead Stair extensions.

### **Addition with the Small Number Rods**

This blank sheet is for the children to record their equations.

### **Tables – Addition, Subtraction, Multiplication and Division**

The tables for addition, subtraction, multiplication and division are to be used in conjunction with Addition with the Short Bead Stair, the Subtraction Strip Board, the Multiplication Board as well as the Division Board.

**Hundred Board**

This page consists of 100 squares and is to be used with the hundred board extensions.

**Four Operations – Equation Signs**

The “operation” signs should be printed onto thick cardstock and cut out individually. The signs are to be used with the Four Operations presentations.

**Four Operations – Equation Slips**

The Four Operation number strips and equation slips should be printed on cardstock and cut out individually.

**Four Operations – Answer Sheets**

These blank sheets are for the children to record their questions and answers.

**Stamp Game Equations**

These equation slips are to be used with the Stamp Game. The slips need to be printed onto thick cardstock and cut out individually.

**Stamp Game Answer Sheets**

These blank sheets are for the children to record their questions and answers.

**Dot Game**

This is the Dot Game. Please color in the different hierarchies at the top of the page.

**Chart Equations**

These simple equation slips can be used with the various boards and charts. The slips should be printed onto thick cardstock and cut out individually.