PART I

Introduction

What Is a Workjob?

A Workjob is simply a manipulative activity using familiar concrete materials from the child's world that is designed to be completed in about ten minutes by a kindergarten, first or second grade student. It requires a specific action from the child and it is through this action that the child develops a new understanding of the given concept.

During my early years of teaching I made many of these independent activity-centered games for the children in my class to use. During one of these years the word "workjob" was coined by a student of mine named Leretha, who took one of the "jobs", as I called them, over to a corner and could be heard saying aloud over and over, "Work, work, work, work, work." An older child, working as a tutor and wanting to be sure, I suppose, that Leretha was sticking to business, asked, "Are you doing your job?" Leretha looked up indignantly and said, "Can't you see I'm doing my workjob?" Other children picked up on this and pretty soon it was standard vocabulary in our classroom. Every time I said, "Go and choose a job to do," the children said, "Oh, I want the 'go-together' workjob," or some such thing. Eventually I gave in and used the phrase too. Ultimately these activities were published in a book called WORKJOBS.

What Is WORKJOBS II?

WORKJOBS II was written to provide kindergarten, first and second grade teachers with complete instructions for making and using twenty open-ended math activities as an enriching supplement to their present classroom math program. In this program the children have many opportunities to use child-oriented counters and gameboards to explore the concept of number from counting to making up and solving their own addition and subtraction equations.

Through the use of these materials the children have an opportunity to explore the many facets of each number and the various relationships that exist between numbers. The teacher becomes more aware of the developmental levels which the child passes through in acquiring a full, flexible understanding of the concept of number.

How Does a WORKJOBS II Activity Differ from an Original Workjob?

When I started teaching first and second grade after having taught kindergarten for several years, I found many of my original Workjobs could be changed to make them more appropriate for the greater developmental range. I took all the numerals off the mathematics Workjobs and made them more open-ended. (I just covered the numerals with gummed labels.) This enabled me to specify how an individual child was to use the activity and thereby provide whatever level was appropriate. A child could put numeral cards with the activities in October, equation cards with them in January, and perhaps write his or her own problems for the same activity in March.

I also found I needed more activities with essentially the same concept in order to provide repetitive practice without having it seem repetitious to the children. By making many varied activities, seemingly different, but alike in usage, I avoided having to explain "what to do" with each different activity. Once the children understood that each activity had counters and an area on which to place them, it didn't matter what the actual counters or counting areas were; the procedure for all the activities was understood. This greatly reduced introduction time as well as individual explanations. All my attention could now be focused on stimulating conceptual development, asking questions, and guiding the growth of the children's social skills rather than on explaining procedure. I found this to be a much more suitable and rewarding use of my time and energy as a teacher.

Which Mathematical Skills Are Developed?

Counting

1:1 Correspondence

Numeral Form

Numeral Recognition

Conservation of Number

Relationships Within and Between Numbers

The Process of Addition

The Process of Subtraction

Interpreting Symbols

Writing and Solving Addition and Subtraction Equations

Use of WORKJOBS II with Other Math Programs

WORKJOBS II is designed to supplement whatever program teachers are using. It provides a link between the child's world (the twenty concrete, child-centered activities) and the adult's world (the mathematical symbols and abstractions); WORKJOBS II forms a bridge that begins at the child's concrete, material level and leads the child to this adult world of abstraction.

These twenty WORKJOBS II activities and the program utilizing them can supplement any existing mathematics program in a kindergarten, first or second grade classroom. It deals only with the arithmetic strand, though, so concepts such as patterning, sorting and classification, measurement, shapes, problem solving and place value need to be fully developed in some other way to round out each child's mathematical understanding.

Many teachers may be familiar with my earlier book MATHEMATICS *THEIR* WAY, and may be curious about the relationship between this program and WORKJOBS II. Teachers using MATHEMATICS *THEIR* WAY as full math programs would teach from Chapters 1–7 to develop the concepts of free exploration, pattern, sorting, counting, comparing, graphing and number. This is

done through total class participation, and small group work. WORKJOBS II would then supplement Chapters 8 and 9 (Number at the Connecting and Symbolic Levels). The WORKJOBS II activities can be used at this stage to enable half the class to work independently while the other half works with the teacher on a directed lesson selected from Chapters 8–12 (Number At the Connecting Level, Number At The Symbolic Level, Pattern II, Place Value, Pattern Book Experiments).