ENRICHMENT ACTIVITIES

for

FIRST GRADE ARITHMETIC

AN ABSTRACT OF

A THESIS

PRESENTED TO THE GRADUATE FACULTY

OF DANBURY STATE COLLEGE

IN PARTIAL FULFILLMENT

OF THE REQUIREMENTS FOR THE DEGREE

MASTER OF SCIENCE

by
Janet Andrus
July 1965

The term "enrichment" in arithmetic refers to experiences that go beyond those used in basic arithmetic textbooks. Many enrichment programs that will challenge pupils are being devised and used in schools throughout our country. They may include activities such as games, puzzles, and work with objects, materials, and other visual aids. No matter which activities are used, they all have as their main purposes to increase the mathematical skill and development of pupils and to present children with a wider variety of suitable activities.

There are basically two forms of enrichment in arithmetic, one being vertical enrichment which is used when children are given material that normally is not presented to them until a later time, and the other is horizontal enrichment whereby youngsters are provided with additional new learning experiences on the level of their present grade. An effective enrichment program should consist of many activities that include both of these forms.

Enrichment activities described in this thesis consist of adaptations from some of the newer mathematical programs such as the School Mathematics Study Group and the Greater Cleveland Mathematics Program and descriptions of several games and devices. Both games and devices are beneficial to pupils because they serve many purposes and can be adapted to fit the individual's level of learning and his specific needs.

The majority of games and devices consist of concrete materials that help youngsters to become aware of the situation and the functions that are taking place. The use of manipulative objects by pupils at the beginning of first grade is extremely valuable because most children have not yet developed the ability to work with semi-concrete materials or to form abstractions. When children follow a planned program of advancing from the use of concrete materials to the development of ability for making abstractions, they are able to obtain a deeper understanding because their abstractions will have more meaning for them. Their experiences do not consist of rote learning where little or no understanding is involved. Use of these manipulative aids also lets children experiment and form conclusions for themselves.

Whereas devices can be used to introduce new topics in arithmetic, games should be used only as a method of reinforcement. Arithmetical games can also provide pupils with many hours of enjoyment. Several specific examples of such games and devices are shown in this thesis.

Whenever children are working with enrichment activities, they must be certain that they have definite goals and understand why they are using a specific form of enrichment. Methods for making enrichment activities most beneficial to all pupils are also presented in the thesis.