AN OVERVIEW OF MEASURE UP: ALGEBRAIC THINKING THROUGH MEASUREMENT

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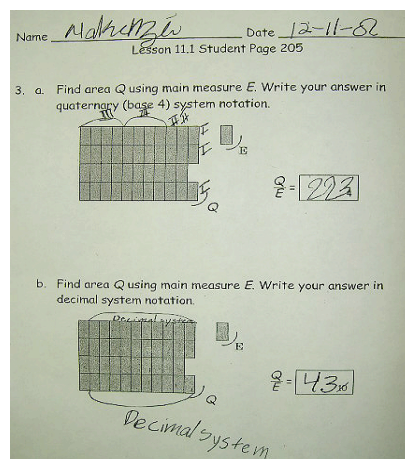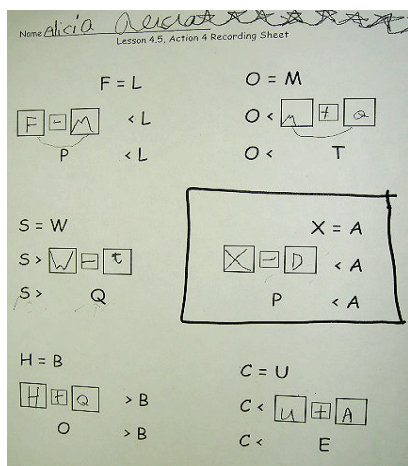Western Illinois University   University of Hawaii   Western Illinois University

MEASURE UP CURRICULUM

Measure Up (MU) is based upon the work of the Russian psychologist, Davydov (1966), who, along with mathematicians and psychologists, wrote, "there is nothing about the intellectual capabilities of primary school children to hinder the algebraization of elementary mathematics." (p. 202). MU addresses an algebraic focus using measurement as its principal context. Children become well acquainted with the notions of equality and inequality by comparing quantities (length, area, mass, volume, and sets) and with the use of addition and subtraction to transform relations of inequality to relations of equality and vice versa. The instruction reflects the notion that mathematical structures, not merely numbers, form the foundation for mathematical knowledge. By beginning with these relations, children can explore and define generalized structures related to algebraic properties such as associativity, commutativity, and inverseness.

Grade 1   Examples of Student Work   Grade 2

CONTENTS OF THE POSTER

The proposed poster will consist of examples of the MU curriculum materials, students work, and pictures from the classroom, parents night, and project staff planning meetings. A CD-ROM that will also include short video clips highlighting the classroom instruction of MU will be made available to interested participants.

Reference

Davydov, V. V. (1966). Logical and psychological problems of elementary mathematics as an academic subject. From (D. B. Elkonin & V. V. Davydov, eds.), *Learning Capacity and Age Level: Primary Grades*, (pp. 54–103). Moscow: Prosveshchenie.