



Curriculum Units by Fellows of the National Initiative

2017 Volume V: From Arithmetic to Algebra: Variables, Word Problems, Fractions and the Rules

Understanding Problems: Using Bar Models with Common Core Taxonomies

Guide for Curriculum Unit 17.05.03, published September 2017

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Understanding Problems: Using Bar Models with Common Core Taxonomies explores how to combine the Singapore bar model approach to analyzing math word problems with the Common Core taxonomies for one-step arithmetic problems (addition/subtraction or multiplication/division). The curriculum unit focuses on the six main types: the change, compare, and part-part-whole situations for addition and subtraction; and the equal groups, compare, and array situations for multiplication and division. Through the use of Singapore bar models, Polya's problem solving scheme, and group discussions, the unit is designed to build students' understanding of word problems. This unit focuses on the single-step components that can be combined to create two-step and three-step problems. A point of emphasis is the connections between addition and subtraction, and likewise between multiplication and division. The pros and cons of the model method are also considered. The unit is designed for third grade students, but could be adapted for students in grades 3-8.

(Developed for Mathematics, grade 3; recommended for Mathematics, grades 3-8)

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