Curriculum Units by Fellows of the Yale-New Haven Teachers Institute
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The Number Line as a Mathematical Tool

Guide for Curriculum Unit 04.05.05
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This unit is designed to be taught to fifth- or sixth-grade students. The objectives for this unit are for students to comprehend the relationship of fractions and whole numbers by applying appropriate mathematical operations to solve word problems and to understand the relationship of fractions to percents. A series of word problems have been designed to be solved using a number line. Word problems with fractions and mixed numbers are presented in the first section. In the second section problems use percents and percents with fractions. Students will create a series of fraction rulers 0 through 2. Each ruler, the same length, will be marked with different non-permanent markers, one marked in fourths, another in fifths, and a third in twentieths. A fourth ruler will be used for section 2 with percents. The mathematical tool developed for this unit is a series of blank acrylic rulers. Students will solve word problems requiring addition and subtraction of fractions and percents using number lines.

(Recommended for Mathematics, grades 5-7.)