



YALE NATIONAL INITIATIVE

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Curriculum Units by Fellows of the National Initiative

2014 Volume V: Place Value, Fractions, and Algebra: Improving Content Learning through the Practice Standards

Practice Standards = Perfect Problem Solvers

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Numbers can be represented in so many ways! Students (and their parents) are constantly complaining they "don't like math" or "can't do math." In order to make math more meaningful and simple for students to understand they need to learn how to change large numbers or large problems into simple parts, their pieces. This curriculum unit, written at Yale University in Summer 2014, describes the sequence of how students can break numbers into their pieces and use those pieces to solve complex problems. The sequence described in the unit includes students becoming fluent with adding and subtracting numbers and building a number sense to ten; how to use ten to describe the "teen" numbers; how to expand 2-digit and 3-digit numbers into their pieces (and although this unit is being written for 2nd graders, the foundation can be applied with larger numbers for students in higher grades or with smaller numbers for students in K-1); and how to use the pieces to solve addition and subtraction word problems both with and without regrouping situations.

This curriculum unit will be taught to 2nd grade students and provide a foundation for professional development for other teachers.

(Developed for Elementary Mathematics, grade 2; recommended for Elementary Mathematics, grades K-4)

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