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EDFI 7100

**Sequencing Rationale**

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This unit in my math foundations courses is sequenced according to the pattern of logical prerequisite as described in the text, *Course Design*, by Posner and Rudnitsky (2001). As there are many different ways this course could be sequenced, I feel that my students will find the most success in this course with the use of a logical type of sequencing. Since math is a content area that relies heavily upon one concept building upon another, I feel that my students will respond very well the logical way that I have sequenced this particular unit. Because of the fact that my students have dropped out of past schools, I find it to be essential to order the curriculum in the way that not only challenges them with material that meets their needs and forced them to extend their thinking, but with a curriculum that also helps them to make connections to different areas in the math content to help them get catch up to the content that that they should be learning at by 10th grade level.

The first unit will be discussing integers and operations. I feel that this subunit is important to place first in this unit because integers are the most basic types of all numbers. In order for my students to understand fractions and decimal numbers (non-integers), I feel is extremely important for students to understand what an integer is. In this unit, students will be learning about negative numbers and absolute value. Students will be learning how to add subtract multiply and divide both positive and negative integers. Students will then move to explore the commutative and associative properties, and then venture to explore the order of operations and how to apply the order of operations to solve mathematical expressions with integers. This subunit provides a solid foundation for students to move to the next unit which discusses fractions (non-integers).

Subunit two will be discussing many different aspects of fractions. Now that students can understand and define integers, I felt that this would be a good place to discuss non-integers. Fractions are a very import subunit for my students as many of them score the lowest in the fraction area of their preassessment that they take upon entrance of my class. In this unit, students will define *fraction,* and use manipulatives to help compare equivalent fractions. Students will then explore methods of adding and subtracting fractions by finding a common denominator, and will then move to exploring methods to multiply and divide fractional numbers. Key terms that will be discussed in this section are improper fractions, mixed numbers, equivalent fractions, and simplifying. I also feel that this subunit is a great place to introduce rational and non rational numbers. Since the next subunit will be discussing decimal numbers, I plan on finishing the chapter with discussion of fractional division and rational vs. irrational numbers. This will provide for a solid framework for my class make connections between fractions and the final subunit of this unit, decimals.

The last subunit will be exploring decimal numbers and their operations. I felt that this subunit flowed logically after the fraction subunit because students will need to understand integers and fractions first so they can make the connections between fraction and decimal. I purposefully ended the fraction subunit with the division sections section so that students could make the connection that a fraction is actually a division problem that oftentimes returns a decimal number. We will begin this section by exploring decimal basics and place value, and then move onto explore properties of multiplying, dividing, adding, and subtracting fractions. Students will identify where they can find and use decimals in the real world, and then apply their knowledge of decimal operations to real life problems with decimals. By using decimal knowledge to solve everyday problems, I hope to further engage my students into discussing estimation and rounding techniques to help make decimal operations easier for their use in the real world.