

## Sequencing Rationale

The sequencing in this unit is developmentally appropriate for the fourth graders it is designed for. This unit is the precursor for students moving into decimals and percentages. The fraction and mixed number unit includes students learning how to add and subtract fractions with like and unlike denominators. In the previous grade, students were introduced to what a fraction is and how to represent them in various ways, numerically and visually using models.

In fourth grade students will begin with adding and subtracting fractions with like denominators. Since addition and subtraction are what students first learn when dealing with whole numbers, it is naturally where we begin when working with fractions. Since students can easily add and subtract fractions with like denominators we use this to ease students into adding and subtracting fractions with unlike denominators. This process requires an additional step, of finding common denominators, which also requires a knowledge of multiples and multiplication. For students, once they master adding and subtracting with like and unlike denominators, they will move into improper fractions and mixed numbers. We use this sequence because improper fractions and mixed numbers are often created when fractions added together equal greater than one whole. Therefore, students need to know what adding and subtracting fractions produce, so they are ready to recognize them as mixed numbers and improper fractions. Finally, students will be able to apply all of these methods and formulas to solve real world problems. They will be able to analyze the problem in the real world and then synthesize their learning and the situation to find a solution.

In the following unit, students will be working on multiplying and dividing fractions. Essentially, because multiplication is repeated addition and division is repeated subtraction, the students must follow this order to developmentally achieve their learning outcomes. So in the

grand sequence of students' learning this unit of adding and subtracting fractions, mixed numbers, improper fractions and real world applications is the foundational piece in understand how we use fractions in the real world and how they can be used outside of the classroom.

### **References**

Chiarelott, L. (2006). Curriculum in context. Belmont, CA: Wadsworth.