

## Statement of Purpose

### **The Problem**

There is a problem in the current district that I serve in. The math curriculum is not as rigorous as the Common Core, and there are a lot of learning gaps that students suffer from. This means they are not prepared for second grade math, and subsequently third and fourth grade, and so on. Foundational math skills are taught in the first grade, and if students do not develop a sound understanding of these skills than they will likely struggle in subsequent math classes. A uniform math curriculum that meets the rigor of the Common Core, as well as the needs of the students needs to be developed in order for our students to become successful mathematicians.

### **Needs of the Learner**

Understanding first grade math is essential to success in further grades. First grade is when students begin to learn the basics, or the foundation, of addition and subtraction. This is also a time when students develop a true understanding of place value. If students understand how to manipulate a number's place value, they will have much success going forward in math. According to Roger Howe, there are three pillars to math and early numeracy, and these pillars are essential to starting off on the right path with arithmetic. The first pillar is, "a robust understanding of the operations of addition and subtraction" (Howe, 2012, p.1). The second pillar, as described by Howe is "an approach to arithmetic computation that intertwines place value with the addition/subtraction facts" (2012, p.1). The third pillar is "making connections between counting number and measurement number" (Howe, 2012, p.1). All three of these pillars describe the foundation that is necessary to be successful in operational math.

### **Needs of the Society**

Societal needs vary in math, but understanding simple arithmetic is essential to success as an adult. Being able to do simple computations is a core skill to have when shopping, paying bills, computing percentages, or making any sort of purchase. Without the foundation of adding and subtracting, society would not be successful.

### **Value of the Subject Matter**

Math is one of the focuses for American education. Creating a strong mathematical foundation will help the students thrive in math in the future. There are many important jobs that involve math, including engineering, architecture, chemist, teacher, accountant, salesman, and the list goes on. Without fostering a lot for learning and math, the United States will continue to see the number of people qualified to hold this positions dwindle.

These lessons are imperative for success as an adult as well. Learning how to balance a checkbook, pay bills, find out how much an item is based off of a percentage, make a purchase, or take a job all depend on the simple skills of adding and subtracting. Those foundational skills are learned in the first grade. If lessons are not interactive, hands on, or fun, students will not be engaged, and will not learn these important skills.

### **The Educational Goal**

The purpose of this unit is to lay the foundation of basic addition and subtraction skills, and to prepare students for more challenging mathematical concepts in the future. The course has the expected outcome of ninety percent of the students being proficient at two-digit addition and subtraction, with an introduction to basic triple digit addition and subtraction. Students will have the opportunities to explore these topics with manipulatives, and work cooperatively with peers and teachers.



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## References

Howe, R. (2012, February 3). Three Pillars of First Grade Mathematics. Retrieved February 16, 2015, from <http://commoncoretools.me/wp-content/uploads/2012/02/3pillars.pdf>