

## **Statement of Purpose**

When put into a real world situation involving math, people often reach for their calculator, smart phone, or tablet to help find a solution. Our world has become so dependent on finding quick resolutions to problems, that common math sense is being lost. Fractions are a mathematical concept that can be found in everyday life. People use fractions to bake, measure distances, and build houses. However, more often than not, a technological aid is present in reaching an answer. While I would support using these devices to check your work, it is essential that people build a strong math foundation so they do not rely solely on technology to do the work for them. This reliance results in a loss of cognitive ability, and capability to problem solve in unexpected situations.

The first year in school when students spend a plentiful amount of time studying fractions is in fifth grade. According to Bloom's taxonomy, by this time students have built a basic foundation by spending time on recall and comprehension, and are ready to begin their higher level of thinking in the levels of analysis, synthesis, and evaluation (Chiarelott, 2006, p. 60). This curriculum unit on fractions will build strongly on the students' experiences. As argued by Dewey, "learning emerges from experience, and one's interpretation of experience is always contextual" (Chiarelott, 2006, p. 7). The most effective way for students to retain information is the ability to relate what they are learning to their own lives. Everyone has used a measuring cup, went on a bike ride, or split the last piece of cake with a friend. These are instances where fractions are used, and it is necessary to have an understanding of what they are and how they work.

In order to teach fractions effectively, the rigor of the curriculum needs to be on par with the necessity of the topic. Fractions surround us, and therefore students need to be held to high

standards during the unit. One strong focus will be on learning the vocabulary that coincides with the unit. Massey and Riley explain how math textbooks differ from the typical narrative style students see in other content areas such as language arts, science, and social studies, and go on further to explain that math texts rely heavily on technical vocabulary (2013, p. 577). There are a lot of vocabulary terms surrounding the concept of fractions. Students will begin with basic recall of each term, but will then be expected to apply what they have learned in context, to something they can easily relate.

The success and availability of technology is brilliant. It has helped our society reach great heights and allows us to cure disease, communicate with people across the globe, and enhance our students' learning experiences in the classroom. While there are many benefits of technology, as educators we need to enable our students to become independent problem solvers, and not answer getters. Fractions are an essential factor of everyday life that some students may not even realize they have been using. This unit will take the prior knowledge students have of fractions and apply it to problem solving, all while enhancing their confidence in their math ability.

### References

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

Massey, D., & Riley, L. (2013). Reading math textbooks: An algebra teacher's patterns of thinking. *Journal of Adolescent & Adult Literacy*, 56 (7), 577-586.

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