Statement of Purpose

“One person puts words on a page, describing a setting or an event. In a different time, in a different place, another person reads those words and, if the transmission is good, sees and feels nearly the same thing as the writer” (Glesne, 2006). This is how I feel about teaching. If I can relay to my students the passion I have for teaching through my notes, my projects, and my activities, then they can truly see and feel the concept I want them to understand. They can create their own meaning and they can see why I believe learning is so important. Often times, I put words on the pages of my Smartboard, and it is my job to make those words as meaningful to my students as possible, to give them a guide that leads to understanding long after they have left my classroom.

I chose exponents and exponential functions as my unit of study because I truly believe this is a topic that my students need to understand. I want them to construct their own reality that is free from memorization tricks or drill and practice. Over the course of my eight years of teaching, I have seen a rapid decline in my students’ ability to problem solve independently. They can no longer take a formula, plug in the numbers, and then explain the meaning behind their solution. This unit provides them with videos, notes, projects, and assessments that will help them create meaning in mathematics, and that will foster their creativity. “Students must be given supportive conditions in which they can develop creativity, but they must be held responsible for confirming or disproving the value or correctness of their assumptions” (Ornstein & Hunkins, 2009). I feel that the WebQuest that I developed for this unit allows students to think critically, to solve independently, and to create without bounds.

This unit is one of the most important because graphing equations and providing a visual representation of your solutions is at the heart and soul of Algebra. Students so often times get wrapped up in solving a problem for the correct answer, but cannot tell you how they know it is correct. This unit is full of real life problems that students may see on a daily basis. It incorporates money problems such as compound interest. It discusses ideas such as vehicle depreciation and tournament eliminations. Animal populations and radioactive half-lifes are also discussed. Exponents find their way into a multitude of professions and developing an understanding of how they work is key to many fields such as biology, banking, or automobile sales.

As educators, we must teach to the test. We must follow certain standards, teach specific concepts, and cover the same material as our fellow educators down the hall. But it is up to us to motivate our students to find the meaning beyond the standardized tests. Math is a series of building blocks. This unit is one of many that my students will need to grasp in order to be successful in their math years to come. “And more importantly, [my students] will acquire both the information and the skills necessary to become critical thinkers” (Chiarelott, 2006). Mathematics is more than just learning numbers, it is about learning how to problem solve, to think critically and logically, to synthesize information, and to present it all in such a way that all will understand.

References

Chiarelott, L. (2006). *Curriculum in Context*. Belmont, CA: Thompson and Wadsworth.

Glesne, C. (2006). *Becoming Qualitative Researchers: An Introduction.* (3rd ed.). Boston:

Pearson Education, Inc.

Ornstein, A. C. & Hunkins, F. P. (2009). *Curriculum: Foundations, Principles, and Issues.*

Boston: Pearson.