Chad Dale

Statement of Purpose.

Having received no Math training in college this paper will explore what I will be expected to teach next year in fourth grade Math. Fourth grade Math is an area of concern as there is a drop in test scores as children express more frustration in the subject. Math at this grade level introduces double digit multiplying, which has led to tears for more than one student this year. At this grade level children will be expected to learn skills from the standards: Operations & Algebraic Thinking, Number & Operations in Base Ten, Number & Operations—Fractions, Measurement & Data, and Geometry (Common Core Standards). This summer the ESC curriculum specialist came in to talk about our school’s curriculum and possible changes due to OAA test scores last year.

Math is important for students to learn as it will become a skill used in everyday life. From counting money to building and design, Math is in constant use in today’s society. Fourth grade math introduces two difficult ideas for students at this grade level, double digit multiplication and it requires a significant use of fractions. It is important that students learn good fundamentals at an early grade level so they can become successful at the higher levels of Math that will be required of them in High School or College.

Math seems to be one of those curriculum areas that people either love or stay away from because they are intimidated by it. The goal of this college requirement is to create a challenging Math curriculum that will give all students a chance to succeed and encourage a love of Math. This requirement will be designed with flexibility in mind to adapt to things a teacher will learn about the curriculum as they are teaching the curriculum.

One particular area these class projects hope to explore is the different ways that boys and girls learn in Math. The hippocampus, which controls memory storage, is larger in girls, which leads to girls having better recall ability of the Math times table (Gurian and Stevens, 2004). The male brain is better suited to think abstractly in terms of symbols and pictures, which gives them an advantage in Geometry and Algebra and promotes the stereotype that boys are better at Math than girls (Gurian and Stevens, 2004). Hopefully lesson plans can be developed to address the differences between boys and girls.

Optimistically one outcome of this project will be to find a creative way to teach children the formal rules of Math. Children should be able to explain the rule and why or how it works instead of regurgitating a formula. An added bonus would be to find a creative project which would allow students to work at their own pace to apply and learn Math concepts. Modification for students with special needs is also another area that could hopefully be explored.

According to Armstrong this should be a good way to teach children about Math as well as giving them an opportunity to explore real world applications with Math (Armstrong 2007). This has also been mentioned in the textbook that class work should be seen as relevant to the real world. Boys also show less motivation to learn partly because they think the curriculum is irrelevant, hopefully this will encourage boys that the material is relevant and make them successful Math students (King, Gurian, and Stevens 2010).

Sources

Armstrong, Thomas. The Curriculum. Educational Leadership, May 2007.

Gurian, Michael and Kathy Stevens. With Boys and Girls in Mind. Educational Leadership, Nov. 2004.

King, Kelley; Gurian, Michael and Katy Stevens. Gender-Friendly. Educational Leadership, Nov. 2010.

Common Core Standards; <http://www.corestandards.org/the-standards/mathematics> 2010 accessed on 4/27/11.