Matthew Seasly February 21, 2012 EDTL 7100 Statement of Purpose

**Statement of Purpose**

Located within the fifth grade science classrooms throughout the state of Ohio today, are the future citizens of our great society. These students must be prepared for the various experiences they will encounter throughout their lives and be able to apply what they have learned throughout their educational careers, to solve problems or create solutions that will hopefully make this a better society to live in for current and/or future generations. Fifth grade science is a core subject that is preparing students with a wealth of knowledge from the many different academic content standards that are covered throughout the year in the areas of life sciences, physical sciences, earth and space sciences, science and technology, scientific inquiry, and scientific ways of knowing. Since the 2000’s, accountability within the science curriculum has come from assessing students on the number of academic content standards they have learned and comprehended throughout a school year (Buxton & Provenzo, 2011). Since Ohio uses the Ohio Achievement Assessment for their students to measure the number of standards they have comprehended, it is critical that students effectively learn the information covered within their classes.

According to statistics from the 2010-2011 State Report Card, 71% of Ohio students in fifth grade science classes achieved a score of proficient or higher (2011, Summer). The dilemma is that the state of Ohio mandates at least 75% of students achieve a score of proficient or higher. Also, according to The Nation’s Report Card (2009), Ohio ranks higher than 27 other states, is ranked lower than 4 other states, and shows no significant difference in 15 other states when it comes to achievement on high-stakes tests in science (National Center for Education Statistics, 2011). Even though Ohio ranks higher in half of the states, the unfortunate aspect is, that Ohio students in science cannot achieve a passing score of 75% on their high-stakes tests in their own state. This information is essential for Ohio teachers to know, because they must create effective curriculum. Research also indicates that if students are engaged in collaborative groups, where the lessons are reinforced with hands-on activities in science classrooms, they will perform better on high-stakes tests and have a better attitude towards school than those students that do not participate in those types of classrooms (Mastropieri et al., 2006). Students within this proposed unit will be given ample opportunities to excel at science and to achieve higher scores on high-stakes testing, because they will be participating in hands-on activities, working in collaborative groups, learning responsibilities and respect, and becoming aware of the environment around them.

The issue of student achievement or progress has a considerable emphasis placed on it in the state of Ohio right now. Science instruction within this grade level is critical to the success of students (e.g. *Value*-*Added*), teachers (e.g. accountability), and school districts (e.g. report card). With the current leadership and legislation of this state proposing that a portion of teacher’s evaluation be based upon student achievement, the need for effective curriculum is at the highest priority for teachers, administrators, and school districts. Ornstein and Hunkins (2009) suggest that today’s curriculum must be relevant towards students (p.48). If students are unable to relate to the curriculum from their past experiences, then learning becomes more difficult and less prevalent in their education. Students must be given ample opportunities to excel at learning and applying the material they are learning. Curriculum must also be developed around the needs of society and kept up with technology (Ornstein & Hunkins, 2009). *Value-Added* will be the measuring tool that will be used to rate a student’s performance and growth throughout one academic school year. But, as research has suggested, boys typically perform higher on science high-stakes assessments, than girls do at this age (Kleinfeld, 2009). Kleinfeld (2009) found that teachers tended to tailor their classroom activities towards the boys’ interests, instead of the girls (p.114). Since that was the case, teachers today must design their lessons and/or activities towards both genders, to give equal chances for student to develop.

Despite the achievement assessments, accountability, and growth scores, the success of any curriculum depends upon the alignment of standards, so that each level of information is being “built” upon the previous level. This enables students to apply what they have learned and use it to help them learn new information. The goal of this unit is to provide students with an opportunity to excel in and out of the classroom, relate the material being learned to their previous experiences, and apply what they have learned, to future problems and the OAA.

**References**

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