**Statement of Purpose: Physical Science**

Physical Science is a high school class designed for incoming freshman that serves as one of the Ohio Core science courses needed for graduation. This course introduces students to new science concepts and builds on the foundation that was taught to them in the elementary and middle school levels. Students will take part in inquiry-based laboratory experiences and learn objectives and concepts that provide a foundation for further study in other sciences and advanced science disciplines. The class will focus on challenging students to use critical thinking skills associated the higher levels of Bloom’s taxonomy. (Bloom 1956) The course is comprised of many different areas of science while intertwining basic scientific inquiry and skills into each unit of study. Students will actively study the Universe, Energy and Waves, Chemistry, and Physics concepts. Many of these concepts within the course will build off previous knowledge and are very much connected together. It will be imperative for students to grasp each objective as it may be the foundation for the next lesson. Students will be assessed on their knowledge of these subjects throughout the year using daily assignments, observations, labs, projects, quizzes, binders, tests, and presentations. “It is clear that different kinds of information must be gathered about students using different types of assessments. The use of diverse set data-collection formats will yield a deeper more meaningful understanding of what children know and are able to do” (Badders 2000)

Physical science class teaches students the necessary basic scientific skills and concepts that will apply to their everyday life as adults. The class will put students into real world situations and activities that they will someday face as citizens and as members of the work force. The United States today has a great need for new scientist and innovators in science fields. There will be a great need for workers in technology, engineering, the medical field, and scientific research all of which start with a basic foundation of science which students will study in this course. The course also will build a foundation for all future fields of study as it is designed help students improve many valuable skills such as problems solving, graphing, analyzing data, communication, and critical thinking.

Physical Science class is designed to be a class where all students can succeed regardless of their cognitive ability. Many students will come in with a fear of science or find it very difficult or uninteresting. The class is designed to give the learner multiple ways to show their knowledge and has enough variety in topics that it will encourage all students to become active participants in the learning process. Students will be able to demonstrate their understanding in a variety through a variety of assessments. Laboratory activities, presentations, projects, tests, quizzes, as well as homework and classwork. Students who struggle will be given modified assignments to meet their needs. Higher achieving students will be pushed to advance beyond the typical objective and dig deeper into each concept. The first year of high school can be a very difficult time in a student’s life. Students are becoming young adults and are given much more freedom and responsibility at the high school level. This can lead to a very difficult adjustment period for many students. It is important to help the students with these adjustments. Organization, time management, social time, and peer pressure are all common obstacles faced by students who take this course.

Upon completion of physical science class students should be able to design and conduct scientific investigations, use technology and mathematics to improve investigations, use critical thinking skills to solve problems, develop fundamental concepts about matter, energy, motion, as well as an understanding of phenomena in physical, living, Earth, and space systems. (ODE 2011)

References

Bladders, W. (2000). *Methods of assessment.* Retrieved from <http://www.eduplace.com/science/profdev/articles/badders.html>

Bloom, B.W. (1956) *Taxonomy of educational objectives: The classification of educational goals.* New York: Longmans, Green.

Ohio Department of Education (2011) *High School SciecneRevised Standards and Model Curriulum.* Retrieved from http://www.ode.state.oh.us/GD/Templates/Pages/ODE/ODEDetail/aspx?page=3&TopicRelationID=1705&ContentID=76585