

**I. Curriculum Area**

Science

**II. Courses**

6000 – Integrated Science 7  
6001– Integrated Science 7 HONORS  
6003– Applied Science 7  
6005– Science Lab 7  
6098- SPED Coteach Science 7-8  
6100– Integrated Science 8  
6101– Integrated Science 8 HONORS  
6103– Applied Science 8  
6105– Science Lab 8  
6272- Forensics  
6600- Hacking STEM  
6601- Integrated Science 7 Honors  
6602- Hacking STEM 2  
6609– Science Explorations  
6630- Science Olympiad  
6700- Science Exploration  
6701- Science Exploration Earth Science  
6702- Science Exploration Physical Science  
6703- Science Exploration Biological Science  
6704- Science Exploration Forensics  
6900- EE Integrated Science 7  
6901- EE Integrated Science 8

**III. Goal Summary Statement**

Students in all 7<sup>th</sup> and 8<sup>th</sup> grade science courses will demonstrate measurable progress in carrying out scientific investigations. They will design and conduct controlled experiments to test their hypothesis and then communicate significant components of their experimental design and results including the connection between evidence and conclusion.

**IV. Full Goal Description**

Students in all 7<sup>th</sup> and 8<sup>th</sup> grade science courses will demonstrate measurable progress in carrying out scientific investigation of a testable hypothesis based on observations and questions. They will design and conduct controlled experiments to test their hypothesis and then communicate significant components of their experimental design and results including the connection between evidence and conclusion. Students will demonstrate their proficiency in the use of science process and thinking skills by planning and conducting experiments in which they:

- form research questions and testable hypotheses;
- discuss possible outcomes of investigations;

- predict results of investigations based upon prior data;
- identify variables and describe the relationships between them;
- plan procedures to control independent variable(s);
- collect data on the dependent variable(s);
- select appropriate format and use it to summarize the data obtained;
- analyze data, check it for accuracy, and construct reasonable conclusions;
- and communicate the results of their investigations.

In order to demonstrate measurable progress, students will need to plan and conduct a minimum of two content-appropriate scientific investigations during the course of the school year. This may require scaffolding and differentiated instruction. To assess these scientific investigations, educators may utilize the Davis Science Processing Rubric or an educator-designed assessment tool. Students should be assessed on all of these science process and thinking skills; however, they do not necessarily need to be assessed simultaneously.

#### **V. Connection to DESK Standards**

The goal of science education is to provide experiences with concepts that students can explore and understand in depth to build a foundation for future science exploration and investigation of phenomena. Science encourages students to gain knowledge through scientific processing and thinking skills: observing, questioning, exploring, making and testing hypotheses, comparing predictions, evaluating data, and communicating conclusions. The Intended Learning Outcomes (ILOs) of the DESK standards describe the skills and attitudes students should learn as a result of science instruction. Educators use the ILOs as the beginning point for planning instruction, where practice of science skills takes place in the context of the DESK standards. Science investigations provide experiences to build from concrete concepts to more abstract understandings, allowing for student growth. Science teaching and learning should encourage students working in cooperative groups and connect lessons with students' daily lives. This requires continuous practice and use of inquiry based instruction by the teacher and the student. The intended learning outcomes develop and build from kindergarten to 12th grade and beyond.

#### **VI. Assessment Tool/Rubric/Evidence**

There should be at least a pre- and post-assessment of the goal. It is recommended that the pre-assessment will be performed during the first semester and the post-assessment during the second semester.

-See attached rubric