FILE : SIP - Science School Improvement Program - SCIENCE Thomas R. Cuba 2006 0831

GOAL: By the 2008-2009 FCAT testing cycle, 70% of the students in each measured category shall have achieved a score of 3 or better. Improvement over the existing level of 33% shall be measured annually. Interim goals are set at 45% for the 2006-7 FCAT and 60% for the 2007-8 FCAT.

NEEDS Assessment: 67% of the St Petersburg High School students scored less than level 3 on the 2005-6 FCAT. Science is considered a "second tier" skill, requiring well developed math, reading, and writing skills in order to provide a proper foundation.

Objective 1: Enact an incremental annual improvement program to achieve the interim and final goals.

Objective 2: Incorporate improvement in reading, writing, and mathematics into the strategies for meeting the science goal.

Objective 3: Motivate students and assure that each comprehends the need to have a working understanding of basic scientific principles, regardless of their future profession.

Strategies:

1a. Each science course syllabus shall incorporate Essential Learning goals and each Sunshine State Standard.

1b. Science course syllabi shall be reviewed for consistency with Strategy 1a on a point by point basis.

1c. Each lab or practical activity will support specific lesson planned items and the achievement of specific Sunshine State Standards.

1d. Where possible, laboratory and practical activity shall build upon and expand upon activities undertaken in previous years.

1e. Science course syllabi will be prepared in a coordinated and mutually supportive manner, each building on the other within grade level as well as upon standards of achievement set forth for prerequisite grade levels.

1f. Science course syllabi will be reviewed for consistency with Strategy 1e on a point by point basis.

1g. Each science course should include at least one period during the first week during which students are exposed to special software used in the course (e.g. excel).

1h. Each science course should develop an on-campus outdoor classroom in order to develop real world experiential laboratory exercises.

2a. Each science teacher should coordinate with the mathematics department to assure that statistics used in the science class are supportive of, and consistent with, each course's lesson plan.

2b. Each science course shall include at least one report in essay format during each 6 week period. Each report shall include at least one graph and one statistical test.

2c. Each report submitted shall be team graded by the science teacher for content, and by a cooperating English teacher for communication skills.

3a. At least once during each 6 week period, a member of the community shall be a guest lecturer in each science class. The guest is to demonstrate the value of basic scientific principles in their daily lives. While physicians and professors may be chosen, guests should be recruited from more common professions such as fireman, detective, automobile mechanic, traffic engineer, sports writer in order to demonstrate that ALL professions require a basic understanding of the sciences.

3b. Self-guided, parent guided, volunteer guided, or student group tours of local scientific facilities should be conducted at least once in each 6 week period. Locations may include local laboratories, hospitals, architectural offices, nature parks, and places where science is used in addition to places where research is conducted.

3c. Participation in summer programs such as local park groups or eco-tours abroad should be encouraged as a form of experiential learning

3d. Each homework or report assignment must be constructed so that it may be completed without the use of a computer in order to assure that all students have an opportunity to complete the assignment. Students with ready access to computers should not be afforded extra credit or other competitive advantage.