STAFF DEVELOPMENT COMPONENT INFORMATION

COMPONENT TITLE: Mathematics and Science Leadership Development

IDENTIFIER NUMBER: 7009001

MAXIMUM POINTS: 60

GENERAL OBJECTIVE:
The purpose of this component is to provide an opportunity for instructional personnel to demonstrate and develop leadership skills in the areas of mathematics and science.

SPECIFIC OBJECTIVES:
Within the duration of this component, participants will:

1. demonstrate the ability to read research, apply theory and communicate effective practices related to mathematics and science.
2. demonstrate knowledge of research-based educational strategies related to mathematics and science.
3. demonstrate an understanding of the Florida Sunshine State Standards, the NCTM standards and the NSTA standards as related to the mathematics and science curriculum.
4. identify and demonstrate an understanding of a meaningful relationship between mathematics and scientific principles.
5. develop an understanding of professional development that is aligned with the National Standards of Mathematics and Science.
6. develop an understanding of school-wide needs assessments and how they can be used to guide professional development.
7. analyze student achievement data related to mathematics and science
8. develop an understanding of how research-based strategies can increase student achievement in mathematics and science.
9. develop an understanding of how to identify and organize resources according to district priorities.
10. demonstrate an understanding of how to actively engage the school staff and community to create shared responsibility for mathematics and science.
11. demonstrate leadership skills to obtain continued community support, to motivate stakeholders and to facilitate staff collaboration for math and science fairs.
12. demonstrate knowledge and expertise regarding math and science fairs.

PROCEDURES:
Participants will:

1. actively participate in professional development opportunities.
2. read research-based best practices from a variety of current academic journals and texts.
3. simulate modeled lessons.
4. observe specified content via video and technology.
5. engage in small-group directed activities.
6. record reflections.

FOLLOW-UP ACTIVITIES:
Participants will apply their learning by:

1. providing written reflections.
2. gathering teacher work samples.
3. developing a portfolio.
4. publishing an article, newsletter, or best practice stating impact to student achievement as a result of implementation.
5. collecting and sharing of data that demonstrates analysis of teacher learning, providing a record of modeled lessons, mentoring, coaching, and/or collegial planning.
6. creating an effective demonstration of best practices using technology.

EVALUATION OF PARTICIPANTS:
Participants must demonstrate a mastery of the component's specific objectives as measured by assessments or other valid measures.
The participants will demonstrate mastery of specific objectives as indicated by valid measures of performance as required in Florida Statute 231.508 (1) .

COMPONENT EVALUATION:
Participants and instructors will assess the degree to which the activities addressed the specific objectives and will make recommendations for revisions through a component evaluation.