Staff Development In-service Component Information

COMPONENT TITLE: K-12 Science Strategies

IDENTIFIER NUMBER: 2015008

MAXIMUM POINTS: 30

GENERAL OBJECTIVE
Professional development designed to provide participants with content knowledge and instructional strategies in order to increase student achievement in all strands of science.

SPECIFIC OBJECTIVE:

Within the duration of this component, participants will:

1. Demonstrate content knowledge of scientific concepts, properties and principles in all strands including physical and chemical, earth and space and life and environmental sciences.
2. Demonstrate clear understanding of scientific vocabulary and terms.
3. Apply scientific vocabulary and terms to instructional strategies.
4. Analyze instructional strategies for effectively teaching scientific concepts, properties and principles in all strands.
5. Identify best practices for the delivery of scientific concepts, properties and principles in all strands.
6. Synthesize a variety of instructional strategies to solve problems.
7. Interpret student data to streamline instructional lessons that target FCAT Science benchmarks.
8. Demonstrate understanding of how to effectively integrate scientific concepts, properties and principles within various strands.
9. Identify opportunities to integrate other core content areas including math, social studies and reading with scientific concepts, properties and principles.
10. Analyze effectiveness of using science literature to develop scientific concepts, properties and principles.

PROCEDURES:

Participants will:

1. Actively participate in professional development opportunities.
2. Engage in multiple hands-on activities related to textbook information.
3. Read research-based best practices from a variety of current academic journals and texts.
4. Simulate modeled lessons.
5. Observe specified content via video/technology.
6. Engage in small-group directed activities.

7. Record reflections.

FOLLOW-UP ACTIVITIES:

Participants will apply their learning by:

1. Providing written reflections.
2. Gathering student 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 student learning.
6. Providing notes of modeled lessons, mentoring, coaching, and/or collegial conversations.
7. Providing evidence of an effective learning center created for the classroom.
8. 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.