STAFF DEVELOPMENT COMPONENT INFORMATION

COMPONENT TITLE: Elementary Geometry

IDENTIFIER NUMBER: 1009011

MAXIMUM POINTS: 60

GENERAL OBJECTIVE
Professional development in geometry is intended to provide teachers with content knowledge and instructional strategies and/or techniques in order to deliver quality instruction to increase student achievement in the area of geometry and spatial sense.

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

1. demonstrate an understanding of terminology and vocabulary related to geometry, the fundamental properties of geometry and characteristics of two- and three-dimensional shapes.
2. demonstrate an understanding of the relationships that exist between geometric shapes including, but not limited to, subdividing and combing shapes.
3. demonstrate an understanding of the relationships that exist between similar figures and congruent figures.
4. analyze conjectures and provide arguments regarding geometric properties and relationships.
5. specify locations and spatial relationships using coordinate geometry.
6. demonstrate an understanding of geometric transformations including translations, rotations and reflections.
7. analyze geometric models to solve problems.
8. develop spatial sense skills that can be applied to other disciplines.
9. demonstrate an understanding of measurable attributes of objects and units, measurement systems and processes of measurement.
10. analyze appropriate techniques, tools and formulas to determine measurements.
11. demonstrate an understanding of instructional strategies to determine measurements including, but not limited to, perimeters, areas and circumferences of two-dimensional figures.
12. demonstrate an understanding of instructional strategies to determine measurements including, but not limited to, surface areas and volume of three-dimensional figures.
13. demonstrate an understanding of how to use manipulatives as instructional delivery techniques geometry.
14. demonstrate an understanding of best practices for the delivery of geometric concepts.
15. compare teaching style to learner needs.

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/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 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.