

STAFF DEVELOPMENT COMPONENT INFORMATION

COMPONENT TITLE: Inquiry Based Instructional Methodologies

IDENTIFIER NUMBER: 2015005

MAXIMUM POINTS: 60

GENERAL OBJECTIVE:

This professional development will provide an opportunity for instructional personnel to improve their own general science content knowledge, learn inquiry-based instructional methodologies and add technology to their science instruction.

SPECIFIC OBJECTIVES:

Within the duration of this professional development, participants will:

1. demonstrate an understanding of and examine ways to apply strategies that connect prior knowledge to existing science concepts.
2. demonstrate an understanding of how to formulate concept maps that effectively communicate science concepts.
3. demonstrate an understanding of the constructivist approach to learning science concepts.
4. demonstrate an understanding of the ability to formulate and test a hypothesis (prediction).
5. demonstrate an understanding of how to specify the use of the inquiry-based method (collect, record, organize, and analyze data) to support a hypothesis.
6. demonstrate an understanding of how science concepts are applied to new situations.
7. identify various observational techniques that can be used to facilitate inquiry-based instruction.
8. demonstrate an understanding of how to implement inquiry-based instruction into science curriculum.
9. demonstrate an understanding of how to articulate various methods for implementation of new science vocabulary and pedagogy into classroom instruction.
10. demonstrate the ability of how to demonstrate effective modeling of science instructional strategies for colleagues.
11. demonstrate the ability of how to explain how technology facilitates the learning process.
12. demonstrate the ability of how to ensure appropriate generalizations are made from presented science concepts.
13. establish best practices in constructivist learning and share among colleagues.
14. infuse technology into instructional practices.

DELIVERY PROCEDURES:

Participants will engage in facilitated interactions and activities relating to research-based practices. These include: reading current research-based material, simulated modeled lessons, observation of specified content via technology, discussion groups, creating authentic products and written reflections.

FOLLOW-UP:

Participants will apply their learning by providing:

1. various data affirming implementation of content knowledge and instruction.
2. written evidence of the impact on student attitudes, learning and achievement as a result of implementation.
3. a portfolio.
4. evidence of modeling various ideas, lessons or best-practices.
5. documentation of computer-based technologies such as websites, streaming video, e-mail, word processing, presentation software, and other multimedia resources used to prepare lessons.

EVALUATION OF PARTICIPANTS

Participants must demonstrate a mastery of the component's specific objectives as measured by portfolios, assessments or other valid measures. Participant will demonstrate a mastery of specific objectives as indicated by valid measures of performance as required in Florida Statute 1012.98.

COMPONENT EVALUATION:

The professional developer will assess the degree to which the information/activities addressed the specific objectives through a component evaluation.