

Achieving Mathematical Excellence: Enriching Strategies for Instruction

30 Inservice Points

Component No. 1 009 004

General Objective

1. To provide teachers with knowledge of a diversified collection of strategies, approaches, and methods associated with the development of mathematical ability through skilled instruction.
2. To provide teachers with an opportunity to acquire additional skilled instructional techniques which lead students to achieve mathematical excellence.
3. To provide an introduction to, insight into, and experience in using the new math series adoption materials with the corresponding national Council of Teachers of Mathematics standards and expectations and the schools mathematics curriculum.
4. To provide a forum for discussion, review, evaluation and revision of the schools curriculum.

Specific Objective

Teachers will:

1. Explore the patterns, relationships, and connections found in pure math and expand foundational knowledge essential for mathematical thinking.
2. Experience problem solving strategies including, classic problem solving types.
3. Develop insight into two and three dimensional geometric principles through the use of logic and proof.
4. Acquire an enrich knowledge of the best methods for teaching numerous mathematical skills.
5. Expose and explore math concepts behind the myths in teaching mathematics.
6. Discover the elegance and importance of fractions.
7. Develop a comprehensive cumulative review plan as a supplement to the new text materials.
8. Explore issues related to parental involvement in mathematical instruction: Areas parents should help with in math and areas they should not.
9. Develop a master of a pure math plan by grade level that will be an easy to read detailed list of the topics teachers are responsible for teaching and students will be held accountable for learning.
10. Develop a list of mathematical terminology specific to each grade level.
11. Participate in an introduction to Florid Math League Problem Solving and develop a supplementary problem solving plan.
12. Explore the value of mental math methods and strategies and develop a supplemental mental math plan.
13. Discover and understanding the math behind the “tricks”.
14. Participate in a discussion to address the adoption of the supplemental plans created for pure math, problem solving, terminology, and mental math.

Activities

Teachers will participate in a variety of experiences including:

1. Lecture, demonstration, discussion, application, and modeling of mathematical strategies, methods, and techniques.
2. Brainstorming supplementary plans in pure math, problem solving, terminology, and mental math compatible with the adopted math series.
3. Collaborative teaming activities for concept attainment and problem-solving.
4. Cooperative structures appropriate for the acquisition of new mathematical concepts and mathematical thinking.



Evaluation

Teacher will complete:

1. Pre and post tests
2. The development of supplementary plans
3. Authentic, alternative, and informal assessment techniques
4. Continuous self-evaluation and reflective responses
5. An Achieving Mathematical Excellence Strategies for Instruction workshop evaluation form

