

Topics in Mathematics

60 Inservice Points

Component No. 1 009 001

General Objective

1.0 To provide teachers with the necessary information, demonstration lessons, and practice to improve professional knowledge and competencies in line with the standards proposed by the National Council of Teachers of Mathematics.

Specific Objectives

1. Use various problem solving techniques to investigate and solve problems.
2. Employ appropriate language and symbolism to communicate mathematical ideas.
3. Provide students with experiences that develop their reasoning skills.
4. Use manipulatives to introduce mathematical concepts.
5. Understand and apply basic concepts of measurements.
6. Provide students with opportunities to investigate mathematical connections and to apply mathematics to everyday situations.
7. Apply estimation strategies and determine the reasonableness of the results.
8. Develop techniques that generate number sense and foster and understanding of mathematical operations.
9. Assist students in developing a reasonable proficiency with basic facts and algorithms and in using calculators in appropriate situations.
10. Provide opportunities for students to explore geometric concepts and develop spatial sense.
11. Develop activities that encourage students to collect, organize, display, and analyze data and explore probability.
12. Investigate patterns and explore and analyze mathematical relationships.
13. Develop a lesson plan which will integrate mathematics with other areas of the curriculum.
14. Integrate technology into the teaching and learning of mathematics.
15. Select and use appropriate methods of assessment.

Activities

A variety of flexible activities are designed to include:

1. Theory presentation
2. Innovative lesson planning
3. Workshops on integrated lessons;
4. Demonstration lesson using manipulatives;
5. Make it and Take it Manipulatives workshop
6. Hands on experiences using computers and calculators.

Evaluation

Participants will demonstrate proficiency in the targeted objectives by completing one or more of the following:

1. Achieve 80% accuracy on a written exam
2. Demonstrate the use of manipulatives in the classroom.
3. Submit lesson plans that reflect the objective
4. Develop activities related to particular mathematical concepts
5. Participate in hands-on computer and/or calculator workshop.
6. Participants will complete a workshop evaluation form.

