

Introduction

As we move to an ever more technologically based society, the need for mathematical knowledge is increasing. Mathematics is defined as more than arithmetic skills, which can be handled by even the most basic calculator. Mathematics incorporates thought, analysis, reflection, problem solving, and creativity. These workshops are designed to provide ideas that could be used in any classroom where the following topics are taught:

- Beginning algebra
- Error Patterns and assessment
- Geometry
- Mathematics in general
- Problem solving
- Proof
- Skills in teaching mathematics.

Each workshop is designed to stand alone, has a detailed discussion outlined in a Power Point presentation, and also has a set of exercises and exercise solutions. There is a bibliography at the end of each workshop that lists resources, sources, and ideas for further investigation.

Each workshop includes topics, activities, and ideas that have been tested with students of varying abilities and ages. There is pedagogy presented to help a teacher reach students with different backgrounds and motivation to study mathematics. The activities and strategies should prove beneficial to all adult education populations.

The assumption is that the trainer is mathematically oriented, but in most instances, the materials have been written in a manner that does not assume extensive mathematical background. The trainer who reads the materials from which the Power Point presentation is taken should be able to explain any topic adequately for any interested workshop participant.

Training Plans

The materials have purposely been written to be independent of any materials. In the workshops proper, items like Geometer's Sketchpad, Casio FX 2.0 graphing calculator, algebra software, and manipulatives such as base-10 blocks and algebra tiles are mentioned. While any workshop could be enhanced with the addition of these resources and materials, there is ample information included to provide appropriate insights and accomplish the training goals.