Abstract:

Grade/Subject: 9-12/Algebra

Time Frame: 5 or 6 – 40 minute periods

Strand: Algebra

Topic: Solving Systems of Linear Equations in Two Variables

Objectives: This lesson will help students learn the substitution and elimination methods of solving a linear equation by first using the graphing calculator to graph and construct tables of linear equations.

Materials: Graphing calculator, overhead display, handout (included)

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Concept:
1. A linear system of equations in two variables will have no solution, one solution, or an infinite number of solutions; 2. Systems of linear equations model real-world phenomena.

Learning Objectives:
1. Student will be able to set up and solve systems of linear equations (algebra strand); 2. Student will be able to decide when a problem situation is best solved using a computer, calculator, paper and pencil, or mental arithmetic/estimation techniques (algebra).

Project/Task:
Students will use a graphing calculator to solve linear systems of equations in two variables using graphing features and table features. Students will then learn the algebraic methods of substitution and elimination. Students will identify which method is most appropriate for a given system, and use these systems to solve practical applications. As a final assessment, students will set up, describe, and solve systems using all methods.

Assessment:
Informal observation and feedback (individual and group)
Demonstration of each method by student
Pencil and paper
Written analysis of methods