5E Lesson Plan

Teacher: Deanna Mallard

Date: June 17-18, 2014

Subject / grade level: Solving One-Step Equations & Two-Step Equations / 6th-7th grade

Materials: Teacher's Manual, Prepared handouts by teacher, Pencils, Notebook, Whiteboard, Markers

NC SCOS Essential Standards and Clarifying Objectives

Standards: Students will:
- **Use variables to represent numbers and write expressions when solving real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.**
- **Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.**
- **Identify and define authentic problems and significant questions for investigation**
- **Plan and manage activities to develop a solution or complete a project**

Lesson objective(s): LO1: The 6th-8th grade students will solve a one-step equation in the forms x+b=c, x-b=c, ax=c, and x/a=c.
LO2: The 6th-8th grade students will be able to solve a two-step equation for the value of an unknown value.

Differentiation strategies to meet diverse learner needs: Reinforcement will be available to all learners, as well as a guided practice worksheets and small group instructions.

ENGAGEMENT
The students will practice the skill by using visual concept development presented from teaching modeling of the skill.
If student does not fully understand, teacher will re-teach and/or remediation.

EXPLORATION
Students will demonstrate a conceptual understanding of algebraic expressions by simplifying algebraic expressions within an equation.

EXPLANATION
Explain that two-step equations are similar to one step equations with the exception of another operation.

- The main goal is to isolate the variable on one side of the equation.
- Using the additive inverse or multiplicative inverse to cancel the operands from one side of the equation.
- What is done to one side has to be done to the other side.
- Check work by substituting value in for variable.
Example: 2x + 3 = 9
1. Subtract 3 from both sides (2x=6)
2. Divide by 2 on both sides (x=3)
3. Check your answer by plugging in the variable 2(3)+3=9

ELABORATION
Students will practice solving one step and two-step equations. During this time, the teacher will offer feedback and assistance in demonstrating mastery of the concept.

EVALUATION
Assess skills and concepts through demonstration and performance.