**Lesson Plan**

**Mathematics Course: \_\_X\_ 8th Math \_\_\_ Math 1 (9th) \_\_\_ Math 2 (10th)**

**Title of Lesson** \_\_\_\_\_\_Solving and Graphing Inequalities

**Unit** \_\_\_\_\_\_\_\_\_\_\_\_\_\_Equal or Not?

**Purpose within unit (include information to help place this lesson within the unit)**:

 \_\_\_\_ Exploration \_\_X\_\_ Direct Instruction \_\_\_\_ Culminating Task

**Georgia Performance Standard** :

**M8A2. Students will understand and graph inequalities in one variable.**

 **b. Use the properties of inequality to solve inequalities.**

 **c. Graph the solution of an inequality on a number line.**

**Objective for This Class Period**: Students will be solve and graph inequalities in one variable.

**Essential Question(s)**

How do I solve and graph linear inequalities?

**Resources**

<http://www.mathsisfun.com/algebra/inequality-solving.html>

<http://www.kutasoftware.com/FreeWorksheets/PreAlgWorksheets/Inequalities%20and%20Their%20Graphs.pdf>

<http://www.ncpublicschools.org/docs/curriculum/mathematics/middlegrades/grade07/goal05/objective5.03/5.03-tasks/5.03-inequalitiespuzzle.pdf>

Mixed Review

Ticket out the Door Activity

**Timing outline (180 minutes)**

* 5 Questions Mixed Review – 15 minutes
* Math is fun website-50 minutes
* Kuta software website-printed material- 50 minutes
* Inequalities puzzle- 50 minutes
* Summarizer – 15 minutes

**5-Question Mixed Review**

**Lesson Guide --website addresses are listed above**

* Activating Strategy –
* Teacher will use the website Math is Fun to teach and review solving inequalities. Make sure that you have visited the website prior to using with students.
* Teacher will need to preview and print selected material for your teaching from kutasoftware and ncpublic schools to use with students.
* After the teacher models, the students will practice with a partner as the teacher facilitates to complete the kutasoftware worksheets on inequalities. The worksheets consist of graphing an inequality, writing an inequality from a graph, and solving and graphing inequalities.
* After discussion and completion of worksheets, students will be given the inequalities puzzle. Students will be assigned a partner to complete the puzzle. This will be used as a formative assessment.
* Students will complete the Ticket out the Door activity each day.

**Ticket out the Door Activity - 3 days**

Using the website <http://www.coolmath.com/crunchers/algebra-problems-solving-inequalities-1.htm>, the teacher will click and give the students three problems to solve. Students will have to write and solve the problems on their paper. Make sure you give students sufficient time to copy the problems. If time allows you may have students to solve the problems and check their answers with the website. If not, students should turn in their work as they leave the room.

1. **Minute Review**

1. Write an algebraic expression that represents the phrase “two less than double a number.”

2. Write 130,749 in scientific notation.

3. Solve x + 8 = 26

4. Find the length of a side of a square with an area of 81m2 .

5 . Use the formula d = rt. You drive a car 210 miles at 42 miles per hour. How many hours do you drive?

**5 Minute Review**

1 . Solve 2x – 5 = 23.

2. What is the square root of 100?

3. What is the square root of 48 in radical form?

4. Eight more than a number is fourteen. Find the number.

5. A number decreased by sixteen is thirteen. Find the number.

**5 Minute Review**

1, Angle 1 and angle 2 are alternate interior angles. Angle 1 equals 78 degrees. What is the measure of angle 2?

2. Write 36, 700, 000 in scientific notation.

3. Write 0.0000000567 in scientific notation.

4. What is the best whole number estimate of the square root of 53?

5. Sam tosses a quarter, a nickel, and a penny. What is the probability that all three land on heads?

**Mixed Review Key**

1. 2x -2
2. 1.30749 x 105
3. X = 18
4. 9m
5. T = 5 hours

**5 Minute Review**

1. X = 7
2. 10
3. 4√3
4. N = 6
5. N = -3

**5 Minute Review**

1. 78 degrees
2. 3.67 x 107
3. 5.67 x 10-9
4. 7
5. 1 out of 8