LESSON PLAN – Algebra I

Title: Solutions to Inequalities with Two Variables **Date:** 11/1/21

Learning Objectives:	1. Determine whether a point is in the solution set of a linear inequality. 2. Graph a linear inequality in the coordinate plane. 3. Write a linear inequality from its graph.

Next Generation Standards	
AI-A.CED.2	Create equations and linear inequalities in two variables to represent a real-world context.
AI-A.CED.4	Rewrite formulas to highlight a quantity of interest, using the same reasoning as in solving equations.
AI-A.REI.12	Graph the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.

Teaching Materials:

iPad and projector
Unit 2A Note Packet (Day 14 Notes)
Calculator
Unit 2A Day 14 Homework & Applied Practice

Time-budgeted Procedure (80 minutes):

Time (minutes)	Activities (description of what you and your students are doing)
5	Intro
30	Notes
20	Applied Practice
25	Homework/Make-up time

Content & Instructional Strategies:

I. Intro
   A. Reminder: Unit Test Wednesday
   B. All post-quiz corrections (Day 7 and later) must be turned in by 3:00 Wednesday!

II. Notes
   A. Intro
      1. I do first ordered pair
      2. You do the other 3
      3. Highlight "yes" vs "no" to illustrate direction of solution set
   B. Method of graphing inequalities
      1. Demonstrate using example from above
      2. Fill table for examples
   C. Practice graphing
      1. Practice 1 – teacher-led
      2. Practice 3 – "we do"
      3. Practice 2 – "you do"
      4. Practice 4 – recall writing equations; find slope and y-intercept "we do"
      5. Practice 5 – "you do"
      6. Practice 6 – write inequality together, then graph independently and regroup to answer part b

III. Applied Practice
   A. Remind that when solving inequalities, dividing/multiplying by a negative flips the sign
   B. Note that number 9 is written oddly and should be rewritten before graphing
   C. "We do" number 10 with leading questions
      1. Before graphing: How will we know whether the boundary line is solid or dotted?
      2. Plot points for boundary line first, then decide on line style and shading
   D. "We do" number 11
      1. Give students 1 minute to try writing the inequality
      2. Regroup to check inequality
      3. Draw attention to the scale of the graph; graph together to illustrate
   E. "You do" questions 8-9 with opportunity to ask for teacher support

IV. Homework/Make-up time
   A. Students should complete homework before starting other tasks
   B. After completing homework, check SchoolTool to see what corrections can be done for Algebra if any
   C. Spend duration of class working on corrections or other work