Lesson Plan - Math

Grade: Integrated	**Subject: Mathematics**
Materials: Whiteboard, markers	**Technology Needed: N/A**

Instructional Strategies:

- X Direct instruction
- X Guided practice
- ☐ Socratic Seminar
- ☐ Learning Centers
- ☐ Lecture
- ☐ Technology integration
- ☐ Other (list)
- X Peer teaching/collaboration/ cooperative learning
- ☐ Visuals/Graphic organizers
- ☐ PBL
- ☐ Discussion/Debate
- ☐ Modeling

Guided Practices and Concrete Application:

- ☐ Large group activity
- X Independent activity
- X Pairing/collaboration
- ☐ Simulations/Scenarios
- ☐ Other (list)
- X Hands-on
- ☐ Technology integration
- ☐ Imitation/Repeat/Mimic

Explain:

Standard(s)
A-REI.C.6
Solve systems of linear equations exactly and approximately, focusing on pairs of linear equations with two variables.

Objective(s)
They will understand how to solve a system of inequalities by elimination by the end of today.
Bloom's Taxonomy Cognitive Level:
Comprehension

Differentiation
Below Proficiency:
Practice problems in book with classmate's assistance
Above Proficiency:
Help classmates who are below proficiency
Approaching/Emerging Proficiency:
Work with class on practice problems
Modalities/Learning Preferences:
Visual/Spatial, Logical/Mathematical

Classroom Management- (grouping(s), movement/transitions, etc.)
Standard classroom procedures for using computers: single-file line, sign computer out, log in to school account, other websites are blocked

Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.)
Students should not be doing anything on the computer but their homework unless they're done, at which point they are expected not to be disruptive with what they do or they lose their computer privileges.

Minutes	Procedures
5	**Set-up/Prep:** This Tuesday, we will reflect It's Topical Tuesday, so the Journal question today is not math-related. It is related to something that is going on in our culture at the time that is relevant.
10	**Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.)** We spend time talking about the journal question, reflecting on what is going on. It's just as important for me to talk to my students about current events as it is to talk about math.
15	**Explain: (concepts, procedures, vocabulary, etc.)** I will give students this problem to work on. They will bring them to me with the correct answer to get credit on their "Try This" sheet. Every row of squares they fill in for correct answers earns them a piece of candy. For this problem, they may collaborate with their table partner to get the correct answer. A hint will be provided to make the coefficients match up through multiplying an equation by a coefficient. *Solve the following system of equations by elimination.* 1. $6y - 2x = 8$ $5y - 4x = -5$ *Answers:* 1. *Multiply the first question by 2 to line it up for subtraction. Students will be confused since the terms don't match up. This is how I will informally teach them to multiply coefficients to find a common term to eliminate. They will also have to subtract these equations to do it correctly.* $12y - 4x = 16$ $-\ \underline{5y - 4x = -5}$ $=\ 7y - 0x = 21$ $7y = 21 \rightarrow y = 3$ $\rightarrow 5(3) - 4x = -5 \rightarrow 15 - 4x = -5 \rightarrow -4x = -20 \rightarrow x = 5$ *The answer is (5, 3).*
15	**Explore: (independent, concreate practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions)** We will talk about what was different about the Try This! problem and clear the air about the things I wanted them to figure out for those who are still confused. We will also talk about how they may not have a common multiple and you may have to multiply both equations to use the elimination method. Furthermore, we'll show how you could divide as well to get the elimination method to work, and we'll show that just like any other method, there are processes you have to watch for in the event there are no solutions or infinitely many.
10	**Review (wrap up and transition to next activity):** Time to work on homework; I will work with students who may be behind in the class or challenged with any disability that need assistance.

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Formative Assessment: (linked to objectives) Progress monitoring throughout lesson- clarifying questions, check-in strategies. **Consideration for Back-up Plan:** Back-up could be tech day for looking at problems of similar nature. Or have a game prepared with candy incentive for the students of team solving of equations.	**Summative Assessment (linked back to objectives)** **End of lesson:** Completion of tasks – did the students complete the Try This? **If applicable- overall unit, chapter, concept, etc.:** There will be a quiz on this soon in a few days.
Reflection (What went well? What did the students learn? How do you know? What changes would you make?):	