Lesson Plan

Grade: 9th

Subject: Algebra 1

Materials: Notes packet, worksheet

Technology Needed: None needed, I will need the projector to project the notes on the board to fill in with the students.

Instructional Strategies:

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

Guided Practices and Concrete Application:

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

Explain:

Standard(s)

HS.A-REI.3: Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.

Objective(s)

The students will, by the end of the lesson, solve literal linear equations and inequalities in one variable, including equations with coefficients represented by letters.

Bloom's Taxonomy Cognitive Level:

Apply

Differentiation

Below Proficiency:

The students who are below proficiency will only have one worksheet that they will be assigned. They also will receive a little more help when doing the worksheet to get them to proficiency.

Above Proficiency:

The students who are above proficiency will have another worksheet to do if they get through the first worksheet as time allows will be assigned a second. They also will help the students who are below proficiency if they need help.

Approaching/Emerging Proficiency:

The students who are approaching proficiency can ask the students who are above proficiency for help and if they still have questions they can ask me for help.

Modalities/Learning Preferences:

Existential, Verbal/Linguistic, Visual/Spatial, Bodily/Kinesthetic, & Interpersonal

Classroom Management- (grouping(s), movement/transitions, etc.)

The students have assigned seats. The seating is arranged in such a way that limits the amount of distractions for each student so that they can learn to the best of their ability. The students also know where the calculators are in the classroom so that when they need them they can quietly walk over and get one.

Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.)

The students will know the classroom procedures and will know to come into class and sit down and wait till everyone is in class and then we will start. The students will also know that they must respect me and the other students at all times.

Minutes	Procedures
0	**Set-up/Prep:** I will have the worksheets already printed before class, and once I get into class I will get the projector set and have the students be able to see the note packet on the screen so they can take notes as well.
3-5	**Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.)** First I will ask the students what they know about literal equations. Once some of them say what they think it is I will give them the actual definition.
20-25	**Explain: (concepts, procedures, vocabulary, etc.)** 1. The definition of a literal equation is an equation that has multiple variables within the equation. 2. To solve a literal equation, we isolate one variable that is given in the question. 3. For the first example I would have the students solve for y and solve it for the equation $y + 5x = 6$. To solve this you first subtract $5x$ from both sides and end up getting $y = 6 - 5x$ 4. The second example is $8x - 4y = -12$ solving for y. We first subtract $8x$ from both sides and we get $-4y = -12 - 8x$. Next, we divide by -4 on both sides and we end up getting $y = 3 + 2x$ 5. The third example is $3ab - 2bc = 12$ solving for c. We first subtract $3ab$ from both sides and end up with $-2bc = 12 -$

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	$3ab$. Next, we divide both sides by $-2b$ so that we only have c on the left and we get $c = \frac{12-3ab}{-2b}$. 6. The fourth example I would give is $A = \frac{bh}{2}$ and we need to solve for h. We first multiply 2 on both side and we get $2A = bh$ and then we divide b on both side and we end up getting $\frac{2A}{b} = h$ 7. The final example that I would give would be $2x + 4y = 8$ and they need to solve for y and then find the y value given $x = -1,0,1$. First, we subtract $2x$ from both sides and we get $4y = 8 - 2x$. After that we divide both sides by 4 and we end up with $y = 2 - \frac{1}{2}x$. Now that we have our equation we plug in each x value, so for $x = -1$ we plug -1 in for x and get $y = 2 - \frac{1}{2}(-1)$ which means for $x = -1$ $y = 2\frac{1}{2}$, for $x = 0$ we get $y = 2 - \frac{1}{2}(0)$ which means for $x = 0$ $y = 2$, and for $x = 1$ we get $y = 2 - \frac{1}{2}(1)$ which means for $x = 1$ $y = 1\frac{1}{2}$.
20	**Explore: (independent, concreate practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions)** The students will then work on a worksheet that I hand out after we get through the examples, they will be able to work in small groups if they would like or they may work alone. If they do not get it done in class they will have to do it as homework.
2-3	**Review (wrap up and transition to next activity):** If the students finish their worksheet before class is over they will hold on to them until the day of the test. If they do not get it done by the end of class they will do it for homework and need it done by the test. We will go over the homework the next day to see if there are any questions.

Formative Assessment: (linked to objectives) **Progress monitoring throughout lesson- clarifying questions, check-in strategies, etc.** During the time for working on their own I will walk around the room and asking the students questions to make sure they are on the right track of learning. Two days after the lesson is taught the students will have an exit ticket that they will have to complete on comprehension of the topic that was taught. **Consideration for Back-up Plan:**	**Summative Assessment (linked back to objectives)** **End of lesson:** The students will have a homework worksheet that they will have to do that will be graded at the end of the lesson. **If applicable- overall unit, chapter, concept, etc.:** At the end of the chapter the students will get a test that will be graded and recorded.

Reflection (What went well? What did the students learn? How do you know? What changes would you make?):
When teaching the lesson the students were very engaged and wanted to learn. One of the main things that I would change is slow down a little bit when I am giving the instruction. I also need to give the students a little bit more time to answer a question that I asked before I just give them the answer to the question that I asked. I know I need to give them more time to answer because when I would give the answer some of the students had a discouraged look on their face because I gave the answer before they had a chance to answer it.