Lesson Plan Template

Grade: 6-8

Subject: Algebra

Materials: Equations to hang on walls

Technology Needed: Smartboard

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)

7.EE.4 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. a. Solve word problems leading to equations of the form $pppp + qq = rr$ and $pp(xx + qq) = rr$, where pp, qq, and rr are specific rational numbers.

Objective(s)

I can solve for a single variable in an equation.
I can solve two-step equations.

Bloom's Taxonomy Cognitive Level:

Application

Differentiation

Below Proficiency:
Students will work with peers, and likely have extra help from me as the teacher.

Above Proficiency:
Students will finish the activity early and have time to work on their online math program. They can also do the if-what cards.

Approaching/Emerging Proficiency:
Students have adequate time to finish the lesson.

Modalities/Learning Preferences:
Kinesthetic, social, visual

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

Students will participate in classroom discussion and work collaboratively for the activity.

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

The students will be in their desks, and work on the warm-up activity. After the students have attempted the warmup, volunteers will lead through the four problems. We will have lecture-based examples, then the students are allowed to choose their own partners for the around-the-room activity. The lesson will be discussion based, so it will provide a more laid-back appeal.

Minutes	Procedures
5	**Set-up/Prep:** Tape the scavenger card problems up around the room; have the warmup problems on the smartboard and tell students to start working on them.
5-10	**Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.)** Warm-up problems are posted on the board. Have students start working on them, and volunteers will complete the problems for the class. Then, I will go over them just to make sure every student understands the concept.
20	**Explain: (concepts, procedures, vocabulary, etc.)** This lesson is an extension of a previous lesson, so the students should be familiar with the information. As a review, we will go over the practice problems as a student-led discussion. I will add input when necessary.
35	**Explore: (independent, concreate practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions)** The problems will be on the walls, so students may use their own paper and start the scavenger hunt. Explanation: Each group will start at a random problem. When they get an answer, they go find their answer somewhere on the wall. This will present them with a new problem, and the pattern will continue. If they ever see a problem again, they can use that as a self-check to see that something is wrong.
20	**Review (wrap up and transition to next activity):** Students may ask questions and finish up the scavenger hunt. Upon completion, they will do some Dreambox activities.

Formative Assessment: (linked to objectives, during learning)

- **Progress monitoring throughout lesson (how can you document your student's learning?)**

I can assess student progress throughout the lesson when we go over the warm-up and the practice problems. As an assessment for the day, when the students are done with the scavenger hunt, I will be able to see how well they understood the material. I will also have instant feedback by observing the students as they work.

Summative Assessment (linked back to objectives, END of learning)

The students will continue work with more advanced problems, and the material will be on a chapter test.

Reflection (What went well? What did the students learn? How do you know? What changes would you make?):

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The students really enjoyed getting up and moving around. I have learned, with middle schoolers especially, that movement is a key part of a block schedule. They learned how to solve for a single variable, and the importance of double-checking answers. If I were to change this lesson, I would choose to pair the students differently. I feel students can handle being with their friends for some things, but this would be a good activity to make sure all students understand the material.

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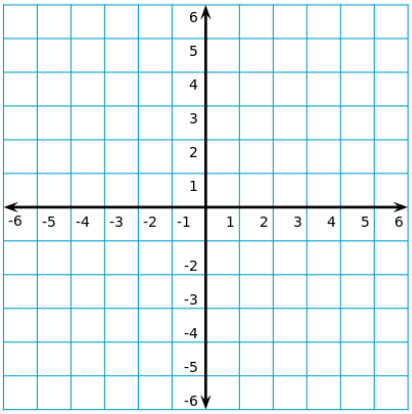
Warm up problems to be posted on board:

1) X + 3 = 7 – X

2) Plot the following points and draw the lines:
   a. (-5,2)
   b. (0, 4)
   c. (2, -5)
   d. (6, -6)



3) Complete using correct order of operations: (8)3-12+3x5

4) State the standard equation of a line:

Practice problems for review before activity:

1) -4X+7=15
2) 4x-3=2x+7
3) 2(x+5)-7=3(x-2)
4) 21=x+x+5+x+7
5) 4p-11-p=2+2p-20

Card #18

Solve the equation:

$$x + 7x = 64$$

Answer:

$$t = 9$$

Card #3

Solve the equation:

$$-6 + 2x + 3x = 29$$

Answer:

$$x = 8$$

Card #12

Solve the equation:

$$6 = 1-2n + 5$$

Answer:

$x = 7$

Card #15

Simplify the expression

$$4x - 2x + 5 - x + 5$$

Answer:

$n = 0$

Card #5

Solve the equation:

$$-20 = -4y - 6y$$

Answer:

$$x + 10$$

Card #10

Simplify the expression

$$-10 + 2x - 4x + 1$$

Answer:

$$y = 2$$

Card #4

Solve the equation:

$$3(n + 3) = 21$$

Answer:

$$-2x - 9$$

Card #9

Solve the equation:

$$-2 + 4x - 10x + 6 = 34$$

Answer:

$$n = 4$$

Card #8

Solve the equation:

$$5(m + 3) = 20$$

Answer:

$$x = -5$$

Card #2

Simplify the expression

$$-1 + 8t - 3t + 9$$

Answer:

$$m = 1$$

Card #6

Solve the equation:

$$-2y + 6y + 10 = 22$$

Answer:

$$5t + 8$$

Card #13

Solve the equation:

$$-8z + 2 = 18$$

Answer:

$$y = 3$$

Card #1

Simplify the expression

$$10 + 8 - 4b + 2b$$

Answer:

$$z = -2$$

Card #17

Solve the equation:

$$5x - 90 + 10 = 5$$

Answer:

$$-2b + 18$$

Card #7

Solve the equation:

$$40 = 3m - 32$$

Answer:

$$x = 17$$

Card #11

Solve the equation:

$$20 = \frac{x}{6} + 5$$

Answer:

$$m = 24$$

Card #14

Simplify the expression

$$7x + 20 - x - 4$$

Answer:

$$x = 90$$

Card #16

Solve the equation:

$$42 = 4t - 12 + 2t$$

Answer:

$$6x + 16$$