

## Lesson Plan Template

<b>Grade: 6-8</b>		<b>Subject: Algebra</b>	
<b>Materials: Activity handout</b>		<b>Technology Needed: Smartboard</b>	
<b>Instructional Strategies:</b> <input type="checkbox"/> Direct instruction <input type="checkbox"/> Peer teaching/collaboration/ <input checked="" type="checkbox"/> <b>Guided practice</b> cooperative learning <input type="checkbox"/> Socratic Seminar <input type="checkbox"/> Visuals/Graphic organizers <input type="checkbox"/> Learning Centers <input type="checkbox"/> PBL <input type="checkbox"/> Lecture <input type="checkbox"/> Discussion/Debate <input type="checkbox"/> Technology integration <input checked="" type="checkbox"/> <b>Modeling</b> <input type="checkbox"/> Other (list)		<b>Guided Practices and Concrete Application:</b> <input type="checkbox"/> Large group activity <input type="checkbox"/> Hands-on <input checked="" type="checkbox"/> <b>Independent activity</b> <input type="checkbox"/> Technology integration <input type="checkbox"/> Pairing/collaboration <input type="checkbox"/> Imitation/Repeat/Mimic <input type="checkbox"/> Simulations/Scenarios <input type="checkbox"/> Other (list) Explain:	
<b>Standard(s)</b> 8.EE.7 Solve linear equations in one variable. -a. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions.		<b>Differentiation</b> <b>Below Proficiency:</b> Students can work with me or partner up (peer to peer teaching). <b>Above Proficiency:</b> Students will finish the activity early and have time to work in DreamBox. <b>Approaching/Emerging Proficiency:</b> Students have adequate time to finish the lesson. <b>Modalities/Learning Preferences:</b> Visual, solitary	
<b>Objective(s)</b> I can identify an equation that has many solutions. I can identify an equation that has no solutions. I can identify an equation that has one solution.			
<b>Bloom's Taxonomy Cognitive Level:</b> Application, Create			
<b>Classroom Management- (grouping(s), movement/transitions, etc.)</b> Students will participate in classroom discussion and work independently for the activity.		<b>Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.)</b> Students are expected to participate in class and work quietly on their activities. This is an independent assignment, and each student should stay busy. When they are finished, they are expected to start their DreamBox program.	
<b>Minutes</b>	<b>Procedures</b>		
<b>5</b>	<b>Set-up/Prep:</b> Have worksheets ready to go; have the warm-up problems ready for students to read through.		
<b>5-10</b>	<b>Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.)</b> 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.		
<b>20</b>	<b>Explain: (concepts, procedures, vocabulary, etc.)</b> This lesson is a review of materials and a reinforcement activity. We will go over a few examples to refresh the students' memory, then they will complete the activity.		
<b>35</b>	<b>Explore: (independent, concrete practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions)</b> Hand out the worksheet for students to practice applications.		
<b>20</b>	<b>Review (wrap up and transition to next activity):</b> Students may ask questions and finish up the activity. Upon completion, they will do some Dreambox activities.		
<b>Formative Assessment: (linked to objectives, during learning)</b> <ul style="list-style-type: none"> <li>• <b>Progress monitoring throughout lesson (how can you document your student's learning?)</b></li> </ul> 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, the worksheet will reflect how the students understood the material.		<b>Summative Assessment (linked back to objectives, END of learning)</b> The students will be assessed on the objectives from the lesson on the next exam.	
<b>Reflection (What went well? What did the students learn? How do you know? What changes would you make?):</b> This was a nice change up from the traditional worksheet assignments. The students liked the change of pace. Instead of planning a movement activity, this was a "fun" activity to go with the month of October. Students learned how to double-check their work and use this feedback to correct assignments. If I were to do this lesson again, I would add more differentiation. For each student at a different level, they would get a different worksheet to be more accommodating to their needs.			

## Lesson Plan Template

Warm-up problems:

$$4(x+2)=16$$

$$5+(8x^2)-16+4$$

Define: slope

Combine like terms:  $2+4y+3z+5+12+42x+6y$

Practice problems:

$$4x-3=4x+6$$

$$2x+3=x+x+3$$

$$2x+10=5+x$$

$$5(x-7)+42=3x+7+2x$$

$$4(x+5)+6=2(2x+3)$$

$$4x+3+7=12-6x$$

# Solving Equations with One, Many or No Solutions

Name: \_\_\_\_\_

Solve each equation. Draw the corresponding facial feature for a given solution on the back of this sheet.

Draw a circle on the back of this sheet to give you a blank face

<p>1) <math>2x - 4(x - 1) = 10</math></p> <ul style="list-style-type: none"> <li><math>x = -3</math>; Open mouth smile</li> <li><math>x = 3</math>; Closed mouth smile</li> <li>No Solution; Closed mouth frown</li> <li>Many Solutions; Yawning Mouth</li> </ul>	<p>2) <math>4x + \frac{1}{2}(8x + 6) = 2(4x + 3)</math></p> <ul style="list-style-type: none"> <li><math>x = 0</math>; Eyeballs looking up</li> <li><math>x = -4</math>; Eyeballs looking down</li> <li>No Solution; Crossed eyes</li> <li>Many Solutions; Closed eyes</li> </ul>	<p>3) <math>6x + 8 = 12x - 4</math></p> <ul style="list-style-type: none"> <li><math>x = \frac{2}{3}</math>; Thick eyebrows</li> <li><math>x = 2</math>; Thin eyebrows</li> <li>No Solution; Thin eyelashes</li> <li>Many Solutions; Thick eyelashes</li> </ul>
<p>4) <math>3x + 5 = 2x + 1</math></p> <ul style="list-style-type: none"> <li><math>x = 4</math>; Thin mustache</li> <li><math>x = -4</math>; Thick mustache</li> <li>No Solution; Goatee</li> <li>Many Solutions; Beard</li> </ul>	<p>5) <math>2(x + 4) = 2x + 5</math></p> <ul style="list-style-type: none"> <li><math>x = 1</math>; Big ears with earrings</li> <li><math>x = \frac{4}{9}</math>; Small ears with earrings</li> <li>No Solution; Small ears</li> <li>Many Solutions; Big ears</li> </ul>	<p>6) <math>6 + 2(x - 5) + 4x = 44</math></p> <ul style="list-style-type: none"> <li><math>x = 10</math>; Face wrinkles</li> <li><math>x = 8</math>; Dimples</li> <li>No Solution; Mole on forehead</li> <li>Many Solutions; Mole on chin</li> </ul>
<p>7) <math>4(x + 3) - 4 = 8\left(\frac{1}{2}x + 1\right)</math></p> <ul style="list-style-type: none"> <li><math>x = 12</math>; Crooked nose</li> <li><math>x = 0</math>; Big nose</li> <li>No Solution; Small nose</li> <li>Many Solutions; Pointy nose</li> </ul>	<p>8) <math>2 + 3(x - 5) = 5</math></p> <ul style="list-style-type: none"> <li><math>x = \frac{3}{8}</math>; Long hair</li> <li><math>x = 6</math>; Short, curly hair</li> <li>No Solution; Afro</li> <li>Many Solutions; Pigtails</li> </ul>	<p>9) <math>3x + 7x + 1 = 2(5x + 1) + 2</math></p> <ul style="list-style-type: none"> <li><math>x = 1</math>; Turtleneck shirt</li> <li><math>x = 12</math>; Shirt with long tie</li> <li>No Solution; Shirt with bowtie</li> <li>Many Solutions; V-neck shirt</li> </ul>
<p>10) <math>3x + 1 = 3(x - 1) + 4</math></p>	<p>11) <math>2(3x + 3) = 3(2x + 2)</math></p>	<p>12) <math>4(2x + 1) = 5x + 3x + 9</math></p>

## Lesson Plan Template

<ul style="list-style-type: none"><li>• <math>x = \frac{3}{4}</math>; Nose ring</li><li>• <math>x = 2</math>; Lightning bolt scar</li><li>• No Solution; Thick eyelashes</li><li>• Many Solutions; Thin eyelashes</li></ul>	<ul style="list-style-type: none"><li>• <math>x = 0</math>; Baseball hat</li><li>• <math>x = -2</math>; Cowboy hat</li><li>• No Solution; Tall hat</li><li>• Many Solutions; Top hat</li></ul>	<ul style="list-style-type: none"><li>• <math>x = 5</math>; Scar on cheek</li><li>• <math>x = -5</math>; Neck scarf</li><li>• No Solution; Freckles</li><li>• Many Solutions; Forehead wrinkles</li></ul>
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