University of Mary Division of Education

Lesson Plan

**Name:** Courtney Kessler

**Grade Level:** 7

**Subject(s) Area:** Pre-Algebra

**Materials Needed:** Flipchart, Promethean Smart Board and equipment, notes, pen/pencil, online textbooks,

Standards:

* **7.EE.1** Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.

Objectives:

* Students will be able to apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.

Learning Activities:

 (PowerPoint slide/exemplar references) [*Potential student responses*]

**0 min Introduce lesson/review:**

* Start class with a Math Fun Fact:
	+ New York’s Coney Island was the home of the first roller coaster built in the United States. In what year was it built?
	+ **Clue:** Eddie was born in 1972. When he celebrated his twelfth birthday, the roller coaster was 100 years old.
	+ **Answer:** The roller coaster was built in 1884.
* Correct homework from last class. (3.5 homework)
* Allow students the chance to go through the problems they still have questions on.
	+ Let students be the experts and have them explain to the class how a specific problem is to be done.

**15 min Daily Activities:**

* Have students read the “I Can” Statement for the day and write it in their planners.
	+ Today’s “I Can” Statement is: I can solve multi-step inequalities.
* Discuss the very first example in the textbook that talks about the soccer team breaking a scoring record.
* Have students aid in setting up the inequality.
* The first example is solving the inequality from the record breaking example.
* Bring up the first example on the board and have students turn and talk to discuss how to solve. (Flipchart slide 5)
* After about 2 minutes, go through the problem as a class.
	+ 88 + 10g > 138
	+ 10g > 50 [*combining like terms*]
	+ g > 5 [*dividing both sides by 10*]
* Make sure students understand the example and if they do move on to example two.
	+ (Flipchart slide 6)
	+ 4(5 – 3b) > 4b + 4
	+ 20 – 12b > 4b + 4 [*by using the distributive property*]
	+ 16 > 16b [*combining like terms*]
	+ 1 > b [*dividingg both sides by 16*]
* Similarly, move on to example three and have students try to work it out on their white boards.
	+ (Flipchart slide 7)
	+ $\frac{x+5}{3}$ **<** 2
	+ x + 5 < 6 [*multiplying both sides by 3*]
		- Note that we multiply first because x + 5 is technically in parenthesis and when solving inequalities we use reverse order of operations.
	+ x < 1 [*adding like terms*]
* If time, do the last example.
	+ (Flipchart slide 8)
	+ Tell whether the given number is a solution of 5x – 10 > 2x + 4; x = 4
	+ Two ways to solve:
		- Plug x in directly, if the inequality holds then it is a solution and if the inequality doesn’t hold, then it is not a solution.
			* 5(4) – 10 > 2(4) + 4
			* 20 – 10 > 8 + 4
			* 10 > 12
			* Not a solution
		- Solve for x and then see if the given number would work as a solution.
			* 5x – 10 > 2x + 4
			* 3x > 14 [*combining like terms*]
			* x > 14/3 [*dividing both sides by 3*]
			* 4 is not > 14/3
			* Not a solution

**40 min In-Class Work Time:**

* Allow students to work on their homework.
* As the students are working on the first problem, walk around and “polka-dot” their page with whatever color marker is handy.
	+ This is a quick assessment to see that the students are on track and understanding the lesson.

**50 min Dismiss Class**

* **HAVE A FABULOUS DAY ☺**

Assessment:

The assessment used for this lesson is problems from the students’ textbook.
Reflection:
This lesson started out really good but I did not finish the lesson as well as I should have. A student became confused after doing the example with the parenthesis. So, I tried to explain this example in a different way and in doing so, I ended up confusing half of the class. If I were to reteach this lesson, I would really emphasize the reverse order of operations. I might also take the students who became confused and reteach those students in a separate group while the rest of the class moves on with homework.