Lesson #2

Title: The Human Number Line

Learning Objectives:

Students will:

- learn and understand how to add integers

Materials:

- Computer to play video
- Sheets of paper
- Duct tape/ masking tape

Instructional Plan:

The teacher will tell the students that today they will be learning how to add integers. They will start having a discussion with the class on different places they see negative and positive numbers in the real world (football field, money, thermometer, etc). The teacher will go over positive and negative numbers with the students and show them a video of "The number line dance" which is a dance/rap that students can use to help them remember which direction negatives go and which direction positives go.

https://www.youtube.com/watch?v=6EWq9EZmIKg

The students will get up and participate in the dance. They will learn the "dance" and the part that talks about which direction positives and negatives go "Negative to the left, positive to the right, it's the number line dance I can dance all night"

The teacher will tell the students that they will be creating a human number line in which they will use their bodies to line up in the correct spot as well as add and subtract different numbers on the number line.

Prior to class, the teacher will write different integers on pieces of paper (enough for each student). He/she will also tape a number line to the floor of the classroom. The teacher will give each student a different number and the students will be required to line up in the correct places on the real life number line. After the students have lined up, they will use the number line to solve the sums of different problems. There will be a few rules.

The student who holds the first number in the problem will be the one who solves the problem. For example:

-2+5

-2 will raise his hand. As a class, they will decide what direction he/she will need to move in order to solve the problem -2 + 5. The students will know that when adding negative numbers you go the left and when adding positive numbers you go to the right (the song can help them here). The student on -2 will either turn to the left or the right and move the correct number of people (spaces). The person he lands in front of will be the answer.

The students will do a few more problems using the human number line. After the problems have been completed correctly, they will take their seats.

As a class, the teacher will tell the students that today they are going to come up with the different rules for adding and subtracting integers, because they will not always be able to use a number line. They will do a few more simple problems together on a worksheet.

Each student will get a worksheet and come up with different rules for solving integers. They will not always need to use number lines if they can come up with different rules for adding integers. Students will break into groups and use their practice problems to come up with the different rules of adding integers:

Rules

Adding two positive integers: Add the two numbers and keep it positive

Adding two negative integers: Add the two numbers and keep it negative

Adding one negative and one positive number: Subtract the two numbers and take the sign of the bigger number

The teacher will recap with the students the different rules.

Assessment:

- observations
- whole class discussion

Standards:

I.   **NCTM**

Number and Operations

Understand numbers, ways of representing numbers, relationships among numbers, and number systems

- develop meaning for integers and represent and compare quantities with them

II.   **Common Core**

The Number System 7.N.S.

1. Apply and extend previous understands of addition and subtractions to add and subtract rational numbers: represent addition and subtraction on a horizontal or vertical number line diagram.