

## Number Line Relay

### Lesson Plan

**Cube Fellow:** Daniel Kiteck

**Teacher Mentor:** Meredith Robinson

**Goal:** Use relay race to develop a conceptual understanding of adding and subtracting integers.

**Grade and Course:** 7<sup>th</sup> grade math course

**KY Standards:** MA-07-1.3.3

**Objectives:** At the end of this lesson the students should be comfortable with conceptualizing adding and subtracting integers by visualizing in their head the relay race that they participate in and watch other students participate in.

**Resources/materials needed:** At least three poster boards, eight 1/16<sup>th</sup> inch wooden rods, scotch tape, marker, small dry erase board

**Description of Plan:** This lesson is to follow up on teaching adding and subtracting integers by using the START/DIRECTION/MOVE conceptual method. For example, for  $3 - (-2)$  the 3 tells you where to START, the subtraction tells you to face the negative DIRECTION, and the negative sign on the 2 tells you to MOVE backward 2 spots, and thus you get to the answer of 5. Addition tells you to face the positive DIRECTION, and when the second number is positive you MOVE forward the amount of the second number. This lesson has the students doing a relay race on a giant number line outside using the START/DIRECTION/MOVE method. I made 21 little signs for the integers from -10 to 10. To make the signs I cut out nine signs from each poster board (note that there is plenty of extra board if one needs to redo a sign), and I then taped 1/3 of a wooden rod onto each sign (the extra rod is for possible accidents). I used a sidewalk outside and pushed a sign into the ground by a line in the sidewalk. An alternate method could use chalk on the sidewalk.

**Lesson Source:** Original lesson.

**Instructional Mode:** Have the giant number line set up before class. Take the class outside and divide them into two teams. Have one student from each team step forward closer to the giant number line and hold up an addition or subtraction expression of two integers (I used a dry erase board). The two students must run to the first number (START), face the correct DIRECTION, and then MOVE either backwards or forwards the correct amount. The first student to correctly do this gets a point for their team. Ideally, discuss with the class about the activity and how we can visualize it in our heads when we work similar problems.

**Date Given:** 10/3/07

**Estimated Time:** One or two class periods

**Date Submitted to Algebra<sup>3</sup>:** 03/31/2008