

“Using Different Colors to Teach Negative and Positive”

**I. Goal /Objective**

- a. The objective of this staff development is to show math teachers how to use manipulative such as counters when teaching math.
- b. Model addition and subtraction of integers with physical materials.

**II. Math Concepts**

- a. Adding and Subtracting positive and negative integers.

**III. Materials**

- a. Different color counters
- b. Different color blocks
- c. Cards with problems on them
- d. Crayons or coloring pencils

**IV. Management**

- a. Things to prepare ahead of time.
  - I. See principal to set a date and time for the staff development.
  - II. Create cards with the math problems on them.
- b. Participant Grouping
  - I. There will be four tables. Each table will have numbers on it.
  - II. Place the numbers in a jar. Each number will be in the jar about four times.
  - III. Upon entering the meeting room, each participant will pull a number out of the jar to see what table to sit at.
- c. Time Frame
  - I. The approximate time for the activity is 30-45

**V. Procedures**

a. Introduction

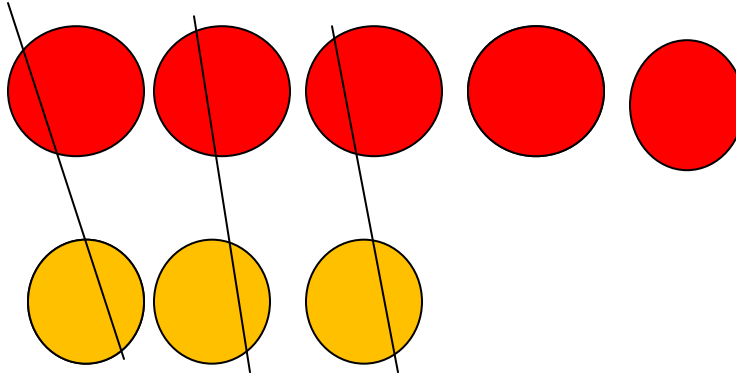
I. Ice breaker; Build it between. Give each table a set of clues and six different color cubes . Instruct each table to read the clues and put the cubes in order.

- II. Activate teachers’ prior knowledge about negative and positive integers.
- a. “What symbol represents positive and what symbol represents negative?”
  - b. “When do you add or subtract a negative and positive number?”

III. Tell teachers they will add and subtract positive and negative integers. They will draw counters to demonstrate how they find their answers. The counters have to be two different colors.

**b. Content Activities**

- I. Give each table different color counters and let them choose what two colors they want to use for positive and negative.
- II. Show the teachers and example of how to use the counters.  $-5+3=-2$



- III. Ask teachers to demonstrate the problems that are on their cards by drawing and color the counters and show how they would add or cancel to get their answers.
- IV. Remind them that it is a group activity.
- V. Give teachers ample amount of time to complete the activity.
- VI. I will circulate the room and give help to the ones that needs it.

**c. Closure**

- I. Ask different groups to share their drawings and their problems with all the teachers.
- II. Ask teachers are there any other ways that they can expand this activity.
- III. Ask teachers do they think the students would enjoy the activity.
- IV. Ask teachers what other math concept could be used, using the counters.