Big Blank Number Line

Objective: Investigate relationships of whole numbers, fractions, and decimals on the number line.

Materials: Big Blank Number Line
Cards with random whole numbers between 0 and 500 printed
one number to a card
Cards with random fractions
Cards with random decimals in tenths and hundredths
Double sided tape or tacky stick

Procedures:
1. Attach Big Blank Number Line to the wall. It should be approximately 12 feet long.
2. Prepare cards with random whole numbers from 0 to 500. Include in the set 0, 100, 200, 250, 300, 400, and 500 and an assortment of other numbers to make a set of 20 to 30 cards.
3. Give the zero card to a participant and ask him/her to place it on the blank number line. (It does not have to be on the far left end, however, if it is placed too far right you might want to verify that it is where the participant wants it.)
   Give the 500 card to a participant and ask that it be placed on the blank number line. (Anywhere to the right of zero will work, but too close will cause problems later. If it is placed too close to zero, do not move it; let the group decide it needs to be moved, along with all the other numbers that have been placed so far.)
   Next give the card with 250 on it to a participant and ask that it be placed in the appropriate place on the number line. (Note that this number must be located relative to 0 and 500.)
6. Continue giving cards to participants (or letting them draw from the deck) to be placed on the number line. Ask the group if they agree with the placement and why.
7. Repeat the activity with fractions. Make cards with $0, \frac{1}{5}, \frac{1}{4}, \frac{1}{3}, \frac{1}{2}, \frac{2}{5}, \frac{3}{5}, \frac{2}{3}, \frac{3}{4}, \frac{4}{5}, 1$ and an assortment of other fractions to make a set of 20 to 25 cards.
8. Repeat the activity with decimals. Make cards with 0, 0.1, 0.10, 0.2, 0.20, 0.25, 0.3, 0.30, etc. (It is good to leave fractions on the number line and then place the decimals in position.)

Extensions:
1. Include in the fraction set mixed numbers less than ten.
2. Place fractions and decimal fractions on the same number line.

Notes:

1. When introducing this activity to younger children, use a set of whole numbers between 0 and 50 or 100. As children become comfortable with the activity, include larger numbers.
2. The primary goal of this activity is not only ordering of whole numbers, fractions, and decimals, but proportional thinking. Start with familiar or related numbers then include less familiar fractions such as $\frac{9}{17}$. This fraction is a little more than one-half. And that is the thinking we want to encourage.
3. The Big Blank Number Line could have a long narrow strip of Velcro down it and the back of each card could have a corresponding piece, therefore, eliminating tape or tacky stick.
4. This Number Line can be used for many other classroom activities, such as, graphs, time lines, etc.
5. Children's book *Every Day Counts* by Patsy Kanter is a nice complement to this activity.
6. Duplicate the included whole numbers, fractions and decimal fractions on different colored card stock.

0.0	0.1	0.2
0.3	0.4	0.5
0.6	0.7	0.8
0.9	1.0	1.1

0.05	0.10	0.20
0.30	0.40	0.50
0.60	0.70	0.80
0.90	1.00	1.10

0.08	0.17	0.25
0.32	0.46	0.59
0.67	0.75	0.83
0.92	1.05	1.17