**Lesson Title: “You” Rulers**

**Length: (60 minutes but length depends on number of participants)**

**Standard(s) Addressed: 6.RP.A.3, 7.RP.A.3, 7.NS.A.3**

**Materials:**

1. Poster board strips
2. Pen/Marker/Pencil
3. Objects of various lengths (different coins, pencils, pens, etc.)

**Outline:**

1. Have students select an item whose length will be one unit on their ruler. Each student should have a different length.
2. Have students construct the ruler using their chosen unit of length. Be sure to remind the student to label their tick marks on the rulers.
3. Have students measure the same object using their rulers. Estimate fractions of a unit.
4. Record the results.
5. Have students pair up to determine the ratio between their units of measure. Do not estimate fractions of a unit. Put the constants of proportionally in a table.
6. Swap partners and repeat until all pairs have been formed.
7. Complete a table.

**Questions:**

1. We can get the ratios between the different units using either the common object measured or comparing rulers side-by-side. What the advantages of each method?
2. What would be a quick and more accurate way to find the ratio between the different units?
3. Write an equation y = kx where x is smallest unit and y is your unit.