Math and Drop Bag Numbers--Third Grade

Common Core Standards are listed first. The activities follow, in italics.

Reproduce the number needed of the booties pictures in the post.

Use the example of booties Jodi packed for the race. A set of booties is 4 booties. She packed the booties in groups of 18 sets of 4. One group = 72 booties. (Dogs wear booties to prevent snow & ice from balling up between their toes. Booties are made of a tough, cordura nylon fabric and velcro around the dog's wrist. Show the photo of the booties to students. Some third graders' hands will fit in a bootie, allowing the velcro to fasten around their wrists.)

Common Core Standards:

Number and Operations—Fractions5 3.NF

Develop understanding of fractions as numbers.
1. Understand a fraction 1/*b* as the quantity formed by 1 part when a whole is partitioned into *b* equal parts; understand a fraction *a*/*b* as the quantity formed by *a* parts of size 1/*b*. its endpoint locates the number *a*/*b* on the number line.
3. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.
a. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.
b. Recognize and generate simple equivalent fractions, e.g., 1/2 = 2/4, 4/6 = 2/3). Explain why the fractions are equivalent, e.g., by using a visual fraction model.
d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction mode.

Measurement and Data   3.MD

Represent and interpret data.
3. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. *For example, draw a bar graph in which each square in the bar graph might represent 5 pets.*

Use individual photos of the booties to represent fractions. Represent one whole as 4 booties (a set for a dog). Ask students to show 1/2 of a set of booties, 1/4 of a set. Ask them to show 2 sets, then half of those 2 sets, etc. Use more than one set to represent fractions such as 3/6, 5/6, etc.

Compare fractions represented by booties to determine equivalency, using <, +, or >.

Create a number line of booties. Identify fractions on this number line.

Use colors of booties to represent fractions.

For measurement and data, draw graphs where each square represents 4 booties (for one dog). Compare colors or students' favorite colors by recording them on the graphs.