Math and Drop Bag Numbers--Second 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. Most second graders' hands will fit in a bootie, allowing the velcro to fasten around their wrists.)

Common Core Standards:

Operations and Algebraic Thinking 2.OA
Represent and solve problems involving addition and subtraction.
1. Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem

Work with equal groups of objects to gain foundations for multiplication.
3. Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.
4. Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.

Measurement and Data 2.MD

Represent and interpret data.

10. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put together, take-apart, and compare problems using information presented in a bar graph.

Use individual photographs of the booties to represent and solve word problems created by the teacher. Photographs can be reduced, printed several to a card, to represent larger numbers on one card rather than individually.

Word problems:

1) Jodi needs 72 booties in one bag. She has 50 booties. How many more need to be added to the group to equal 72?

2) Another musher, Brian Bearrs, paid for 100 booties. The store clerk put them into 2 bags. When Brian got home, he only had one bag of 45 booties. How many booties are in the other bag?

3) Subtract 80 booties from 100 booties.

4) Jodi had 5 dogs with large paws. She puts booties on every paw. How many size large booties does she need?

Use pictures of the booties for 2.)1 3 and 4. Preparation for multiplication. Students prepare arrays as described by the teacher. Arrays can be by number or color or combinations of colors.

Students use colors of booties to create picture or bar graphs up to four categories. Use the graphs to solve problems. How many booties in all are represented on the graph? If you take away the red booties, how many are left? Which color bootie is there more or/less of? Are there any colors which have the same number of booties? Add 2 colors of booties together. Are they more or less than the other 2 colors?