

Math--Giving Meaning to Numbers--Kindergarten

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

Reproduce 20 pictures or 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 kindergarteners' hands will fit in a bootie, allowing the velcro to fasten around their wrists.)

Common Core Standards:

Counting and Cardinality K.CC

Know number names and the count sequence.

3. Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).

Count to tell the number of objects.

4. Understand the relationship between numbers and quantities; connect counting to cardinality.

a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.

b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.

c. Understand that each successive number name refers to a quantity that is one larger.

5. Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.

Compare numbers.

6. Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.¹

Operations and Algebraic Thinking K.OA

Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

1. Represent addition and subtraction with objects, fingers, mental

images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.

2. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.

3. Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$).

4. For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.

Measurement and Data K.MD

Classify objects and count the number of objects in each category.

3. Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.

Students arrange the booties in varying amounts and write the number representing the amount shown. Use a SmartBoard to present different amounts of the booties. Students come to the board to count the items, then write the number representing the items. Count booties to produce a certain number of booties. Make 2 groups of booties. Students identify which group has more, less, or the same number of items. Use photos of booties, one bootie per picture, to accomplish #5 in Counting and Cardinality K.CC.

Use booties or pictures of individual booties to represent addition and subtraction. Arrange booties to represent equations such as $4 + 2 = 6$ and $5 + 1 = 6$. $8 - 2 = 6$. Students find the number that makes 10 when added to the given number and uses booties to represent this. Make addition, subtraction, and equal sign cards so students can insert them in the correct positions. Represent the numerals in the equation with booties or pictures of booties.

Draw pictures or use booties to represent these word problems and more that you create:

1) 5 booties are on the ground. A dog has 4 paws. How many booties will be left on the ground when the dog has booties put on his paws?

2) Two dogs are waiting to have booties put on. How many paws are there?

3) Put 13 booties in a line. Pretend one bootie has a hole in it and it can't be used. Show how many booties can be used.

4) Show 8 booties plus 6 booties.

Using the pictures of the different colors of booties, print the quantity desired. Use the pictures to practice Standard 3 under Measurement and Data.

