N2.4, 2.6

**ACTIVITY 5.3**

## Estimating Groups of Tens and Ones

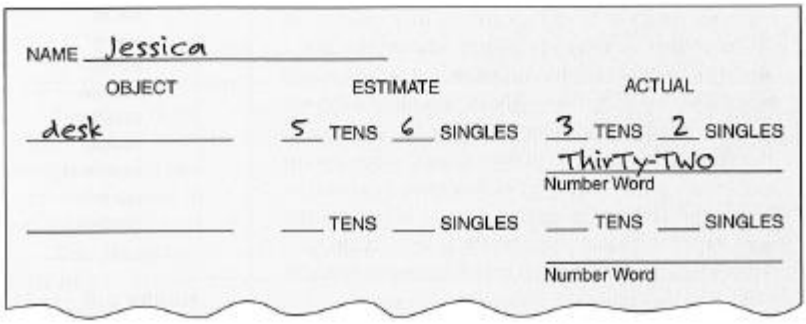
**Show students a length that they are going to measure—for example, the length of a student lying down or the distance around a sheet of newspaper. At one end of the length, line up 10 units (e.g., 10 cubes in a bar, 10 toothpicks, rods, or blocks). On a recording sheet (see Figure 5.6), students write down a guess of how many groups of 10 and leftovers they think will fit into the length. Next they find the actual measure, placing units along the full length. These are counted by ones and also grouped in tens. Both results are recorded.**

Children can work in pairs to measure several lengths around the room. A similar estimation approach could be added to "Groups of 10" (Activity 5.2), where students first estimate the quantity in the bags. Estimation requires reflective thought concerning quantities expressed in groups.

### *The Strangeness of Ones, Tens, and Hundreds*

Reflect for a moment on how strange it must sound to say "seven ones." Certainly children have never said they were "seven ones" years old. The use of the word *ten* as a singular group name is even more mysterious. Consider the phrase "Ten ones makes one ten." The first *ten* carries the usual meaning of 10 things, the amount that is 1 more than 9 things. But the other *ten* is a singular noun, a thing. How can something the child has known for years as the name for a lot of things suddenly become one thing? Bunches, bundles, cups, and groups of 10 make more sense in the beginning than "a ten."

As students begin to make groupings of 10, the language of these groupings must also be introduced. At the start, language such as "groups of 10 and leftovers" or


NAME Jessica

| OBJECT | ESTIMATE | ACTUAL |
|---|---|---|
| desk | 5 TENS 6 SINGLES | 3 TENS 2 SINGLES<br>ThirTy-TWO<br>Number Word |
| | ___ TENS ___ SINGLES | ___ TENS ___ SINGLES<br>Number Word |

"bunches of tens and singles" is most meaningful. For tens, use whatever terminology fits: bars of 10, cups of 10, bundles of 10. Eventually you can abbreviate this simply to "ten." There is no hurry to use the word "ones" for the leftovers. Language such as "four tens and seven" works very well.

The word *hundred* is equally strange and yet usually gets less attention. It must be understood in three ways: as 100 single objects, as 10 tens, and as a singular thing. These word names are not as simple as they seem!

From Van de Walle, J. A. & Lovin, L.H. (2006). *Teaching Student-Centered Mathematics Grades K – 3*. Toronto: Pearson Education, Inc. (p. 132-133).