Teacher Note

Observing Students as They Count

Your students will be counting many things during this unit and throughout the year. Counting involves more than knowing the number names, their sequence, and the way to write them. It is the basis for understanding our number system and for almost all of the number work primary-grade students do.

In Grade 1, expect a great deal of diversity among your students. By the end of the year, many students will have learned the oral counting sequence up to 100, and will begin to recognize patterns in the sequence of numbers from 1 to 100. However, many first graders will not end the year with a grasp of quantities greater than 40 or 50 or so. Students develop their understanding of quantity through repeated experiences with organizing and counting sets of objects. In Grade 1, many of the activities that focus on quantity can be adjusted so that students can work at a level of challenge that is appropriate for them. Early in Grade 1, some students will need repeated experiences with quantities up to 10, and others will be able to work with larger collections. Some students may be inconsistent—being successful one time and having difficulty the next.

Your students will have many opportunities to count and use numbers in this unit and throughout the year. You can learn a great deal about what your students understand about counting by observing them as they work. Listen to students as they talk with one another. Observe them as they count objects and as they count orally and in writing. Ask them about their thinking as they work. You may observe some of the following:

- **Counting orally** Generally, students can count orally further than they can count objects or correctly write numbers. For some students, the oral counting sequence is just a song; they do not necessarily know that when they count one more, they are referring to a quantity that has one more. Students need many experiences counting and adding small quantities as they learn about the relationship between the counting words and the quantities they represent. Counting backward is not as familiar to students as the forward counting sequence. They frequently know "10, 9, 8 . . . 3, 2, 1, Blast off!" but will need plenty of practice counting back from other numbers.

- **Counting quantities** Some students may correctly count quantities above 20; others may not consistently count quantities smaller than 10. Some students may count the number of objects correctly when they are spread out in a line, but may have difficulty with organizing objects for counting. They may need to develop techniques for keeping track of what they are counting.

- **Counting by writing numbers** Many beginning first-grade students are just gaining some competency in writing numbers. Young students frequently reverse numbers or digits. Often this is not a mathematical problem but simply a matter of experience. Throughout the year, students need many opportunities to see and practice the sequence of written numbers.