COMMON MISCONCEPTIONS

• Numbers do not have to be said in the correct order to count to a number (two three four five)
  Students may find it challenging to connect the idea that number names represent quantities and the idea that any number represents a subset of a larger number. Ensure that students are counting in the correct order. If you find them skipping numbers or saying them out of order, have them start by counting a small group, such as 3. Then add one more to the group. Now there are 4. Add one more, now there are 5. Next, within the group of 5, ask them if we can count 3? 4? 5? The goal is for students to grasp the idea that counting by 1s means growing a quantity by 1s.

• Twenty-ten
  While students are learning the concept of the base-ten system, it may take them some time to absorb the idea that number names change for every 10 numbers counted. Be sure to let students know that by counting twenty-ten, they have counted the correct amount of objects (twenty and then ten), but the number is said differently. Again, it is a matter of practice, and students should be given opportunities to demonstrate that they know when number name changes happen.

• Thirteen-one, thirteen-two, thirteen-three
  Learning eleven, twelve, and teen numbers can at first be challenging for students. They may get thirteen confused with thirty, fourteen with forty, and so on. Give students many opportunities to distinguish between “teen” and “ty” numbers. “Twenty” and “thirty” are also more challenging to remember than “forty” and “fifty.” Because of the irregular nature of some of these number names, practice is key to memorizing which name to use when.

COUNTING BY ONES UP TO A HUNDRED

Students will learn how to count objects one-by-one up to a hundred. At this stage, they will learn the number names, and they will observe how the number names change in a pattern every 10 numbers. They will learn eleven, twelve, and the teen numbers, as well as that groups of 10 are called ten, twenty, thirty, etc. Students are not reading or writing numbers here, but given actual objects or manipulatives, they are learning to count by ones how many there are in a given group.
COUNTING ON FROM A GIVEN NUMBER

Students will develop an understanding of the pattern in how numbers are named in order to count on from a given number. Students may be able to count from 1 to any number via rote memorization. However, to count on from a larger number, they need to understand that the ones digit goes up by 1 each time until it gets to 9. After that, the ones digit goes down to 0 and the tens digit goes up by one. Do not use formal names for place values when drawing students’ attention to these patterns, but ask students to describe the patterns that they see when looking at a set of numbers.

TEACHER TIPS

A hundred chart is an excellent way to display patterns in the numbers 1-100. Let students explore the chart and draw out observations about how numbers progress in the rows and in the columns. Count out loud when going through the chart, drawing attention to the fact that all of the numbers starting with a “fourty” sound start with a 4, and so on.

COUNTING BY TENS

Next, students learn that there is a more efficient way to count larger quantities than one by one. If we can count to 10, we can create groups that each contain 10 objects. At this point, students are only counting quantities that are multiples of 10. If they can create several groups, they can then count the groups by tens. They are not multiplying the number of groups by 10, they are simply counting the groups as “ten, twenty, thirty...” Demonstrate that when we count by tens, we are “skipping the numbers in between, because we know that each group contains 10.”