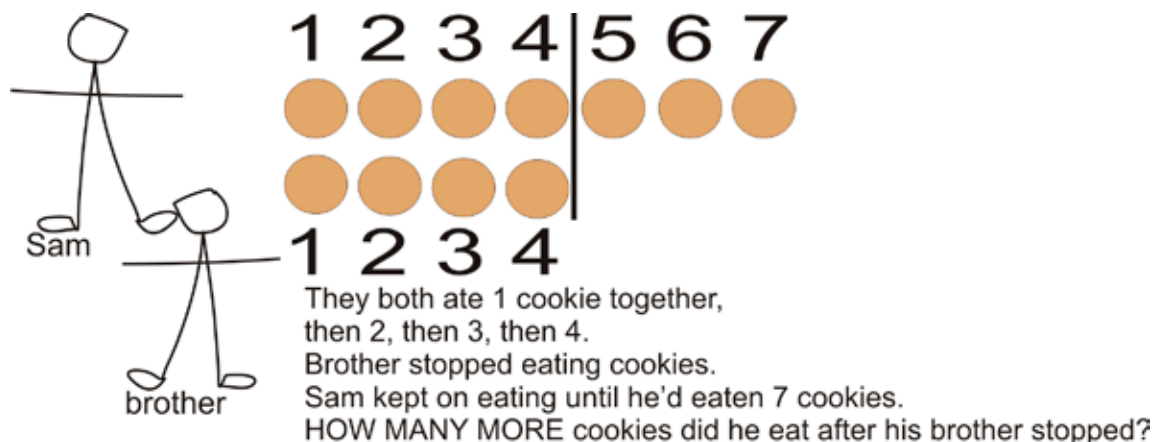# Understanding Counting On

Math word problems can be a real bear, especially for children who struggle with reading comprehension or for those learning to speak English as a second language. The good news is that there are a few strategies for helping to take the drudgery out of word problems. One is to help children develop the habit of visualizing, another is to group problems by type and identify words that are likely to be used in the problem, and the third is to help children learn to sketch out what is happening in the word problem.
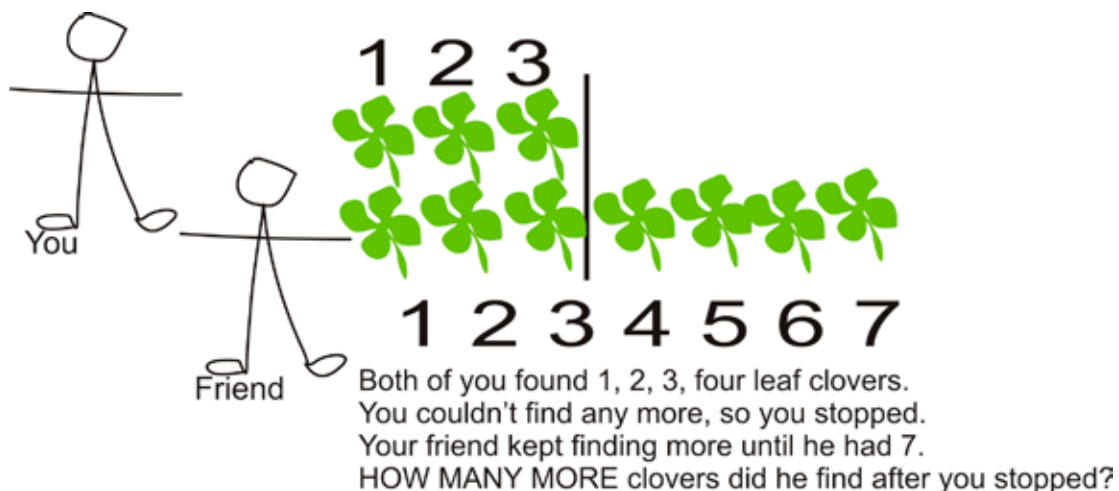
"How many more…"

This type of problem is daunting to many students. The best way to handle it is to do several of these problems in a row until solving them becomes second nature to the kids. First of all, share with your students that when they hear the words "how many more" they can be sure that there are two numbers and they were keeping up with each other evenly until the smaller one stopped. The other kept on going and got more than the first one.

Here are some examples for this type of problem:

"Sam ate 7 cookies while his brother ate 4. How many more cookies did Sam eat than his brother?"

1 2 3 4|5 6 7

1 2 3 4

They both ate 1 cookie together,
then 2, then 3, then 4.
Brother stopped eating cookies.
Sam kept on eating until he'd eaten 7 cookies.
HOW MANY MORE cookies did he eat after his brother stopped?

"You found 3 four leaf clovers. Your friend found 7. How many more did your friend find?"

1 2 3

1 2 3 4 5 6 7

Both of you found 1, 2, 3, four leaf clovers.
You couldn't find any more, so you stopped.
Your friend kept finding more until he had 7.
HOW MANY MORE clovers did he find after you stopped?

For "how many more" problems, have your students draw a sketch like the ones in my examples. Have them draw a line showing where the smaller number stopped. Stress that up to the line, both were the same, but then one stopped and the other kept on going. The "how many more" is anything past the line.

Practice problems:

• "There were 5 robins in the pine tree and 7 in the oak tree. How many more robins were in the oak tree?"

• "In our class there are 12 girls and 17 boys. How many more boys are there than girls in the class?"

• "There are 4 yellow cars in my driveway and 2 green cars in my driveway. How many more yellow cars are there than green?"

After the children have made drawings for a few more of these problems, encourage them to close their eyes and see what is happening in the problem. This is best done with smaller numbers. Over time, they might begin to realize that the shortcut for this type of problem is to start with the larger of the two numbers and subtract the smaller number from it. However, just giving students a rule to memorize is not the best solution for those who learn most easily through visuals.