Eliminate the old habit	Adopt this new habit	Why?
"Addition makes things get bigger."	Addition is about combining You might say this: "We use addition when we are combining two or more parts to make a total or when we are comparing pieces of information to figure out a total." OR: "When we add, we are taking a decomposed number and composing it into a simplified form."	Addition is about combining quantities, and it is only in elementary school where the numbers we combine are all positive numbers. By saying that addition makes things get bigger, we are: 1) Saying something that will have to be debugged in middle school. 2) Bypassing an opportunity to discuss the actual structures of addition. If I combine the $8 dollars I have with the $2 dollars I owe you, I will end up with $6. This is not more than my initial $8.
"Subtraction makes things get smaller."	Subtraction is about difference. You might say this: "We use subtraction when we're finding a missing part of a total or when we compare two numbers to find the difference between the two."	Subtraction does not make things get smaller. As above, this is a false construction based on a limited set of numbers that are introduced in elementary school. For instance: 5 minus -3 = 8. Consider in your own life the situation where a debt is taken away from you: "Don't worry about that $3 you owe me." Also consider the comparative model. If I compare what I have, let's say my net worth is $10,000, to what you have, let's say your net worth is a negative $5,000. When I compare those two numbers, the difference between our net worth is $15,000. This is actually the greatest of those three numbers!
"We don't have enough 1's so we need to go to the next place."	Support student understanding of how numbers are composed to support their understanding of the place value system. You might say this: "In this form, we don't have access to the 1's we need, so we need to change the form of the number." OR: "We don't have access to the 1's we need, and we need to get at those 1's." OR: "We have plenty of 1's. 25 is a larger number than 18 so we will even have some left over, but we need to decompose the higher unit value here so we can get at some of the 1's that are composed into 10's."	Research shows that elementary students don't understand that there are 10 1's in a 10. Language matters; students are literal. If they hear "we don't have enough 1's" whenever these problems are addressed, they begin to believe it. Shift your language to habitually point out that there are 1's available within the number, but that the form of the number is the issue. The 1's need to be accessed by decomposing the higher unit value (Chandler, C.C. & Kamii, C., 2009; Faulkner, 2009).
"You can't take a big number from a little number."	Prepare students for future learning rather than creating false notions about the number system. You might say this: "We could take a larger number from a smaller number, but we would get a negative number. You will learn about these later, but right now we will learn to solve this problem using all positive numbers."	This problem language is the cousin of the "we don't have enough 1's" mistake. It is critical that teachers do not make statements that are mathematically inaccurate in the service of a procedure or algorithm. We can teach efficient algorithms and maintain mathematically accurate language. Kids respond to this much better than we expect. At the very least, they hear accurate mathematical language from you, and, often this precision on your part leads to great conversations with the class. Here note the following: Traditionally I proceed as follows: 1 ~~2~~5 -18 7 But I am not really STUCK and forced to do this. I could use my knowledge of negative numbers as follows: 25 -18 -3 10 7 I CAN subtract 8 from 5. The result is -3. I can also subtract 10 from 20 and get 10. When I combine 10 and -3, I get 7. All subtraction problems of the type taught in 2nd grade could actually be solved by taking a larger number from a smaller number in this way.