**Erin Chavez**

**I used to…**

Assign word problems for students to complete by themselves in a set amount of time, collect them, take them home, and then magically wait… for someone to grade them. After a couple of days I would grade them by marking the word problems that were correct and circling the ones that were incorrect. Then I would send the problems home hoping that the students would magically correct them and figure out the right answer. When students brought the word problems back I would then give it a score.

**Now I…**

Teach word problems by giving a higher level questioning word problem where I expect to see students struggle. I allow about four minutes for students to solve the word problem using the graphic organizer “Choose Three Ways” (source). The graphic organizer supports students to show three different ways to solve the word problem. Then students collaboratively work together sharing their strategies for solving the problem in seven minutes. While students are working together, I am walking around in search of my favorite “no” and my favorite “yes” to use for modeling strong and bring attention to common misconceptions during a whole group math talk. My favorite “no” is often a student’s work that has great math computation going on, but perhaps their operation or labels are incorrect. For example the student might have added when he should have subtracted. My favorite “yes” is when the student solves the word problem exactly correct and has perhaps used a unique strategy in doing so. During the 10 minute math talk I show my favorite “no” response and explain to students how this person is extremely smart and has great math going for them. We also discuss what mistake was made, allowing students who made the same mistake to realize what they should do to correct their own work. This brings in a great opportunity for students to construct viable arguments and critique the reasoning of others. I also show the students my favorite “yes” so that they see an example of strong work. After the math talk students either; fix their mistakes, or add another strategy to their graphic organizer on how to solve the word problem.

**Why I changed…**

No longer do I wait…for the magic math fairy to come down and grade my stack of math papers. By watching my students as they work, I instantly see what misconceptions they are facing and take action to clear them up in the math talks. Students now do not leave my classroom practicing the wrong process and think they are doing it right. This formative assessment strategy even pushes my strong students to consider multiple ways and seeing that other strategies are valuable as well.

**What I noticed as a result…**

My favorite “no” students are just as accepting as my favorite “yes” students because they now have more of a growth mind set. My students can see that making a mistake is absolutely okay and is part of the learning process. They are less likely to repeat the same mistakes because we are constantly clarifying their misconceptions. More importantly, my students are able to take more risks, explain their thinking, and overall are engaged in useful mathematics.

Source: teaching channel: persistence in problem solving; grade 3, math, word problems

https://www.teachingchannel.org/videos/problem-solving-math?fd=1