READING WRITING IN THE DISCIPLINES

Annotating Word Problems Video Transcript

Student:
The max that you can buy in order to be $390 are 28 Divine ducks and 49 Chipper chickens.

Kim Dinh:
Does that work for this?

Student:
Yeah, it basically means that, like, at most, 77 people, because they can hold a max up to 80 people. And if 77 people...

Dinh:
Let me go ahead and set our purpose for today. Our purpose is to use our understanding of inequalities in equations to be able to solve word problems involving linear inequalities. So I'm going to pass these out, and I'm going to ask you to focus on using your BUCK strategy here.

Sometimes with students, getting started is the most important part, and especially with word problems in math. And I think the BUCK strategy helps with that.

Box your question, underline any important information needed to solve the problem, circle important vocab words, and knock out any irrelevant information. You guys have that. Go ahead and start on number one. And then after that, we'll share out.

Student:
Let's box the question first. How many people can each side bring to the wedding?

Dinh:
BUCK is just a simple strategy students can use to go after a word problem. I think this helps them be able to define something they want to know. So most students will go to, like, numbers, they'll underline numbers, or they'll say, "Oh,

this is important to me -- I need to underline this." And then they'll circle important vocab words.

Student:
Circle important words used in the process. I don't know.

Student:
"Only."

Student:
I think it's "only" and "max." Because you know, maximum is, like, the most. So circle that.

Dinh:
After that I think that one of the most important parts is knocking out irrelevant information, because sometimes a word problem is so overwhelming, kids need to know, "Hey, I don't need this. I've got to cross this off. This is not relevant."

Alyssa:
Finding certain things that you need to pull out, it's a lot easier to be like, "Oh, yeah, this is what I need." I think the BUCK strategy actually helped me get through it. But without it, I'd probably be, like, skipping over words that I probably should have gone back and figured out what they were trying to ask me.

Dinh:
Sometimes I give a student a word problem and I think, "Oh, my goodness, I have to clarify everything for them." If we give them annotating strategies like BUCK, we can give them more possibility to access the problems. And sometimes we just have to trust the process a little bit more, and give them an opportunity to struggle with it. If they get it on their own, they tend to remember it a little bit better.

Mavis, you can go ahead and read number one for us.

Mavis:
"Ms. Munch and Mr. Dinh would like to have a smaller wedding, and their venue can only hold a max of 80 people. How many people can each... each side bring to the wedding? Give some possible examples."

Dinh:
Okay.

I try my best to relate with the kids. And today there were word problems that related to my fiancée and I getting married. I think that the problems being something that they understood and something they were interested in helped, and it kind of engaged them to understanding word problems with linear inequalities.

I want you and your partner to come up with possibilities on how many people I can invite to my side of the family for the wedding, and then also Ms. Munch's side. I want to see what you guys can do with these.

Student:
How many people?

Student:
40 and 40.

Student:
We could do 30 and 50.

Student:
That's 80 people, and half of 80 is 40.

Dinh:
It doesn't necessarily have to be that number, does it?

Student:
It could be, like, 20 friends, and then, like...

Dinh:
Well, how many... what possibilities could I invite to my side, and then Ms. Munch would invite to her side?

Student:
Divide 40.

Dinh:
So 40 and 40. What other possibilities might there be?

With an inequality, you don't have to reach that number like an equation. Because some students, with an equation they'll think, "Okay, I have to get to 80 people," whereas with inequalities we can go less than that. And I think that's something that students struggle with.

Student:
You could choose any number as long as it's under 80.

Student:
27 and 35.

Dinh:
27 and 35? How do you know that works?

Student:
Because if you add them, it's still under 80.

Dinh:
Still under 80, okay.

Student:
Well, this was... so it has to be under 80, then?

Student:
Or 80.

Dinh:
What does the problem say?

Student:
You have a max of 80 people.

Dinh:
A max of 80 people. Can I have exactly 80?

Student:
Yeah.

Dinh:
Yes, I can. Okay.

So I actually put up a graph: number of people that Ms. Munch would invite, and number of people that I would invite, okay? So Mohamed, do you want to give me a possibility?

Mohamed:
80, zero.

Dinh:
So who would invite 80?

Mohamed:
Ms. Munch.

Dinh:
Ms. Munch would invite 80, okay. So the number 80-0 would be right here, right? So I'm going to plot these points for you.

Mohamed:
I like Mr. Dinh's class because we learn and we have fun at the same time.

Dinh:
Go ahead, Andy.

Andy:
One, 79.

Dinh:
One and 79. Which side would be one?

Andy:
You.

Dinh:
So I would invite one. Okay, I get where you guys are going with this. So I would invite one person, and so Ms. Munch would invite 79.

If you have a lesson that gets them to think about the content, then that's another way of engaging them, too.

Can we see a trend going on?

Alyssa:
Most of the dots are going in a diagonal line, if you put it...

Dinh:
Can you come up here and plot any possible points on my work here? Go for it. Okay, we might just invite one person and one person. Might just be me and her, okay. What else might there be? I mean, you can keep going. Just make it rain, if you want.

One of my goals is to get them to be able to problem solve so that they can use it in real life. There's value in understanding a situation and knowing how to solve it, whether that be using an equation or not.

Student:
"At Ms. Munch and Mr. Dinh's wedding reception, the caterer will serve the Chipper chicken and the Divine duck. The Chipper chicken costs four dollars and the Divine duck costs seven dollars. Mr. Dinh and Ms. Munch do not want to spend more than $392. Ms. Munch's side would like to order the Chipper chicken, and Mr. Dinh's family would like to order the Divine duck. How many of each could they buy? Give some possible examples."

Dinh:
Go ahead and BUCK it up, and give me five possibilities. I don't need an equation. I don't need an inequality of some sort. I just want you to give me possible numbers that might work for me to invite on my side and her to invite on her side.

We don't necessarily read and write in the traditional sense. We read and write in terms of equations, word problems, and representing them in graphs. Foundational math, and understanding word problems especially, really gets students to be confident.

Student:
I mean, 35 guests for Ms. Munch, and then she could buy 35 chicken Chippers with a total of $140. And then if you add those two, you get $385 in food, and then 70 guests total.