

CECILIO DIMAS: I also wanted to highlight how you were able to keep the classroom conversation... whole-class conversation going when you were monitoring what students were doing in their pairs. And you had sequenced...you had selected two or three students to share whole-class in one of the earlier parts of the lesson, and I just wanted to highlight that that teacher move of monitoring and then sequencing pieces of student work, or in this case students sharing verbally, I think was a powerful enhancement for the whole-class discussion.

Again, going back to the five dimensions of mathematically powerful classroom, that act of...that teacher move of giving students an opportunity to showcase their understanding, but have it be sequenced a very strategic way, helps them build agency, identity, and authority, and I think that was a powerful teacher move on your part.

ANTOINETTE VILLARIN: Yeah and that's always like a wild card, because as you walk around, you're always hoping...like, I was looking for three things because we were considering an argument on starting situation, rate of change, and this idea of, like, decreasing. So I was, like, strategically looking for those, and a lot of the students were writing things about the top...the liquid flowing from the top prism down to the bottom, so that was what I was seeing.

So when I saw words like *decrease* or I saw *rate*, I quickly, like, grabbed onto those and knew those were the ones that I want to talk about. I was looking for one that said five centimeters, but I didn't find one. Maybe I missed it but when Elias shared his and mentioned the five centimeters, it was, like, if I could've paid him to say that because, like, he...it was like what I was looking for. So it was...it was neat to see somebody at least acknowledge that, because that's what was my segue into the whole point of us trying to match it, so...

CECILIO DIMAS: I also think it's interesting that two of the students who are in your classroom -- one's been here for six days and one's been here for four weeks -- and how they have been able to jump in right away and support each other as two partners, but also actively engage in the whole class conversation. I think that's a testament to the classroom culture that you have built with your class to have it be a space where they can jump right in and start sharing their thinking. Because sharing our thoughts, in a way in which we are working as mathematicians, sometimes can be an intimidating thing to do. And so I just...a little kudos to you for that.

ANTOINETTE VILLARIN: Thank you. Thank you. I know. I got her, maybe, like, five days ago, last Friday, so. And she's been doing awesome, so. But I think it's also she has a really...like, I've paired her up strategically with somebody that I think can guide and help her, and it's been a good pairing so far.

CECILIO DIMAS: So if you could summarize your next steps for the final part of this FAL [formative assessment lesson], what will they be?

ANTOINETTE VILLARIN: Okay. So I think tomorrow I'm going to come in and we'll start with the poster, and I'll say, "Yesterday we were matching cards, we were looking at starting situation, we were looking at rate of change, we were looking at constraints. I'd like to add to that and I want to add that some of you guys saw yesterday, you were looking at time. You were also looking at the context of the story."

So as we continue to build this, because we haven't glued it down yet, and students know with FALs, once they glue it down it becomes official, which is why we don't glue anything down until we've talked and, like, we're really confident in our answer. So I think I'm going to start there and then I think I'm going to put up the slide with the four matches, and we'll talk about non-examples.

"Okay, so we know G2 and G6 are a match. Can you tell me why G2?" And I think I'll do that especially for fourth period because I didn't get to do that with...I did that with the morning classes, and I think there was value in that. And then I'm going to give them time to finish it up, okay, and continue their record sheet until everyone has all six matched up, or any six that they believe are matched up.

And then I think I'll introduce the prisms -- give them more time for that -- another gallery walk. And I may change up the gallery walk -- it may not be the same. It might just be find a different partner, find two other or three other partners and just compare, but now they actually have a record sheet in their hands. And then I'm going to give them the equations and we'll see how we go from the equations. I feel like I'm going to need to jump in a little bit with the equations to share how we might be looking at the context of the problem symbolically now, because we've been looking...spending so much time looking at it graphically and looking at rate of change graphically, because we've been trying to connect it with the slope. So I'm just curious to see what...what we're going to do. So I feel like there's going to be lots of divergent thinking, and that's going to be my next steps for next week. And I feel like next week we'll be focusing on initial values and what that might mean with equations.

CECILIO DIMAS: So as part of all of this -- the divergent thinking and the different strategies...the diverse strategies that surfaced -- that's an opportunity for you then to utilize next week is what you're saying?

ANTOINETTE VILLARIN: Yeah, basically.

CECILIO DIMAS: How are you then able...going to converge the divergent thinking, so that then we can utilize all those different strategies and ideas that surfaced?

ANTOINETTE VILLARIN: Do you mean from the -- from this FAL?

CECILIO DIMAS: From this FAL.

ANTOINETTE VILLARIN: I think so. Once I think students feel comfortable with the graphs and the prisms, I'm going to have them glue everything down. And I may do a gallery walk and have people walk around. I may highlight a few posters, and ask people to share what some of them were. I am going to give the post-assessment.

So we...on Monday we gave the pre-assessment. I had, like, initially when I was thinking of planning this, I thought I would finish the FAL today but knowing that it was longer than, I think an eighty minute...it was suggested that it'd be eighty minutes, and I need more time. I was going to give the post-assessment -- I think it's called The Walkathon, so it's very similar to The Race. I'm going to do that as kind of a final summary. I also am going to give students their pre-assessment back with a sheet stapled on front...on the front asking them to take a pen out and strike through answers that they now believe are incorrect, and I'd like them to modify answers based on what we've done this week. And what I did is I typed up questions that they may want to consider. Like, what's the starting situation, how do you know this runner's going faster, and I want them to go back and fix it. So I might actually use that as an assessment rather than Walkathon. Maybe I'll give Walkathon a lot later, but I want them to revisit their pre-assessment and use that kind of as the conclusion to this FAL.

CECILIO DIMAS: Any final thoughts?

ANTOINETTE VILLARIN: It was...I love FALs. I feel like...I feel like it's like a fun way to teach, because you really, like, you really...it really pushes you as a teacher, I think, to really get your students talking about math, and creating structures, and access that really get them to become mathematicians. And it's really fun to see versus, like, giving a worksheet or doing textbook work. Like, it's really neat to see them talking in pairs and sharing what they're thinking, and I love it. Yeah.

CECILIO DIMAS: I agree that giving the students an opportunity to engage in a problem...

ANTOINETTE VILLARIN: Yeah, a challenging one, too.

CECILIO DIMAS: A challenging problem where you're building...based off of the context, you're building a space to be able to apply the mathematics. And that you're also giving them an authentic way to utilize the vocabulary, because it's not likely that they're going to use math vocabulary to the level that you would hold them accountable to, if they didn't have the space to do it in the math class. So I think it's great that you're including that.

ANTOINETTE VILLARIN: Yeah. Like, things like rate of change. It's nice seeing them say *increasing*, *decreasing*. Yeah, it's nice to see as eighth graders. I hope it helps them when they get to high school.

CECILIO DIMAS: Well, thank you for inviting us in, and thank you for allowing me to work with you and your students as your coach. It has been a lot of fun.

ANTOINETTE VILLARIN: I wish you were here every day.

CECILIO DIMAS: Thank you, Antoinette.

ANTOINETTE VILLARIN: Thank you, Cecilio.