

CECILIO DIMAS: Yeah, I know that we've talked about the routine of convince self, friend, and skeptic, and it sounds like the pairing up of students who have different strategies, like, that's gonna be possibly either a friendly conversation or maybe a skeptic conversation for them to engage in. So what are some of the supports that you might put in place as you think about pairing students up to have those conversations?

ANTOINETTE VILLARIN: I'll have sentence frames, like "I agree," or "I disagree." I think a lot of times some of the students in this class, maybe because it's a morning class or they're not used to it, but question each other, what types of questions to ask each other, like "How did you get that problem? Where did this number come from?" so I feel like I'm gonna need sentence frames to encourage them to have kind of a constructive dialogue versus, like, "Okay, I get your answer," but maybe asking questions for going deeper into it. So, those are some things.

CECILIO DIMAS: So, taking a step away from this lesson and talking a little bit more about the change from moving schools. And so, as I came into your classroom and worked with you earlier this week, I noticed that there are some staples that you brought with you. And so I think it'd be interesting to talk about some of the things that you brought with you and why you brought those posters or those ideas with you.

ANTOINETTE VILLARIN: Well, definitely the posters like "We celebrate mistakes," and I loved today when Grendel felt like he made a mistake and he was doing Pythagorean theorem, he said, "Oh well, no, I made a mistake," and I loved that it was in front of the class and we were able to work through it. So this poster right here, I don't know if you can see it, where it says "We celebrate mistakes as opportunities to learn," "Do you mean, I don't get it yet." Other posters, like, in math class that I got from SVMU was "We will share and justify our solutions," we'll explain our thinking, make sense of others, so there's a poster up there. So, lots of just kind of the culture of the classroom that I want to create, I've brought -- I'm hoping to bring with me. But being at a new school, it's different at every new school, so, like, for me coming into a geometry class, I was really excited to see how deep they were gonna justify their work and I noticed that we were lacking in that, so I just feel like this is the year where I kind of wanna build it up, with this group.

CECILIO DIMAS: And I think that the distinction between showing your work and a justification is something that you've continued to engage with your students and support them in working through, and computing and calculating is a part of it, but then how does it relate back to the story in the context. So I think that having those visual cues for yourself but also for the students to know that you're not picking on them by asking them to justify or explain deeply, it's actually what we want them to do as mathematicians.

ANTOINETTE VILLARIN: Yes, yeah, and I've noticed that too, like a lot of times I'll go around, they'll have calculations on just an activity that we did earlier in the week, and I had asked one student, "Where did you get that equation, and what does that number represent?" And then she told me, and I'm like, "Okay, perfect, why don't you label it. Even if you don't write a sentence, label that so it's connected to, like, the right triangle that we were looking at." So

really just pushing them to really think deeply and communicate it clearly to a non-geometry student.

CECILIO DIMAS: Another question I had that might enter the realm of being sensitive would be -- well, another question I had in observing what might feel a little sensitive is, when Zoe was sharing, she made some comments about her strategy, and so I'm wondering if you could talk about that a little bit.

ANTOINETTE VILLARIN: Yeah, and I think she said at the end ... well, I saw her hand hesitate, and I said, "Well, why don't you come up here and share it," and I think she called it stupid. And I said no, we -- and I wish I had honed in on that a little bit more, like in hindsight when you think about the lesson -- but I told her, "No strategy is stupid, I'd like you to share." And it was like a perfect segue because as I was walking around and seeing students solve it, I thought one of the strategies would be that students would, like, fold their paper in half, because we had started with some constructions at the beginning of the year, and looking at how shapes like dilate and form, so we had folded isosceles triangles in half and seen what properties. So I was thinking that would be a strategy that they would use, and nobody did it. So when she did it, I mean, I felt like it was a perfect segue into showing her that there's even simple ways of folding a paper, and I mean, she got the correct answer when I looked at where her midpoint was, so it worked. And I -- that'll be one that when I make my list of strategies when they come in for part two, that these are things that I saw you do on Friday, that'll be on there. And I loved when I said, "Is that any less than anybody's strategy?" and Logan's like, "Of course not," [laughs] so it was perfect. And just kind of creating that space where there's different ways to solve it, because I do have abilities also within this kind of advanced group.

CECILIO DIMAS: And when we think about the importance of building classroom culture where students can share their thinking, their "on their way" thinking, their current ideas as to way to have like a sounding board, and to bounce ideas off of their classmates, I think that we can see that in your class. And I think it's really important to highlight that. And I also observed you talking a lot with your students, prompting them with turn-and-talk with purpose and product, and some of the other routines that you have in place that didn't need explanation, like you announced what the expectations were and students engaged in it.