

LISA HENNEFARTH: Well, functions as they're- as they've learned, the formal definition, if I were to ask any student with the formal definition of a function is it's a relationship between two things, they couldn't. They wouldn't be able to articulate that at all. What I was hoping at the end of this is for them to say, you know, like if you'd thought about this race, what were the two things that were going on? What were the- what was the math behind the race? That- that they were- they were racing, and what were they racing- they were racing in a pool. How do we measure length in a pool? By distance, meters, yards. And then what else were, you know, how do you know who wins a race or who crosses the finish line first? But what is that a function of? What- what is the importance of that? Well time. It's whoever gets to the wall first.

So again, the relationship, in this case the function was distance and time, right? So what does that relationship- so can they tease out, when they look at a graph, this has been something that I keep noticing that students don't want to do. They don't want to talk about the units. They don't want to talk about- they just want to say, well, this is what's going on, but give me more detail. What does that detail I'm looking for? I'm looking for the time, I'm looking for the distance, I'm looking at the time, I'm looking at the height. I'm- I'm the drone in the rocket, the squirrel in the tree. So how long after the- the squirrel was in the tree, did he fall out of the tree or did he. So just all of those nuances around the math. That's the math that we're looking for. That's the math we're trying to tease out of them is this relationship between the two variables that we're talking about, independent, dependent, they can identify that. But what story is it actually telling us? And at the end of the day, you can tell a story, but now, make sure you identify the variables and what they stand for in your story. The three reads, you know, like editing that last piece of just, you know, talking about, um, you know, obviously reading it aloud was important. I- that- that was a little bit nuanced more. I probably would have maybe spent one more time just having them like make some notes uh, on their own papers to annotate. I mean, I just had them circle and stuff, and we went right into like, okay, let's read it out loud. Now let's talk about it. So, I kinda shorten that part up.

The other part was, again, I had talked about in my opening remarks about I was looking for commonalities like what did everybody do? And on the fly, I noticed that I had these great posters that were given me great information, and there was nothing wrong with any of that information at all. It was just the level of detail was different, and that is the piece that I wanted to make sure that I talked about or that- And that was done on the fly. That was- it was like, okay, instead of doing this, I'm gonna do this because this is what I'm seeing from the students work. And, so it- I think it worked out well because they all felt successful going up in sharing and not at all. They weren't afraid that they were going to get criticized in any way. And I made sure that this was not going to be a critique. It's actually a lot of what we do but we never write down. And as a teacher, your practice is always refining and reflecting.

So I will, this lens of going through those five steps like, like obviously planning a learning objective. That's really, really important because at the end of the day, what is the math that you want your students to learn? The next piece is that anticipating, I think they all work, is like a- a conductor that, you know, is what, you've got an orchestra in front of you. And so you're conducting this teaching in your classroom. That's really important to understand that it doesn't happen in isolation. Nothing does. It's gotta be kind of like a concert. So you've got to be able to have your learning goal, figure out like what do you want them to do. But what are going to be some of the things that's going to happen to get in the student's way. How can I plan? So everybody has access to that.

So that's- that the piece around sequencing. So like you go anticipate, then it's a matter of like, you know, how are you going to build that lesson? How are you going to make sure that

everybody has access to it? Then it's walking around, and making sure you monitor their engagement. You can't stand in the front of the room. You- I mean, unless you have uh, an environment where maybe you have a small short class period or maybe you're gonna to do that. But I love to move around the classroom because it allows me to see first-hand what they're doing, you know, are they writing or they are- You can even tell by their facial expressions whether they're listening or not, because it doesn't always come down to writing. You know, a lot of times is they're thinking, they're reflecting, they're processing, so how can I scaffold a question to make sure that they're understanding what it is that we're doing.

So then it's a matter of like, if I want to do a task, and I want the students to have something that they're going to be able to produce, then showing sequencing and steps, and then why do I want that student to talk about their work? Why is it that I picked your work and not somebody else's? Oftentimes students think like, oh gosh, I done, again, I talked about like, I've done something wrong and it's no. We have to kind of frame it in, in a very positive way.

So all of these steps, these five steps, are very much part of a practice that now you're doing with thought and with reflection, and you're not afraid to make those changes, as you move through the lesson to make sure that you- you stay on TAC. Connecting, always back to the learning goal like, what did my students need to learn at the end of this lesson? Were they able to accomplish that goal? That's another important. And if you didn't, is there a way for me to reflect, and think about how I can pick it up the next day. So it's almost a little bit of a continuum, an ongoing continuum depending on where you're at in that five-step. So, and I'm not at all afraid to say, okay, I didn't get to Step 5, so maybe I- I can, in somehow incorporate Step 5 or Step- together in to the opening of the next day's lesson.