

00:00 So I noticed in both of the lessons we watched, you started out with that little concept map? Is that just a general practice about how you go about designing lessons?

00:14 Or was that specific to when you start a new big idea?

00:21 You know, I mean... with anything new, in particular, we try to front-load those vocabulary ideas, and it gets people, you know, it's that scaffolding strategy

00:36 Of getting people on the same playing field to start what can be a very difficult lesson.

00:45 Why we did it the second time, I think just to get them back to the same place again. You know?

00:50 Because as I said, most of the instruction has really not been teacher-led for the last two weeks, it's been student discussion.

00:58 And so to get them back into, to ground them in a concept before we begin was really why we started that.

01:06 Yeah. I mean, one of my favorite observations was right at the beginning, as they're filling that out, they were coming up with their own units.

01:15 And someone came up with this idea of hours per nanoseconds. And another kid said, "No, that doesn't work, because those are both time."

01:23 "They have to be different kinds of units." So they got into this little discussion about that, which was really great.

01:30 And then they had this idea of something called a "constant rate," because they came up with, like, the number of minutes per hour is constant, it stays the same.

01:41 As opposed to these other rates, like miles per hour. Or gallons per whatever, miles, could change. Which was sort of an interesting little turn that they developed on their own.

01:53 So it brought out a lot of really interesting information. And I like how you sort of pointed out to them how far they had come from the first day,

02:03 When they could only come up with two or three of those. Or how much more sophisticated their definition was.

02:09 So, for me, besides the fact that the kids were just really delightful, and the questions were really great,

02:17 I like to think about, what was the process that you went through to sort of develop this series of lessons, or even just this specific lesson.

02:28 What were the things that you were thinking about, how'd you come up with those questions?

02:35 Wow.

02:39 Just focusing on this lesson, the debrief of the lesson Joe did in another classroom, hearing those ideas was probably the launching point.

02:51 Because again, there's still so much, and thankfully there's still 7th, 8th grade, 9th through 12th grade, you know, the kids are going to keep learning.

02:59 You know, we really don't see this as "Oh, 6th grade's over." You know? But this is helping us see where to take these kids in 7th grade.

03:09 Some of what we talked about already is perfect fodder for that pre-algebra, algebra in 7th grade piece.

03:15 So.. but I think very specifically it was that collaboration and hearing other teachers respond to the lesson.

03:23 Yeah, because it's not like you use a set book, so you didn't turn to page 256, and go, "Oh, these will make good questions to put on a poster."

03:32 We also saw a lot of things ... a lot of ideas come out through the problem of the month, through their posters and their papers.

03:41 And that guided us. And it didn't matter if it was the lesson, the kick-off lesson in another school district or this one,

03:50 We saw that there were common things that the kids weren't doing, were doing well, or misconceptions that they had, so working off of those pieces...

04:01 ...and developing a lesson. And of course I have this amazing math coach also, so.

04:09 I know. I loved the way that you set it up, with like keeping the seconds constant, then keeping the beans constant,

04:16 Because every student had some access to proving who was fastest. Can you talk a little bit about what you heard students doing as they were trying to make those little proof statements?

04:32 A couple kids in the middle of the room who actually took the time to examine the three rates. They had initially written them down.

04:44 Say for the first one, 20 seconds for 30 beans, 20 seconds for 25 beans, 20 seconds for 40 beans.

04:53 And they had taken the time to read each rate and realized that ... they didn't need to do anything.

05:01 But I... surprisingly, only maybe 5 out of 25 kids in the room ... realized that the constant was given to them, and they didn't need to do anything.

05:15 So there were a few that just wrote down a sentence, "Yeah, I know that these, this person is fastest because they all counted for the same amount of time."

05:25 Just a small percentage of them saw that, though.

05:28 It was interesting, the group that I was watching, Aiden, I think it was, never wrote down the 20 seconds for 30 beans, or 30 beans per 20 seconds.

05:42 He immediately went, in his head, to the unit rate. So then he could write his sentence because he already had a unit rate.

05:51 Then the girl, Camille, had written those, but like you said, didn't read the information, and had to go and do all the division to find the unit rate.

06:06 To come up with her idea. And then another little boy just ... could read the rates, like you said. So it was out of three, there was all different kinds of ways

06:18 Of going about getting that proof. But it was a good question that we don't ask them enough, how can you prove that?

06:28 I tend to then move to the next step in my mind, is so now what? And also on our walk over here, as we were thinking about this,

06:39 I was, you know, I thought... we put it out there, we're still seeing kids manipulate and do some mathematics that is less efficient.

06:54 But making meaning, which is wonderful. So we're seeing that flexibility. So now can we ask the question that is very focused on which method is most efficient?

07:06 For this problem? And give them another set of numbers, why? Which method is most efficient for this problem?

07:14 Oh yeah, I'd love to watch that.