

00:00 O.K., so last time I was up here you guys were doing the "Rate-Palooza" to sort of kick off the Problem of the Month.

00:14 And so now we are going to where kids are at since they started the study on rate and how they did on Problem of the Month.

00:23 So where exactly are we in the development of the lesson sequence. I mean, what's been going on in the last couple of weeks?

00:32 Well, after the "Rate-Palooza" we dove into Problem of the Month. And we structure it where we introduce a particular level of Problem of the Month.

00:46 Talk about some concepts and then the kids go home, sometimes in class, but the kids go home and take a stab at it.

00:52 And then we come back the next day and we talk about it as a group and move on to level B.

00:56 So the Problem of the Month which is called...

00:59 First Rate

01:00 First Rate has been almost our sole curriculum for the last two weeks.

01:08 O.K. and how does that work, sort of, as a school wide event? Because I remember last time kids were changing classrooms and doing a series of activities...

01:18 ...about rates, different ones at different classes. So, then, what is the process as a school for sharing out all those posters?

01:27 So, we set a tentative date as to when we want everybody to have completed their posters.

01:36 The poster process is basically, students choose a level that they are most comfortable with, that they feel that they really tested themselves on.

01:45 And they join a group within that level and they produce a solution, ideas about that level.

01:56 And so we get...we try to get everybody done at the same time and we have about half the school done right now as of today so...

02:07 O.K. What kinds of activities, O.K. so, in the classroom they have been discussing those Problems of the Month...

02:15 and how they have been progressing along them. What kinds of other activities have you done that might help them make more sense of rate or...

02:24 have you done any specific thing?

02:27 Over the last two weeks, it's been, there has been no direct instruction, right? So this has been all student exploration, collaboration with some meaty problems.

02:40 Prior to that you had done some work around proportions with your sixth grade so maybe you could share, that was actually even prior to "Rate-Palooza."

02:51 So it wasn't so much, it wasn't all within a context and that the concept within that capacity, but maybe you can just share a little bit about, if you can recall...

03:02 End of the year.

03:03 It is, I know. So we should start with a "thank you". Thank you for opening your classroom at this point in the year.

03:10 Sure.

03:11 It's a busy time.

03:12 You know, we spend, I spend, the sixth grade teachers spend when did we finish all testing? Probably the end of April, beginning of

May. 03:28 We spend the last month and a half focused solely on proportional reasoning. Working with ratios, working with rates, working with proportions and...

03:36 so we do a lot of stuff. We do some worksheets. We do some actual hands on experiments where kids are up walking or running.

03:49 Where, you know, the "Rate-Palooza" was a lot of counting stuff. So exposing them as much as possible to different ideas around rates

03:59 How to represent them as ratios. How to look at something proportionally.

04:06 We work within our geometry unit to look at proportional relationships with shapes, their perimeters, their areas stuff like that.

04:19 So what are you hoping to get out of today's lesson. What's your, sort of, goal for students for this lesson?

04:29 Well, I think, you know I mean, because it is coming at the end of Problem of the Month, it was a, sort of, assessment goal to it.

04:44 You know, where are we? What are the children understanding? It doesn't always have to be set up in that way.

04:49 And if you flipped it. And you looked at time over the number of something, would their understanding of that rate be the same?

04:57 Or would they...how much would they lose in understanding it?

05:01 I think what...your goal seems really interesting to me because, like, when we are talking about the Rate-palooza...

05:10 ... you were talking about how you really want kids to have a lot of movement and you think that that helps to, sort or, cement ideas in the learning process.

05:20 That if students moved around the room to do the experiments. They move from room to room to do different experiments...

05:28 and then I think also about this lesson or in the whole development of this unit you were talking about flexibility.

05:37 So could one of you speak to this idea of wanting kids to be flexible?

05:44 When developing this lesson I think we focused in on, one of the aspects, was the flexibility of looking at a rate as a comparison between two measurements.

05:53 And being comfortable with, and so today we are still asking a question. Are our students comfortable with moving those two measurements around...

06:04 ...from numerator and denominator. Today we are going to focus on, then, the idea of comparing, it's a double comparison.

06:14 Rate is a comparison but now we want to compare rates. And so we are going to look at three different strategies for comparing rates...06:22 ...that could involve that flipping piece that was, you know.

06:27 As well as this idea of holding one of the measurements constant. Whether it's the numerator or the denominator.

06:33 We have had the conversation that doesn't matter but that the unit itself needs to remain constant in order to be able to clearly state,

06:42 "I know which one is faster or which one is..." So the third piece. So that is two strategies because one could be holding numerator constant...

06:51 One could be holding denominator constant. And then the third piece was this idea when we started... So this is flexibility.

07:02 Which is the third piece of a unit rate and we found at the beginning students didn't seem to go there.

07:10 And we are hoping that they will and so we are posing the idea of the naked problems. Just these three numbers that are in fact unit rates...

07:19 ...but they are not labeled with the measurements so we want to see how students react to that.

07:23 Do they see it now as a unit rate and do they see the measurements that are involved in that.

07:28 So long-winded but another, because, so that's where we went today and there are still many other areas.

07:36 So just briefly we also talked about the development in Joe's classroom over the last couple of weeks has been, students have been, 07:43 and he has brought this out from them, be articulate around the different strategies that they use...

07:52 not in that comparison but actually just in the piece of mathematics that is creating an equivalent ratio.

07:58 And we are not going to push to hard on that today because: A. He has done some of it and...

08:06 B. that's a whole other realm of flexibility that we want our students to have.

08:10 The school is...we really try to get to this idea of multiple representations. The idea that students...all ideas are valid.

08:25 We as teachers...I had this experience yesterday. We as teachers come in with these bias about how we like to look at things.

08:31 You know I like to look at a unit rate as a... the number of... the amount of money per ounce.

08:38 And when they come at us with, "I've got one dollar, this is how many ounces I can get."

08:46 Our initial reaction is, "That doesn't fit with what I see, what I'm experiencing."

08:51 And so stopping and allowing these multiple representations to be put up there, talked about.

08:56 And we found that, in particular with this dollars per ounce or ounces per dollar, the counter intuitive way was the way the students understood it.

09:09 So counter intuitive for you.

09:11 For me.

09:12 O.K. so as I observe the lessons are there any particular things you want me to watch for when I'm looking at students or listening to students?

09:23 One of our focuses through out these lessons has been the idea of a rate needing, not only the unit but a term.

09:34 Some sort of words. So looking at if students are beginning to identify what the numerator and denominator of this particular ratio are talking about.

09:45 In addition to that, how are they comparing them? That's, you know, as Becca referred to it, it's one of the main focuses is...

09:55 Do they have strategies to compare these three rates?

10:00 O.K. Good. All right. I'm looking forward to seeing what the kids are going to do. This will be fun. Thank you.