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.

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.

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?

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.

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

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

So the Problem of the Month which is called…

First Rate

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

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…

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

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

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

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

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…

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

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…

have you done any specific thing?

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.

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."

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…

End of the year.

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

Sure.

It's a busy time.

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.

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

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

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

How to represent them as ratios. How to look at something proportionally.

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

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

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.

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

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

Or would they...how much would they lose in understanding it?

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

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.

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.