SALLY KEYES: So Cecilio, before we begin the lesson in your class, maybe you can give us a little bit of information about the make-up of the class.

CECILIO DIMAS: Okay. Well, just some of the data of the class that we have 27 students, 14 girls, 13 boys. We have two students who are identified with special needs, and we have three students who are English language learners. One has been here for about one year and is extremely fluent in Spanish, and so I partnered him up with a volunteer who has asked to work with him because she is comfortable with her English skills and also comfortable translating into Spanish for him. We also, looking at their CST data from 6th grade, we have 14 students who are advanced to proficient and then 10 students who are basic or below basic. And I have 3 students who I don't have CST data for. But outside of data, it's a very friendly group of students. They work well collaboratively in their groups of four and even though some are a little shy or quiet, they still have great conversations together. And the work that we've collected from them throughout our time together this year, verifies that they do work well together.

CECILIO DIMAS: There's a particular student named Charles that is a very bright student and I would be curious to see if he...what are some of the thoughts that he has as we're working through the different tables, um, about the different questions that are asked. I would also be curious to see how Melanie and Daniel are working together; they're the Spanish speaking team that we talked about earlier. I also have some teams of girls and I feel that within those teams that they have a lot of great mathematical ideas that aren't always shared out with the class. And so that's also another group that I like for you to look at.

SALLY KEYES: What parts of the lesson do you think students will find straight forward and be successful at?

KAMALJIT SANGHA: Well, there's the student age, it has three tables that would be easy for them to read. If there's any confusion, it would be because two tables don't have labels; that would be the difficulty, otherwise it's just labels. It has the tables for the 1st scenario, 2nd scenario, 3rd scenario.

SALLY KEYES: And is this the first table we're going to be using in our lesson today?

CECILIO DIMAS & KAMALJIT SANGHA: Yes.

SALLY KEYES: So that's our opening one. Okay. So what parts of the lesson do we think students will struggle with?

KAMALJIT SANGHA: Oh, we have another one we think...

CECILIO DIMAS: Yeah. I think that students will do well with Student E, which is going to be the 3rd table that we work with. Student E is the tabular representation that has correct data, and it will follow Student A, which will be the first table where we, um, we talk about zero. Um, but Student E, I think will be a table that they will have full understanding...

SALLY KEYES: And so the lesson that's been designed, I think we touched upon just briefly, but the lesson has been designed to be able to be used in any 7th grade classroom regardless of what kind of a class we may have, so maybe we should address that a little bit here. What makes it a complete lesson? What makes it so that we're able to address those students who are in the accelerated class or more advanced class versus those who are not? So how's the lesson been devised to meet the needs of all those students? So perhaps we can talk about the pieces. You mentioned student age, and you said the third table is Student E, and perhaps you'd like to share a little bit about...

KAMALJIT SANGHA: The Student E is the different...the one that, that's the second one, the one that's the most difficult one. It has the issue of zero, whether to start with zero or one. When do you have to start with one? When do you have to start with zero? When is it crucial to start with zero? So that is the big piece for students to understand and do you have any...?

CECILIO DIMAS: And with going from Student E to Student A, some students may be challenged with the idea of combining all three tables into one. And as stated already, starting with zero versus starting with one, that's going to be a new idea, probably for some of the students, to see the information that you can gather by starting the table at zero.

KAMALJIT SANGHA: This is also the difference between vertical and horizontal. Some students like to see horizontally, the others vertically, but they need to realize you can represent data both ways.

SALLY KEYES: So we have these three tables and these three different students and we have H, A and E. And then we do a comparison; looking for similarities and differences between the different tabular representations. And what else is built into the lesson that we could, if we happen in a class, to get through all those and have a very deep conversation around those similarities and differences? I do believe it's...

CECILIO DIMAS: And we, um, we have actually two things that we are planning to use, whether it's in this lesson or lessons to follow. One being Student J, and Student J is a student who organized their table in a different way but didn't include enough information to answer their prompt of when will all three DVD Plans cost the same. We also have two challenges that we have created, which also give students an opportunity to work with the idea of cost analysis, and using a table to show their ideas and their conclusions about the cost effectiveness of the two different plans.

KAMALJIT SANGHA: And also, just to realize that the students will have difficulties when they're comparing all of them and going back every time we introduce a new table, and how they are related to each other and how we can find the answer in each one. And also, we have to realize the lesson doesn't end today, it's a re-engagement that's going to go on for a couple of days.

SALLY KEYES: So depending upon our class.

KAMALJIT SANGHA: That's right.

SALLY KEYES: Any additional comments?

KAMALJIT SANGHA: I'm just...I like to know that the staff, our math department enjoys this lesson study. It's a learning experience, actually being able to listen in on the students and see what they're saying, that you naturally when you're in a class alone, you don't get to hear everybody all the time.

CECILIO DIMAS: The insight that we gain through each other's teaching and through each other's own interpretations of different lessons and different ideas is definitely an opportunity for us to grow as professionals. So we're definitely grateful for the opportunity to participate in lesson study.

SALLY KEYES: And I like to say additionally too that the lesson study has been really wonderful as far as fine tuning our prompts. You know, we have some prompts and we felt we weren't getting what we really wanted to get from some of it; we changed the order some student work that we shared because we decided that maybe the order we had wasn't getting at that mathematical piece in the sequence. So with lesson study, it does provide us that opportunity to collaborate, and to discuss, and to observe students actually using those prompts and having those discussions, and lets us fine tune a lesson to make it better.

KAMALJIT SANGHA: And it's also exciting to see the kids all excited.

SALLY KEYES: It is. And I think it's good for all of us to be able to get out of class to watch other students -- other students and other teachers. And it's around the same lesson but then we can have common conversations about, um, the actual mathematics of the lesson, and what's happening with the students and with their understanding of that. Alright, so I think we're ready, we have our, um, we know what we need to do right? We need to take notes.

KAMALJIT SANGHA: We're the observers.

SALLY KEYES: Yes, we are. Thank you.