

LF: Hi, Hillary and Carolyn, I'm really excited to get to observe your lesson today. I understand you're going to be doing something on a protocol called "re-engagement." Could you tell me a little bit about what that means to you?

HL: Well, um, we're going to do a lesson: the class has already taken an assessment and we're going to go back to that assessment and have them think about the problems again.

CD: We're going to have them look at some of the other responses to the problem that the different classmates have had, so that they can understand different approaches to the problem, and therefore get a broader view of all the mathematics involved in the problem.

LF: Why do you think that it's really important to go back and re-discuss a task after you've already given it to the class?

HL: Well, for the students who didn't do it all correctly and still need to learn from it, that gives them more time to understand that items they didn't understand the first time around, and for the students who *did* do well, they will get a chance to think about other ways of solving the problem and to push themselves a little bit further.

CD: Once they've done a task, they're familiar with it. So when they go back, sometimes, I know that I'm amazed to find out how much more there is to get out of a task, just by rethinking it, and thinking about it more deeply!

LF: Can you tell us a little bit about the process of how you chose your questions or your problems that you're going to present to the students today?

CD: We looked back at some of the student work, and we saw where some of the students were having some difficulties. We saw what we thought was interesting mathematically in those difficulties, and we wanted to get them to confront what didn't make sense, and really think it through. Think about why it did and why it didn't.

LF: What are you hoping that students will get out of today's lesson?

HL: I'm hoping that it will further their understanding -- that they will each learn a little bit more about the problems than they had done the first time around.

CD: They should discover that it's so much *fun* doing this kind of mathematics, the logic of the thinking, it's pure fun! There's no right and wrong, except in the mathematics itself!

LF: I know when you guys were planning the lesson, you had a really large discussion about how to introduce the lesson. Can you rethink what some of your logic was, about how you were going to introduce the lesson?

HL: I'm trying to remember... (laughter)

LF: You know, like how were you going to present the problem originally, why you wanted to look at this thinking again?

HL: Was that with the... we decided to start with the first problem on the assessment, is that what you were thinking?

CD: Are you trying to think about what order we wanted to have?

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LF: I think it was like you wanted to pose the questions to students in a way that would get them excited about rethinking those particular tasks?

CD: That's right. You know, when you come back, the idea was, you come back and it was so interesting—we got so many different responses from these different---from the same question, many different responses! What was each one of these students thinking? What was valid in it, and why were they thinking this way, and how it could lead? It often opens up new evidence of thoughts.

HL: Right, and we wanted the other students to be able to see those interesting ways of thinking.

LF: It seems like there were something that you were talking about, about getting them to think like mathematicians, that you were going to put in that introduction...?

HL: that's right, and it will be. (laughter)

CD: That's right, we were telling them, we actually want them to be acting like mathematicians. Instead of saying "like calculators", we want them to be acting like mathematicians. Mathematicians discuss interesting problems, and we want them to have that experience! That's the excitement.