MALLORY WILLIAMSON: The task I chose for this particular standard is with adding and subtracting fractions, and the additional standard on there was with line plots. And so, with this particular task, they're analyzing a line plot and with that data that's put on a line plot, the students are then going to be required to add and subtract fractions. Which, when we're adding and subtracting fractions, they may be multiplying within that because there's a relationship that's evolved. So, the students, first and foremost, are taking it through several steps by recreating the line plot and then using that data to kind of find a solution.

I hope to see the relationship they use between adding and subtracting with the multiplying of fractions. I think at this grade level, that's very common for them to make that relationship and also believe that they should be able to take data from a line plot and answer questions. It's very hard for them to just start creating a line plot from scratch, but once they take that step forward, I think they could use that data to then answer any kind of question.

I know that the students are going to do a lot of repeated addition. Students who don't necessarily feel comfortable with multiplying fractions will use the repeated addition, so that they can keep track of their data. Another strategy that they're probably comfortable with is just using any kind of numerical expression to solve. One of the parts on the task that would be interesting to see is asking them to model their work. So, when you implement a model, they then want to take and model the solution instead of actually using a model to find a solution. So, I'm excited to see what comes up with that, what they come up with, but I'm also nervous because I know that that's a more challenging area for students.

Before adding or subtracting fractions or multiplying them, a major misconception is that students often want to multiply the denominator. So, within this line plot, there's a lot of fractional amounts that have fourths or halves or even eighths. So, they have to rename equivalent fractions into eighths before analyzing that data. And so, I'm, I'm probably anticipate seeing some of those misconceptions of trying to repeatedly add denominators that are different amounts or multiplying the denominator instead of just keeping the denominator the same because that whole stays the same, as well as struggling with the models. I think the major misconception I'm looking for is, are they able to create a model to find a solution or are they just going to model the solution.

This task is really lengthy. So, often times, our tasks, because we go so deeply, cover so many different standards, we're looking at probably a 60-minute task. So, it's important for students to constantly shift their perspective on what they're actually solving. So, the way we have it is that they're going to start off with a task themselves and try to look through it, just kind of using what they know, what they observe, and then collaborate with one another. Once they have a concept or an idea, they're then going to take those ideas and place it on one final chart paper for a presentation. So, that way they're using that one presentation or chart paper to then answer their questions. So, it's more collaboration, more willingness to speak to one another instead of just individually working it out on their paper and answering questions by themselves. And breaking it up into parts of—after they solve a question, discussing it.

MALLORY WILLIAMSON: So, if I see any misconceptions, I can go over those solutions or misconceptions before they move on to the next part, which that's important because they build off of one another. So, if they do the whole assignment wrong, I'm not able to catch maybe a minor misconception and have them recorrect it before then moving on. So, having those discussion so they can actually be successful in a solution, even though they made a minor mistake.

Pulling them to carpet is one of the strategies I found out often students, if you talk to them as a whole, for the whole class, it's easy for them to see their concentration and look elsewhere and not really be engaged in the conversation because of proximity. So, if I move them closer, they're more willing to pay attention to something that's right in front of them or listen to somebody who's beside them, instead of being further away from one another.