

Math in Action

Assessment and Evulating Inquiry in Math

As a teacher, it's really important you stand back and you watch the process of learning. You have to listen, you have to watch. You have to interact and ask questions that draw out the knowledge of your students. How are you? Are you focused? You working well as a team?

>> Yeah.

>> Yes? Okay. Any obstacles so far?

>> It's important through provocations to see the starting point where your students are at.

>> So how did you pose your questions to make sure that you got honest answers?

>> We actually -- we had several ones. We had to think and think and think.

>> And then as a teacher, you take that, and you lead the students. You facilitate the learning. So to take a look at what students are thinking in advance, how much knowledge do they have? And you take that information and guide the process. So it is valuable to see where the students are at. Okay, so looking at your data, the majority of those who participated disagree.

>> Yeah.

>> You have to assess through the process so that you know, is what I'm doing effective? Are the students actually learning through this process? Are they continuing to build their knowledge? So as a teacher, you have to be assessing so you know, do I need to revisit something?

>> Yeah, we're trying to our best to make predictions that are realistic.

>> So that's a really good point. What is our government doing?

>> Is this strategy in need of refinement? Even drawing the knowledge out, when you're communicating with a student that had knowledge that they perhaps didn't demonstrate on their own, you have to really value that. And you have to take a look at the process of learning, and understand that that is where the assessment is. The assessment can be embedded in the journey that takes you to your end goals. When I conference with groups, one strategy that I used was using communication books, where they had to document daily what contributions each member had made, and what the community had done with those contributions. So I think that's an effective strategy. Further to that, it's important that if you do feel that a student is perhaps

holding back a little bit, encouraging that student. And making sure that student also has a role and feels that sense of community and that sense of participation.

>> Oh, great!

>> If I don't get it, I'll be, like, "Oh, I don't get this," right? Like, I'm being honest about not getting it. And then she'll help me so I understand it better.

>> The more questions you ask, the better understanding you get, which is something I think really helped for me.

>> When you are assessing your students, you really want to make sure that they're sharing everything that they truly know. Because there is that apprehension with some students. And sometimes it takes questioning to draw out that knowledge that they already have.

>> When you were problem-solving, did you work together to problem-solve to come up what you described as a formula?

>> Yes.

>> Did you share ideas? Or was it something that you felt more comfortable doing on your own? So an example of that was when I was working with one of the intermediate groups in the Agents of Change project. And there was a student sitting in a group. And the group was faced with a problem. When they were trying to figure out where to go, what the next step was in their process, there was a member that was sitting and offering the suggestion. And I heard the suggestion. The group, however, did not respond. And I think as a teacher, you need to be making sure that you are checking in and making sure that every student has a voice, and that the students understand that part of learning is being a good listener.

>> We started off on our own group, but then we came together to make sure everybody was on the same track.

>> Okay. So I approached the group, and I had them communicate what the problem was once again. Then I asked that student, the idea was a really fantastic idea. And the students ended up hearing that idea for the very first time. And that's part of the assessment as well, is prompting that knowledge, or making sure that voice is heard. And what would you do if someone wasn't on the same track? Let's see if Ivy has something to contribute.

>> We would probably, like, try to work together to find a solution.

>> I think it's important to understand during assessment that you can't be quick to say, "Yes," or, "No." You have to take a look at what they've done and look at the

layers within their learning. When I asked you to describe how to calculate units cubed, how would you communicate that with me?

>> We took the width, which is two, and the height, which is three. And I times it by two, because there's two layers.

>> I like how you described it as "layers." I like that. I think to be an effective educator, you have to be reflective. You have to look back on what you've accomplished with your class and question, was I successful? Did I reach every student? What can I do differently next time? Building with colleagues, team building with colleagues is really valuable to the process. And I think that becomes part of the school culture as well.