

Math Lives Here: Helping Social Justice Take Flight

Math Lives Here: Finding the Math

>> I began in my social studies curriculum where the students are meant to examine the role of community, and what makes a community a comfortable place to live. And we drew a map, and we put a railroad crossing where it belonged in their community. And I happened to mention to them, "Did you know that this railway crossing is going to become a bridge?" And it was like a light went on in the room. They had to know everything about the bridge. I realized it was going to be more than a 20-minute conversation about a map of their neighbourhood. So after mapping their neighbourhood, I took out an inquiry planner. And I started with that central question of how will this bridge for trains make our communities safe, or not?

>> It all began because in this community, there's been a lot of changes. It's been going through revitalization. Throughout my time here, a lot of the students were talking about they were feeling about revitalization. They had sort of mixed feelings. They felt that they're being displaced. They're feeling like this was not their community anymore, and there were people coming in and they were being moved out. I got the sense that people were feeling like maybe this is not the same Regent Park that it used to be. So we started talking about ways to remember the community, and the people who built the community. And the project sort of started up that way.

>> As well, oftentimes, if there is something of interest in the media, I will bring that in to promote that discussion and see where that leads us.

>> So looking at anything that might bring in a student's interest, engage them, and bring mathematics into their world, thereby really making it real-world for them, is a perfect opportunity.

>> Through the mapping that we had done initially, the directions to the bridge, the numeracy involved in serving their entire school of 297 students, or some-odd, there's 200 and some-odd number of students, the graphing of the data, and then the estimating and measuring distance and height.

>> We've done a number of inquiries that are related to food scarcity. We began by examining the top and bottom 20 percent in terms of income, of people who live in the Toronto region. And from that, the students learned a great deal about privilege, and so on. So we dealt with ratios and percent, to how much a person makes to how much they spend on rent, and whether or not it is proportionate, or if, indeed, there might be a tremendous difference.

>> There were times when I was ready to end the inquiry into the bridge math. And the students were the ones who were vocalizing their concern or their passion for that particular project, and explained to me, "Miss Keenan, we need to learn more

about air pollution." Or, "Miss Keenan, we don't really know how acid rain forms. So we need to look into this if we're going to solve this bridge problem."

>> Certainly what is very essential as well is the fact that the students feel that value, that they, indeed, have a lot to do with the direction that we go. And that's something that I've had to develop over time, certainly being able to be free to allow the students to take me in that direction. But ultimately, a good solid knowledge of curriculum is essential so that you can share that you keep things within the boundaries that they should, so to speak. So you're moving beyond them, but yet maintaining that curriculum focus.