

Growth Mindset Thinkers

Video: Applying Math Outside the Classroom

(ALAN SCHOENFELD:) There are tons of things in the real world subject to logical analysis, subject to mathematical tools, that people shy away from or don't realize they can do. And my goal as a math person is to open the door to people having access to and using those tools. If they only know what they've been taught in classrooms and can only apply it when it's labeled as a math problem, then we failed mathematically.

How did you last use mathematics on the job? And their answer most likely is, "Well, math is mostly arithmetic." And you know, "Maybe I added up my cheque book or something like that." If -- that doesn't exactly justify 12 years of mathematics in the curriculum. The thing that really matters is being able to take the tools of mathematics and use them sensibly when you encounter real-world situations for which mathematical thinking is appropriate. And you almost never encounter such things looking exactly like they looked in math class. Which means that you need to develop the [INAUDIBLE] bits of mind that say, "I've learned to be analytical. I've learned to be willing to look at situations and see what underlying structure they have. I've learned to be able to persevere in sense-making. And that the organizational skills, the analytical skills, the tools that I've learned in mathematics don't come pre-packaged to solve those problems, but they are things that I can use to make progress on new problems."

And basically you don't learn to get good at problem-solving unless you have lots of experience doing problem-solving.