

**11.124 Introduction to Education: Looking Forward and Looking Back on Education, Fall 2011**  
**Transcript: Teaching Students with Strong Science and Math Backgrounds**

SLATE: MIT students bring their expertise and passion for math and science into the classroom.

I think the great thing about having students who have really deep knowledge of math and science in these classes is that they draw upon that in the way that they think about math and science. So it's not just about math that, you know, happens in a textbook that lives on a piece of paper, but math that's embodied in engineering, math that's embodied in their lives, math that they can kind of think about in interesting and different ways. Same with science, you know, it's about science in practice that they may have done from a UROP on campus, or from some other experience that they've had interacting with faculty that have done research in those areas. So they can bring that to the classroom – they can bring their own experience and their own passion for Math and Science.

They bring so much to the classroom. And I don't need to sort of say like, "Well, you really need to understand what's great about science before you understand how to communicate that to students, or to understand what's great about... that math is a language that we can use in lots of ways. You need to understand that before you can teach math." I don't need to do any of that for the students here, and students who come from more diverse, sort of backgrounds with their own experience with math and science do sort of need to learn that first. They need to understand what's great about science; they need to understand how math is a language that helps us understand the world. And so I think that if I were teaching in a different university, I'd probably need to help students learn that first before they actually tried to convey that to their own students, and I'm fortunate enough to not have to do that here.

SLATE: The students need to grasp that different people learn in different ways.

For most of the students, math and science have always come really easily to them. They've sat in a room, someone's perhaps lectured at them, and they've kind of gotten it. They can do well on the tests, and they can move on. And, sometimes it's a struggle for them to think about, "Why... why is this student not getting it? You know, the teacher told it to them just like they told it to me, and yet I understood it and this student didn't." And it's a matter of trying to think about, "How do you break that down to help them understand that everybody sort of thinks about the world differently and thinks about their own learning differently?" and how to accept that challenge.

MIT OpenCourseWare  
<http://ocw.mit.edu>

11.124 Introduction to Education: Looking Forward and Looking Back on Education  
Fall 2011

For information about citing these materials or our Terms of Use, visit: <http://ocw.mit.edu/terms>.