

Inspiring a Generation of Students

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How can we grow public awareness of nanotechnology and its possibilities, so that we can excite and inspire a generation of students to pursue careers in scientific research and engineering? What does nanoscience look like in a high school classroom, and what are the challenges and barriers to introducing it at this level? What are the nanoscience resources available to K-12 educators, and what will it take for educators to use them? How do we benefit from bringing K-12 educators into the research lab? This presentation will examine these questions and provide one educator's solution. The goal is for attendees to come away with an understanding of the value of outreach to K-12 educators, and the need for continued, innovative involvement with the K-12 community.

Mariel Kolker is an advocate and public speaker on addressing the gender gap issue in STEM education and careers. She is also a secondary teacher of physics, engineering, and nanoscale science at Morristown High School in Morristown, NJ. Mariel developed her full-year Nanoscale Science & Engineering course while working in the Soft Materials Lab at Stevens Institute of Technology, Hoboken, NJ through a grant on iron oxide nanoparticle brushes. A second-career teacher, Mariel has a degree in Mechanical Engineering from Rutgers University and an MBA in Finance from Fordham University, and worked as an engineer and manager in the power generation, transmission and distribution industry for 13 years. Mariel lectures nationally on the gender gap issue in STEM, blogs about it at marielkolker.wordpress.com and is on Twitter at @marielkolker. Her talks draws upon academic research as well as her own findings from an all-girls engineering class she advocated for and taught at Morristown High School.