When I signed up for RET I thought I was going to learn more about new technologies and how they work. I never thought that I would physically be working in a laboratory collecting data and designing experiments that would allow for a technology to be used. Although my expectations of the programs were not met, I took more out of the program then I could have ever anticipated. From observing lab presentations; producing experiments and participating in valuable professional developments. My teaching philosophy and delivery of instruction has changed. I have a greater sense of awareness that has allowed me to deliver lessons that challenge students to be independent learners, researchers' and innovative. My lesson plans now incorporate a better sense of "real-world" applicability that was absent in my teaching prior to the summer experience. The experienced I gained from RET gave me the confidence I needed to be innovative in implementing new ideas, and introduced me to the world of research.

This summer I worked at Boston Universities Photonics Center on a project that used fabricated microchips to detect explosive materials. Our project consisted of two parts. We first had to create a gold nano-rod microchip that will be able to collect explosive molecules from the environment near an explosive source. Our next task was to develop and program a prototype (lego) robot that would transport the microchip to the hazardous zone, trap any available molecules and bring back the microchip to a microscope where we would collect data to determine whether or not the source contained explosive materials. The applications of this technology, when successful, could save countless lives of military personal by identifying explosive materials prior to detonation. The long-term development is to make this technology cheap and accessible to locate mines that are deep underground. This project would be cheap, easily mass-produce and portable to benefit a large community.