

# Clintoria Richards-Williams

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## 2007-2008 APS K-12 Minority Outreach Fellowship

I have truly enjoyed serving as a 2007-2008 APS K-12 Minority Outreach Fellow. Admittedly, I began this fellowship thinking about the impact that I would have on minority students. Ironically, in the end, it was I that realized that this experience had impacted me. This Outreach Fellowship forced me to face the realization that tangible role models are lacking within the minority community. In talking with other minority scientists, it was revealed that they had the privilege of being exposed to science at a young age. These scientists talked of family members who encouraged them to participate in scientific activities such as science fairs and camps. They credit these experiences with inspiring them to pursue careers in science. After thinking about my scientific path, I realized that I had not been fortunate enough to have role models early in life to assist in providing me with the early exposure to science that my colleagues had experienced. Furthermore, after talking with local teachers, I realized that the lack of role models within the minority community was not uncommon. This realization created within me a strong desire to provide encouragement to minority students.

The APS K-12 Minority Outreach Fellowship has afforded me with opportunities that reach well beyond the research bench into the very place where students first become exposed to science, the classroom. My mission within the classroom consisted of assisting minority elementary students in realizing their potential. This mission was accomplished with two aims. In the first aim, I emphasized the diversity that exists in the science field. My goal was to get students to dismiss their misconceptions that all scientists were just "old white men". The Dress-A-Scientist activity was an aid that encouraged students to share their views about the appearance of scientists. Also, during my powerpoint presentation, I shared with the students pictures of young scientists of both genders and all races and nationalities. I believe that these two activities helped the students realize that their perceptions of scientists were not true.

The second aim of my classroom visit was to encourage students to believe in themselves. I wanted them to know that they possessed the intellect of scientists. This was accomplished by helping students to realize that their daily problem solving skills had similar parallels with the techniques that scientists used to solve scientific problems. This was addressed by a modified version of the "Elvis Experiment" named "Notorious BIG". In this demonstration, the students examined the effects of exercise on the cardiovascular system. In this activity, the students mimic blood flow through the cardiovascular system. The objective of this activity was to encourage students to examine the effect of exercise of the cardiovascular system. This activity helped the students realize that conceptual lectures were applicable to life.

The teaching tools that I utilized during my classroom visits were learned at the Science Teaching Forum in Airlie. I find it amazing that I went to this Forum thinking that

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I would function in the teaching capacity, but ended-up in the student role. I believe that this was the most beneficial aspect of my fellowship. It provided me with the necessary tools to be a more effective educator within the classroom. As a result, I was able to make my interaction with the students engaging and inquiry-based.

This fellowship has really helped me to connect to my community in a way that was not possible before. In addition, my fellowship has also impacted my fellow minority scientists who had the opportunity to interact with students during PhUn Week 2007. They too are now motivated to serve as role models for the youth in their communities. These scientists now share my belief that science education should be cultivated early and nurtured long.

Thank you for this opportunity.

Clintoria Richards-Williams  
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