

Marsh White Award Report
University of Louisville

January 5, 2006

The University of Louisville chapter of the Society of Physics Students received its Marsh White Award in the spring of 2005. In the summer of 2005, the funds from the award were used to purchase a set of demonstration concave mirrors from PASCO, and several pieces of hardware to be used with the mirrors for demonstrations about waves.

This project was motivated by the observation that many students learn about related topics – be they in Physics or another field – as if they are disjoint. We were struck in particular by students who did not understand that sound waves or seismic waves could reflect and refract like light waves; that tuning a guitar might be related to the funny pattern seen in the shadow of a needle. Given the fundamental nature of wave motion to Physics (Optics, Acoustics, Quantum Mechanics, etc.), we decided to combat this lack of connection, as one of the major focuses of our outreach.

On November 22, 2005, SPS members Alyssa Cramer (Outreach Coordinator), Blakesley Burkhart, and George Schuhmann visited the Presentation Academy for Girls in downtown Louisville. They visited approximately 25 girls in the school's one and only Physics class to deliver the presentation on waves. They also talked about Women in Physics and encouraged the class to consider continuing in Physics after high school. The two pictures below were taken that morning.



George and Blakesley discuss general properties of waves at Presentation Academy. (Photo by Alyssa Cramer).



Blakesley adjusts the mirrors at Presentation Academy. (Photo by Alyssa Cramer)

On December 6, 2005, a group of 4 SPSers – Alyssa Cramer, John Lorenz, Scott Boyd, and Dr. David Brown – headed to Pleasure Ridge Park High School, one of the largest in Louisville’s Jefferson County Public Schools system. They met with 4 classes, totaling over 100 students, and had a great time talking about waves and about careers in Physics.

On December 13, 2005, Alyssa, John, Scott, and Blakesley visited the Brown School in downtown Louisville, meeting with approximately 40 students in 2 classes. Again, they successfully presented waves phenomena and careers in Physics.

The UofL chapter of SPS will continue its outreach through the spring semester of 2006 and beyond. One major part of the outreach has been made possible thanks to the Marsh White Award from the national office of the Society of Physics Students.