Marsh White Report 2010

The Marsh White Outreach event each year has counted as one of the most significant events that we do in SPS at Henderson State University. SPS at Henderson State and all its dedicated members think Physics Outreach is fun, important, and a great learning experience! It started with the 2009 Marsh White Award, where we were funded to host the Star Party. Star Parties are a huge success in our monthly calendar, and students across the campus, faculty, their families, and the community absolutely love looking into space with our telescopes and learning about the night sky.

With all that positive energy from the stars, we planned our 2010 outreach—The Physics Circus. The Marsh White Award, cool Physics demos, a few creative SPS members, enthusiastic students from local schools, a story and a script were all that were needed to get it going. We started out by writing a story, then building a script around it, incorporating physics demos within the acts, and finding suitable roles for our actors. Once we had the demos we wanted to use, we conducted several learning sessions on how to use each demo, and how to describe them correctly in a way middle/ elementary school students could understand. Many days a week, our actors would get together after classes and practice becoming Dr. Mollere—The Scientist, Tracy Tripsalot—The Apprentice, Marco Findsalot—The Guide, Icey Defuture—The Gypsy Maid, and Milton Badly—The Villain! Each character uses different demos. For example, Tracy Tripsalot trips while wearing two polarized glasses at right angles, Icey Defuture uses a Plasma Globe to fool the visitors that she could predict the future with it, Dr. Mollere is forced by the villain to sleep on a bed of nails, Marco Findsalot is amazed by a spinning Gyroscope and Tuning Fork, and so on. The best of all, the crew celebrate with a display of raging fire from the Rubens Tube. First grade students from Sparkman Elementary School, in Arkansas joined us on the morning of 30th April, 2010 to be a part of the Physics Circus. Following the skit, we present the demos in a hands-on fashion. In the video, you will see the primary portion of the skit. We were not able to video tape the demonstrations that followed because we ran out of room on the memory card. We will get it next time though!

Rubens Tube was a great investment in this project. The original design was downloaded from the internet, but major modifications were made to make the device as safe as possible, with the addition of a gas regulator, and latex membranes at ends to reduce flammability. The whole device was leak checked because although fire is exciting, we want our fire contained.

Out of the $300 award, $120 was used to build the Rubens Tube. $100 was used to buy Gyroscopes and Kaleidoscopes that the kids could play around with, as well as props and costumes for the circus such as lab coats, silly string, boards, tapes, etc. The remaining $80 from this year has been used to prepare for the Physics Circus in Fall 2010. We have reviewed the video from our first performance and are purchasing a few more costume elements and props to make the demos more clear. Just like the Star Parties, we have decided to include the circus as one of our regular events, and perform it every semester to different schools in our community. Therefore, we are ordering more Physics toys such as Prisms, Magnets, etc with the rest of our funds for the next semester.

As for this year, first graders from Sparkman Elementary were thrilled by the performance. They loved every demo, and were thrilled by the Rubens tube. Deborah Smith, teacher at Sparkman Elementary said, "My kids are really excited about science. The interaction was great. The whole morning was a wonderful experience." The children enjoyed being able to look closely at each demo as we explained how it worked and how it was used in the circus. The theme of the circus was based on the idea that if you know how things work, you can do those things that may seem like magic to others. Physics is everywhere, and its knowledge will make you more aware of what you see and use. The theme served its purpose, and this year's outreach event was a sparkling success!