Rhodes College Marsh White Report 2013

Each year Rhodes College hosts a free carnival for the Memphis community. Over a thousand children and family members attend the carnival, and it is a wonderful way to engage with the community. Various social, athletic, and academic organizations help to host the event: our SPS chapter has played a major role in this carnival for the past several years. With the help of the Marsh White Award, the Rhodes College SPS chapter maintained its major presence at Rites to Play—the student organizer of Rites to Play commented, "Physics kids are the best! Your demos are so exciting!" A student from a neighboring table told our chapter president, "I'm always jealous of you guys—physics has the coolest toys!"

This year our chapter had 40 feet of demonstrations in addition to our four tables of physics demonstrations! We took over the central area of the carnival for periodic water explosions, propelled by partially filling a 1-liter plastic bottle with liquid nitrogen and forcing it to sink in the water barrel, and the splash zone was always full of eager families. In the Memphis heat, this was a welcome demonstration of the power of physics. We also showed the compressive power of air in contrast to the explosive power of expanding liquid nitrogen using the barrel implosion demo. The heat also made our liquid nitrogen ice cream a huge hit as kids and parents alike took some tasty Science Ice Cream to help cool down, along with the crunch of flash-frozen marshmallows. Along Physics Row we had our staple giant Oobleck pool, using 125 pounds of cornstarch in a 10 x 3 foot pool. Non-Newtonian liquids are a classic charmer at Rites to Play, and kids of all ages were fascinated by the properties of the liquid. We also displayed our electric bike to physically show the conversion between kid power and Watts. This demo resided next to our new and improved Fire Tornado, recently repaired thanks to the Marsh White Award, now made to withstand the impressive heat of the demonstration.

There were approximately 1,000 people at Rites to Play this year, and SPS personally reached virtually all of them with our demonstrations and knowledge. SPS was by far the most exciting section, drawing large crowds for every implosion and explosion, and our tables were always flooded with fascinated children, families, and dogs. A reporter from the local newspaper, The Memphis Flyer, also stopped by to chat with some of our volunteers and photograph the Oobleck station.

We used our funding from Marsh White to purchase items for many of our demos which constantly need to be replenished.

1. One 55 gallon Barrel: ($70)
2. Liquid Nitrogen Ice Cream Supplies ($80)
3. Cornstarch ($100)
4. Marshmallows ($20)
5. Giant Bubble Pool ($30)

Three visitors in awe of the new-and-improved "Fire Tornado."

An SPS volunteer, Mark Sellers, explains the whirlwind of fire to a couple curious students. New panels make the Fire Tornado visible even in broad daylight.

Students playing with our ever-popular Ooblek pool. Everybody loves it!

Ooblek is one of our most popular stations every year. Kids can't get enough of Non-Newtonian physics! SPS volunteer Catt Miller had great fun running this station.

Our chapter secretary, Jake Magness, uses the swing we set up for the Rites to Play Carnival to help demonstrate the physics of pulleys. Kids lined up all afternoon for a turn!

Two SPS volunteers, Adriana Martinez and Tyler Andrews, set up our newly acquired Frenell lens. With the Frenell lens we can demonstrate the power of the Sun's rays when focused together. We can melt pennies!

A young Memphian tries out the Electric Generator Bike, while Mark Sellers adjusts the power necessary to make a light bulb light up.

This past year we built an "Oobleck Speaker," creating "living" goo! We placed a specially fitted tray for Oobleck a matter of centimeters above an amplifier, so the sound provides enough force to move the Oobleck. It's just like Flubber!

The aftermath of Rites to Play: Rhodes College SPS loves to get in the thick of physics!