



The Superhero Training Network meets with a fifth-grade class at Tampa Palms Elementary School. The team includes, from left, graduate student Robert Bair, Audrey Buttice and Samuel DuPont, whose superhero identities are Superconductor, Sublimation and Megabyte. They visit schools in the Tampa area in their superhero costumes to meet with students who have watched their videos.

# Engineering Alumni Promote

By Elizabeth Engasser, Class of 2015

After graduating with a Ph.D. in chemical engineering, one wouldn't expect a full-time job to consist of donning a superhero costume and visiting elementary schools to speak to kids about science.

But that's exactly what Audrey Buttice and Samuel DuPont do.

Buttice, Chemical Engineering '09, MSCH '09, Ph.D. '12, and DuPont, Chemical Engineering '06, Masters in Environmental Engineering '08, Ph.D. '12, met in graduate school at USF while participating in the National Science Foundation's Students, Teachers, and Resources in the Sciences (STARS) Research Fellowship program, which provided them the opportunity to visit classrooms and tutor students in science, technology, engineering and math (STEM) subjects.

"If it wasn't for the STARS program, we never would have even gone into helping the education

system at all," Buttice said. "That put us in classrooms and opened our eyes to what is going on in our education system, and how badly (schools) need influence from people in science careers."

The duo created The Scientific League of Superheroes and The Superhero Training Network to help fill this need. The story behind how their characters gained their super powers is that a lab accident caused Buttice's alter ego, Sublimation, and DuPont's character, Megabyte, to come to life. The heroes fight alongside fellow USF engineering graduate student Robert Bair to save the world from the evil Dr. Entropy, all the while teaching students about STEM concepts. Students can become part of the action by joining the League's Superhero Training Network and using their newfound STEM skills to help fight Dr. Entropy.

Buttice and DuPont also film video segments that supplement their school appearances and serve as training tools for the network. The videos and other educational materials the team creates



When the team visits the schools their videos are used in, they perform hands-on experiments with students to reinforce the material.



DuPont and Buttice create video materials for teachers to use in their classrooms when teaching about STEM-related subjects. The videos are used to introduce students to the field in a fun and memorable way.



Students from all over the Hillsborough County School District quickly recognize Superconductor, Sublimation and Megabyte whenever they make an in-person appearance.

# STEM Education in a ‘Super’ Way

are then purchased by the schools for use in the classroom, and are being used in more than 100 schools in the Tampa area.

DuPont said the first time they visited a school, they weren't sure how students would react to meeting them in person after having watched their clips.

"The teachers kept telling us the students loved it, but we hadn't actually seen it for ourselves, so we didn't believe it," he said. "We get in (the classroom) and ... all of a sudden they were like 'Oh my god! It's Megabyte! It's Sublimation!' and then they all start singing our theme song that at this point in time they have only heard twice in their life."

Buttice said while they may not be going the traditional route with their education, they're motivated to keep the Superhero Training Network alive and growing because of the reactions they get from students.

"It's funny because they'll recognize us in public and we don't expect it," Buttice said. "I think that helps motivate us a lot because we hear a lot of positive feedback about the program. When things get a little hard, we know we're making a big difference in the teachers and the kids in the schools, and their ability to move forward in their science educations. So it's worth it." 🦄

