

As one of the most successful FIRST Robotics Competition (FRC) teams in Texas and top 20 in the world, CRyptonite (FRC Team 624) believes we have a responsibility to help ensure that everyone has equal access to STEM and STEM opportunities, regardless of race, religion, social background, or gender. To broaden our impact and effectively spread STEM, we have a number of community outreach activities, from mentoring young FIRST LEGO League (FLL) teams to hosting an annual Science Day Camp, from visiting underserved communities in Houston to sending ambassadors to India to teach school children about LEGO Robotics.

Specifically, Team 624 has mentored more than 200 students from 3rd to 8th grade in FLL teams over the past 5 years. Our mentorship has helped improve team success, with many moving to regional competition, and one being included within the 108 teams of 35,000 teams competing to go to the global championship. This also provides a pipeline for CRyptonite as nearly 80% of mentored FLL team members join CRyptonite. Finally, we also support FLL camps for Girl Scouts of San Jacinto Council (GSSJC), with over 120 local Girl Scouts learning how to build and program Mindstorms LEGO Robots, and regularly hold FLL coaching conferences at GSSJC, NASA, and FIRST in Texas.

We also host an annual Science Day Camp (SDC) with a multitude of different STEM-based stations (such as biomedical engineering, material science, chemistry) and around 600 students over the past 5 years participating. A few highlights include prototyping and testing earthquake-proof buildings, learning about monomers and polymers while making slime, and using forensic chemistry to identify the culprit in a diamond heist. Many students who attend the SDC have stated that it has increased their desire to learn more about STEM and go into STEM fields!

Team 624's flagship local outreach program is our partnership with Sewa International, an organization dedicated to helping immigrants and refugees throughout the United States. For the past 3 years, we've visited Sewa children to provide STEM activities for an underserved community, inspiring and fascinating the students who were so excited to see something they had never seen before. Though there were language barriers, no translation was needed to see their sparked interests. In addition, through Sewa, we invited 50+ kids to the RSC and had a fun day of STEM activities, similar to our Science Day Camp. This partnership ensures that our impact in Houston reaches everyone, not just a few.

CRyptonite's efforts have also gone global as we have introduced FLL to over 200 students in Odisha, India to expose them to the experience and opportunities offered by FIRST. We began Skyping with the students every week, teaching them basic Lego EV3 skills. Our efforts paid off, as there were long lines that formed at the door every week. The impact we had on the students was recognized by the city of Bhubaneswar, which invited us to participate in their annual street festival, where we shared the impact of FIRST with nearly 60 thousand people.

With the outreach and support of STEM, we impact the student members of CRyptonite as well. We have almost 100% of the graduating seniors pursue STEM degrees as they move forward in college.

As you can see, CRyptonite is focused on developing and promoting STEM using FIRST, and the results of our outreach efforts can be clearly seen through the successes of those we mentor and teach. In the future we plan to keep promoting STEM and expanding our outreach programs, as well as encouraging the development of young minds. Through providing interactions with STEM to our community, we hope to create a profound impact on the future and what it holds for everyone.