

The Killer Bees' hive is supported by a strong tree of community footholds, FIRST experience, and the constant ambition to keep improving. Team 33 strives to accomplish something more rewarding than just building robots: we aim to provide students with comprehensive, hands-on STEM experiences while initiating and sustaining community efforts much bigger than ourselves.

The Killer Bees hope to get **every** member involved in STEM-related outreach, and in 2014 every student helped build at least one part on Buzz XIX, and use these skills to reach out to other teams. I can personally say as a sophomore I've helped rookie teams build bumpers at each competition we've attended this year, and my teammates do the same - inspectors at competitions call us the "bumper brigade." Upperclassmen teach and lead, and underclassmen have unique leadership opportunities. Recently, the team hosted 50 middle schoolers at a STEM and teamwork focused field trip at the Troy District Competition.

Our school community is very supportive of our team, and Killer Bee students may earn a varsity letter for their efforts. According to school tradition, the administration rewards athletic and robotic state championships equally with a school-wide day off. The team also works to complement the school's STEM classes, and one of our mentors is offering a new Science of Technology Robotics class for next year. Team 33 sustains the team with new students through school functions, freshman science class visits, and recruiting from FTC and FLL members. Over 50% of our team is FLL alumni which provides us a strong trunk of FIRST experience.

We build on this through development leagues to teach technical knowledge before FRC season. During the offseason, Killer Bees work on small teams to build tabletop robots while learning engineering concepts from veteran students. In OCCRA, we apply this knowledge to an FRC sized robot.

I knew I wanted to join the Hive as soon as team members introduced me to FRC. **When on my FLL team, I worked with Killer Bees at a Lego League camp, and I saw what my old team members were capable of just a few years later. Now I can help inspire others in the same way.**

After 19 years of FIRST Robotics, the Killer Bees have lots of experience to draw from, and each year we look to improve in both our robot and outreach programs. Students always look to improve on their skills. **Whether** it's post-kickoff strategy questions and robot sketches or mini documentaries, both Jim and Dean's Homework build my skills and help me contribute to all facets of the team.

To help sustain all teams in our area, the Killer Bees branch out to the Girl Scouts by hosting two FIRST exposure badge workshops. As a Girl Scout myself, I loved working with young girls at the first event. When I asked what they wanted to be when they grew up, they first replied with the expected princess, ballerina, and pop star answers. After interacting with Buzz XVIII, over half of my group wanted to be engineers or FIRSTers. During the event for older girls, scouts were introduced to FRC at an all female competition the Bees helped to host. We started 1 FLL and 14 Jr. FLL teams, and I'm glad these girls get to enjoy FIRST programs just like me.

Team 33 reaches out to teams looking for advice on a broad range of topics. This

year, we packaged many of our programs, like the Purple Alliance and a rookie handbook template to provide a resource for other teams. In 2014 we have deepened our roots and improved our sponsor relationships by assisting Chrysler through Project Speedbump and, our newest sponsor, Elite Fencing, has established the importance of Killer Bee alumni to the Hive.

The greatest part about being a student on Team 33 is the amazing opportunity we get to see a change we want to make in the world, pursue it, and achieve it. Our driver, Ellen, had an idea to make a year-round FIRST makerspace, an OZONE to give everyone the chance to experience FIRST robotics. At Maker Faire she was able to pitch this to the Michigan STEM partnership. Exploring potential locations in Downtown Pontiac with grant writers has been an incredible experience.

Parents, mentors, and alumni of Team 33 have seen how much students and graduates get out of FIRST and have created the HIVE Foundation, short for the Hands on Incubator for Vocational and Emerging Engineering. Companies and businesses that contribute to HIVE can access a database of students with technical experience, along with their preferred internship choices. This spring, we hosted a virtual college planning workshop for 25 FRC seniors. The Foundation aims to aid the expansion of STEM and support students through the transition periods in engineering between high school and college and into careers.

I'm grateful for the role models and friends the FRC community has given me. I decided to use my network for a positive cause and united teams in the Purple Alliance. Along with one of my good friends from Team 1718, we created a common community of FRC teams interested in doing service together and planned monthly service activities for 5 teams. The Purple Alliance brings coopertition to outreach, provides both team and community networking, and makes FIRST outreach STEM focused and more effective. The old adage that many hands makes light work has never been more true than when it's paired with FIRST ideals. Seeing the faces of the young and old light up as teams work together to bring STEM to our area has been my favorite experience as a Killer Bee. We're also working with Team 2283 from Mexico City to translate Killer Bee templates and white pages from English to Spanish to assist the flourishing hispanic FIRST community.

It's impossible to capture the essence of the Killer Bees in just a few short minutes. It isn't the statistics or the demographics that make this team, it's our passion and constant pursuit of success. It's the way a child smiles when she shoots a frisbee for the first time. It's the joy of working side-by-side with competitors in the spirit of FIRST. It's the inspiration inherent in minibots, triple balances, and 30 point hangs that keeps the hive alive and growing. It's what has gotten us here today and will sustain us long after we've all graduated. We are Team 33, and this is what we do.

Our branches of outreach continue to reach upwards and outwards into our community thanks to our substantial roots and hearty trunk. Without a school district, it's hard for Team 33 to identify with one singular community, so we directly reach out to our local, school, and FIRST communities. By focusing our outreach to be STEM-focused whenever possible, we help

change cultural perceptions of STEM in all demographics. We've continued our efforts at the Rochester Hometown Christmas parade, building an award winning robot-themed float with Teams 201 and 245 for the third year in a row. At Maker Faire, 25,000 innovators interacted with inventors from all over the country, and Buzz XVIII was a crowd favorite. Whether it was shooting frisbees or driving in figure eights with future FIRSTers behind the controls, excitement was buzzing in the air. For two days Killer Bees targeted the STEM-crazy population and introduced them to the whole family of FIRST programs and showed them how they can get involved.

While applying to colleges, I found it difficult to fully capture my FIRST experiences using the Common App. I accurately depicted my time as a Killer Bee in the additional prompts sections, but I never got to use those prompts to tell the colleges more about myself, therefore taking away from my application, as a whole. Online, hundreds in the FIRST community rallied behind my petition prompting an overwhelmingly positive response from the Common App Board of Directors, especially from the President, who is a huge fan of FIRST Robotics. "FIRST Programs" is now a proposed activity for the 2014 application.