Pearadox Team 5414 Executive Summary

Pearadox 5414 started as a small group of nine students working out of a garage, driven by our motto “To question to learn; to learn to question”. From our humble roots, we blossomed into a team drawn from three rival high schools, united in our love of the game and devoted to spreading awareness of FIRST and the practicality of STEM. From our home in Texas, to Australia, Calgary and Dubai, Pearadox has had an international hand in starting and assisting fellow rookie teams.

Before Pearadox, Pearland ISD didn’t support any FRC teams, much less a district wide team. The founding members of our team evolved from a FTC team at Berry Miller Junior High, who loved their work and desired to continue that work well into their high school careers. As incoming freshmen they made a spectacular presentation to the school board, convincing them that not just one high school robotics team, but a district wide one would be a boon to our hometown, generously allowing us to use a school band hall as our base of operations. From this start, Pearadox began to spread its branches, aggressively recruiting from Pearland High School, Glenda Dawson High School, and Turner High School to compose one cohesive team. Obtaining sponsors from the likes of NASA, NRG, Kuraray, and United Safety, our team set the stage for success, with grants and donations from all four along with a trailer and a multitude of equipment from United Safety, and two more than qualified mentors from NASA and one from Kuraray.

As a rookie team in 2015, Team 5414 fought an uphill battle, training over thirty completely green members. Week one of the 2015 build season was dedicated to teaching proper safety and assembling our equipment, with an introduction to cost-benefit analysis of what we wanted to do for that year’s game (Recycle Rush). With our eyes set on the illustrious rookie all-stars award, we quickly took the lead from local exemplary teams and set up an organizational structure that allowed for greater organization, optimized communication, and a set delegation of tasks to ensure our build went smoothly. A variety of roles were elected in week one of the 2015 build season, from team captain, co-captain, a public relations lead, an awards lead, a business lead, and a strategy lead. Because of our members’ inexperience, a subsystem rotation was set for the first few weeks, and those who showed an exceptional interest and aptitude for a subsystem were elected as subsystem leads.

As Rookies, our team made mistakes, but more importantly learned from them in our build season. With a heart for fellow rookie teams and a mind on their futures, our team set out to spread FIRST to other young students by creating our Rookie Starter Guide. This was designed to help any enterprising team begin their journey with FIRST Robotics by outlining the mistakes we made as a young team and what we did to correct them along with how we overcame the difficulties we encountered. By listing our aberrations and initial misconceptions, the Rookie Starter Guide actually worked as a useful planning tool seeing as though we too were in our rookie season.

For the Lone Star Regional, our team prepared for every aspect of the competition, from a memorable pit to an extensive scouting system. We prepared our entire team for speaking to judges, but trained a group of students for independent speaking and equipped them with a binder filled with all the information they would need and more. But, to stand out, we invited Congressman Pete Olson to attend, and speak with the regional. As it turns out, he was the first congressman to attend the Lone Star regional. At the competition we introduced him to the notable sights there, and he spoke in between two of the games. Due to our presence at the regional, Team ---, a team we had yet to network with decided to bring over NFL player --- to talk to us about our team and the impact FIRST has had on us. With all of our efforts, the first competition for Pearadox was more than successful, and we brought back the Rookie Inspiration Award as a testament to those efforts.

During our team banquet, we not only thanked our business sponsors, but our teacher sponsors as well. Over dinner, each of our team members received an individual shout out

But since our inception, we’ve realized that being an FRC team is much more than simply building robots. It’s about reaching out not only to the FIRST community, but to our local community. From our sponsorship with Kuraray, We were invited to the Girls Exploring Math and Science event, where our women members spoke to students alongside other women professionals. There they shared with the Houston community the prospects of FIRST, and met another FRC team, Jersey Voltage, while also promoting Kuraray. In addition we were invited to participate at Trash Bash, an event where all a manner of groups attend to clean and give back to society. There our entire team cleaned all over the Clear Lake area, working alongside girl scouts and church groups, informing youth groups of local FRC teams they could join and girl scouts of local FLL and FTC. As some members were cleaning around the city, others stayed back to network with our sponsors attending (Kuraray and NRG) as well as the aforementioned groups we worked alongside.

One of the ways we assisted younger FIRST teams is by participating in refereeing at an FLL tournament, hosted at a Spectrum facility. Prevalent in the past of our team, Spectrum has loaned us equipment, helped us prepare for TRI, and introduced us to the non-robot side of FRC. In addition to receiving gracious help from team Spectrum, we’ve received assistance from other teams such as Robonauts, Gatorzillas, and Gearnotics. These teams provided us with parts, mentorship, and an opportunity to experience FIRST and integrate it into our lives. For example, one of these teams—the Robonauts, lent especially helpful assistance to our team in its pre-rookie season by providing us mentorship, a robot to compete with, and an in depth analysis on exactly what FIRST is. Speaking of our pre-rookie season, we participated in three off-season competitions: TRR, TRI, and Remix.

Focusing on the up and coming generation in Pearland, our team attended Science Night at Silverlake Elementary School, a local elementary school, where we spoke to parents and students alike about the STEM programs offered in Pearland ISD for each grade level, primarily FIRST. However, we described all the soft skills involved in robotics, such as teamwork, managing, and marketing. A parent attending the event was so impressed with the scope and depth of FIRST, that he offered our speaker an internship opportunity at Spark’s Engineering. Along with elementary level students, we took a more direct hand with our junior high students, mentoring/assisting at local junior highs, making known that if they wish to continue doing what they were doing, they could join 5414 when they came to High School.

At an even younger age, --Ivy Day Care--. During a process of reaching out to other parts of the community, some of our members had a demonstration at New Hope Church, in their youth group and children’s Sunday school. This was an attempt to give back to the community that gave so much to our team already. As such an inspiring town, Pearland and its surrounding areas have helped support Pearadox since its conception. To demonstrate how truly grateful we are, this and so many other of our outreach opportunities offer a chance to give to the home that gave so much to us.

Since the beginning of our team, we’ve annually participated in the Pearland Christmas Parade, to spread holiday cheer and the message of FIRST. For the years we’ve participated, we’ve constructed a unique float to reflect the year’s theme. Other participants in the parade were all a manner of groups, from small town boy scouts to international church organizations, we spoke to all of the aforementioned folk. Among these groups one was the Pearland Lion’s Club. This was an opportunity to make another connection to our community and gain a possible sponsor to invest in our team.

Yet another opportunity we had to give back to our community and participate in outreach with other FIRST related teams was hosting kickoff and inviting other them to our facilities for such events. Among these teams included local names like Blarglefish, and rookie teams, like Tiger Robotics and the Juggerbots. After the kickoff video we began discussing a cost-benefit analysis with the rookie teams, which was an interactive activity which included dialogue from both sides; this was a way we could outline how their first FRC build season could look, giving them an insight to the depth of the organization.