

Blue Devil E-News

CHS Robotics Team – 2021 A Robot Odyssey

By Nancy Longino

“Parts is Parts” – not speaking of chicken parts here – but clearly that must have been what Mr. Kevin Hawthorne was thinking when he opened the box of various and random parts given to him by Raytheon Inc., intended for his Robotics team. Each year, Raytheon helps sponsor the BEST (Boosting Engineering, Science, and Technology) competition in local area schools. BEST Robotics Inc. (BRI) is a non-profit, volunteer organization based in Dallas, TX. Started in 1993 with 14 competing schools and 221 students, today BEST has over 700 middle and high schools and over 10,000 students participating each fall. Local hubs are formed in each county. The BEST Program is designed to teach teamwork, problem solving, project management, and pride in task completion within the constraints of a short time period and limited physical resources. Through partnerships of participating schools with corporate sponsors, youth teams are supported by mentors who serve as positive role models for the next generation of scientists, engineers, and technologists. The goal is to demonstrate the excitement of advanced technical careers to young people who are nearing decisions on college plans.

This year, Celeste High School Physics Teacher, Kevin Hawthorne, took on the challenge of starting up a Robotics Team to compete against schools ranging from 1A to 5A districts. “Basically the driving force behind the competition is to inspire students to pursue careers in engineering, science, and technology through participation in a science and engineering-based robotics competition,” said Mr. Hawthorne. Each school is provided kits of equipment and parts, a set of game rules, and given six weeks to design, build, and test a small Radio/Controlled (R/C) robot that outperforms other robots.



The team received a box of various supplies such as PVC piping, plywood, electronic servos, motors and steel rods, but no instructional manual. The project set forth for 2007 was titled “2021-A Robot Odyssey”, in which you were to build a robot that could be helpful in building a base on the planet Mars. Mr. Hawthorne set about with his team of five seniors (Andrew Hackler, Marissa King, Harrison Hayes, Russell Winters, and Emily Giles) to decide exactly the best approach to design a motorized robot that could not only move but hold supplies. Making sure every aspect of the engineering process was documented and correctly surveyed; the Robotics Team diligently recorded their progress. Saving the complex wiring for last, Mr. Hawthorne called in his friend James West – an L3 engineer – and relied heavily on his technical expertise for wiring and controller programming. Mr. West donated his time, helping the students understand the complicated concepts and how to best achieve the desired effect they were looking for.

After much trial and error, and a very “cool” paint job –provided courtesy of the artistically talented, Menetra Hawthorne, El Diablo (the name bestowed on the newborn robot) was ready to roll in the big leagues up against the big dogs. Competing against Plano East H.S. and Allen H.S., the Celeste team did not shy away from the stiff competition. Although El Diablo didn’t bring home the trophy – he did bring a lot of self-directed learning as well as some fun problem-solving techniques to a pilot Robotics team.