

Team #245, Adambots



& Rochester Adams High School

“You think it’s a game; think again.” In a school with over one thousand students and staff, almost every other person owns the infamous Superfan t-shirt. Proud home to the 2004 Division II state football champions, Rochester Adams High School lives up to its reputation as a jock school. Like in most jock schools, robotics, along with other academic organizations, receives little or no attention at Adams. Nevertheless, through endless hours of hard work, and a determination to inspire others, the Adambots take the school motto to a whole new level.

Every fall, the Adams robotics team begins the year by taking part in OCCRA (Oakland County Competitive Robotics Association), the local robotics competition. With twenty-six teams participating from around the county, OCCRA emulates FIRST in many ways. Teams are presented with a game in September, slightly resembling that of a previous FIRST competition, and are then given six weeks before the first tournament to build a functional robot. Unlike FIRST however, teams are not allowed to have corporate sponsors for OCCRA, and thus have to privately raise any money they need to contend. In an effort to allow members a chance to *earn* their way onto the team, the Adambots make fundraising everyone’s responsibility. To both unify and raise money for the team, this year’s fundraising activities included neighborhood can and bottle drives, working at a booth in the Pontiac Silverdome during the state football playoffs, and caroling as a group during Christmastime.

There was a time for Adams, not too long ago, when simply having a robot that moved was a great accomplishment. They have come a long way since then, and persistent improvement has been the key ingredient for their continuing success. In the 2003 FIRST season, the team experienced a dramatic improvement



exhibited by their winning two regionals, due to enhanced strategy, organization, and partnership between the students, teachers, parents, and engineers. This was followed by a successful 2003 OCCRA season with the team winning at least one trophy at each event. The OCCRA season drew to a close with a final championship event, the all-female invitational, in which the annual game is altered to entail a modified robot. This contest, first implemented in 2001, is designed to increase female involvement in science



and technology. Though many schools dismissed the event as worthless, the lady highlanders from Adams started from scratch, building a brand new robot in virtually two weeks. Through unremitting diligence and cooperative teamwork, the “Evebots” have been champions of this event for two consecutive years. Like Adams, most of the schools involved in OCCRA are also members of FIRST, so gracious professionalism is a highly valued aspect of the game. Aside from winning many competition

awards, the Adambots swept the spirit of the competition, recognized by the judges as the team that exemplified gracious professionalism, both in the pit and in the stands.

In the true spirit of FIRST, team #245 extends gracious professionalism to their school, community, and beyond. Despite the lack of school support for robotics, the Adambots exhibited their robot numerous times at lunch, to advertise upcoming events, and inspire fellow students to get involved with the club. At fall parent/teacher conferences, the team proudly displayed “Penelope,” the FIRST robot from the previous year, attracting many interested parents. Following the end of the FIRST season last year, the robot was displayed at the closing ceremony of GM’s A World in Motion program at Von Steuben Elementary School in Detroit. On “take your kid to work day,” a group of students spent the day first at Siemens VDO in Auburn Hills, then at Siemens Automotive in Troy, showing off Penelope, and raffling off Adams robotics team t-shirts. Applying the scout’s code of honor, “to serve [our] country,” the Adambots introduced robotics to local boy scouts troop # 360 and girl scouts troop #1516. The scouts had a chance to learn about robotics



and drive around the competition robot. At the Rochester Hills Public Library, the Adams Robotics team turned out for an evening of entertainment, even drawing some attention from the media, and one mother asking, “will you be back again soon?”



In an attempt to promote FIRST Lego League and recruit future members, the Adambots toured schools across the county. Musson Elementary School’s third graders build mini-robots as part of their curriculum, and two lucky students were chosen from each class to test-drive Evesbot after the presentation. Math Maidens, a program at Brewster Elementary School, is intended for fourth and fifth grade girls to become more involved in

math and science. Riva Das, team captain of the Evebots and former Math Maiden, displayed the robot to the class of 2004 at Brewster along with two fellow teammates, in

hopes of inspiring girls to pursue fields in science. Coincidentally, a substitute teacher and former member of FIRST was present at Brewster that day. Crystal Wilkerson was a past member of the team from Ortonville that took third place at the FIRST nationals in 1999, which demonstrates how significant an impact FIRST has on society.

As the counterpart to Rochester Adams High School, Van Hoosen Middle School is full of prospective robotics members. In May 2003, a group of seniors spent two days promoting robotics in industrial technology, drafting, and woodshop classes at Van Hoosen. As a result, the Adambots received over ten phone calls from interested 8th grade parents, most of whose kids comprise the current freshman members of the team. In lieu of a FIRST Lego League team, which Adams sponsored in 2002, the BEAM robotics club was started at Van Hoosen in 2003. The engineer who started the program was involved with the Adams robotics team last year when his daughter was in her senior year on the team. An Adams team member works with the middle school students as a mentor, as they explore the world of science through building miniature robots.

In addition to serving their community, team #245 strives to support its team contemporaries. Since robotics isn't a primary concern for the Rochester Community Schools district, the three high school teams #201, #245, #1037, share a familiar bond. Rochester United Robotics was formed to signify an alliance between the teams, allowing them to have more interaction between teams by both getting together outside of robotics, and supporting each other at competitions. At the Midwest Regional in 2003, team #301 was stranded in Chicago with no feasible transportation to and from events. Not only did the Adambots *adopt* the Dearborn team for the weekend, but they also took the "Pirates" out for a team dinner. As a gift to all the regional teams, the Adambots assembled care packages, each containing a brochure about their team and a plethora of robotics essentials, such as safety glasses, tie-wraps, electrical tape and other items that every team needs to succeed. Through a common mentor, Mr. Paul Slaby, the Adambots came into contact with a rookie team this year, team #1256 from Howell. Although tangible assistance was nearly impossible to provide because of the extensive commute, the Adambots offered the first-year team use of their playing field at Siemens, and a machine shop to work in during the weekends.

Although competitions take place only in the fall and spring, robotics is a year-round commitment for the Adambots. Last summer, following the conclusion of "Stack Attack," team #245 held a farewell picnic for all the departing seniors, most of which had been part of the team for all four years in high school. Even though it was difficult to replace such an experienced group, the close-knit relationship with the middle-schoolers from Lego League made it easy to find new recruits. Even before a game is introduced or after the season is over, the Adambots continue to hold regular weekly meetings to plan fundraisers, discuss strategy for next year, or simply to have some fun together.



For a club of such size, it is difficult to arrange meetings to suit everyone's schedule, so organization is a fundamental aspect. The team communicates primarily through emails, indicating when and where meetings will take place. The website, which is regularly updated, is also a good source of information, and includes forums for students, both from Adams and other teams, to discuss ongoing proceedings. Although the Internet plays a major role in communication today, the Adambots also use conventional methods to correspond with one another. Messages about upcoming fundraisers are spread by phone, and postcards with mandatory meeting dates are mailed to all members. In order to involve every member in some aspect of robotics, the team is broken up into several different committees, such as strategy, designing, building, autonomous mode, electronics, fundraising, publicity, animation, etc. Team members may be part of multiple committees simultaneously, so everyone has a chance to participate in whatever he or she desires. This method also allows students who aren't adept in science, to still partake in robotics team activities.

Despite how difficult it is to attain special attention from the school board regarding robotics, parent, community, and even administrative support has been growing for the Adambots. Since Adams' rookie year in 1999, the team has had four different teacher sponsors, placing much higher importance on parent involvement to smooth the transition. General Motors, which employs many of the Adambots' parent mentors, became a major sponsor for the 2004 season, ultimately recognizing the team's numerous achievements. For a weekend get together, a local volunteer fire station agreed to host the team's meeting. The administration is also considering adding a robotics course to the school's curriculum, following the example of schools in surrounding districts, however the decision is still pending. Robotics has had a tremendous effect on students and mentors alike. Aside from learning engineering skills first hand from experienced adults, students gain many attributes that are essential to their future, such as leadership in heading a committee, or working with other people as a team. Siemens Automotive has also gained much from this opportunity, recognized by Dean Kamen himself at a company meeting, where he quoted a thank you letter from Mr. and Mrs. Drummer, parent mentors of the Adambots.



FIRST robotics gives a team the opportunity to interact with its peers, mentors, and community, to make a difference in the way the world interprets science. With a resolve to promote science and technology, team #245 persistently demonstrates gracious professionalism by supporting fellow teams and inspiring a future generation of scientists. The multi-faceted nature of the Adambots allows students of varying backgrounds to achieve the experience of a lifetime. So you think it's just a game? Think again.