

FOR INSPIRATION AND RECOGNITION OF SCIENCE AND TECHNOLOGY

FIRST awards

Chairman's Website Woodie Flowers



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Below is the entry you have submitted for the Chairman's Award. You may log in and view it at any time.

Event: **Greater Toronto Regional**
Submitted: 02/22/2007

Your Team Number: 771
Team Name, Corporate / University Sponsors: St. Mildred's Lightbourn Parent Association / DANA-Long Manufacturing / Canadian Bearings Ltd / Fisher-Ludlow / MD Robotics & St. Mildred's-Lightbourn High School

Images:

Briefly describe the impact of the FIRST program on team participants with special emphasis on the 2006/2007 year and the preceding two years. -100% of our team graduates go on to higher education -90% in science or technology related careers -confidence and competence with tools in a school with no formal technical program -realization that non-traditional careers were not only an option, but an appealing one - effective communication -sense of responsibility and maturity -two former students offered the University of Waterloo/FIRST Mechatronics Engineering Scholarship

Examples of role model characteristics for other teams to emulate. -curriculum integration with grade 11 physics: brainstorming becomes fun, critical thinking becomes essential and planning and problem solving come to fruition in actual machines -exposure in school -Day of Seminars for 10 local FIRST teams, with seminars on such essential topics as strategic design, team organization, mechanical design and programming -hosted very successful FIRST Lego League Provincial Championship -helping start FLL in PEI

Describe the impact of the FIRST program on your team and community with special emphasis on the 2006/2007 year and the preceding two years. -Nominated for Oakville Community Spirit Award for our efforts to encourage more youth into science and technology -much media exposure -donated money to community charity -presentations to companies of girl guides and brownies -presentation at school open house for members of community -FLL Provincial named one of the top 10 events in Oakville in 2006

Teams innovative methods to spread the FIRST message. -integration into physics curriculum, bringing real-life skills to those who would not be exposed to them otherwise -very successful Day of Seminars for local teams -smaller strategic design seminar for another Oakville team -presentation to all of the engineers at one of our primary sponsors -involving younger grades in the FRC program -assisting with starting FLL in PEI

Describe the strength of your partnership with special emphasis on the 2006/2007 year and the preceding two years. partnership with sponsors: -presentation to DANA engineers - presentations to Parent Association -tours of Canadian Bearings & Fisher-Ludlow factories -students get chance to work hand in hand with engineers and get exposed to the profession partnership with school: -increased enrolment due to FIRST team -run schoolwide game -largest extracurricular activity at the school -integration with physics class

Teams communication methods and results. -regular meeting updates sent out via email, leading in more organized meetings -section in school newspaper, leading to increased awareness in our school about our team and what we do -regular meetings with leaders of key process teams, as well as with team leadership to ensure the team is on the same page -defined team roles

Other matters of interest to the FIRST judges, if any. -all girls team -encouraging girls especially to get more involved in fields where they are drastically under represented -helped at Halton FLL -mentored FLL team -FLL provincials

We are all a part of numerous communities, each of which not only hold a special place in our hearts, but bring us together with those whom we share something in common. St. Mildred's Women Advancing Technology (S.W.A.T.) 771 is a part of many communities, and has made significant steps in furthering inspiration and recognition for science and technology, as well as promoting the concept of gracious professionalism. Throughout the six years we have been involved in FIRST, we have become increasingly involved in the many communities to which we belong, including those of our school and our town. We have also developed strong ties with local industry, inspired many of our graduates to pursue careers in science, and helped to spread the message of FIRST.

FIRST is a very important part of our school community. We have run several successful fundraisers to bring the school together, the most popular being "Peg Attack." This game requires students and teachers to "peg" another person, encouraging students and teachers to get to know each other outside the classroom setting. Additionally, every year our team makes a presentation at the school's open house to prospective students, parents and community members. The awe on their faces as they hear about the program is always evident, and is often a key factor in their decision to come to our school. In fact, one of our student team leaders came to our school solely for the FIRST program. We are regularly featured in the school newspaper and newsletter, and have been granted our own section.

At our school, we have integrated the FIRST Robotics Competition into the Grade 11 Physics curriculum. The students of this class, under the direction of our teacher-advisor and the team captains, helped with the brainstorming and construction of our robot. Assisting in the construction process provided these students with an opportunity to apply theoretical concepts to a challenging, enjoyable activity. The physics curriculum offers many opportunities for this project, giving real life to physics: brainstorming becomes fun, critical thinking becomes essential and planning and problem solving come to fruition in actual machines. This has served a dual purpose at our school, exposing an entirely new group of students to the engineering profession, as well as giving them practical skills. FIRST has also helped our school to overcome the fact that it has no formal technical program. Students who had no idea how to use a screwdriver are taught how to safely use power drills and jigsaws, giving them confidence and competence in technical and construction skills. Because of our firm belief that this should be expanded, our team will be presenting a seminar on "Integrating Robotics in Science" at the Canadian Independent Schools 2007 Best Practices Conference. This is a national conference bringing together classroom teachers and school leaders from independent schools across Canada.

Within our team, we have encouraged effective communication, allowing the team to function efficiently. Build season is a short, stressful time that teaches the value of such communication. Our team is open to all of the members of our senior school, from grades 7-12, and because of the age and social diversity of our team, many members are involved in other extra-curricular activities. Over the past few years, we have developed a system to make sure that every single team member is included, even if they sometimes have other commitments. To accomplish this, we ensure that every team member is on a key process team. Each process team has a leader who has committed to attending every meeting. These team leaders communicate with each other and their team members after each meeting. With our diversity of ages, we strive to keep the atmosphere comfortable and non-threatening. We ensure that the younger students have control over some of our projects, as well as some aspects of the robot, allowing them to have not only a sense of responsibility and maturity, but also see firsthand what is involved in all of the aspects of engineering. We have also involved the team parents; one family has even offered to host a party for the team during the Waterloo regional.

FIRST has had a significant influence on our alumni community. The impact most commonly mentioned by our graduates was the realization that non-traditional careers were not only an option, but an appealing one. We have greatly influenced graduation rates at our school, with 25% of graduates going into science or engineering related programs since our team started. This is much higher than the national average for females, which is still less than 20% (from the Canadian Council of Professional Engineers). One of our former team captains is even going on to pursue graduate studies in engineering. In fact, two of our former students were offered the University of Waterloo/FIRST Mechatronics Engineering Scholarship.

We have expanded into our local community in many different ways over the past several years. Firstly, we have given presentations about FIRST to companies of Girl Guides and Brownies. The impact of these presentations was evident in the level of enthusiasm they generated. The light on the girls' faces when they saw our robot, and how excited they all were about science and technology was an inspiration to everyone. One of the girls, when asked what she learned, replied that "I learned that it doesn't matter how big or how small you are, or if you're a boy or a girl, if you work hard, you can do anything, even build a robot." Secondly, we have been featured in several magazines and newspapers, including the Oakville Beaver. Third, we have tried to give back to the community that has given so much to us. To do this we set up a collection, asking every member of the team to donate \$2 at every meeting. We collected the money, \$234 in total, and donated it to the Oakville United Way. For our efforts, we were nominated for an Oakville Community Spirit Award. Our nomination read: "through effective role modeling and boundless creative energy, the SWAT robotics team has encouraged more youth (especially girls) to give the real-life, hands-on application of science and technology with a desired outcome of higher numbers of girls considering careers in engineering, trades and technology."

We are also an active participant in the FIRST community. On November 4th, 2006, we hosted a very successful day of seminars for local teams. We featured presenters who are at the top of their respective fields in FIRST, and paired them with S.W.A.T. girls to assist them in their presentations of mechanical design, team organization, strategic design, programming and other topics generated by the attendees. Together they shared their wealth of knowledge of various concepts with students, mentors and teachers from ten FRC teams, some of much experience, others rookies. After this, we hosted a more in-depth team organization/build strategy presentation for our team and another Oakville team. We also assisted team 1114 in a presentation to Appleby College, a 2007 rookie team.

Our team is a leader in the FLL community. After hosting the Halton Regional FLL tournament for three years, we were asked to host the FLL Ontario Provincials, and eagerly accepted the opportunity. There were over 1000 students in our school's gym, every single one of them not only excited about the competition, but in awe at what they had accomplished and how much fun science and technology could be. The Provincials were prominently featured in the local newspaper, as well as being named one of the top 10 events in Oakville in 2006. As a result of hosting the provincials, we were contacted about starting up a FLL program in Prince Edward Island, and have been working with Skills Canada there to hopefully get it up and running. We also continued supporting the Halton FLL, and assisted in running it. 771 mentored our own FLL team, the NanoMillies, creating bonds between our FLL and FRC girls, as well as fostering leadership characteristics in our older team members. We will be bringing our FLL team to the Greater Toronto Regional this year, to get them excited about being a part

of the FRC team next year.

In the industrial community, we have spread the word about FIRST, recruiting as many sponsors as we can. We did a presentation of the 2007 game to 20 engineers at DANA, one of our primary sponsors, and got many of them excited about what FIRST accomplishes. We have developed many industry contacts, engaging them to promote the program. We have a very strong partnership with our mentors, teachers and parents. Our mentors have not only taught the team about engineering and leadership skills, but have also given us the inspiration to be anything that we want to be. The mentors have also learned much from the team, improving their leadership and mentoring skills, as well as receiving their own hope and inspiration, seeing the students so involved in engineering.

We at S.W.A.T. 771 have spread the message of FIRST, to help create a world where science and technology is celebrated and where young people dream of becoming engineers. At one of our Girl Guides presentations, when we asked who wanted to build robots, every single guide put their hand up. That is the world that we at Team 771 have tried to create within all of the communities, all of the people that we touch.

This entry was not submitted towards fulfilling the Nasa Grant requirements.

By entering my name below, I agree that I have read my teams Regional Chairman's Award submission and have personal knowledge that the statements and claims made are complete and accurate.

Team Captain / Student Representative :

Kate Mosley

Team Mentor :

Dorothy Byers