

# **PENFIELD ROBOTICS PATRON BOOK**

**TEAM 1511 - ROLLING THUNDER  
2009–2010**



**[WWW.PENFIELDROBOTICS.COM](http://WWW.PENFIELDROBOTICS.COM)**





# FIRST

## For Inspiration and Recognition of Science and Technology

Nationally:  
200 Bedford Street  
Manchester, NH  
03101  
603-666-3906 or  
800-871-8326  
www.usfirst.org  
info@usfirst.org

## Vision Statement

To create a world where science and technology are celebrated... where young people dream of becoming science and technology heroes.



## Mission Statement

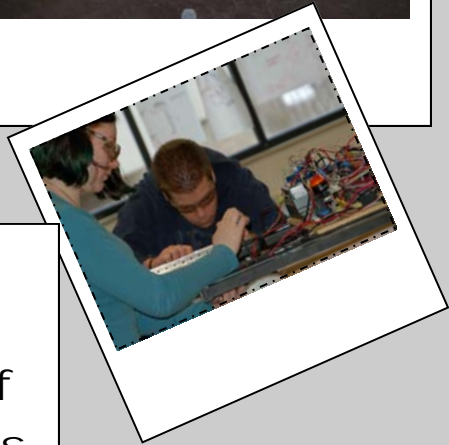
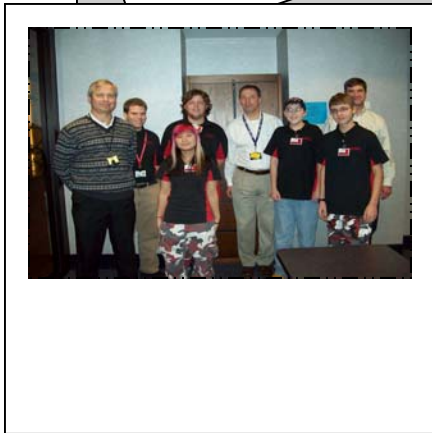
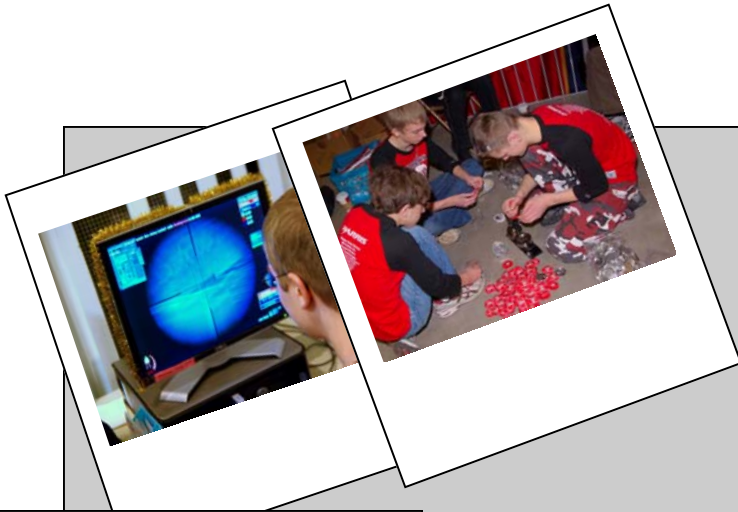
*FIRST* designs accessible, innovative programs that build not only science and technology skills and interests, but also self-confidence, leadership, and life skills.

The **goals** of the FIRST Program

- To expose middle and high school students to engineers and the engineering profession
- To create an environment that makes “heroes” out of engineers and scientists
- To demonstrate a company’s engineering capability, resources and commitment

“The varsity sport for the mind,” *FIRST* Robotics Competition (FRC) combines the excitement of sport with the rigors of science and technology. Under strict rules, limited resources, and time limits, teams of 25 students or more are challenged to raise funds, design a team “brand,” hone teamwork skills, and build and program robots to perform prescribed tasks against a field of competitors. It’s as close to “real-world engineering” as a student can get. Volunteer professional mentors lend their time and talents to guide each team.





At Harris, we are more than just a proud supporter of the *FIRST* Robotics Program...



**We live for this stuff.**





# MEET OUR TEAM



## Students



Alexis Buckley  
Justin Byers  
Alex Ceci  
Matthieu Dora  
Calvin Drake  
Tom Geen  
Michael Hartman  
Becca Hasmann  
Chris Hufziger  
Paul Jennings  
Rachel Joram  
Kevin Krech  
Nathan Kittrell  
Kristina Kohl  
Jacob Kremer  
Jason Kuberka  
Sam Lerman  
Michael MacNally  
Theo Matt

Elizabeth McChesney  
Andy Melnick  
Matthew Mlodzienski  
Ethan Mohny  
Michael Montemalo  
Candido Pinto Jr.  
Tom Powers  
Shauna Richards  
Quinten Rock  
Tresten Rosati  
Alex Rozanov  
Kyle Schuhart  
Ben Stoeckl  
Peter Stoeckl  
Vaughn Thompson  
Alex Vadas  
Crystal Vongnaphone  
Karen Wilson  
Alex Wolf



# MEET OUR TEAM



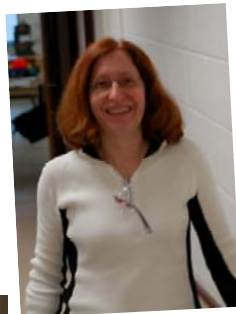
## Harris Mentors

Amy Averill  
Eric Averill  
Dave Burlone  
Tony Dal Santo  
Karen Fellows  
Joshua Gannon  
Larry Lewis  
Kevin Lloyd  
Victor Parris  
Dave Schoepe  
Dean Smith



## Teachers & Community Mentors

Leann Bartomioli  
Eric Brewer  
Mark Byers  
Cynette Cavaliere  
Tom Cavaliere  
Jeff Downs  
Lee Drake  
Val Drake  
Eric Eckhardt  
Kim Eckhardt  
John Hall  
Tom Kanzler  
Michelle Latona  
Bonnie MacLean  
Rick Matter  
Melinda Mlodzienski  
Terri Montemalo  
Dave Vadas  
Dave Weisbrod





# Chairman's Award Submission

The Chairman's Award is **FIRST**'s most prestigious award. It honors the team that best embodies the purpose and goals of **FIRST** and that other teams emulate. The award helps keep the central focus of the **FIRST** Robotics Competition in field; the goal of inspiring greater levels of respect and honor for science and technology.

## Briefly describe the impact of the FIRST program on team participants with special emphasis on this year and the preceding two years.

Teamwork, confidence, leadership: that's the impact of FIRST on 1511. Over 80% of our alumni are pursuing a science or technology career. While focused on the technical: CAD, programming, documentation, hands-on mechanical skills, students also gain business skills: public speaking, interviewing, time management, problem solving. Our mentors learn from students and other mentors about managing, networking and collaborating. We are an all-inclusive family and there is fun, friends and belonging.



## Examples of role model characteristics for other teams to emulate.

With a combination of community outreach, leadership development and technical emphasis, the enthusiasm and dedication of 1511 gives us the resources to help other teams through workshops, individualized assistance, materials, advice and support, funding, even robot shipping. We have assisted over 150 FRC teams in 6 years. Our annual FRC events (Rally, Ruckus, Rookie Meet and Greet) and volunteering for FRC, FTC, FLL and JLL keep the action going year round and are fun ways we promote FIRST.

## Teams innovative methods to spread the FIRST message.

Our "1511 Thunderbolts" program tracks our outreach to FIRST and communities all over the world, with team help, robot demos, FLL and JLL activities and community service, such as blood drives and Thanksgiving basket delivery. We have spread FIRST to the Bahamas, providing kits for 2 FLL teams. At the



## Describe the impact of the FIRST program on your team and community with special emphasis on this year and the preceding two years.

We have made connections to Harris RF and other local businesses, as well as with RIT, increasing opportunities for our students after high school. Averaging 2 robot demos and one community service activity a month, we are changing lives and shaping futures. Our efforts to spread FIRST through FLL have resulted in a 5-fold increase in the number of local FLL teams. We started JLL in Penfield. Our LEGO camps and coach seminars reach over 100 students and adults from upstate NY each year.



2009 Monroe County and NYS Fairs, we had hands-on FRC and FLL displays. A Girl Scout Tech Fair, Parades, Penfield Days and our off-season events allow the public to experience FIRST through 1511.



# Chairman's Award Submission

## Describe the strength of your partnership with special emphasis on this year and the preceding two years.

1511 is a family. Our student-mentor relationships are not just technical, but consist of real-life advice, assistance and friendships. Our mentors care about each team member and show this with year-round involvement and in their support of the school curriculum. Harris truly provides much more than dollars. School support of the team is also strong with 3 new teacher advisors, dedicated staff who attend our events, a new shop, unprecedented building usage and Board of Education recognition.



## Teams communication methods and results.

1511's focus on communication increased our team in size and recognition. At PHS we recruit with ice cream socials, pep rallies, video announcements and two display cases. Within the team we have weekly team and subteam emails, and extensive use of our online forum. We update our homepage, online Wiki and blog regularly. The public follows us on YouTube, Twitter and Facebook. We reach out with our patron book, newsletters and features in local media and were recognized by a NY Senate Resolution.

## Other matters of interest to the FIRST judges, if any.

1511's contributions to FIRST and our community haven't let up in 6 years. This year we moved into a new space during build season, have a new lead mentor and 1/3 of our team is new to FIRST. We overcame these challenges with teambuilding and an offseason training program, using the engineering design and review process. All members gained real-life engineering experience through a Mock Build Season, one-on-one mentor training and engineering notebook use. All students work on the robot.





# Rolling Thunder

Penfield High School  
Harris Corp., RF Communications Div.



## 2010 Chairman's Award Essay

### We are Thunder

It's one thing for a meteorologist to predict the storm of the century, it's another for that storm to hit. Woodie Flowers predicted that storm in 2005 when 1511 won International Rookie All-Star. The storm struck twice in 2007 and 2009 with 1511's thunderous regional Chairman's Award wins. Our outreach has expanded throughout FIRST, to new schools, sponsors and other countries. The Thunder keeps getting louder!

### Keep the Thunder Rolling

Team 1511 has assisted over 150 FRC teams with everything from programming to team structure. We provide emergency robot support at competitions – over 20 teams every year! Our LabVIEW scouting system is part of our success on the field; we publish the code and share data with teams. On our award-winning website, linked on FIRST's website resources, we share robot code, engineering notebooks and activities with year-round documentation. Our former team leader and founder moved away this year, but is updated on our progress in our online wiki and blog; she visits often! We've smoothly transitioned to a new lead mentor, keeping the thunder rolling.

In 2009, we met four times a week with rookie FRC2999, a Rochester city school, to teach and guide them during build season. We provided tools, mentors and a crate helping them finish their robot before our own. This year, we lent our Inventor and structural design expertise to rookie FRC3173 and a student from a nearby county is shadowing us to learn how to start FRC at his school. Like many before, he's become one of our adopted team members. We also offer our workshop, field and expertise to neighboring FRC1405.

We also contribute to FRC after competition. This year, we are a C++ Beta Test Team. We presented our findings at two offseason events, where we used the beta test hardware and software on our robot, and at Kickoff to Rochester and New York City teams. In summer 2008, our team's biweekly LabVIEW seminars assisted local teams in programming the 2009 robot controller.

1511 has sponsored 38 FLL teams and 6 JFLL teams that 12 of our teammates have mentored. This year, we hosted our 5th Rochester Rumble event where FLL students compete in last year's game. Our annual series of summer camps introduces FLL to over 100 students and adults! 1511's coaches seminars teach parents how to run a team, program and fundraise. We also provide FLL Grants. In 2009, 2 mentors and our teacher advisor started JFLL in Penfield and 1511 raised funds for them. The school district allocated teacher stipends to support JFLL next year.

These efforts have grown FLL and JFLL in our community so much that Rochester has held its own qualifiers (QTs) since 2008.

Over 25 of our members volunteer annually at the Finger Lakes FLL QTs and Championships. In 2009, 1511 supplied 20 volunteers for 2 QTs, with head referees at both events and an MC. At FLFLL Championships, we supplied six judges and 80% of the referee staff. We also raised \$3000 for the 2008 FLFLL winners to attend Championships. Two mentors helped run the FTC and FLL tournament at Clarkson University three years in a row. Last year, we bought Mindstorm and field kits to start Bahamian FLL teams. This year, we started Team 10474. We're setting up more Bahamian teams and are excited to send 1511 members to organize a competition there.



# 2010 Chairman's Award Essay (cont.)

## Thunderous Events

Since 1511's creation, we have run three annual FRC events that are featured by local media. Our biggest event, Rah-Cha-Cha Ruckus, is a Halloween-themed offseason competition. Over 20 teams attend each year from as far away as Michigan and Canada. Ruckus allows students a chance to drive robots and get pumped for the upcoming year.

The Rochester Rally is a pre-ship scrimmage where local teams test their robots, refine their designs and engage in friendly competition on our full field. Invited sponsors speak about the importance of technology. In 2009, we handmade 90 moonrocks and our members helped finish robots for 2 rookie teams and a veteran team. After Rally, we drive teams' robots to the drayage facility.

The All Rookie Meet and Greet at Championships lets teams share experiences and play games. We gave last year's ARMAG rookie winners a giant handmade moonrock signed by Dean, Woodie and teams from our regionals. We create a booklet with each year's rookies' accomplishments and provide information on starting FLL teams.



## Thunderous Reaction

Thunderous excitement rolls through our community with our various events year-round, which are tracked through Thunderbolts - our term for the many ways we spread the word of FIRST. Our goal is 1511 Thunderbolts by our 10<sup>th</sup> anniversary. Our efforts earned us recognition by the NY Senate in a 2009 resolution written by Senator James Alesi.



We have promoted FIRST by holding over 140 demos at festivals, career fairs, schools, science centers and more! The 2008 Imagine RIT festival, attended by 17,000 people, included innovative technology groups. We represented FIRST! One of our favorite demos this year was at a local supermarket Halloween party for 800 kids and parents! At the Simcona Electronics Trade Show we brought FIRST to over 25 companies. 1511 also demoed at our county and New York State fairs.

Since April, our students logged 265 hours of community service. We sort medical supplies for third-world countries at InterVol and helped with their Haiti relief effort. We've delivered over 1200 Thanksgiving baskets to needy families with the Rochester Small Business Council since 2008. We visit senior citizens several times a year, participate in the local animal shelter's annual walk-a-thon, get our hands dirty at Penfield Clean-Up Day and hold biannual blood drives, saving hundreds of lives. We also support charities in which our team members have a personal awareness, such as Multiple Sclerosis, Autism Speaks and Cystic Fibrosis Foundation.

Our biggest fundraiser, the Patron Drive, is another way we spread the Thunder to the community. Annually, students meet with over 150 local businesses and raise over \$9,000! We send 70 sponsors monthly updates and FIRST literature, do demos at their sites and thank them with an annual picnic. We invite our sponsors and the rest of the community to all of our events where we wear our team uniforms. No one can miss our red camouflage!

## When Storms Collide

Our main sponsor, Harris RF, provides us with year-round support, 11 invaluable mentors and our lead mentor. Mentors teach students technical skills that allow them to work independently. Student-designed

# 2010 Chairman's Award Essay (cont.)



parts are manufactured at Harris. Mentors act as a review board in our school's Engineering Design & Development classes and give Harris tours. We also exhibit the robot at Harris events and female 1511 members attended Women in Technology Day. To show our appreciation for 5 years of support, students presented plaques to staff including the division president and engineering VP. Harris' newsletter featured this meeting and over 20 articles on our team. Due to the economy, Harris had to cut charitable funding this year, but chose to keep supporting FIRST.

We also have 15 community mentors, most with science and technology backgrounds, some who introduce students to non-engineering fields. Mentors, who know students on personal and professional levels, write recommendations for college and scholarships. They also provide homework help as our policy is school comes FIRST!

We receive continuous support from Penfield High School and the Board of Education. Before this year's school renovations, our input was sought in designing the tech wing. Our work area has nearly tripled! We have 3 new teacher advisors and the assistant principal attends our competitions, including Championships! Two school display cases are devoted to our awards and team updates. We have built friendships with school staff who love to see our progress, attend our events and join our team meals.

Our strongest partnership is among our members. In team surveys, students requested more preseason robot building experience. In response, to prepare our 28 new students, we held a 5-week Mock Build Season. We divided into two teams, built VEX robots and held a competition. This helped more than double last year's student retention rate, expanding our family! Parents cook meals and mentors bring breakfast that we eat together. Students help each other grow, learn teamwork and build friendships and robots. Understanding the loss of a student, we collected \$500 for FRC3125's Habitat for Humanity memorial.

## Thunder Leading the Way

FIRST is not only about building a robot, but also about building future leaders. A team alumnus said it best in the 2009 Rochester Business Journal, "Growing without being aware of it is what FIRST does best." Maturing students have emerged to develop a student-led team. Our Leadership Boot Camp includes speeches, presentations, developing strengths and teamwork. Student leaders are selected through interviews, speeches and team vote, earning positions such as school and public relations or meeting coordinator. Nine subteams are each led by a student and mentor. In build season, student leaders collaborate at Integration Meetings to discuss progress and issues and devise solutions. Students organize all our demos, service, fundraising and fun activities. We promote opportunities for every student to be a leader.

Like rolling thunder, our team has a lasting effect on everyone involved. Over 80% of our alumni are pursuing science or technology careers. They come back to mentor, share their knowledge with students, travel with us to regionals and attend our annual team picnic. Several alumni are mentoring other teams as well; one alumnus mentors all-deaf rookie team FRC3126.



The Harris, Penfield High School, Rochester and FIRST communities merge together to make 1511 a fun and inspiring experience for us and everyone we meet. Our team is like thunder; it doesn't affect just those who hear it, it creates a sound so loud and powerful that it can be felt miles away.

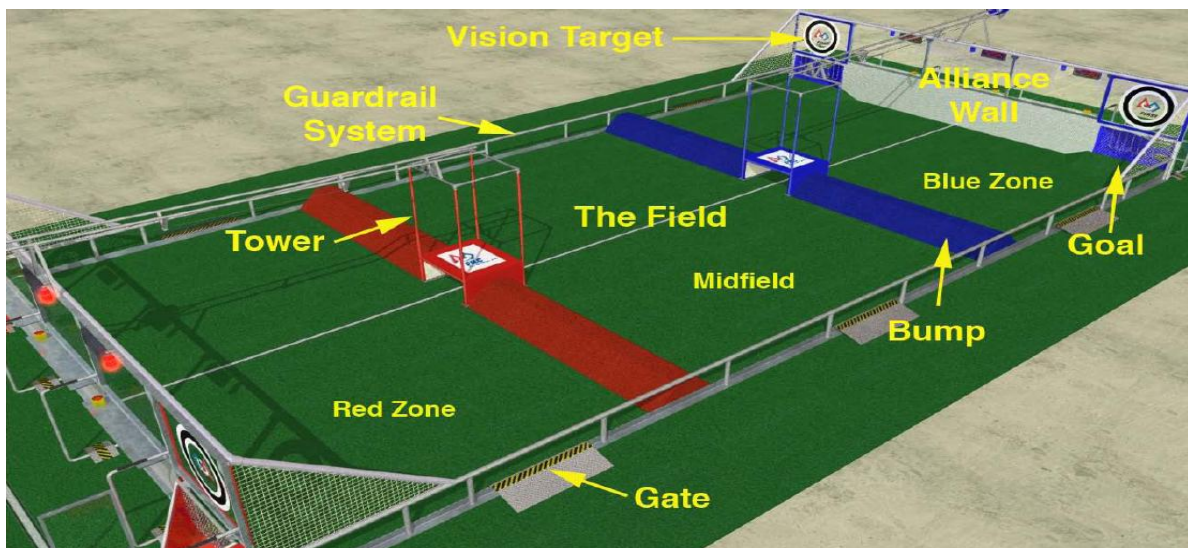


# FIRST Games

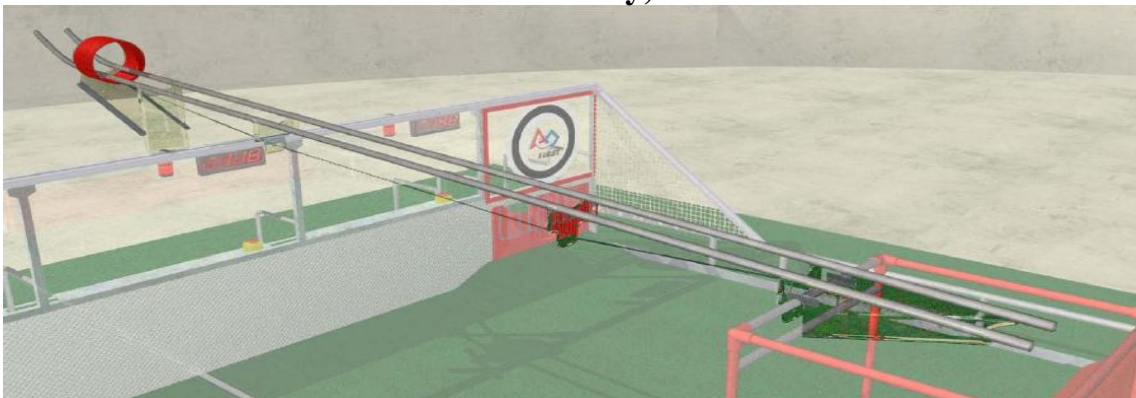
## 2010 - Breakaway

The 2010 game is called Breakaway. This game is roughly based off of soccer, sharing similar game aspects. Two alliances (red and blue) made up of three teams each compete in each match. The goal is for your alliance to score more points than the opposing alliance by shooting balls (1pt) into the four goals in the corners of the field. Once the ball is scored, it must be re-fielded by the human players within 11-15 seconds. The balls are returned with the ball return overhang. If the balls are not intercepted by a robot, it will roll into the opposing alliance's side of the field. The fully carpeted field is divided into three sections by 13.5" tall carpeted bumps with 18" tall tunnels that divide each bump. At the end of the match, alliances can score bonus points by lifting their robot above the platform of their alliance's tower (20") for 2 points. If a robot from the same alliance lifts itself from a currently elevated robot until it is above the platform of the tower, it is considered elevated, and gains that alliance 3 points.

The match starts with a 15 second autonomous period, where robots can use pre-programmed code and sensors to score balls into the four goals. Vision targets are attached above the goals to assist in this purpose. After the autonomous period finishes, a 2 minute tele-operated period begins. Human drivers take control of their robots and try to score balls, defend goals, and keep balls on their alliance's side of the field. In the last 20 seconds of the match, the finale begins. It allows robots to expand their size, and elevate or suspend themselves on their side of the field.



Above is the Field for Breakaway, Below is the Ball Return





# AWARDS

## 2010 Awards

March 4-6	<b>Finger Lakes Regional</b>	Rochester, NY	<b>Engineering Inspiration</b>
March 25-27	<b>Boston Regional</b>	Boston, MA	<b>Chairman's Award Dean's List Finalist - Crystal Vongnaphone Finalist Award Coopertition Award</b>
April 15-17	<b>2010 Championship</b>	Atlanta, GA	<b>Quarter Finalist, Curie Division</b>

## 2009 Awards

March 5-7	<b>Finger Lakes Regional</b>	Rochester, NY	<b>Finalist Award Kleiner, Perkins, Caufield &amp; Byers Entrepreneurship Award</b>
March 19-21	<b>Chesapeake Regional</b>	Chesapeake, MD	<b>Imagery Award Website Award Chairman's Award</b>
April 15-18	<b>2009 Championship</b>	Atlanta, GA	<b>International Judges Award for Integrated Performance</b>

## 2008 Awards

March 6-8	<b>Finger Lakes Regional</b>	Rochester, NY	<b>Engineering Inspiration Award</b>
April 16-20	<b>Philadelphia Regional</b>	Philadelphia, PA	<b>Imagery Award Safety Award</b>

## 2007 Awards

March 9-11	<b>Finger Lakes Regional</b>	Rochester, NY	<b>Chairman's Award</b>
March 22-25	<b>Boston Regional</b>	Boston, MA	<b>Daimler Chrysler Team Spirit Website Award</b>

## 2006 Awards

March 9-11	<b>Finger Lakes Regional</b>	Rochester, NY	<b>Engineering Inspiration</b>
March 23-25	<b>Boston Regional</b>	Boston, MA	<b>Imagery Award</b>

## 2005 Awards

March 3-5	<b>Finger Lakes Regional</b>	Rochester, NY	<b>Rookie All Star</b>
March 24-26	<b>Buckeye Regional</b>	Cleveland, OH	<b>Highest Rookie Seed</b>
March 3-April 2	<b>Toronto Regional</b>	Toronto, ONT	<b>Rookie Inspiration Daimler Chrysler Team Spirit Regional Champion (1st Place) Championship Rookie All Star</b>
April 21-23	<b>2005 Championship</b>	Atlanta, GA	



# 2010 Dean's List Finalist - Crystal Vongnaphone

In 2010 FIRST announced a brand new award set to honor the student leaders within FIRST, and coined it the Deans List Award. With only 4 days to write and submit the essays, 1511 knew exactly what to do! Crystal Vongnaphone was the 2010 Boston Regional Dean's List Finalist, and Mike Hartman was 1511's second submission. Here you can read parts of the essays we submitted!



WaFfLeS!~ is the enthusiastic salutation that closes every message from our Junior Student Leader Crystal Vongnaphone! You would never believe that the loudest cheers and attention-getting "Hey Everyone!"s come booming from this little 4'11" young woman! Her enthusiasm is incredibly contagious!

Crystal channels her enthusiasm into organizing events and making sure every student on the team gets involved in build season and at team activities. If we need something done, Crystal will volunteer to do it! She organized team members into jobs to help our pre-ship Rally run smoothly, planned our FLL postseason event, referees at all local FLL events, arranged several community service trips to sort medical supplies for third-world countries, and runs numerous robot demos year-round.

In her three years on the team, she has gone from our happy cheering pit runner to an elected student leader as our Communications Director. Every week, she sends out the team email with details on meetings, events, activities, and reminders. When she took on this task, she implemented a new exciting html format that attracts interest and keeps people wanting to read on! She also posts notes from all leadership meetings on the team forums. As a student leader, she helps plan the year's schedule for 1511 and helps lead weekly team meetings and build season integration meetings. She writes press releases and coordinated students to write the WFA and Chairman's Award submissions for which she is the primary author.

Crystal proves that the most enthusiastic people are often the most creative. Her freshman year she tackled leading our Flare team, creating fliers and choosing handouts for the team. In two years, she has produced many great videos for our team. From those for the school's morning announcements, our 1511 event and competition highlights, to the Chairman's Award, her creations help promote FIRST. She wears our red camo team gear everywhere so that she gets noticed and has more chances to talk about FIRST!

Crystal has taken advantage of all that FIRST has to offer, including practical experience in electrical engineering. From wiring the robot and controls to specializing in schematics and soldering, it's clear she has discovered a talent and passion! She never has idle hands, and seeks more challenging tasks from electrical mentors. No later than the second time she picks up a tool, she has it mastered. Due to her excitement for FIRST, she enrolled in Project Lead the Way Design Drawing Production and Digital Electronics classes, and works hard to understand all of the material.

Getting her hands in everything, at competitions she has filled roles such as scouting lead, electrical pit crew, driver and pit scout. She attends Championship leadership lectures and organizes students at competition to stay on schedule and get tasks completed! Her favorite part of competition is getting to know FIRST teams from around the world. Last year, when 1511 mentored a city school rookie team, she was the first to volunteer and met with them four times a week to help them build and wire their robot. She was instrumental in welcoming them to the program and helping them understand FIRST and Gracious Professionalism!

As she motivates students, wires up control boards, helps out other teams, cheers her heart out, connects with other teams, organizes every kind of 1511 event and WaFfLeS goodbye at night, Crystal is a truly an enthusiastic leader in the FIRST community!



# 2010 Dean's List Submission - Mike Hartman

Have you ever met a student that lives, eats, breathes and sleeps robotics? For 1511, that student is Mike Hartman. Setting and attaining the ambitious goal of attending EVERY 1511 event and logging the most build season hours, he is the epitome of dedication!



Mike joined FIRST looking to add to his resume to get into a good college; however, he discovered much more than he expected - a family. FIRST has helped him grow both academically and as a person. After only his second year on the team, he already plans to return after graduation to mentor and help new students in the way he has received help from all of 1511's mentors.

Mike is hoping to attend MIT to either dual major in electrical and computer engineering, or in chemical engineering, or to triple major in electrical, computer and mechanical engineering. Despite a hectic schedule and ambitious plans for the future, Mike always demonstrates a high level of energy and enthusiasm. He enjoys every aspect of the FIRST team and is truly hooked and dedicated to the cause! There is no doubt he is in FIRST for life!

# 2010 Woodie Flowers Award Submission - Jeff Downs

FIRST has had a long tradition of honoring the mentors that help make this program possible. Each year 1511 has submitted a mentor for the Woodie Flowers Award. Jeff Down's was this year's nominee!!

A few willing students and a pile of code is all team mentor Jeff Downs needs to get the thunder rolling. Since the establishment of the team in 2005, Jeff has continued to display his gracious professionalism on and off the field. In a conversation with team leader Kim Eckhardt, Jeff learned there were programming issues with her rookie team. He joined the Thunder with two weeks left of build season and programmed our entire robot with only one student. Since then, he has attended every 1511 competition and our programming team has grown to 6 students.

Marking his 6th year on the team, Jeff has continued to "think outside the code" and guide students who struggle with programming. With his support, we submitted for the 2010 C++ Beta testing and were selected. During the pre-season students presented and demonstrated the Beta System with Jeff's assistance to over 50 teams in and out of state, and posted findings on both Chief Delphi and the official FIRST forum to help even more teams. His technical expertise in programming has even inspired team members to give their own presentations and mentor other teams.

Jeff has given countless hours to students to teach them the language of C++ by comparing the code and its functions to real life objects, such as cars. If a student has trouble understanding an activity or concept, Jeff works with them individually to help them realize their mistakes and learn to debug their code. As a review board for students, his guidance inspires them to achieve greatly every day, and several students are now pursuing computer engineering degrees in college.





# FIRST ROBOTICS TEAM 1511 ROLLING THUNDER



*Celebrating Six Years With...*  
*Celebrating Six Years With...*

**HARRIS**<sup>®</sup>  
assuredcommunications<sup>®</sup>



*Join our team.*



**THE THUNDER JUST KEEPS GETTING LOUDER**





# Thunder in the Community Summer 2009

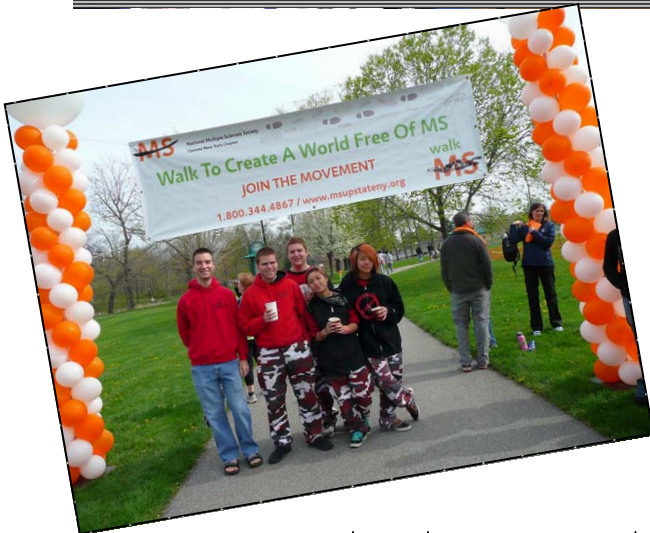
New York State Fair Demo



Sorting Medical Supplies at INTERVOL



TEAM PICNIC



Independence Day Parade



FIRST Lego League Camp



# Thunder in the Community

## Summer 2009

Sorting Food at Food Link



Rochester Museum & Science Demo



Car Wash Fundraiser



Boy Scout Demo



ROCHESTER RUMBLE IV



# 1511 Pre-Season



TEAM MEETINGS

# 1511 Pre-Season

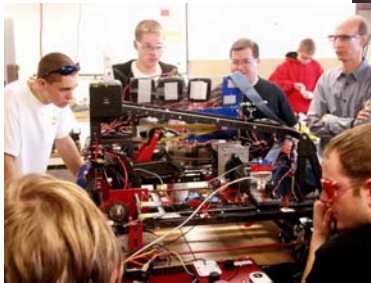
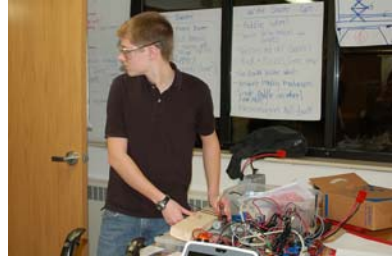


## HOLIDAY PARTY!!!





# 1511 Build-Season





# 1511 Build-Season





# OCTOBER OFF-SEASON COMPETITION

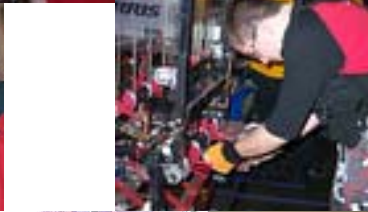
# Rah Cha Cha Ruckus





# Ramp Riot - Ambler, PA

## November - off-season competition





# Rochester Rally

## February - Pre-season Event





# March

2010  
Finger Lakes  
Regional  
Competition  
Rochester, NY



T.E.A.M— Together Everyone Achieves More



Engineering Inspiration Award



MATCH 006			
TEAM 1:	1511	TEAM 1:	1558
TEAM 2:	578	TEAM 2:	1507
TEAM 3:	3157	TEAM 3:	281
SCORE:	4	SCORE:	3
BONUS:	2	BONUS:	0
PENALTY:	0	PENALTY:	1

Finger Lakes Regional

6 2 FRC





# March

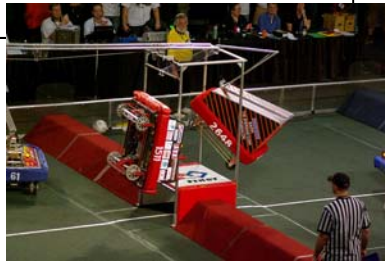
2010  
Boston  
Regional  
Competition  
Boston, MA





# March

2010  
Boston  
Regional  
Competition  
Boston, MA



TEAM 1		TEAM 2	
TEAM 1:	383	TEAM 1:	61
TEAM 2:	1511	TEAM 2:	155
TEAM 3:	2648	TEAM 3:	157
SCORE:	9	SCORE:	5
BONUS:	2	BONUS:	4
PENALTY:	0	PENALTY:	1

Boston Regional 11 8 FRC



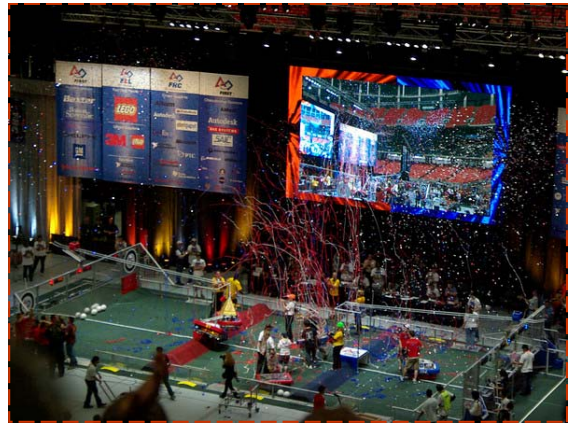
Chairman's Award  
Dean's List Finalist-Crystal Vongnaphone  
Cooperation Award  
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# April

## 2010 Atlanta International Championship Atlanta, GA





# April

2010  
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International  
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Atlanta, GA



MATCH 026			
TEAM 1:	1511	TEAM 1:	1306
TEAM 2:	1775	TEAM 2:	3284
TEAM 3:	2775	TEAM 3:	1878
SCORE:	11	SCORE:	8
BONUS:	8	BONUS:	2
PENALTY:	0	PENALTY:	0
17		11	

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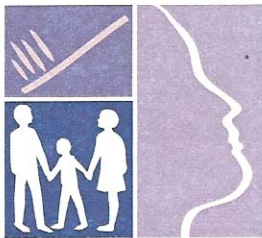
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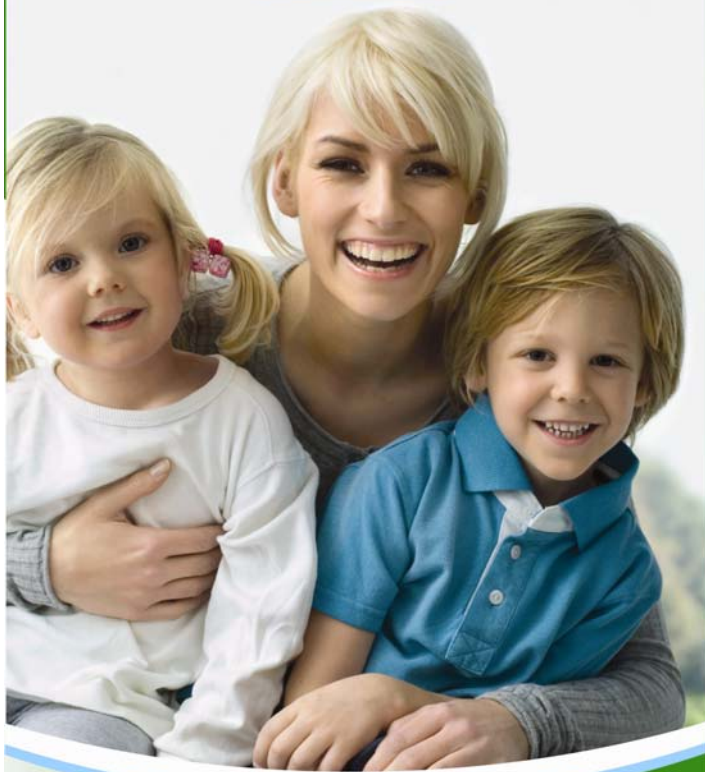
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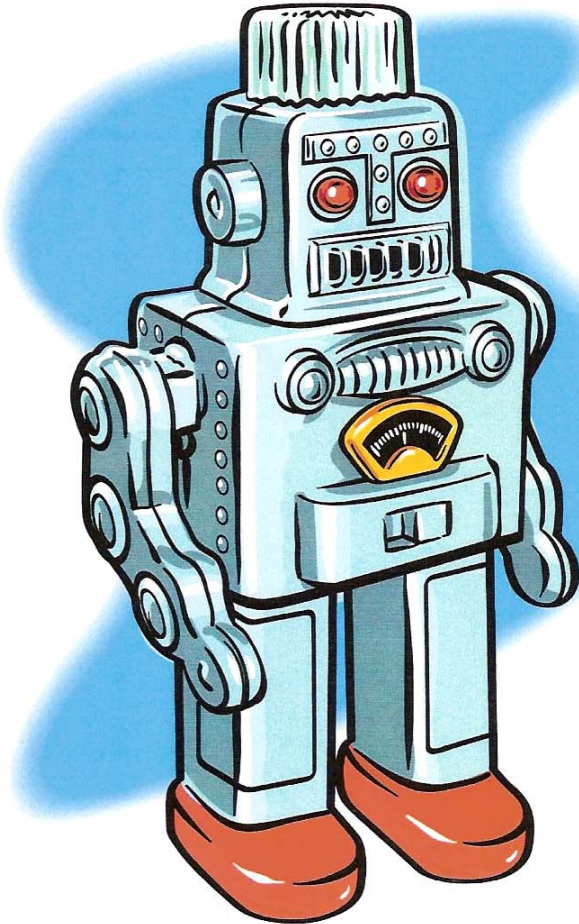
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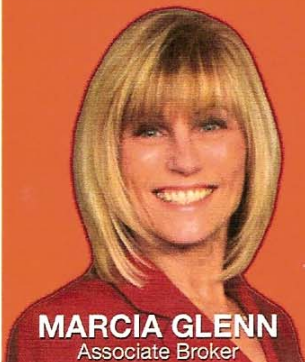
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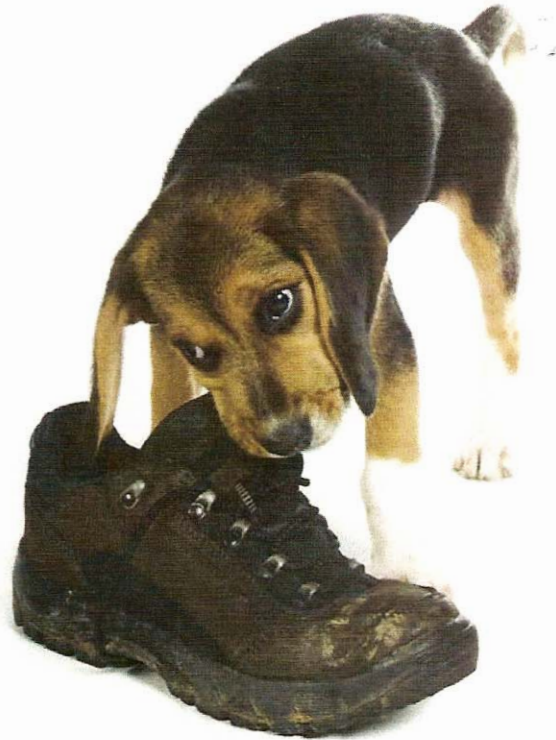
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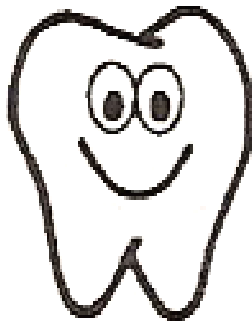
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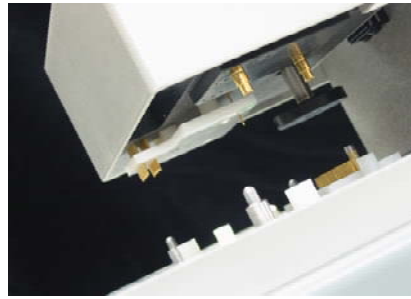
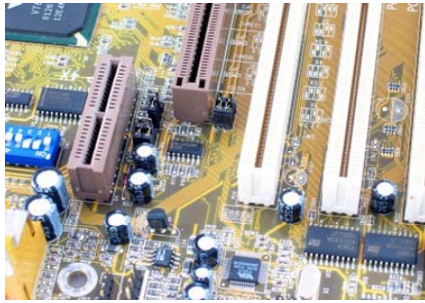
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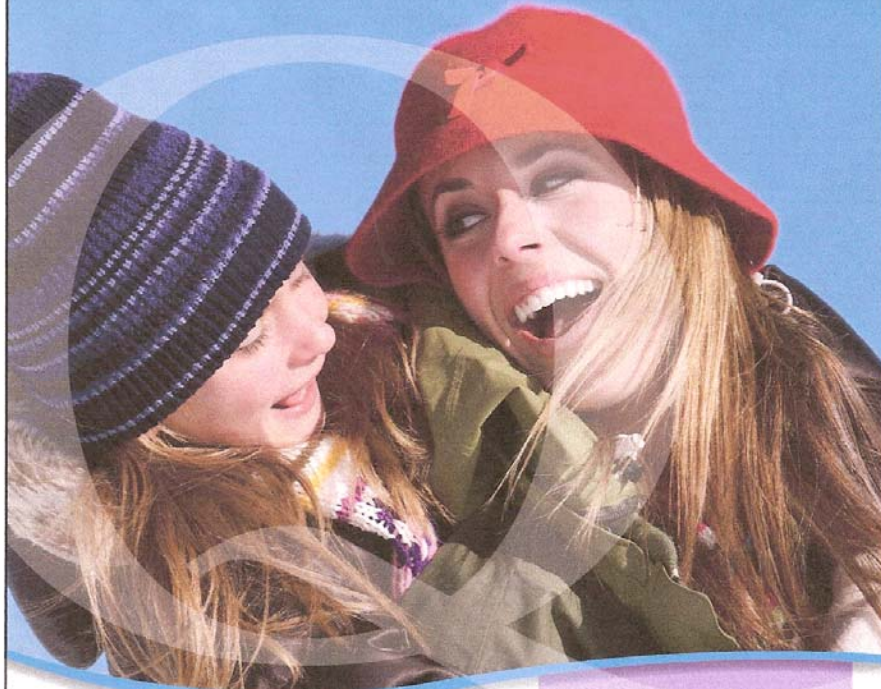
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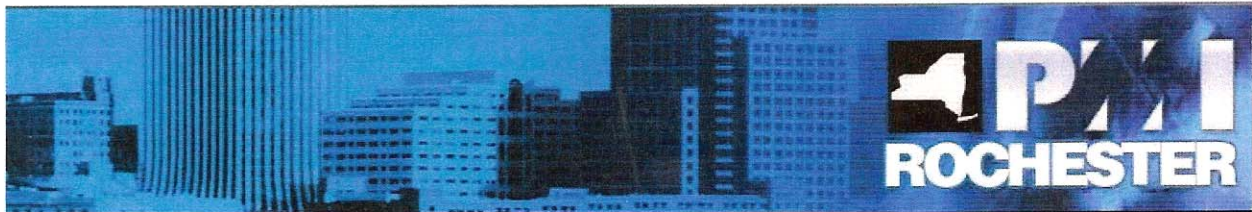


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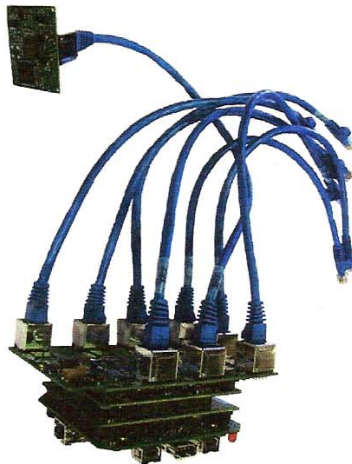
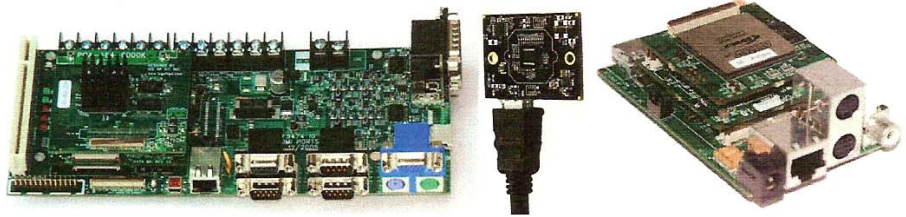
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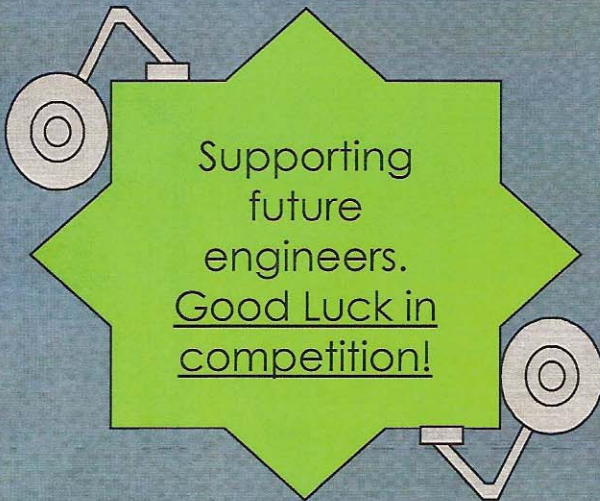
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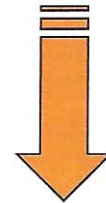


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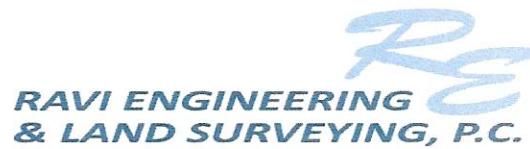
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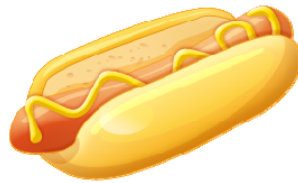
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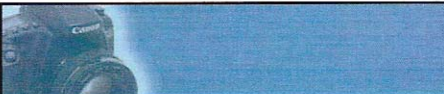
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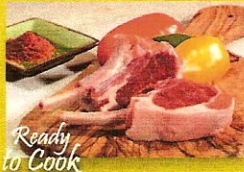
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**I believe that robots ROCK!**

**We believe that 1511 ROCKS!**  
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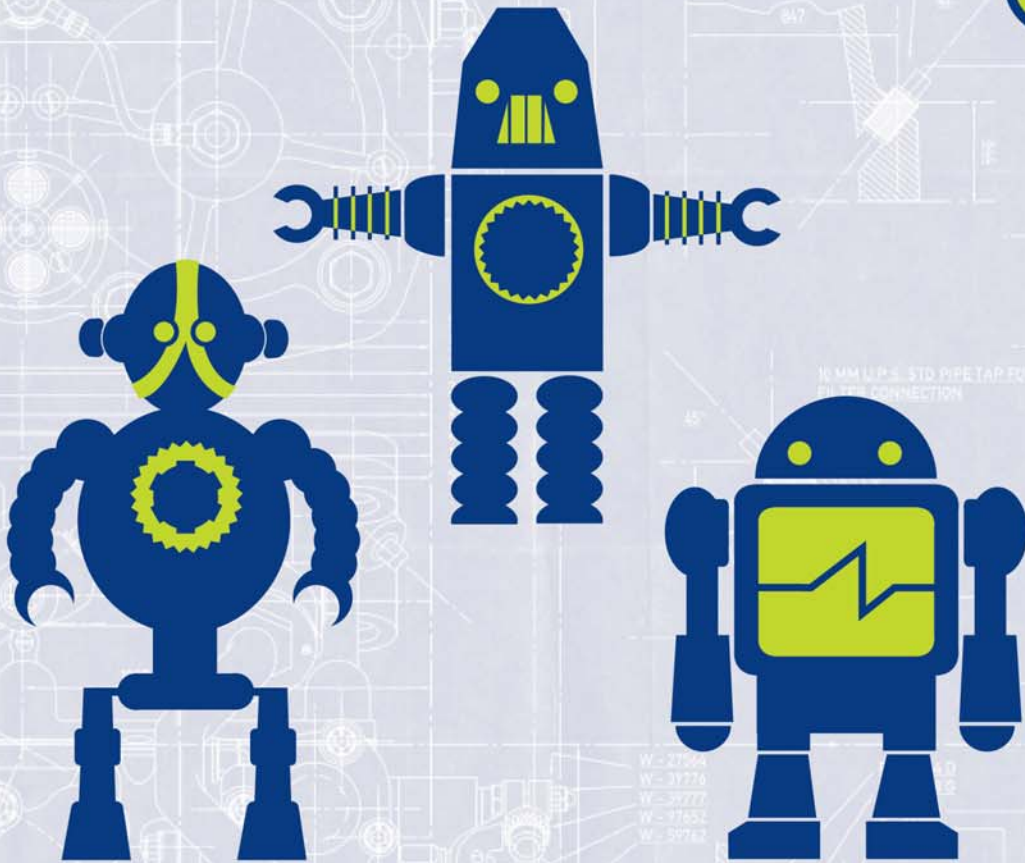
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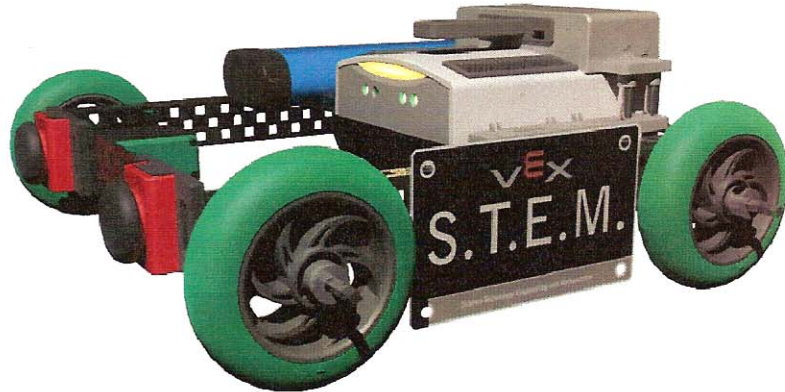
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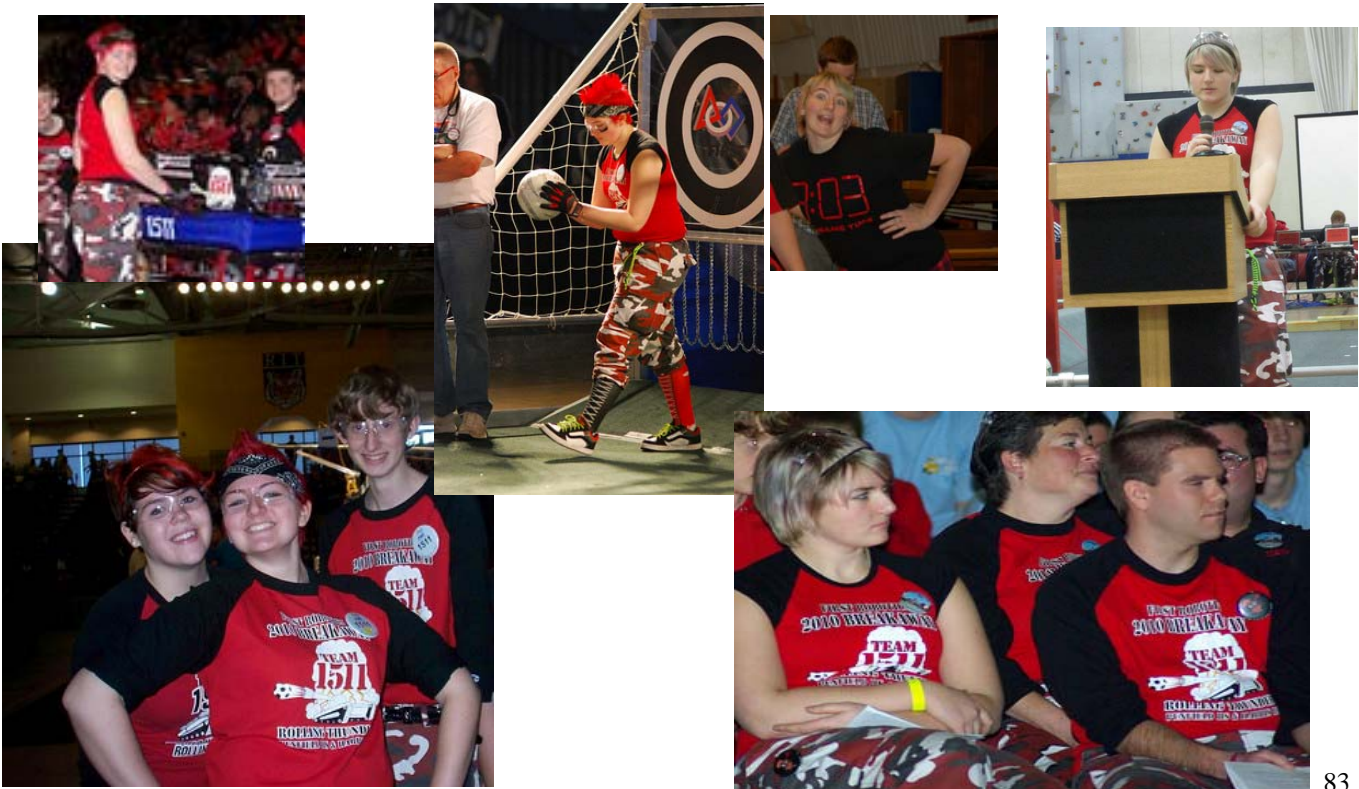
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