



Miracle Workerz

Team Handbook

MIRACLE WORKERZ WEBSITE: **www.moe365.org**

TEAM HOTLINE	302-774-4588
BMP 34 WORK AREA	302-892-7956
BMP SITE SECURITY	302-999-2200
EMERGENCY - SITE PHONE ONLY	#311
JOHN LAROCK CELL PHONE	302-545-3540



OVERVIEW

This Handbook is an information source and communication tool for the use of the Miracle Workerz Robotics Team. The Miracle Workerz is a partnership between local high school students and engineers and other adult mentors, with support from DuPont and other local sponsors. The team is made up of members from the following groups:

- Students from local high schools (Delaware, Pennsylvania, Maryland, New Jersey)
- Engineers and other adult mentors
- Team alumni (typically college students)
- Parents of student team members

We strive to promote the ideals of FIRST in these ways (See What is FIRST? below):

Miracle Workerz Team Goals:

- Provide a hands-on engineering experience for local high school students
- Excite students to engineering and technology careers
- Offer students positive role models
- Promote the ideals of FIRST
- Provide skills which will promote success: leadership/teamwork/creativity
- Increase community awareness of FIRST Robotics, FIRST LEGO League and FIRST Tech Challenge
- Grow the number of FIRST teams in Delaware and the surrounding region in PA and MD
- Mentor other local FIRST teams
- Strive to be a competitive FIRST team

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MIRACLE WORKERZ HISTORY

The Miracle Workerz evolved from the DuPont Engineering Explorer Post, a career-interest group, which had been educating high school students about engineering for over 30 years. In 1999, with seed money from the DuPont Center for Collaborative Research and Education, the Explorer Post became affiliated with FIRST. The Miracle Workerz compete as Team 365. The team nickname and the robot name, MOE, which stands for Miracle of Engineering, were taken from DuPont's slogan, Miracles of Science.

FIRST (For Inspiration and Recognition of Science and Technology) is a national non-profit organization that focuses on inspiring students to pursue careers in science, engineering, and technology and to teach valuable life skills. FIRST, among other activities, sponsors a nationwide robotics competition, where thousands of high school students and adults get a chance to express their excitement about technology by competing in a challenging and fun atmosphere.

What is FIRST?

Vision

"To create a world where science and technology are celebrated... where young people dream of becoming science and technology heroes" -Dean Kamen, Founder

Mission

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

From the beginning, the Miracle Workerz have become recognized leaders in the east coast FIRST community and have received many regional and Championship awards, including::

- 2001 National Competition Champion
- 2001 National Competition – Newton Division Champion
- 2001 “Incredible Play” Award – National Championship – Newton Division
- 2002 Philadelphia Regional Chairman’s Award
- 2002 Championship Team Spirit Award
- 2004 Championship Imagery Award
- 2005 Championship Entrepreneurship Award
- 2005 Championship Chairman’s Award Honorable Mention
- 2006 Championship Engineering Inspiration Award
- 2006 Championship Chairman’s Award Honorable Mention
- 2007 Championship Chairman’s Award
- 2008 Championship Imagery Award

In 2004, Miracle Workerz mentors and supporters formed First State Robotics, Inc., a non-profit 501(c)(3) Delaware corporation. The Miracle Workerz is just one of several programs now operated under the FSR corporate umbrella. FSR also organizes and operates the official First State FIRST LEGO League Tournament/Diamond State FIRST Tech Challenge. Most of our team members participate or volunteer in the operation of this tournament.

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TEAM STRUCTURE/OPERATION

Team Make-up – The team consists of these groups:

- **High school students** - There are no restrictions on which high school the student attends. The team will accept students from grades 9 to 12. However, 9th graders may be required to join the affiliated FTC team.
- **Adult mentors** – They are full team members who attend most team meetings and have leadership roles on the team.
- **Adult supporters** – They assist with various tasks when needed, but do not have leadership roles on the team. They are “honorary” team members, but are not considered to be full team members.

Team Organization

Students are assigned to one or more sub-teams which have specific responsibilities. Team resources can vary among the sub-teams as necessary. Sub-teams vary each year but can include the following:

- **Executive Team** – comprised of key mentors, sub-team leaders and student. This is the main governing body for the team.
- **Robot Drive Team** – responsible for designing and constructing the robot drive system.
- **Robot Chassis Team** – responsible for designing, constructing, and perfecting the skeletal structure of the robot.
- **Robot Electrical Team** – responsible for electrical wiring, circuitry, controller programming, and all electrical components associated with the robot.
- **Robot Pneumatics Team** – responsible for the incorporation of any pneumatic mechanisms on the robot.
- **Robot Specialty Teams** – responsible for designing, constructing, and perfecting specific robot functions that are needed for the current competition goals, such as a ramp, hook, or arm.
- **Programming Team** – writes both autonomous and tele-operated programs and coordinates the sensors that accomplish the game strategies.
- **Animation Team** – responsible for storyboarding, developing, and providing an entry for the Autodesk Animation Awards.
- **Web Team** – responsible for updating and maintaining team website. This includes team schedule, photographs of progress, journal of activities, results of competitions, and “cool” look of the website.
- **Awards and Special Events Team** – responsible for capturing and recording team history, submits awards, develops displays for special events, and presents to judges at competition.

- **Spirit Team** - This team is also responsible for the “look of the team” (jerseys, dyed hair, bandanas, etc), team buttons and giveaways, and the developing/awarding the MOE Awards given to other teams during competition.
- **Competition Team** – operate the robot during competitions. The competition team consists of
 - *Main (chassis) driver*
 - *Robot accessory operator*
 - *Human player*
 - *Strategist*
 - *Coaches*
 - *Back-ups*
- **Scouting Team** – responsible for gathering data and providing competitive information on other teams’ robots, strategies, and performance to assist the MOE strategist and competition team prior to and during competitions.
- **Pit Crew** – responsible for maintaining robot and making engineering upgrades during competitions.
- **MOE Boosterz** – comprised of adults mentors and parents who are responsible for non-robot aspects of the team. This could include guiding/mentoring students, also.
 - **Playing Field Construction Team** – responsible for understanding FIRST - supplied blueprints of the playing field, purchasing materials and building the field to those specifications.
 - **Public Relations** – responsible for getting local community and FIRST community exposure for the team and the robot. This is done through contacts with FIRST, local publications, local television stations, etc.
 - **Fundraising/Sponsorship** – responsible for organizing any fundraising events and obtaining funding and donations (food, supplies, services) for use by the team. This team is also responsible for organizing students’ Thank You notes for the sponsors.
 - **Outreach** – responsible for building relationships with schools, the local community, and other FIRST teams in order to promote the vision of FIRST and to assist/establish other teams.
 - **Travel Logistics** – responsible for detailing logistics for team events where travel/lodging is required. This includes airfare, lodging, transportation, park passes, carpooling, etc.
 - **Food** – responsible for preparing a schedule and the food purchase/ preparation for the team during the competition period (January through March)
 - **MORE programs** – responsible for organizing and running MORE reading education events

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TEAM DEVELOPMENT

Teamwork and engineering skills are developed through participation in team activities throughout the year. Team development activities are divided into three categories: MOE University, independent study, and special team events.

MOE University consists of workshops, which are designed to cover the basic information that everyone needs to understand how the robot works. Any in-depth training on specific skills that are required for a particular sub-team will be done during the build phase or in conjunction with an independent study course. MOE University workshops are mandatory for team members.

MOE Grad School exists to cover a specific subject in more depth compared to a MOE University workshop or to accomplish a task important to the team prior to the build phase. Attendance is voluntary, but will give students added skills to contribute to the team. The independent study group chooses their own meeting time and schedule to complete the study.

Community service events are those activities where members are expected to participate, such as fundraisers, MORE events, community events, or an invitational competition. All team members are required to perform a number of service credits each year.

FUNDING AND FINANCIALS

Team funding comes from three sources: major sponsors, other sponsors, team fundraisers and team member contributions.

Major sponsors supply the majority of the funds used by the team. DuPont Engineering and the DuPont Center for Collaborative Education and Research are the major sponsors for the Miracle Workerz. Major sponsors are solicited typically through the Executive Team.

Other sponsors are companies, groups, or individuals who contribute funds, supplies, or services to our team. They are solicited through team members. Each team member is encouraged to solicit at least one such sponsor.

Team fundraisers are typically held twice a year. Funds can go to the team and/or towards team members' travel accounts. Student team members are expected to participate in both fundraisers.

Team member contributions are funds provided by team members to support the cost of their participation on the team. This covers the cost of food, team shirts, and travel/lodging to competitions. However, if financial difficulties are preventing a team member from contributing, he/she should consult with a member of the Executive Team. No student will be denied membership due to lack of funds.

BUDGET ITEMS

Participation in the FIRST Robotics Competition is not inexpensive. Here are some examples of estimated budget line items in 2009:

* Registration (entitles team to compete at one regional event)	\$6000
* Each additional regional event attended	\$5000

Note: We typically attend 2 local regional events (Philly and one other) and go to the Championships in Atlanta each year.

* Playing field construction	\$500-\$1000
* Robot construction (including back-up robot)	\$3000-\$4000
* Travel to regional	\$300/member
* Travel to championship	\$600/member
* Food	\$150/member
* Team items (banners, giveaways, jerseys)	\$2000-\$3000
* Miscellaneous	\$2000

This is a very expensive endeavor. This is why it is so important for team members to fundraise and to help obtain sponsors.

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STUDENT INVOLVEMENT

FIRST's mission is to excite young adults about science and technology. FIRST does not set requirements for student involvement with their respective teams. These requirements are for each team to determine themselves.

The goal of the Miracle Workerz is to give students as much hands-on experience in the engineering project of building a robot to the specifications of the competition as possible. Students are involved in the following areas:

- brainstorming the design aspects of the robot
- prototyping ideas to see which have merit
- machining parts
- wiring the circuitry for the robot
- designing and mounting the pneumatics components
- programming the controllers and writing computer code for various tasks
- assembling the final product
- testing and troubleshooting
- constructing the playing field
- developing storyboards and creating the animation entry
- recording (via photos and video) team progress
- scouting other teams to obtain competitive information
- participating in community service events

Students are assisted by adult professionals, many being engineers. In addition, students assume leadership positions and represent the team with media, community groups, other teams, and at competitions.

SPONSOR AND COMMUNITY INVOLVEMENT

The primary goal of FIRST is to inspire people to appreciate engineering, science, and technology. As part of this mission the Miracle Workerz promotes interaction with our sponsors and our communities. The robot and the team is available to give presentations as requested by our sponsors.

Because community activities provide opportunities to promote the educational mission of FIRST, the Miracle Workerz value and support community involvement for the team and for individual students.

PARENTAL/ADULT INVOLVEMENT

The Miracle Workerz encourage parents participation whenever possible. As stated earlier, some roles require substantial time commitment and expertise. These require team membership due to their involvement. Other roles do not, such as volunteers for special projects.

PARENT/ADULT TEAM MEMBER – parent who fulfills all expectations of team membership, including meeting attendance, active team participation, and associated financial requirements. Parent Team Members must attend the majority of the meetings to receive full team membership privileges.

PARENT/ADULT TEAM VOLUNTEER – parent who assists the team on certain projects, but who does not meet full team member requirements. Examples of projects may include the building of the competition field, obtaining sponsorship, food deliveries, public relations assistance, supporting the team during competition events, etc. Volunteers can attend meetings when it is convenient.

PARENT/ADULT TEAM SUPPORTER – Family members and friends are welcome at competition and other team events and are encouraged to attend and cheer for the team.

TEAM RULES

To maintain membership in good standing with The Miracle Workerz, each student team member must obey the team rules. Failure to do so may result in consequences up to dismissal from the team.

MOE team members, adults and students, practice “gracious professionalism,” which is expected of all FIRST teams and mentors. It means we act in a manner that makes our grandmothers proud.

Professionalism- attendance and dress

1. We treat each other, as well as other teams, with courtesy and respect.
2. Team members must “sign in” at every meeting and carry their MOE badge on site at all times.
3. Team members must attend 70% of the meetings scheduled in order to stay active.
4. Team members must dress appropriately at all times. Tanks tops, low cut shirts, bare midriffs, and see through or mesh shirts are not professional and cannot be worn at team meetings or events. When working in the machine shop, open toed shoes, sleeveless shirts and shorts, and loose clothing, jewelry and hair or cannot be worn. Specialized ear and foot protection are required in designated areas.

Safety

5. Team members will act in a safe manner at ALL TIMES. This includes during any official or unofficial team meeting, traveling to team events, and during competitions.
6. Team members will obey ALL safety rules of the site and the work area (e.g. wearing proper protective equipment – safety glasses, driving safely on site, etc.)
7. No horseplay will be tolerated on site.

TEAM MEMBER EXPECTATIONS

1. Team members are expected to attend all scheduled full-team meetings, to arrive at the proper start time of the meeting, and leave at the proper finish time.
2. If a team member cannot attend a meeting, he/she must contact their sub-team leader, or if necessary another adult leader on the team via e-mail or phone **PRIOR TO THE MISSED MEETING**.
3. Team members are expected to keep current with team activities, deadlines and requirements (paperwork, forms, money due, etc.). Team members can do this by attending all meetings, calling the team hotline (**302-774-4588**), or by checking updates on our team website (**www.moe365.org**).
4. Team members are expected to actively participate in meeting activities.
5. Team members are expected to take initiative to determine what tasks need to be completed in support of the team. Some downtime (lack of having a team task to work on) is expected. Excessive downtime will not be tolerated.
6. The Miracle Workerz Robotics Team is an opportunity to learn from professionals and accomplish a formidable task. It is not a social club. We do expect social interactions to occur as we build a true team. However, our team meetings and events (competitions, community events) are not the place for excessive socializing **or** displays of affection.
7. It is expected that each team member be responsible for whatever tasks he/she has agreed to complete. It is very important to the team that members are reliable when they say they will do something.
8. Team members are expected to promote FIRST and technology education in their communities and schools. This may entail participation in presentations about FIRST Robotics.
9. Team members are expected to write “Thank you” letters to team sponsors in a timely manner.
10. **HAVE FUN!!!!!!** Being an active member of this team takes much work, but the rewards are definitely worthwhile. Take advantage of this.

STUDENT MEMBER SELECTION PROCESS

The Miracle Workerz has a maximum student membership of 35 students. The procedure for the selection process is as follows:

- PHASE I: Students returning completed applications by the due date will receive invitations for the Kick-off event.
- PHASE II: MOE University attendance is required for membership. Failure to attend these sessions without a valid reason will result in dismissal from the team.
- PHASE III: If required, after the Duel on the Delaware event in October, decisions will be made on final team membership. The criteria used to make this decision will include:
- meeting attendance
 - team participation
 - initiative and enthusiasm
 - having all required forms completed
 - having all required fees paid

The selection decision will be made by the Executive Team.

- PHASE IV: If a student does not follow the team rules or meet the team expectations after team selection is completed, he/she may still be dismissed from the team. The Executive Team will make these decisions as necessary.

NOTE: In addition, if more than 35 students apply for membership, it may be determined that the younger students will be invited to join the FIRST Tech Challenge Team 365 for one year. FTC teams are separate from FRC teams; however they may participate in some shared activities, such as fundraising and community events. After one year, they will be automatically eligible to join MOE 365.

MEETING SCHEDULE

Our team season officially begins with a kick-off event in early September. Following the kick-off, MOE University will commence. The purpose of MOE University is to provide an understanding and some level of skills training for students prior to the start of the competition.

MOE University ends in December, when the focus turns to the requirements of the actual competition. The FIRST Robotics Competition kick-off event occurs in early January. From that point, teams have six weeks to design, build, test, and ship a robot that will compete in that year's challenge.

Regional competitions are held in March and early April. The Championship is held every year in April. It is scheduled to be held in Atlanta for the next few years.

As stated above, team members are asked to participate in community service events throughout the year. After the Championship in April, students are encouraged to arrange presentations at their high schools to further interest in the program and help recruit students for next year.

MOE University - September through December

Meeting day: MONDAYS

Meeting time: 6:00-8:00PM (Machine Shop sessions may last until 8:30PM)

Robot Build - January through March

MONDAYS 5:30-8:00PM

WEDNESDAYS 5:30-8:00PM

THURSDAYS 5:30-8:00PM

SUNDAYS 1:00-5:00PM

Competitions - March/April

To be communicated

FINANCIAL REIMBURSEMENT POLICY

(Costs are estimates and may vary)

Meals with the team Three meals per week, January through March, due by December 15th. If you cannot continue with the team, please let us know by the beginning of the month and we will reimburse you for the remaining meals.

Team jerseys Payable by December 15th. Once the shirts are ordered no reimbursement will be made.

Travel payments All students are encouraged but not required to travel to competitions. Payments for travel with the team are due on specific dates – typically (but subject to change) 1st payment by December 15, and final payment by February 15th.

****Your student will be told the final date after which there is reimbursement.**

Rental of a bus for travel to a competition - once the bus is ordered and paid there is no reimbursement.

Airline tickets - tickets are non-refundable once purchased.

Hotel accommodations - after the deadline there will be no reimbursement

Other travel expenses – may be non-refundable depending on expense

Let us know as soon as possible if plans change and you cannot travel with the team. If we are informed before the deadline you will be reimbursed whenever possible.

SAMPLE FUNDRAISING AND SPONSORSHIP LETTERS

These are sample letters team members have used in the past to raise money for their travel accounts and for the team. Feel free to personalization for your own use. They are available electronically from the Boosterz along with team letterhead.

Dear Family and Friends,

I have recently joined the Miracle Workerz Robotics team, and in just a few months, we will be building a robot to participate in the FIRST robotics competitions. FIRST stands for “For Inspiration and Recognition of Science and Technology” and is a program designed to interest high school students in careers in science and engineering. The Miracle Workerz team is one of the premier FIRST organizations in the nation. We plan to take our robot to compete at regional competitions in Philadelphia and Pittsburgh, and then join the best of the best at the National Championship event in Atlanta next April. Our team won the National Championship in 2001 with the robot Lil’Moe. (See our team website www.moe365.org for recent competition photos)

I first learned about the team in July of 2002 during DuPont’s 200th anniversary celebration. There was a demonstration by the Miracle Workerz team with that year’s robot, MoeHawk, in which they displayed the robot’s abilities to maneuver with ease on a small platform and carry out multiple tasks. This demonstration caught my eye, and from that point on I felt as if it was my destiny to join the team. My 8th grade science fair project was on robotics, and one of the team’s professional engineers was able to bring one of our robots to class for a demonstration. As you may know, I have an obsession with building and engineering, especially with Legos. The FIRST robotics program is a logical and major step up from Legos, and I feel ready to take the leap.

The team is mentored by professional engineers who volunteer their time to guide students through this program. We will work together to design and build a robot that will play a new and exciting game, which will be introduced in January. As a team member, I will be learning about engineering, project planning, computer programming and public speaking as well as other valuable skills. Students participating in the FIRST program are also eligible for over \$5 million in scholarships for college, and they can earn college credits at a local community college.

Although corporate sponsorships cover some of the costs, each team member has a financial obligation. I have made a commitment to raise \$1,000 towards the team expenses and travel costs, and would appreciate your help to reach this goal. For those of you who feel you can help me financially for the 2005 Robotics season, I truly appreciate it! However, best of all, I am glad that I can count on you for your continued encouragement and support! Thank you in advance for your support of me . . . and The Miracle Workerz.

Sincerely,

Please complete the contribution information below. Enclosed you will find a stamped self-addressed envelope. Donations are due by December 31, 2004. You may visit the team's website at www.moe365.org for more information.

ALL DONATIONS ARE TAX DEDUCTIBLE. First State Robotics is a 501(c)3 non-profit organization and all donations are 100% tax deductible. The EIN (tax ID number) for First State Robotics is 20-0613902.

Please return this form with your donation.

I wish to support the Miracle Workerz Robotics Team for the 2005 Season

Donor's Name: _____ Email: _____

Address: _____ Phone: _____

City: _____ State: _____ Zip: _____

Robotics Team Member's Name: _____

Please make checks out to **"First State Robotics"**

Donation Amount: \$ _____

Signature: _____ Donation Date: _____

Pollution, energy shortages, lack of sufficient drinking water, insufficient food, disease; we all know about these and other tough challenges facing our world today. Scientists have made great strides in alleviating many of these problems through engineering, invention and technology. But we are leaving many of these issues to our children's generation to solve. Who are these scientists and innovators of tomorrow? The reality is, there are too few students interested in pursuing careers in the sciences and mathematics.

It was in response to this lack of talented minds entering the sciences that inventor Dean Kamen began FIRST (For Inspiration and Recognition of Science and Technology). Involvement in the FIRST program exposes young people to the world of engineering and inspires them to pursue intellectual excellence. Talented professionals mentor young people through the process of solving complex and challenging questions in a fun and exciting atmosphere.

First State Robotics began five years ago, when a group of local engineers recognized the value of the FIRST experience for the development of the scientists of tomorrow. The Miracle Workerz Robotics Team for high school age students has been a huge success. In five short years the programs has already achieved national recognition and sent numerous students off to higher education in the sciences.

Participation in the FIRST sponsored competitions is effective, but it is not inexpensive. Originally, the Miracle Workerz was sponsored almost entirely by corporate donations. But, now we must expand our resources and diversify our sources of support in order to continue to offer a growing quality program. To further this effort, First State Robotics was incorporated as an independent 501(c)3 non-profit in December 2003. We have developed a nationally recognized program with talented, dedicated mentors. We have committed corporate sponsors. But we still need your help. Will you make a tax-deductible contribution to the development of the scientists who will help solve the problems of tomorrow?

If you would like more information about our program, please check out our website at www.moe365.org, which also has a link to the national FIRST organization. Please feel free to contact John Larock (302-774-0311) or Karen O'Brien (610-932-4755) with any comments or questions!

Sincerely,

Sample letter to get your school to help cover your expenses

Mr. or Mrs. _____, President
_____ High School

Wilmington, DE

Dear _____ :

The _____ High School in Wilmington and First State Robotics share a very successful relationship. Each year, your students contribute to First State Robotics' winning team and learn a great deal in the process. Our program enriches what your students learn in the classroom. Information about the team is enclosed.

Please consider helping to defray the costs incurred by the _____ students on the team this year. We believe this is a good opportunity for the _____ school for the following reasons:

- This year students on the team will earn awards and recognition in regional competitions. This success enables them to compete in the National competition in Atlanta in April 2007.
- Several team members were instrumental in launching and mentoring programs such as the Ulster project, MORE-a reading program where students attend demonstrations at Libraries and read to younger students; and attending many other volunteer events supported by First State Robotics.
- Each student pays for his/her own participation in the team's competitions.
For example, each student attending the competitions in must pay \$800.
- At least one other high school is funding the cost of its students' participation in the First State Robotics team.
- _____ High School benefits from the fact that students on the team are supported by a major corporate sponsor (DuPont) and coached by professional mentors from many different companies in our area, who volunteer countless hours of their time.

Please consider sponsoring each student. Your funds would be directed to First State Robotics, Inc. This money will go towards your students' accounts. If you have any question please call John Larock (302-774-0311) or Karen O'Brien (610-331-2368) or visit our website: www.moe365.org.

Student Member Contract

**** REQUIRED DOCUMENT ****

I _____, agree, as a member of the Miracle Workerz, to
(print name)

1. Follow the TEAM RULES as communicated by the adult mentors.
2. Meet all the TEAM EXPECTATIONS as documented on the Team Expectations Chart.
3. Conduct myself in a safe manner in all situations where I am acting as a member of this team.

By not adhering to this contract, I realize that my behavior may result in consequences up to and including termination of my team membership.

Dated this _____ day of _____, 20____

By: _____
(student signature)

(parent / guardian signature)

FOR REFERENCE ONLY

CONSENT, RELEASE, AND HOLD HARMLESS AGREEMENT, AND AUTHORIZATION TO REPRODUCE PHYSICAL LIKENESS

As used below, "FIRST" shall mean **United States Foundation For Inspiration and Recognition of Science and Technology**. As used below, "DuPont" shall mean **E. I. DuPont de Nemours and Company, Inc.**, and its board, officers, directors, employees, agents and assigns or any third party designated by DuPont at any time, including without limitation, television, broadcast, video, print, and publication. As used below, "First State Robotics" shall mean **First State Robotics, Inc.**, and its board, officers, directors, employees, agents and assigns or any third party designated by First State Robotics at any time, including without limitation, television, broadcast, video, print, and publication. As used below, "Participant" shall mean any individual, student, mentor, teacher or volunteer involved in a FIRST, First State Robotics, or DuPont event.

In consideration of the acceptance of my participation in any FIRST competition and/or related FIRST, First State Robotics, or DuPont programs, meetings, activities, or events (collectively, the "Events") as an individual and as a member of or participant in any activity sponsored by First State Robotics, I agree to the following:

I hereby grant to First State Robotics the right to photograph, record, and/or videotape me and/or my guests and invitees during my participation in an Event. I further grant to First State Robotics, forever and throughout the world, the right to use, reproduce, distribute, and otherwise use or license the right to reuse such photographs, recordings, and videotapes of my participation and my guests or invitees, during my participation and thereafter, as First State Robotics may desire, in all media and in all forms and for all purposes, including without limitation, advertising and other promotions. I understand that First State Robotics is not under any obligation to exercise any of their rights, licenses and privileges herein granted. Each such photograph, recording, and videotape shall be a work for hire and First State Robotics shall be deemed the owner of any copyright and/or trademark rights therein (and all applications for, registrations of, and renewals resulting therefrom). If, however, the work is deemed not to be a work made for hire by a court of competent jurisdiction, then this Consent, Release, and Hold Harmless Agreement and Authorization to Reproduce Physical Likeness ("Release") shall constitute an irrevocable assignment of the worldwide right in the work to First State Robotics.

The undersigned being fully cognizant of the risks in participating in an Event, hereby assumes the risks of bodily injury (including, without limitation, death) and property damage, inherent in such participation. Except to the extent due to the gross negligence or willful misconduct of First State Robotics and/or DuPont, to the fullest extent permitted by applicable laws, I hereby waive any claims or causes of action which I may now or hereafter have against First State Robotics and DuPont arising out of my or my guest's or invitee's participation, and I hereby agree to protect, defend, indemnify and hold harmless, and reimburse First State Robotics and DuPont against any and all loss, claims, lawsuits, liability, expenses and attorneys' fees and costs of any kind and nature whatsoever which DuPont and/or First State Robotics may incur arising out of or in common with any claimed damage to or loss or destruction of property, or because of claims, demands, lawsuits, actions, settlements, or judgments whatsoever for bodily injury, sickness or disease, including death, sustained by any person resulting from or in connection with or by reason of the participation in any Event connected thereto by me or my guests or invitees, including any such claim or proceeding based in whole or in part on any alleged negligence, strict liability, contribution, indemnity or other allegation against DuPont or First State Robotics except the sole and exclusive conduct of DuPont or First State Robotics. This party intends this indemnification to be given its broadest applications to all claims.

I hereby release First State Robotics and DuPont and their respective successors, affiliates, licensees and assigns from all claims, demands, liabilities, damages, costs and expenses (including, without limitation, attorneys' and other professional fees and expenses) that I may now or hereafter have against First State Robotics and/or DuPont arising in connection with my participation in the Event and First State Robotics' and/or DuPont's exercise of rights hereby granted, including, without limitation, claims for compensation, defamation, or invasion of privacy, or other infringements or violations of personal or property rights of any sort whatsoever.

In the event I should sustain injuries or illness while involved in an Event, I hereby authorize First State Robotics and/or DuPont to administer, or cause to be administered such first aid or other treatment and medications I may bring as necessary under the circumstances, to include treatment by a physician or hospital of First State Robotics' and/or DuPont's choice.

This Release shall be binding upon my heirs, personal representatives and assigns and me and shall be governed by and construed under the laws of the State of Delaware without regard to conflicts of laws principles. Venue for any legal action arising out of or in connection with this Release shall be in New Castle County, Delaware, and jurisdiction shall be vested exclusively in the Court of Common Pleas, Superior Court, or Chancery Court in and for the State of Delaware, as appropriate; or, if appropriate, in the Federal District Court for the District of Delaware. This Release constitutes the entire agreement among the parties hereto with respect to the subject matter of this Release and supersedes any and all previous agreements among the parties, whether written or oral, with respect to such subject matter. This Release does not affect any other releases, waivers or agreements entered into by the parties hereto.

Signature: _____ Date: _____ Age: _____ Gender: _____

Name (Printed) _____ Address: _____

Phone: Home _____ Work _____ City: _____ State: _____ Zip: _____

For those persons under the age of eighteen (18) years: I hereby consent and agree to the above as the Parent or Legal Guardian of

_____ (minor's name), in which case "I", "me", and "my" as used herein shall refer to said minor.

I also grant permission for said minor to participate in the FIRST Robotics Competitions and related activities of FIRST and First State Robotics as a member of the Miracle Workerz Robotics Team.

Signature of Parent or Legal Guardian _____

Printed Name of Parent or Legal Guardian _____

Date _____

2007-08 CONSENT, RELEASE, HOLD HARMLESS AND AUTHORIZATION TO REPRODUCE PHYSICAL LIKENESS

Program: FRC FTC FLL JFLL Event(s): _____ Team# _____

Role: ☐ Mentor ☐ Team Leader ☐ Student Participant ☐ Volunteer

This is a Consent and Release of Rights in favor of the United States Foundation For the Inspiration and Recognition of Science and Technology, and its officers, directors, employees, and assigns ("FIRST"), as well as entities designated and approved to assist FIRST in managing, contracting, sponsoring, hosting, conducting, evaluating or publicizing (including individuals and entities working with FIRST in print, publication, television, broadcast or video media) FIRST's programs ("FIRST's Cooperating Entities") including any and all FIRST Place, the FIRST LEGO® League ("FLL"), Junior FIRST LEGO League ("JFLL") FIRST Tech Challenge ("FTC"), and FIRST Robotics Competition ("FRC") Events (the "FIRST Events"). As used below, "Participant" shall mean any individual, student, mentor, teacher, or volunteer involved in a FIRST event. In consideration of the acceptance of my participation in one or more FIRST Events, I agree to the following:

I hereby grant to FIRST, to FIRST's Cooperating Entities, and to the press and media admitted into FIRST Events the right to photograph, videotape, or otherwise digitally collect my likeness, voice and sounds (as "Works") during my participation at the FIRST Event(s). I further acknowledge the Works by FIRST and the FIRST's Cooperating Entities to be works made for hire, and otherwise irrevocably assign and grant to FIRST and to FIRST's Cooperating Entities all rights in these Works and the right to use or sublicense these Works and my name, likeness and biography, in FIRST's discretion, in all media and in all forms and for all purposes, including without limitation, advertising and other promotions for FIRST or the FIRST's Cooperating Entities, without any further consideration to me or any limitation whatsoever. It is a FIRST policy not to print a minor's name with his/her picture without specific permission from his/her parent or guardian.

There are risks inherent in participating in FIRST Events including the risks inherent in the construction of robots and LEGO structures, as well as in working with electrical connections, traveling to and from events, and participating in public competitions. These risks include the risk of bodily harm, including without limitation, death, disfigurement, and injury. Being fully cognizant of the risks in participating in an Event, I hereby assume the risks. Except to the extent due to the negligence or willful misconduct of FIRST or FIRST's Cooperating Entities, I hereby WAIVE ANY CLAIMS OR CAUSES OF ACTION which I may now or hereafter have against FIRST and FIRST's Cooperating Entities arising out of my participation in any FIRST Event, and I will indemnify and hold FIRST and FIRST's Cooperating Entities against any and all claims resulting from such participation.

I HEREBY RELEASE FIRST and FIRST's Cooperating Entities and their respective sponsors, affiliates, licensees and assigns from all claims, demands, liabilities, damages, costs and expenses, attorneys' fees, or other reasonable fees and expenses, and any claims including, without limitation, claims for compensation, defamation, or invasion of privacy, or other infringements or violations of personal or property rights of any sort whatsoever that I may now or hereafter have against FIRST and FIRST's Cooperating Entities arising in connection with my participation in any FIRST Event.

In the event I should sustain injuries or illness while involved in an FIRST Event, I hereby authorize FIRST and FIRST's Cooperating Entities to administer, or cause to be administered, such first aid or other treatment and medications I may bring as may be necessary under the circumstances, to include treatment by a physician or hospital of FIRST's or FIRST's Cooperating Entities' choice.

This Release shall be binding upon my heirs, personal representatives and assigns, and me and shall be governed by and construed under the laws of the State of New Hampshire, which shall be the venue for any legal action. This Release constitutes the entire agreement among the parties hereto with respect to the subject matter of this Release and supersedes any and all previous agreements among the parties, whether written or oral, with respect to such subject matter.

FIRST strongly believes in confidentiality of all contact information. FIRST promises that it will not rent, sell or distribute this contact information to any organization other than those directly involved in the operation and support of FIRST programs. FIRST will be using the personal contact information provided here as part of its participant database and to contact the FIRST participant and/or the participant's guardian as part of its research, program evaluation, or alumni outreach efforts, or other related outreach activities as they may occur.

Unless I check this box ☐ to remove my consent, I hereby grant to FIRST the right to use the personal contact information provided here for FIRST's research, program evaluation, alumni efforts and/or other outreach activities.

I understand that this form involves a release of legal rights.

Participant Name (Print Clearly) _____ Participant Signature _____ Date _____
 Address: _____ City: _____ State: _____ Zip: _____
 Phone: Home () _____ Email address: _____
 Gender: _____ (M) _____ (F) _____ Date of Birth: Month: _____ Date: _____ Year: _____
 Race (optional) [Please check one]: ☐ African-American ☐ Asian/Pacific Islander ☐ Native American/Alaskan ☐ White ☐ Multiple races
 Ethnicity (optional): ☐ Hispanic ☐ Non-Hispanic

For Participants under the age of eighteen (18) years listed above: I hereby consent and agree to the above on Page 1 (one) as the Parent/Legal Guardian of _____ (minor's name), in which case "I", "me" and "my" as used herein shall refer to said minor.

Parent or Legal Guardian Signature _____

Print Parent or Guardian Name _____

