

The Fighting Calculators

FIRST Robotics Competition Team 2175

BUSINESS PLAN



Math and Science Academy



http://www.fightingcalculators.org/

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"To transform our culture by creating a world where science and technology are celebrated and where young people dream of becoming science and technology leaders."

Dean Kamen, FIRST Founder

1. Team Philosophy

FIRST's (For Inspiration and Recognition of Science and Technology's) Mission: To inspire young people to be science and technology leaders, by engaging them in exciting mentor-based programs that build science, engineering and technology skills that inspire innovation, and that foster well-rounded life capabilities including self-confidence, communication, and leadership.

The Fighting Calculators's (FIRST Team 2175's) mission is to provide the chance for youth to participate in FIRST Robotics Competition, to prepare for college and careers, and to become the problem-solvers of the future. Our goal is to excite youth about the opportunities and rewards in Science, Technology, Engineering and Mathematics (STEM), to increase self-confidence, and to build life skills. We partner with mentors from industry and academia to broaden students' perspectives. The team is student-led and student-driven; with mentors who provide support, encouragement, direction, and education.

We subscribe to two of FIRST's foundational philosophies:

- **Gracious Professionalism:** A way of doing things that encourages high-quality work, emphasizes the value of others, and respects individuals and the community.
- **Coopertition:** The idea of both competing against and cooperating with one another at the same time.

2. Team Organization

The Fighting Calculators are organized into an Executive Committee that oversees the entire team operations and three Branches that coordinate activities. The Technical Branch oversees the robot design and builds operations, the Competition Branch oversees both formal and informal competitions, and the Administrative Branch oversees fundraising, outreach, transportation and other functions. Each of the Branches is divided into sub-functions, which concentrate on specific roles and responsibilities. In general, all sub-functions are 3-tiered. A mentor is assigned to provide guidance, education and encouragement, a senior team member is assigned to lead the effort, and other students are assigned to the team to both accomplish the mission of the team and prepare for the leadership role in the future.

An organization chart is provided in Tab A.

3. Communication Plan

The team uses a variety of communication techniques to ensure that team members, mentors, parents and the public are kept informed, including:

- a. Google Group (http://groups.google.com/group/frc-team-2175)
- b. Wiki (http://roboticsdev.mnmsa.org/wiki)
- c. Email
- d. Website (http://www.fightingcalculators.org/)
- e. Facebook (http://www.facebook.com/frc2175)
- f. Twitter (http://www.twitter.com/frc2175)
- g. Blog (http://www.fightingcalculators.org/blog)

The main communication tool used is a "Google Groups" networking system. The Google Group is only open to registered team members, mentors and parents, but is closed to the general public. The Google Group provides opportunities to store historic documents, to post current files, and to communicate via subject-specific blogs.

The Wiki system allows interactive collaboration of working documents.

Email is used extensively for communicating among parents. Each season, we create an email distribution list of parents. This distribution list is used throughout the year to keep parents informed about team activities.

The website is used to keep the public informed about the Fighting Calculators and to help increase brand awareness. The website serves as a portal for team members to access the wiki and our files storage pages. We host the live webcast from both Minneapolis Regionals and use the webpage as an access point for the public to view the webcast.

Facebook and Twitter are used for increasing brand awareness and engaging with fans.

The purpose of the blog is to help the team stay easily connected with what went on at the shop even if they were not present. It is also useful for non-team members, parents, and sponsors to follow our progress.

4. Financial Plan

It costs over \$15,000 to compete in the FIRST Robotics Competition. This cost covers parts, tools, competition registrations, etc. Over the years, the Fighting Calculators have built a broad base of financial support. The main source of funding comes from corporate donations. 3M is our main corporate sponsor. We actively engage 3M representatives, as well as representatives from our other sponsors, in team activities. Several 3M employees serve as mentors. This provides a double bonus, because as well as their technical expertise, the team receives a monetary donation for each 3M employee that donates at least 20 hours of time.

We engage our corporate sponsor through several avenues:

Employees serving as mentors

- Shop open houses
- Design review and assistance
- Invitations to regional competitions
- Newsletters and periodic email communications

We provide recognition to our sponsors in proportion to the level of sponsorship provided. Smaller donations are acknowledged on our website, while larger donations are recognized with logos displayed on out T-shirts and on our robot. A flier of sponsorship levels is developed each year and is attached at Tab G.

We use other sources of income to supplement the corporate donations and to increase FIRST awareness in the community.

Gas Card Sales: We have arranged through Kwik Trip and our school to sell Gas Gift Cards. The school gets 10% from Kwik Trip, and the Fighting Calculators get 40% of that. Gift cards can be sold to friends, neighbors and coworkers and it doesn't cost them any more than they already spend on gas. This easy fundraiser helps to get entire families involved in the fund raising effort and increases their level of commitment to FIRST.

Linder's Flower Sales: We have also arranged with Linder's Greenhouses to sponsor flower sales. Coupons are distributed through team members to family and friends. For a specific time period, Linder's donates 15% of total sales from customers who present a Fighting Calculators coupon. Similar to the gas gift cards, these coupons don't cost friends any more than they would otherwise spend, and it increases the number of families actively supporting the team.

Every fall, the team meets to prepare for the upcoming robotics season. This includes preparing a budget for the year. We have noted that having the funding necessary to attend 2 Regional events makes a significant difference in our team's performance. The robot invariably works much better at the second regional after working out any bugs during the first competition. It is therefore our current goal to consistently be able to afford to attend 2 competitions. Our budget, and our fund raising, is geared toward this goal. A copy of our budget is attached at Tab D. The Math and Science Academy serves as our banker. Income, including student fees, checks from sponsors, etc., is deposited with the school. We then use school purchase orders and/or checks to pay for expenses throughout the year. The school maintains a running balance sheet and this is reconciled monthly. The balance sheet is attached at Tab E.

5. Strategic Partnerships

The Math and Science Academy is a small public charter school in Woodbury, MN with an enrollment of about 350 and a High School enrollment of 125. MSA does not have any shop facilities. For the first several years, the Fighting Calculators built their robot in makeshift facilities, like the basement of an office building or the corner of a warehouse. We did not have proper (any!) power tools other than a hand drill and a jig saw. In the fall of 2009, we facilitated and mentored the start-up of 3 new FIRST Robotics Competition teams in the Woodbury area. The new teams were:

Team 3130: East Ridge ERRORS

- Team 3206: Woodbury High School
- Team 3883: Park High School







In particular, we began a strategic partnership with the East Ridge ERRORS team. East Ridge has a fully equipped metal shop. Both teams use the shop during the build season. The teams cooperate on training, and share prototype ideas, tools and equipment. Both teams combine resources to provide meals and snacks for the team members, etc. It is a very advantageous relationship for both parties, a definite win-win situation.

6. Outreach Plan

The Fighting Calculators are committed to spreading the word about FIRST. We have seen many examples of FIRST providing the self-confidence, leadership communication and technical skills needed to thrive in STEM education and into STEM careers. We have several Fighting Calculator Alumni that have returned after college to serve as mentors on the team. One of the founding team members has completed college and is now working as a technical advisor for FIRST! Because of our commitment to spreading the work of FIRST, we outreach into the community in many ways, including:

- **Mentoring other teams:** As noted above, the Fighting Calculators have started 3 new teams in Woodbury. In addition, an alumnus of the Fighting Calculators moved to Salt Lake City and started a team there.
- **Training and Education:** The team hosts CAD and programming training sessions in the summer and invites members of other teams to attend.
- **State Fair:** The team demonstrates robotics at the Minnesota State Fair every summer. In 2010, we took first place in their competition.
- Open Houses at MSA
- Open Houses at the shop: This year, we were able to get representatives from Senator Franken's office to visit the shop and learn what we are doing to promote STEM. They were very impressed and we have since developed a working relationship with them. Senator Franken is a strong supporter of legislation to improve STEM education.
- Community Demonstrations: This year, the Fighting Calculators are giving two STEM based demonstrations. One is to a class of third graders at Middleton Elementary, and another at Washington County's 4-H STEM Education Workshop.

Brand Recognition: One of the outreach principles that we cultivate is brand recognition. The Fighting Calculator is promptly displayed wherever we go. We have a Fighting Calculator mascot, a Fighting Calculator flag (Calculator on a Stick – COS – i.e. cosine), Fighting Calculator logo wear for both team members and non-members, Fighting Calculator bling to

hand out at competitions, and the logo displayed both in our pit and on our website. Other teams have told us that brand recognition has helped us during alliance selections because the Fighting Calculators are well known.

7. Safety Plan

A strong safety culture is necessary when working in a metal shop and around power tools. We have a dedicated safety captain to oversee our safety program. We insist on safe practices, including the wearing of safety goggles, whenever we are at the shop. We also practice safety during transportation to and while at competitions away from the shop.

8. Transportation Plan

Transportation plans are developed for each away competition. The plans cover all the details of:

- Who
- When
- Transportation options
- Costs
 - Bus or carpool costs
 - Hotel costs
 - Spending money needed
- Deposit and Balance due scheduled
- Permission slips
- Medical forms
- Liability waivers
- Code of conduct
- Emergency contact info
- Detailed agenda
- What to bring

9. Build Process

The build season starts with Kick-Off. The team attends Kick-Off in person at the University of Minnesota. We then head back to Woodbury to strategize the game.

Week 0 – Elect Captain and get ready for build season.

Week 1 – Game analysis, brainstorming, sub-team assignments, field element construction

Week 2 – CAD layout, prototyping, drivetrain decisions

Week 3 – Continue CAD, refine prototyping, chassis construction

Week 4 – Drive train assembly, CAD refinement, component construction, programming

Week 5 – Complete construction, Drive test, refine programming

Week 6 – Attend pre-season competition, adjust program and make robot revisions

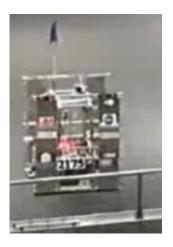
10. Long Term Survival

Nobody likes to think about what would happen if all of our funding got cut but it is something that we have a plan for. Beginning in 2013 the Fighting Calculators have a line item in the budget just for this scenario. We are planning on putting \$1,000 or more a year until we reach what we deem enough to run a successful season without sponsors. This amount includes the registration fees for up to 3 events (Championships and 2 Regionals) and enough to build a successful robot.

It is inevitable that students graduate and move on. That means that we won't have the same marketing people working on funding forever, thus creating the need to train new members in the art of fundraising. The students mainly learn on the job with an older student mentoring a younger one.

11. Team History

FIRST Team 2175, The Fighting Calculators, was organized in the fall of 2006 using a grant from NASA and support from 3M.



2007: In our debut year of 2007, the game was Rack and Roll™. The objective was to strategically place inflatable rings on a metal rack and/or lift robots off the ground to score points. Our robot was primarily defensive, preventing other teams from placing rings. We were very successful at the Wisconsin Regional Competition. Our team placed 2nd out of 52 teams with our alliance partners 930 and 2039, winning the Regional Finalist Award. We also took home the Highest Rookie Seed Award.



2008: The 2008 game was Overdrive™, and involved racing around a track and lifting 40" trackballs over a 7' rack. Our robot was very maneuverable and could move the trackballs up and down with a pneumatic arm. We competed in the first ever Minnesota regional, in Williams Arena at the University of Minnesota. We went 3-5-1 in the qualification matches and were selected to join the 6th seeded alliance with teams 2472 and 1756 in the elimination matches. We defeated the 3rd seeded alliance and then lost in the semi-finals.



2009: In 2009, FIRST® surprised us with a unique game called LUNACY™. Every robot was required to use the same hard slippery wheels on a hard slippery floor called "regolith", simulating the Moon's low gravity and traction. Our robot, aptly named "Box o' Rocks", was built out of plywood and shot the moon rocks from the top into the opposing alliance's trailers. That year, the number of teams in Minnesota nearly doubled, so there were two regional events in Minnesota: 10,000 Lakes and the North Star Regional. We participated in the North Star Regional. Teams 171 and 525 picked us to ally with them as the 8th seeded alliance. We defeated the 1st seeded alliance and then lost to the 4th seeded alliance in the semi-finals.



2010: BREAKAWAY™ was the 2010 FRC® game. The field was divided into 3 sections by two large bumps. There were 12 soccer balls which could be scored in goals at each corner. In the center of each bump was a tower from which robots could hang at the end for extra points. We built a six-wheeled robot that could cross the bumps safely, score soccer balls with a roller and kicker mechanism, and hang from the tower with a pneumatic arm. It was named "The Multiplier" in reference to the large structural X on the back. We again competed in the North Star Regional, this time joined by our new friends, Teams 3130 and 3206. We also applied for the Chairman's award for the first time. Team member Aren Siekmeier was named a Dean's List Finalist at the North Star Regional.





2011: In 2011, FIRST introduced us to the new game LOGOMOTION™®. The goal was to bring triangular, circular, and square tubes across the open field and place them on a rack to make FIRST logos. At the end of the match, teams deployed minibots to race up poles for bonus points. Our robot featured an elevator with a pneumatic gripper that could reach all rack positions and pick up tubes from the floor. For the drivetrain, we tried something new, called "Slide Drive," with four omni wheels in a standard tank configuration plus a fifth pointed sideways in the middle, giving us 3 degrees of freedom. Our minibot deployment had a springloaded fork for self-alignment on the tower, and its appearance lent itself to our robot's name. Scorpion. We competed at the North Star Regional, where we were semifinalists as the number 5 seed with 1816 and 1652, and the Championship in St. Louis, where we came in 52nd place out of 88 teams in Archimedes division. Mentor Will Preska received the Woodie Flowers Finalist Award at the North Star Regional.

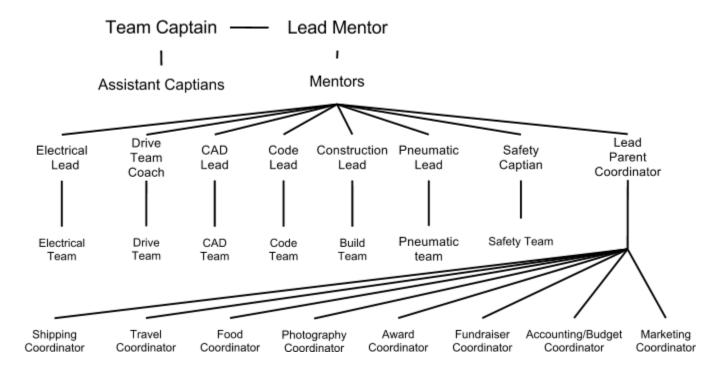
2012: In team 2175's sixth season FIRST gave us a basketball like game, called Rebound Rumble. The purpose of the game was to score eight inch foam basketballs into basketball hoops which were arranged at three different levels, the higher the basket the more points you get, and to balance as many robots on three bridges as you can at the end of the match. The Fighting Calculators robot, Blue Thunder, had a tank drive this year with ten four To push down the bridges we inch wheels. designed a ski that deflected the bridge allowing us to drive onto it. To collect basketballs we had an intake roller that pulled balls into a "queuing tower" where they would wait until we shot them. To shoot the balls we used a pitching machine type mechanism. Wheels would spin up and then shoot the ball out. This year was the first year we attended two regionals. (North Star and Lake Superior) At Duluth we were picked by the third seed alliance, captained by 1625. In the end we were eliminated in the quarterfinals but brought home the Coopertition™ award for our bridge balancing. At North Star many we seeded 15th overall and were picked by the sixth seed alliance, captained by Miller Bots. We were eliminated in the quarter finals but won the creativity award for our innovative parking brakes and balancing abilities.



2013: The 2013 FRC Game "Ultimate Ascent" is a game where robots try to score Frisbees into goals and at the end of the match, try to climb a pyramid. The Fighting Calculators' robot - Trap - performed very well. In our first regional, we were ranked 8th, and were asked to join the 2nd seed alliance. We were then eliminated in the guarter-finals. At the competition we also won the Entrepreneurship Award. At our second regional, we did much better we were ranked 4th and were asked to join the eventual 2nd seed alliance. We advanced through the bracket and ended up winning the regional. We also won the Team Spirit award. By winning this regional, we were allowed to go to the FIRST World Championships in St. Louis, MO. There, we did decently and were once again selected by the 2nd seed alliance. This time we were eliminated in the Finals of the Galileo field, making us World Quarter-Finalists. Back in Minnesota we were invited to the MSHSL State Tournament where we were ranked 8th and were asked to join the 1st seed alliance. We then went on to win the tournament. This season is the best season that the Fighting Calculators have ever had.

YEAR	GAME	EVENT	RESULTS
2007	Rack 'N' Roll	Milwaukee Regional	Highest Rookie Seed; Regional Finalists
2008	Overdrive	Minnesota Regional	Semi-Finalists
2009	Lunacy	Minnesota North Star	Semi-Finalists
2010	Breakaway	Minnesota North Star	
2011	Logo Motion	Minnesota North Star	Semi-Finalists; Woodie Flowers Finalist
2011	Logo Motion	FIRST Championships	
2012	Rebound Rumble	Lake Superior	Quarter-Finalists; Coopertition Award
2012	Reboulla Rullible	Minnesota North Star	Quarter-Finalists; Creativity Award
		Northern Lights	Quarter-Finalists; Entrepreneurship Award
2013	Ultimate Ascent	Minnesota North Star	Regional Winners; Team Spirit Award
		FIRST Championships	Galileo Division Finalists
		MSHSL Championship	State Champions

TAB A: Organization Chart



General Job Descriptions:

- Food Coordinator: Coordinate volunteers to provide meals during the build season.
 Coordinate with East Ridge to share meals.
- **Membership:** Keep a list of team members, parents, contact info, etc.
- Fund Raising: Coordinate fund raising activities. Encourage and mentor students in making contacts and following up. Track donations and thank you acknowledgements.
- Marketing: General branding and marketing, including coordinating the ordering, purchase and distribution of T-shirts and bling (trinkets and buttons given out at competitions). Coordinate photography, scrapbook, possible press releases...
- **Budget:** Keep track of income and expenses. Money is processed through MSA.
- Transportation: Coordinate carpools and other travel arrangements for events
- **School Liaison:** Coordinate fund raising activities with the school board and keep the board informed of our activities. Oversee information tables, spirit days, back to school night, open houses, etc.
- Chairman's award: Coordinate activities for the Chairman's award submission.
- **Technical Mentors**: Oversee all activities at the shop. Ensure safe operations. Provide technical guidance on design, construction and programming activities

TAB B: Roster:

A team roster, complete with phone numbers and email contact information, is kept on the secure Google Groups files pages.

Last Name	First Name	Grade
Boehm	Brian	10
Cobian	Carl	12
Crump	Lisa	12
Glick	Daniel	10
Glick	Rachel	12
Ing	Julia	10
Hjort	Jake	10
Irvine	Peter	11
McBrien	Jake	11
Mekala	Kiran	10
Mockenhaupt	Jack	11
Nixon	Keith	11
Siekmeier	Greta	10
Siekmeier	Jacob	12
Siepmann	Ines	10
Siepmann	Tim	12
Smith	David	10
Stout	Noah	10
Visness	Benjamin	11
Visness	Daniel	9
Wunrow	Han Yong	12

TAB C: Communication Instruction Sheets

Google Group:

To Join:

- 1. Go to http://groups.google.com/group/frc-team-2175
- 2. Click the Link that says sign in and apply for membership.
- 3. If needed create a Google Account, it's free and you don't need a Gmail.
- 4. Wait for our Communications Administrator to add you to the Group. When you have been added, you will start receiving our emails.

Wiki:

To Join:

- 1. Go tohttp://roboticsdev.mnmsa.org/wiki
- 2. In the upper right click Login/Create Account
- 3. Create your account
- 4. You will automatically be directed to the Main Page, with your username displayed in the upper right corner.
- 5. This registration will close, November 1st, so make your account now. It will open again at Kick Off, and on an as-needed basis.
- 6. This will also give you access to our files page http://roborics.mnmsa.org/files

TAB D: Budget

Description of Expenses	Bare Minimum	The Next Level	Ideally
Regional Registration fee - U of M - includes basic kit of parts	waived	N/A	N/A
Second Regional Registration fee - Duluth	\$4,000	\$4,000	\$4,000
Shipping	\$300	\$300	\$300
Travel & Lodging 10 students 3 adults			\$3,220
Nationals - St. Louis - Registration fee		\$5,000	\$5,000
Shipping		\$0	\$0
Travel & Lodging for Nationals 12 students 5 adults			\$4,500
Start-up funding for FTC Team, "Just Ducky"	\$2,000	\$2,000	\$2,000
Fall Competition Events - MRI & Minnie Mini	\$350	\$350	
Robot Parts & Materials not in kit	\$1,000	\$2,000	\$3,000
Tools & Supplies			\$3,000
New Band Saw	\$200	\$200	\$200
Team Uniforms (50 at \$15 each)	\$500	\$500	\$1,000
Team Promotional items for competition events	\$0	\$0	\$500
Meeting Expenses	\$100	\$250	\$500
Off season projects			\$1,500
Total Expenses:	\$8,450	\$14,600	\$28,720

TAB E: General Ledger

date	Description Income		Expenses		balance		
	start balance	\$	971.70			\$	971.70
3/31/2011	t-shirt		\$36			\$	1,007.70
4/18/2011	Cheapest T shirts			\$	558.00	\$	449.70
5/23/2011	Bloom Engineering	\$	100.00			\$	549.70
6/30/2011	extra St. Louis Tom Crumpcu	\$	327.00			\$	876.70
6/30/2011	SAME grant	\$	2,118.00			\$	2,994.70
9/19/2011	Just Ducky			\$	2,000.00	\$	994.70
9/30/2011	osborne match \$	\$	100.00			\$	1,094.70
9/30/2011	Linder's flowers	\$	140.88			\$	1,235.58
9/30/2011	State Fair award	\$	25.00			\$	1,260.58
10/12/2011	Roseville event			\$	200.00	\$	1,060.58
10/12/2011	Prior Lake			\$	150.00	\$	910.58
10/28/2011	3M Grant	\$	6,000.00			\$	6,910.58
10/28/2011	Hubbard	\$	2,500.00			\$	9,410.58
11/5/2011	student fees	\$	1,550.00			\$	10,960.58
1/23/2012	ER Tools			\$	200.00	\$	10,760.58
1/24/2012	3M Alex volunteer \$	\$	250.00			\$	11,010.58
1/24/2012	Regional fees			\$	4,000.00	\$	7,010.58
1/31/2012	Visa cards used 06/11			\$	2,000.00	\$	5,010.58
2/3/2012	Marzolf -kosanke donation	\$	500.00			\$	5,510.58
2/3/2012	student fee	\$	50.00			\$	5,560.58
2/9/2012	Simley competition			\$	100.00	\$	5,460.58

2/23/2012	Balance OK Cbluhm			\$ 5,460.58
2/29/2012	Hjort Holiday Inn	\$ 250.00		\$ 5,710.58
2/29/2012	Lightbulb sales	\$ 237.65		\$ 5,948.23
2/29/2012	Temple/Donation Boehm	\$ 35.00		\$ 5,983.23
2/29/2012	Kwik trip gas	\$ 400.00		\$ 6,383.23
2/10/2012	PO granger		\$ 72.00	\$ 6,311.23
2/6/2012	MSA VISA Digi Key \$129.94			\$ 6,311.23
2/3/2012	MSA VISA VexRobotics 189.43			\$ 6,311.23
2/2/2012	MSA Visa Daves Motor \$33.99			\$ 6,311.23
2/2/2012	MSA Visa New Egg(30.95) \$30.83 OK		\$ 575.50	\$ 5,735.73
3/1/2012	Balance OK			\$ 5,735.73
2/6/2012	PO Andy/Mark 2		\$ 662.42	\$ 5,073.31
3/28/2012	Justin Gehring	\$ 600.00		\$ 5,673.31
3/28/2012	S Crump ck donation	\$ 250.00		\$ 5,923.31
3/28/2012	Brady Corp	\$ 1,000.00		\$ 6,923.31
3/28/2012	Thrivent	\$ 250.00		\$ 7,173.31
3/28/2012	Anchor Bank	\$100.00		\$ 7,273.31
3/31/2012	Cheapest T shirts		\$ 839.35	\$ 6,433.96
3/31/2012	MSA Visa McMaster Carr2 \$83.58			\$ 6,433.96
3/31/2012	MSA VisaAmerican Buttons \$111.36		\$194.94	\$ 6,239.02
1/31/2012	PO Andy/Mark 1 ck 4/4/12		\$ 448.42	\$ 5,790.60
4/5/2012	balance OK			\$ 5,790.60
2/6/2012	PO Andy/Mark 3		\$ 48.39	\$ 5,742.21
	3 M matching Cobian	\$ 250.00		\$ 5,992.21
	3 M matching McBrien	\$ 250.00		\$ 6,242.21

	Henseler ortho donation	\$ 100.00		\$ 6,342.21
	T-shirt income sales estim.	\$ 48.00		\$ 6,390.21
3/12/2012	baseball cards		\$ 123.00	\$ 6,267.21
3/30/2012	Will expenses estimate		\$ 200.00	\$ 6,067.21
3/30/2012	Mark expenses estimated		\$ 150.00	\$ 5,917.21
	pending at MSA			
	anticipated/not received			
		\$ 18,439.23	\$ 12,522.02	

TAB F: Fund Raising Spreadsheet

GRANTS			
	SAME grant	\$	2,118.00
	Just Ducky/Google/SRT	free	registration
	3M Grant	\$	6,000.00
	Hubbard	\$	2,500.00
	Marzolf -kosanke donation	\$	500.00
	Hjort Holiday Inn	\$	250.00
	Thrivent	\$	250.00
PRIVATE DONATIONS			
	Temple/Donation Boehm	\$	35.00
	S Crump ck donation	\$	250.00
SALES			
	student fees	\$	1,600.00
	Lightbulb sales	\$	237.65
	Kwik trip gas	\$	400.00
	Linder's flowers	\$	140.88
	State Fair award	\$	25.00
3M VOLUNTEER MATCHING			
	3M Cobian volunteer \$	\$	250.00
	3M McBrien volunteer \$	\$	250.00
	3M Matching Osborne	\$	100.00
	3M Alex volunteer \$	\$	250.00
	Total	\$	15,156.53

TAB G: Sponsorship Flyer

See Next Page

TAB H: Sponsors

Sponsorship Level	Company	Donation Amount
Platinum		\$6000
Gold	Google Lunar X-Prize	Entry Fee for a FIRST event (\$5000)
Gold	American Military Engineers Minneapolis-Saint Paul Post	\$2118
Gold	HB UNC.	\$2500
Gold	$\frac{S_{\text{cientific}}^{\text{Boston}}}{\text{Test}} \underbrace{S_{\text{cientific}}^{\text{Boston}}}$	~\$1000 in Equipment and a Mentor

Silver	Holiday Inn ST. PAUL DOWNTOWN	\$250
Silver	JR COMPUTER ASSOCIATES	\$650
Silver	Thrivent Financial for Lutherans™	\$250
Silver	MACHINING SPECIALISTS	Custom Machining
Silver	CONESTOGA-ROVERS & ASSOCIATES	\$500
Silver	MARZOLF STATEMENT OF THE STATEMENT OF TH	\$500
Silver	SONS TOOL INCORPORATED	Custom Battery bracket
Bronze	ANCHOR BANK	\$100

TAB I: Schedule

A detailed calendar is kept up to date on the teams Google Group site. The calendar indicates key events, including shop hours. Highlights for the season are:

- January 7th Kickoff Coffman/East Ridge
- February 18th Simley Practice Meet
- February 21st Ship Day! (Stop Build Day)
- March 8th-10th Lake Superior Regional Duluth
- March 29th-31st North Star Regional Mariucci Arena
- April 25th-28th World Championship St. Louis Not Attending
- TBD End of year Banquet
- May 18th-19th MN State Championship Williams Arena Not Attending
- TBD State Fair

TAB J: Business Plan Revision log

Revision Number	Date	Author	Action
1.0	4/7/12	Tom Crump	Initial Draft of Business Plan
1.1	4/8/12	Peter Irvine	Revisions, addition of flow chart
1.2	4/8/12	Brian Boehm	Sponsors tab editing of flow chart
1.3	4/8/12	Becky Boehm	Grammatical Revisions
1.4	4/8/12	Brian Boehm	fixed footer, and injury log
1.5	4/10/12	Brian Boehm	fixed budget table
1.6	5/12/12	Brian Boehm	Added to team history section
1.7	7/30/13	Ben Visness	Lots of formatting tweaks and polishing, also grammar policing
1.8	7/31/13	Brian Boehm	Fixed a few minor things updated what still needs to get done
1.9	7/31/13	Peter Irvine	LTS, Content