

ENGINEERING NOTEBOOK





MOE 365 Non-Technical Notebook Summary Page

Our Non-Technical is used to show the progress of our connect, communications, social media and fundraising programs. This notebook contains our business plan and team bios.

We took a lot of time developing goals and a new team organization (Pages 9-11). This became our Business Plan.

Some of our favorite Outreach events include the Blue Rocks Science Day (Page 123) where we taught little kids about our robot and let them use demo bots. We really are trying to improve Delaware FIRST. We've done this by hosting a Brainstorming Event (Page 129) where we helped new teams see a brainstorming process/got ideas for the new game. We've also hosted multiple scrimmages like the Delaware one on Page 138.

MOE has taken a lot of time to try and gain new sponsors along with sustain the ones we have. Our brainstorming for sponsors is on page 21. Some sponsors we gained are: Burris Logistics (Page 126), Boeing (Page 132-133), and Be Barre Fit (Page 134). We have tried to sustain our sponsors by trying to keeping them updated on what we are doing and doing demonstrations for them. This can be seen on page 124 where we demonstrated our robot for the company Axalta and presented them with a 3D Printed version of our robot. MOE also received a grant for a 3D Printer from Ekocycle. In addition, Axalta sponsored a scholarship for Delaware FTC student. The application can be found on Page 26 and the acceptance email/plan for the printer can be found on Page 135. For fundraising we have also sold Horsey Youth Raffle Tickets for a sports car.

MOE 365 Technical Notebook Summary Page

Our design process began after we learned what challenges we would be facing in Cascade Effect. We started by designing a chassis using 80-20 (p. 19) to figure out a design which would best accommodate our needs. We had brainstorming sessions in small groups for ideas in strategy and robot design, and hosted a brainstorming session for rookie teams to help our decision making for the season (p. 20).

CAD is a major part of our design because it allows us to design and test ideas more quickly than if we had to physically build it (p. 19). This is our second year using CAD and we are continuing to use Autodesk Inventor because it remains a software that several of our team members are familiar with. One of our objectives was to have a robot design based on industrial design, mobility, and simplicity. CAD greatly assisted in this, allowing us to easily fabricate custom parts (p.).

At the beginning of the season the Technical team made a timeline (p. 2). This helped with time management and gave us goals to reach by certain dates.

Programming for the Mecanum wheels were completed on a prototype robot. The challenge was to make the robot go in any direction and orient robot direction (Pg. 80). Programmer did lots of work on testing various sensors including Ultrasonic and Accelerometer (pg 82). These will be used later in season. Another challenge was to calibrate the encoders on the new AndyMark Never Rest 40 motors (pg 83). Our future autonomous strategies are on pg 84. We are using very simple "off the ramp" and aim to dispense in the small rolling goal strategy for this tournament, since we do not have time to program any more.

NOTEBOOK GUIDELINES†

NOTEBOOK INTRODUCTION

Using a Notebook to record ideas, inventions, experimentation records, observations and all work details is a vital part of any engineering process. Careful attention to how you keep your Notebook can have a positive impact on the patent outcome of a pending discovery or invention.

Following are some overall recommendations to help you keep more efficient and accurate Notebook entries. Remember, however, that these are simply a suggested set of guidelines. Only your attorney can supply the exact guidelines she would like you to follow to satisfy specific legal requirements. That is why we recommend that you consult your legal counsel.

RECORDING DATA

Your Notebook is a vital record of your work whether it is for patent purposes, legal records or documenting drug research under FDA guidelines. The Notebook can help you prove:

- a. Exact details and dates of conception
- b. Details and dates of reduction to practice
- c. Diligence in reducing your invention to practice
- d. Details regarding the structure and operation of your invention
- e. Experimentation observations and results
- f. A chronological record of your work
- g. Other work details

Follow a few simple rules of thumb

1. Always record entries legibly, neatly and in permanent ink.
2. Immediately enter into your notebook and date all original concepts, data and observations, using separate headings to differentiate each.
3. Record all concepts, results, references and other information in a systematic and orderly manner. (Language, charts and numbering systems should be maintained consistently throughout.)
4. It is acceptable to make your entries brief. Always, however, include enough details for someone else to successfully duplicate the work you have recorded.
5. Label all figures and calculations.
6. Never, under any circumstances, remove pages from your notebook.

Remember to treat your Notebook as a legal document: It records the chronological history of your activities. The following guidelines should help you maintain the consistent and accurate entries needed for future legal purposes.

1. Start entries at the top of the first page, and always make successive, dated entries, working your way to the bottom of the last page.
2. After completing a page, sign it before continuing to the next page.
3. Make sure that you record the date of each entry clearly and unambiguously.
4. Never let anyone other than yourself write in your Notebook (excluding witness signatures, discussed later).

5. Never leave blank spaces, and never erase or remove material you have added. Simply draw lines through any blank spaces at the same time you are making your entries.
6. Do not erase errors. Just draw a single line through any erroneous entry, then add your initials. Enter the correct entry nearby.
7. You can supplement your entries with supporting material (e.g., test-result printouts and other documentation). But you must permanently affix the material onto a page in its proper chronological location.
8. Never rely solely on any supplemental attachment. Always include your own entry describing the attachment and add any conclusions that you might draw from its substance.
9. Occasionally, secondary sources might be too large or inappropriate to attach directly to your notebook. In this case, you can add all secondary sources to an ancillary record maintained precisely for this purpose. However, always remember to write a description of these secondary sources, clearly and unambiguously, in your notebook.

DOCUMENTING PATENT ACTIVITIES

A primary purpose of your Notebook is the support of documenting work that may be patentable. To support patent activities, it is necessary to provide clear, concise, chronological entries with specific dates. To rely on these dates, you must have at least one non-inventor corroborate that the events actually happened and that he or she understood your invention by signing and dating the "Disclosed to and Understood by" signature blocks.

Your Notebook should help you document and prove:

1. *Conception Date*—The date that you knew your invention would solve the problem.
2. *Date of reduction to practice*—The moment that you made a working embodiment of your invention.
3. *Diligence in reducing your invention to practice*—Diligence refers to your intent and conscious effort to make a working embodiment. You are not required to rush, or even to take the most efficient development strategy. But your Notebook must include details relating to your diligent activities. These are dates and facts that show what activities you have conducted to reduce the invention to practice, and when such activities were conducted. Since you may still be diligent despite periods of not working on reducing your invention to practice, always remember to provide reasonable excuses for these periods of inactivity by supplying facts relating to why there was no activity during the period in question. (e.g., unavailability of test conditions or equipment).
4. *How to make and use your invention*—provide documentation details sufficient to teach a colleague how to make and use your invention.
5. *The best mode of practicing your invention*—document the best way to practice your invention.

A non-inventor colleague should corroborate each of these events/facts by signing the "Disclosed to and Understood by" on the relevant pages.

† BookFactory provides these sample guidelines "AS IS" without any warranty.

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Name: Rachel Prettyman

School: Cab Calloway School of the Arts

Years on MOE: 4, Grade 12

Role: Team Manager, Coach, Competitor, Interview, Super Hero, Communications

Why is MOE Awesome? MOE is awesome because I get to be apart of the best sport on Earth with my closest friends. I also get to include art with technology.



Name: Kyle Morrill

School: Conrad Schools of Science

Years on MOE: 2 Grade: 10

Role: Drive team, Communications, Programming.

Why MOE is awesome: MOE is awesome because GREEN, but also having ~~fun~~ great time interacting with other teams.

Goal for the year: Learn most of programming.



NAME: GEORGIA MACKAY

SCHOOL: NEWARK HIGH SCHOOL

YEARS ON MOE: 4 GRADE: 11

ROLE: BUSINESS PLAN, SCOUTING, INTERVIEW, MICROSOFT PAINT EXPERT

WHY IS MOE AWESOME: WE GET TO BE INVOLVED IN STEM AT OUR AGES. OPPORTUNITIES LIKE THIS ARE RARE

GOAL FOR THE YEAR: MAKE 1000 BUTTONS



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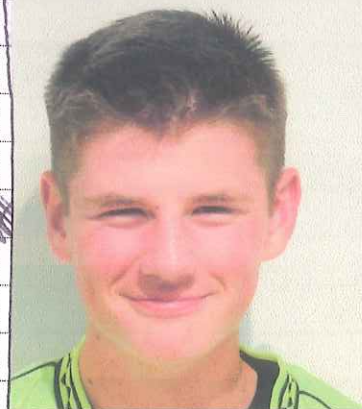
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PROPRIETARY INFORMATION

Name: Shane Chopko
 School: Newark Charter School
 Years on MOE: 2
 Role: Primary Driver, Pit manager, ~~Secondary Driver~~
 Secondary Driver, Coach
 Why is MOE awesome? We get to make incredible
 Buttons and make
 Goals: Finish BOM



Name: Kayla Morrill
 School: Conrad School of Science
 Year on MOE: 1st year
 Role: Photographer
 Goals: try and work on electrical



Name: ETHAN PRICE
 School / Grade: NEWARK High School JUNIOR
 Years On MOE: THREE
 Role: MECHANICAL, CAD INTERVIEW
 Why Is MOE AWESOME: BECAUSE IT IS
 GOAL: HAVE A ROBOT BY THE FIRST COMPETITION



Name: ARNAV PRASAD
 School / Grade: Charter School of Wilmington - 3
 Year on MOE: 2 Grade: 11
 Role: ELECTRICAL / PROGRAMMING
 Why is MOE AWESOME: BECAUSE ROBOTS
 GOAL: MAKE ROBOT GO.



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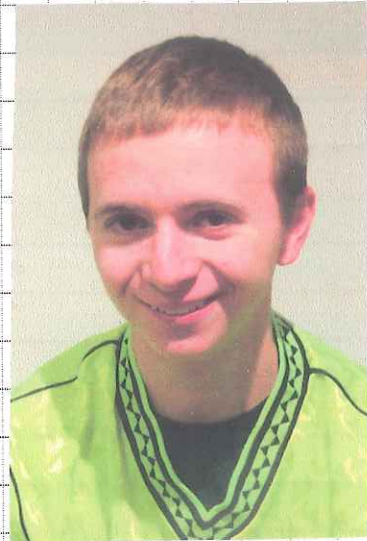
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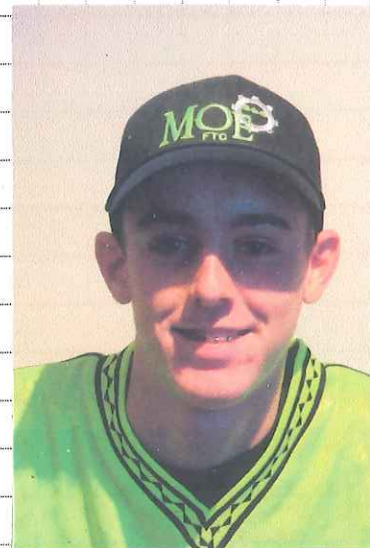
Name: Abieshek Subramaniam
 School: MDT Charter High School
 Grade: 9th
 Years on MOE: 1st Year
 Role: Mechanical
 Why is MOE Awesome: Robots
 Goal: Get RoboDT to work



Name: Matthew Warner
 School: Unionville High School
 Grade: 12th
 Years on MOE: 4
 Role: CAD, Mechanical
 Why is MOE awesome: Meeting people
 With common interests.
 Goal: Have an enjoyable season and
 get the most out of my last year on moe.



Name: Jack Hopman
 School: Homeschool
 Grade: 10th
 Years on MOE: 2
 Role: Mechanical, Drive
 Why MOE is Awesome: Robots and Friends
 Goal: Make a working robot!



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PROPRIETARY INFORMATION

NAME: ANDREW SZETO

PLACE OF EMPLOYMENT: The Boeing Company

YEARS OF MENTORING: 8 yrs

ROLE: LEAD/MENTOR

WHY IS MOE AWESOME: It is fun working with students who are motivated and have many innovations with solutions to different engineering problems. In addition, I like and enjoy our team color (GREEN)
GOAL: Gracious professionalism and Motivation.



NAME: Ron Prettyman

PLACE OF EMPLOYMENT: AXALTA Coating Systems

Years of mentoring: 5 years

Role: Business, Logistics, Organizational Mentor

Why MOE is Awesome? I get to work with great kids & adults in a worthwhile team event that is lots of fun. WE ALL LEARN every day.

GOAL: HAVE fun + LEARN



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PROPRIETARY INFORMATION



Name: Ajay Prasad

Place of Employment: Univ. of Delaware

Years Mentoring: 2

Role: Mechanical

Why MOE is Awesome: Gracious Professionalism!

Goal: Exceed your expectations.



Name: Barry Price

Place of Employment: Artesian Water

Years mentoring: 1

Role: Mechanical, CAD

Why is MOE Awesome: Robots are Awesome

Goal: Help students reach their goals while having fun and learning



TIM CHOPKO

SELF EMPLOYED CARPENTER

2YRS MENTORING

TEAM: MECHANICAL "HARASSER"

WATCHING KID USE THEIR CREATIVE IDEAS COME TOGETHER

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PROPRIETARY INFORMATION

NAME: Jim Morrill

Place of Employment: Verizon

Years Mentoring: 1

Role: Logistics

Why MOE is Awesome: Everyone working together!

Goal: Have fun!



NAME: SUBRAMANIAM SINGARAVELU (SUBBU)

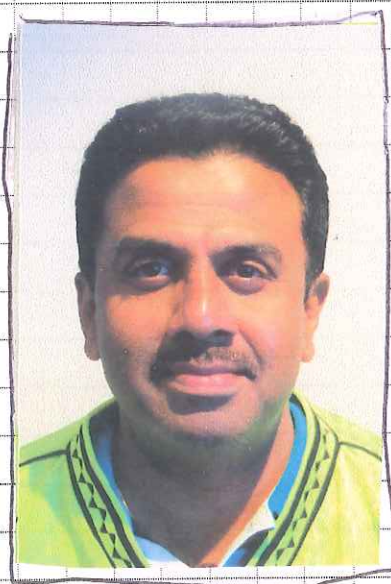
PLACE OF EMPLOYMENT: FIRST DATA CORPORATION

YEARS OF MENTORING: 1

ROLE: LOGISTICS

WHY MOE IS AWESOME: TEAM WORK!!

GOAL: FUN & LEARNING NEW THINGS.



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PROPRIETARY INFORMATION

Ellen Seis
Matthew Warner

Ronald E. Patterson

Myra

Amr Hassan



Georgina Mackay
Banyan
Andrew
Rachel Prettymann
Jim McD
Rick
Ajay

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PROPRIETARY INFORMATION

Task

- Figure out organization for team structure
- Pick goals for each team

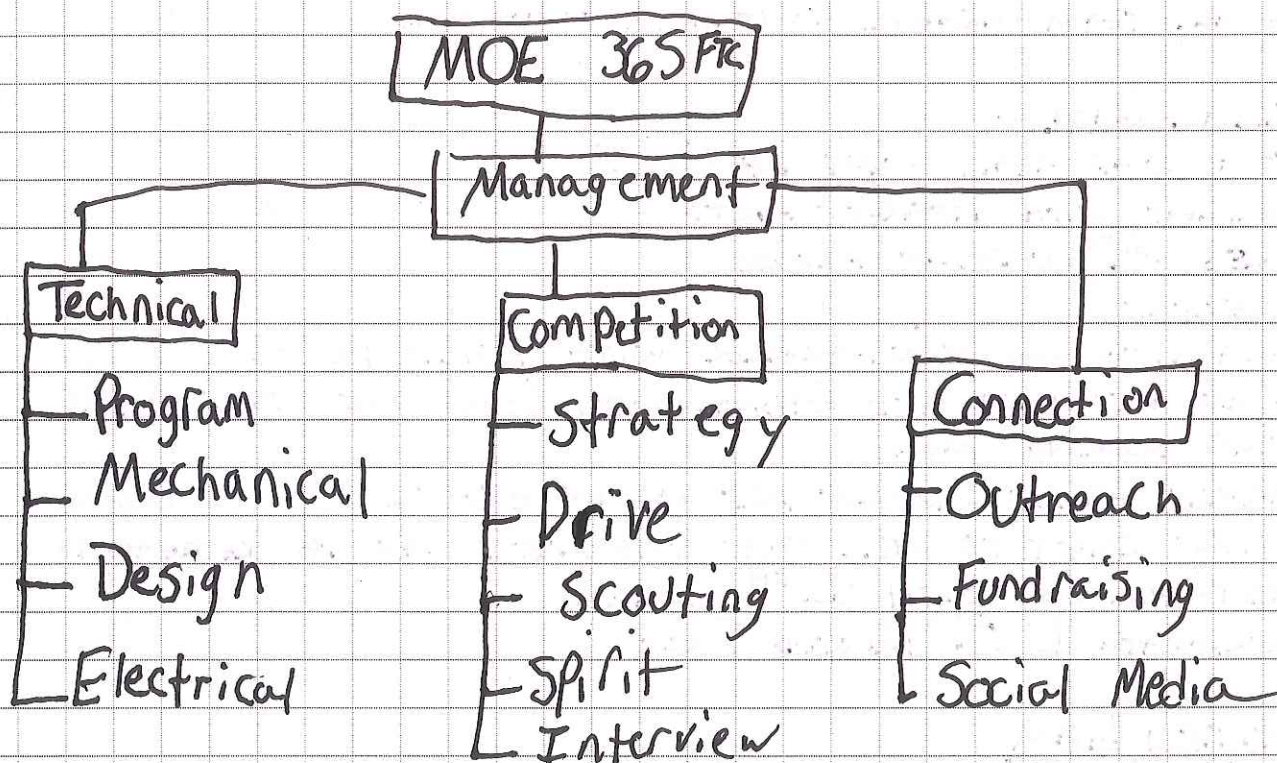
Reflection

- It was a very heated debate
- People felt it was for document purposes

Our options for team structure

- 3 teams - Technical, Competition, Connection
- Lots of teams
- NO teams

We are going with this structure:



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SIGNATURE

Rachel Prettyman

DATE

8/5/14

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PROPRIETARY INFORMATION

TASKS

- COME UP WITH TEAM GOALS FOR THE SEASON
- DISTRIBUTE HORSEY FLYERS TO TEAM MEMBERS

REFLECTIONS

• WE ARE HOPEFULLY GOING TO ACHIEVE OUR GOALS

TODAY WE BRAINSTORMED A LIST OF POTENTIAL GOALS FOR THE UPCOMING SEASON

GENERAL GOALS

- UPHOLD THE FTC CORE VALUES
- UPHOLD OUR TEAM'S SAFETY VALUES
- RESPECT (OURSELVES AND OTHERS)
- ~~TAKE~~ ^{SHARE} KNOWLEDGE AND HELP OTHERS
- HAVE ALL TEAM MEMBERS CONTRIBUTE TO NOTEBOOK

TECHNICAL TEAM

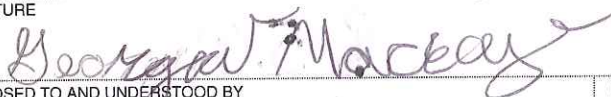
- HAVE A COMP READY ROBOT BY OCT 31
- EXPERIMENT WITH DIFFERENT PARTS
- UTILIZE CAD IN DESIGN PROCESS
- USE SENSORS
- PROGRAMMING EARLY/IN PARALLEL WITH BUILD PROCESS
- HAVE AN AUTONOMOUS AND PHYSICAL ROBOT COMPONENTS THAT ADDRESS EVERY SCORING MECH
- PROPERLY PRESENT DESIGN PROCESS IN ENGINEERING NOTEBOOK
- DOCUMENT ROBOT SO WELL THAT THE ROBOT CAN BE RECREATED
- CROSSTRaining WITH 12TH GRADERS
- INCORPORATE 1 3D PRINTED PART

COMPETITION TEAM

- MAKE EVERYTHING GREEN
- STICK WITH PLAN
- ACHIEVABLE SCOUTING APPROACH
- ADDRESS MULTIPLE GAME STRATEGIES
- PACKING CHECKLIST
- HAVE INITIAL DRAFT FOR INTERVIEW BY OCTOBER 31
- HAVE A VISUAL AID FOR INTERVIEW
- PREPARE A REASONABLE DRIVE TEAM PROCESS BY OCT 31

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DATE

8/12/14

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PROPRIETARY INFORMATION

CONNECTIONS TEAMIMPROVE DELAWARE FTC

- SET UP RESOURCES
- NEW WEBSITE
- FIX/MAINTAIN WIGGIO/CALENDAR
- GET 1500 TWITTER FOLLOWERS
- MAINTAIN FB POSTS
- APPLY FOR X AMOUNT OF GRANTS
- DONATE MONEY TO STEM BASED PROGRAM
- SET A #NUMBER OF OUTREACH/FUNDRAISERS
- JERSEY DESIGN DONE BY SEPT
- REACH OUT TO ENGINEERING COMMUNITY

General Goals

- Uphold FIRST core values
- Uphold teams safety values
- Respect (ourselves and others)
- Share knowledge and help others
- Improve DE FTC

Technical Team

- Have a competition ready robot by November 1st
- Utilise CAD in design process
- Experiment with different parts; sensors and 3D printed parts
- Have autonomous and physical robot components that address every scoring method by the end of the season
- Properly present design process in notebook

Competition Team

- Achievable scouting approach
- Packing checklist
- Visual aid for interview
- Have initial draft for interview by October 18th
- Prepare a reasonable drive team process by October 8th

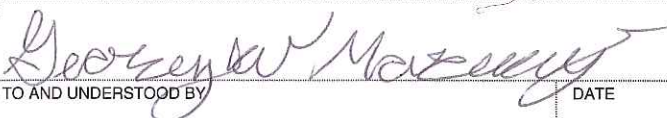
Connections Team

- Website that includes resources for other teams
- Maintain event calendar on timely basis
- Stay up to date with social media; Facebook, Instagram, and Twitter (reach 1500 followers this season)
- Reach out to engineering community by sending letters asking for support
- Donate money to a program in the STEM community
- Participate in at least 17 outreach/fundraising events

WE LATER SHORTENED OUR LIST TO WHAT IS PASTED ABOVE

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DATE

8/12-14

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DATE

PROPRIETARY INFORMATION

TasksReflections

- Talk about Horsey Ticket Fundraising
- Talk about team structure
- Define notebook layout

• Rachel is having a lot of trouble getting people to work on the notebook

Notebook Layout

- In the beginning of the notebook we should leave space for bios as usual.
- Following the bios we could have a list of all the subteams and their roles and minor goals for the year.
 - This can be done in the form of a chart.
 - We should also include general goals for the whole team
- Budget Plan
 - We should include toward the beginning after the goals how we can raise money.
 - Maybe a goal we could use the money for?
 - Like donating to a team
 - We should try to develop a strategy for business planning.
- For regular meetings
 - We should include two columns at the top of each page
 - Tasks- What is your team doing and discovering?
 - Reflections Column - Where your team records thoughts on what is happening and any questions that need to be answered.
 - This is straight from the 2013-2014 Game Manuel
- For Event pages
 - We should summarize the event
 - What went well/what didn't
 - If it's for an Outreach event we need to make it clear who we are connecting with.

SIGNATURE

Rachel Prettyman

DATE

6-24-14

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PROPRIETARY INFORMATION

TONIGHT WE TALKED ABOUT REORGANISING / REDESIGNING OUR WEBSITE. THIS IS IMPORTANT BECAUSE WE FEEL LIKE IT IS VERY OUTDATED. ALSO, WE FEEL ITS IMPORTANT TO HAVE A GOOD WEB PRESENCE TO BETTER REACH OUT TO OTHER TEAMS BY BEING A GOOD RESOURCE. FOLLOWING IS A LIST OF THE PAGES OUR WEBSITE WILL INCLUDE:

- HOME
- CONTACT US
- RESOURCES
 - ↳ OUR RESOURCES
 - ↳ FIRST RESOURCES
 - ↳ OTHER TEAMS
- BLOGS
 - ↳ NOTEBOOK (ONLINE VERSION)
- ABOUT US
- SOCIAL MEDIA
 - ↳ PHOTOS / VIDEOS

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Georgina MacEwen

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DATE

7/1/14

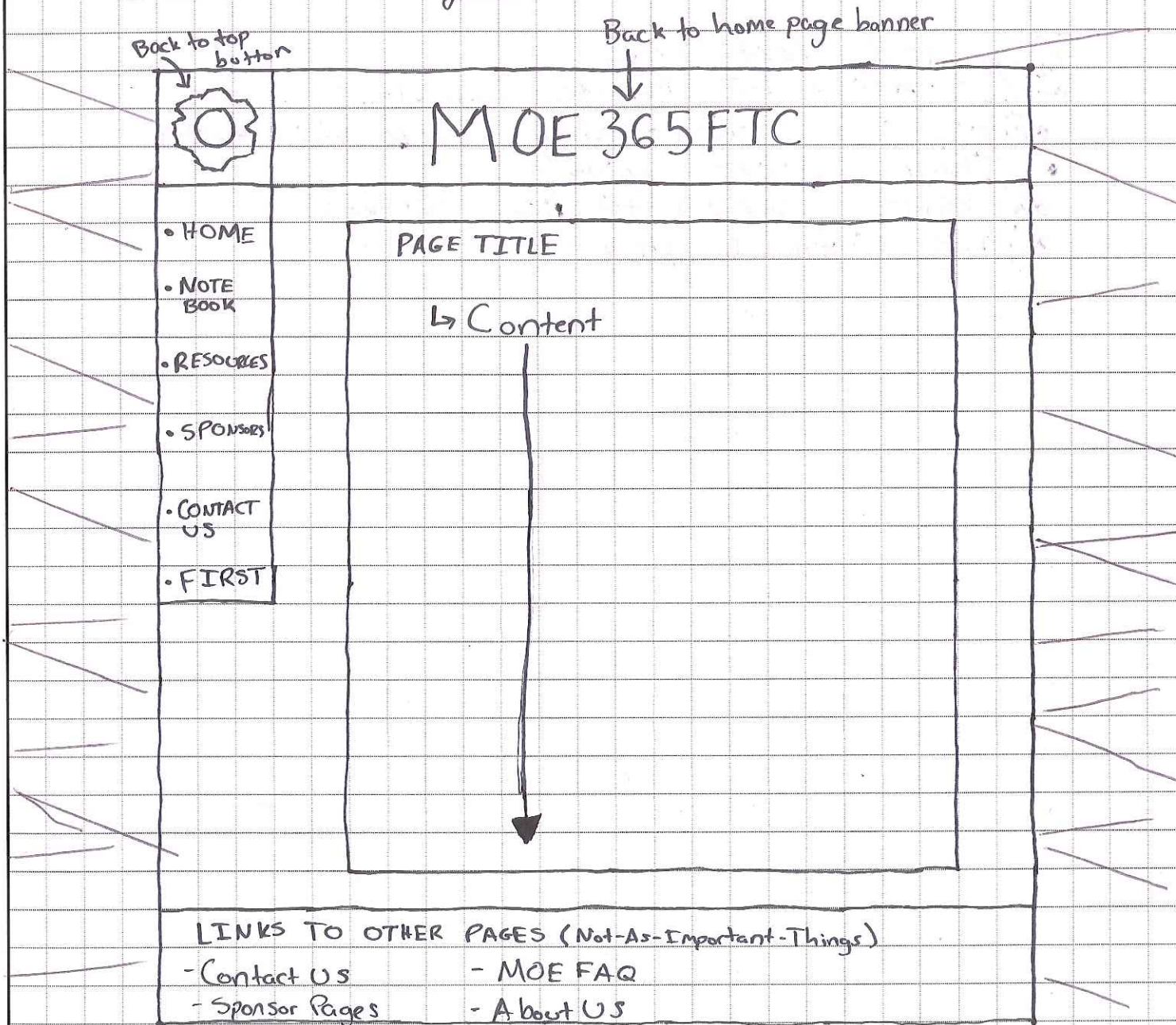
PROPRIETARY INFORMATION

Meeting July 8th

Tasks

- Prepared for the Axalta event.
- Made a list of people to send thank you cards for
- Work on website
- Discuss Fundraising

Possible Website Layout



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SIGNATURE

Arnav Prasad . Yife Mouwill

DISCLOSED TO AND UNDERSTOOD BY

DATE

DATE

7/8/14

PROPRIETARY INFORMATION

Tasks

- Discuss website future

Reflection

- Going to merge HTML and WordPress - gives us nice freedom for design, and access to many plugins for functionality

Things to do next week

- find someone to manage calendar
- figure out brainstorming / kick off events
- Think about goals
- Website needs to be worked on
- Update Outreach pages

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SIGNATURE

Rachel Prethmann

DATE

8/12/14

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DATE

PROPRIETARY INFORMATION

Tasks

- Assemble field
- Reflection summer work

Reflection

- Field assembled
- Accomplished a lot this summer.
- Increase social media activity

Things to do next week

- Get organized for kickoff
- Organize cabinets
- Condense goals

Continued to page

SIGNATURE

Matt W.

DATE

8/26/14

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DATE

PROPRIETARY INFORMATION

Tasks

- Compact and revise goals

Reflection

- Goals compacted to a more reasonable level

See page 10 and 11 for more details

Continued to page

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DATE

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PROPRIETARY INFORMATION

Task

- Discuss game
- Work on team roles
- Discuss grants

Reflection

- We made a lot of progress discussing grants and came up with a lot of ideas
- ~~Everyone~~ Everyone but the newest members wrote down the goals they are interested in.

Goal → Set 6 Grant letters

Have a basic letter and adjust it for ~~companies~~ companies

Local

- ~~cap~~ Captain Blue Hen → see about possible outreach
- Mid County Lanes
- Burr is Logistics
- Have everyone on the team talk to parents
- Be BARRE Fit

Medium

~~University of Delaware~~

Larger

- Core / 3D
- Motorola
- NASA
- Microsoft
- Adobe
- Verizon
- Boeing
- Axalta

Continued to page

SIGNATURE

Rachel Peltzman

DATE

9/9/14

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DATE

PROPRIETARY INFORMATION

Tasks

- Discuss timeline
- Start coming up with roles for everyone.
- Split into groups

Reflection

- We got a lot done and are starting to develop a timeline for each team
- We also want to make a dropbox for ~~our~~ resources on our website

How do we go from Now to December

- Working - Robo +
- Interview Judging - Document
- Drive Teams Approach
- Notebook

- Robot Check list
- Judging practice
- Time line
- Note book summary pages

- Visual presentation
- Business plan → Budget
- Order parts
- Autonomous
- CAN

- Drive practice
- Meeting organization
- Fund raising

- Duel on the Delaware - Oct 18
- Tentative Oxford Scrimmage - Nov 15

- NJ Qualifier - Nov 16

- PA Oxford - Nov 22

- PA Dec 6

- Del Scrimmage - December 13 - Natural History Museum

- Rocking List

- Stims

- Tool prep

- T shirt

- Strategies

- scouting

- individual duties

- ~~Scoring~~ Buttons

- Bill of Materials

SIGNATURE

Rachel Prettyman

DATE

4/16/14

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DATE

PROPRIETARY INFORMATION

Continued to page

Tasks

- Work on t-shirt design
- Work on grant letters
- Make Connect team timeline.

Reflections

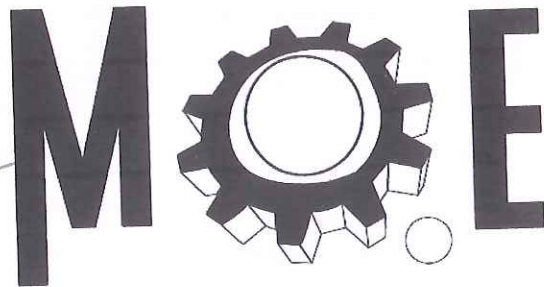
- There were not a lot of dates for the Connect team. It was hard because it's a looser schedule we should probably add more

Possible Connect Timeline

- Have Fundraising Letter done - Sept. 27
- Due 1 on the Delaware - Oct. 18
- Possible Oxford Scrimmage - Nov. 15
- Delaware Scrimmage - Dec 13

Need more dates

We also started our Lunch fundraiser



Continued to page

SIGNATURE

Rachel Prethman

DATE

9/20/11

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PROPRIETARY INFORMATION

Tasks

- connect timeline
- update outreach events for notebook
- website update

Reflections

get more focus
and get back on
top for social media.

started to flush out the connect timelines.
came up with a plan for travel spirit box.
talked about t-shirt designs. agreed on
future core value review process. talked about
button designs.

Continued to page

SIGNATURE

9/23/14

DATE

Kayla Morrison

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DATE

PROPRIETARY INFORMATION

TASKS

- DISCUSS BUSINESS PLAN
- CONTINUE WORKING ON PROTOTYPES
- FORMAT SCOUTING APPROACH

REFLECTIONS

- SIGN UP FOR STIMs
- PROTOTYPING WENT WELL, WE STILL NEED TO FINISH THE LIFT, GOAL MANIPULATION, AND HARVESTING.
- PREPARE BIZ PLAN ^{OUTLINE} FOR NEXT TIME

DISCUSSED THE BUSINESS PLAN. OUR FORMAT WILL BE:

- DESCRIPTION
- MISSION STATEMENT
- TEAM ORGANISATION
- GOALS
- FINANCIAL PLAN
- STAKE HOLDERS (EMPLOYEES, SHARE HOLDERS, CUSTOMERS, COMMUNITY)

IN OUR BUSINESS PLAN WE WILL INCORPORATE CHARTS AND PICTURES. ITS ALSO IMPORTANT TO REMEMBER THAT THE BUSINESS PLAN AND THE BUDGET ARE TWO DIFFERENT THINGS.

WE ALSO ~~STAYED~~ ON THE FINAL MODELS FOR OUR PROTOTYPES. WORKED TOWARDS DECIDING



TEAM MEMBERS OPERATING THE DIFFERENT PROTOTYPES TO HELP DECIDE WHICH WE WILL USE ON THE ROBOT.



ETHAN HOLDING THE CONVEYOR MECHANISM.

Continued to page

SIGNATURE

Georgia Maccary

DATE

9-27-14

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DATE

PROPRIETARY INFORMATION

Tasks

- Go over awards
- Grant for 3D printer
- Start Bios
- Make buttons

Reflections

- The awards review went well for people who are new and haven't been to a competition.

TODAY WE SEND OUT OUR APPLICATION FOR A 3D PRINTER GRANT.

MOE FTC 365, would incorporate 3D printer technology into our build process to enhance our overall design. A 3D printer would allow our team to have creative alternatives and be able to fulfill ideas that weren't possible before. This would also allow us to create and quickly test prototypes that before would take us weeks to make.

Our team's main mission is to spread the FIRST core values and STEM based initiatives in the state of Delaware. We want to be able to tutor other teams in this exciting technology. At outreach events we could easily show the younger generation models to get them interested in engineering and also encourage them to use recycled materials.

MOE FTC is interested particularly in the EKOCYCLE Printer because of its sleek design and the convenience. The Cubify app would allow us to distribute the design process over multiple devices and enable team collaboration in the design process. We plan on recycling our cartridges/plastics by sending them back to CubeX, so we reduce our waste stream. As a team we are very committed to sustainability. Our team has utilized recycled materials in building our robot rather than buying all new kits. This approach allows us greater flexibility in design process, while making more efficient use of previously used parts.

We created a 3D print of our 2013-2014 FTC robot over the summer. Our team included the printed robot to demonstrate our team's appreciation to our sponsors and mentors last year. This is one of the ways our team would demonstrate the capabilities and innovation made available by this technology, as well as gratitude towards our sponsors and supporters.



Continued to page

SIGNATURE

Rachel Puttyman

DATE

10/17/14

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DATE

PROPRIETARY INFORMATION

TASK

- MAKE FINAL DECISION ON LIFT MECHANISM
- BUTTONS

REFLECTIONS

- WE GOT ALOT OF WORK DONE
- WE LIKED THE PROCESS FOR DECIDING THE LIFT
- WE WILL USE SPREADSHEETS IN THE FUTURE

TODAY WE WORKED FULL FORCE ON DECIDING WHAT LIFT MECHANISM WE PLANNED ON USING. IN THE LAB, WE COMPARED THE ATTRIBUTES OF EVERY MODEL BY LAYING THEM SIDE BY SIDE. TO THE LEFT YOU CAN SEE US DOING THIS PROCESS. WHILE COMPARING AND CONTRASTING WE MADE A CHART TO DOCUMENT WHICH BUILD WAS SUPERIOUR.



COMPARING THE MODELS

THE PROCESS OF US DOING THE PROTOTYPING DECISION IS DOCUMENTED ON THE SPREAD SHEET ON THE FOLLOWING PAGE. IN THE MECHANICAL NOTEBOOK.

Continued to page 28

SIGNATURE

Georgina MacKay

DATE

10-11-14

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PROPRIETARY INFORMATION

Awards Review Presentation

Motivate

"This Judged Award celebrates the Team that exemplifies the essence of the FTC competition through Team building, Team spirit and enthusiasm. They celebrate their Team, their individuality and their spirit through costumes and fun outfits, a Team cheer and their outstanding spirit. This Team has also made a collective effort to make FIRST known throughout their school and community."

- SPIRIT
- ENERGY
- ENTHUSIASM
- OUTFITS
- BUTTONS
- COMMUNITY
- CHEER

Rockwell Collins Innovate Award

"The Rockwell Collins Innovate Award celebrates a Team that not only thinks outside the box, but also has the ingenuity and inventiveness to make their designs come to life. This Award is given to the Team that has the most innovative and creative Robot design solution to any or all specific Field Elements or components in the FTC game."

- Out of the box design
- Creative solution when it comes to manipulating game components

Connect Award

"A true FIRST Team is more than a sum of its parts, and recognizes that its schools and communities play an essential part to their success. The recipient of this Award is recognized for helping the community understand FIRST, the FTC, and the Team itself. The Team that wins this Award is aggressively seeking engineers and exploring the opportunities available in the world of engineering, science and technology."

- Connecting with local, state, regional, national and world-wide community!
- Not just outreach events but connecting and gaining knowledge/experience from the science community
- Social Media!
- Fundraising is a big part tool

Think Award

"This Judged Award is given to the Team that best reflects the "journey" the Team took as they experienced the engineering design process during the build season. The Team's Engineering Notebook should focus on the design and build stage of the Team's Robot. Journal entries of interest to Judges for this Award will include those describing the underlying science and mathematics of the Robot design and game strategies, the designs, re-designs, successes, and those "interesting moments" when things weren't going as planned."

- Documenting the journey
- SUMMARY PAGES-Highlight important events/parts you want to emphasize
- Pictures look good and appeal to judges
- Budget Plan!
- They like to see goals, failures, and successes.

PTC Design Award

"All successful Robots have innovative design aspects; however, the PTC Design Award is presented to Teams that incorporate industrial design elements into their solution. These design elements could simplify the Robot's appearance by giving it a clean look, be decorative in nature, or otherwise express the creativity of the Team. The winning design should not compromise the practical operation of the Robot but complement its purpose. This Award is sponsored by Parametric Technology Corporation (PTC), developers of the CAD tools, Creo and Mathcad."

- Incorporates CAD into the design process in a clean and precise way
- Uses CAD to show elements of scoring and overall look of the robot

Promote

"This Judged Award is optional and may not be given at all tournaments. The Promote Award is given to the Team that is most successful in creating a compelling video message for the public designed to change our culture and celebrate science, technology, engineering and math. Winning videos will be submitted to FIRST and used to promote the higher values of the FTC. Teams may win the Promote Award only once at a Championship level event and only once at a qualifying level event. Team must submit a one-minute long public service announcement (PSA) video one full week prior to the event to be eligible for this Award. The submission process for this Award may vary by tournament."

- Video award
- The theme is currently not up yet
- Seriously guys can we please do this, this year?

Control

"This Award is given to the Team that demonstrates innovative thinking in the control system to solve game challenges such as autonomous operation, enhancing mechanical systems with intelligent control, or using sensors to achieve better results on the field. The control component should work consistently on the field. The Team's Engineering Notebook should contain details about the implementation of the software, sensors, and mechanical control."

- Sensory stuff in autonomous
- Lots in details in notebook about autonomous

Judges Award

"During the course of the competition, the Judging panel may encounter a Team whose unique efforts, performance or dynamics merit recognition, yet doesn't fit into any of the existing Award categories. To recognize these unique Teams, FIRST offers a customizable Judges Award. The Judging panel may select a Team to be honored, as well as the name of the Judges Award."

- Mostly for teams that have traveled a long distance for a competition, had financial issues, and rookie teams.

Inspire Award

"The Team that receives this Award is chosen by the Judges as having best represented a 'role-model' FTC Team. This Team is a top contender for all other Judging categories and is a strong competitor on the Playing Field. The Inspire Award Winner is an inspiration to other Teams, acting with Gracious Professionalism™ both on and off the Playing Field. This Team is able to communicate their experiences, enthusiasm and knowledge to other Teams, sponsors, and the Judges. Working as a unit, this Team will have demonstrated success in accomplishing the task of creating a working and competitive Robot."

- Overall your team is amazing
- Don't have to always have a running robot hence what happened to us the 2012-2013 season
- Have an awesome notebook!
- Does a great job demonstrating Gracious Professionalism and enthusiasm

Compass

The Compass Award recognizes an adult Coach or Mentor who has provided outstanding guidance and support for a Team throughout the year. An FTC Team is about more than building Robots, and competing at tournaments, it is a journey to a destination through trial and error, success and failure, with challenging new technology and obstacles to navigate where no road maps are provided. The winner of the Compass Award will be determined from candidates nominated by FTC Team members, via a 40-60 second video submission, highlighting how their Mentor has helped them become a champion Team.

- Submitted through video
- Mentor's award

We did this Review to refresh for old members and inform new members on all of the FTC Awards

Continued to page

SIGNATURE

Rachel Prettyman

DATE

10-14-11

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PROPRIETARY INFORMATION

TASKS

- PACK + PREP FOR THE DUEL ON THE DE
- DISCUSS NOVEMBER 15 OUTREACH AT THE INDEPENDENCE MEET.
- FIELD BREAK DOWN

REFLECTIONS

WE ARE ALL PACKED AND PREPARED FOR THE DUEL.

PACKING LIST FOR DUEL

- BUSINESS CARDS
- BEADS
- SPIRIT TIES
- ~~BOX~~ 3 HATS
- 3 BANDANAS
- GLOW STICKS
- WINDS
- BUTTONS
- EMERGENCY KIT
- PARTS BOXES
- ROBOT FROM LAST SEASON
- OMNI BOT

BY MAKING THIS PACKING LIST WE ARE ABLE TO BEST DOCUMENT WHAT WE BRING WITH US AND KNOW WHAT TO BRING BACK. WE HOPE THAT BY BRINGING BUSINESS CARDS AND BUTTONS WE CAN REACH OUT TO OTHER FTC TEAMS AND POSSIBLY SOME FRC TEAMS. WE ARE BRINGING SPIRIT GEAR (LIKE BEADS AND BANDANAS) TO SHOW OUR SPIRIT FOR THE EVENT. LASTLY, WE ARE BRING OUR ROBOTS AND PARTS SO WE CAN HOPEFULLY WORK ON THIS SEASONS ROBOT. THE DUEL IS AN EXCELLENT OPPORTUNITY TO WORK WITH OTHER TEAMS ON A FIELD PRIOR TO THE COMPETITION SEASON. THERE ARE ALSO JUDGES AVAILABLE IF WE HAVE ANY QUESTIONS.

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DATE

10-14-14

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PROPRIETARY INFORMATION

TONIGHT WE ALSO SENT OUT A LETTER
TO A POTENTIAL SPONSOR

Dear Ms. Mackay,

We are a FIRST Tech Challenge (FTC) team. We design, build, and program robots to compete in a challenge released every year by FIRST (FIRST stands for the Inspiration and Recognition of Science and Technology). Our full team name is MOE – the Miracle Workerz (Miracles of Engineering) Our team consists of 10 students, from 9 area schools, ranging from public, private, homeschool. We range in age from 14 to 17. We take the FIRST core value of Gracious Professionalism very seriously. Gracious Professionalism is a way of doing things that encourages high-quality work, emphasizes the value of others, and respects individuals and the community. We endeavor to exhibit it not only when working with other teams at competitions, but also to each other at meetings, and, perhaps most importantly, outside of MOE- related events to people who know nothing of FIRST. We have huge amounts of team spirit. Our spirit manifests itself in copious amounts of MOE green, MOE puns, and our famous MOE cheer. Most importantly, it's what drives us to be the best we can be, and to excel in all we do. Along with this our team has proudly had the chance to go to the FTC World Championship four times in the past five years.

Our team would greatly appreciate if your company considered sponsoring us for the 2014-2015 season. Your funding would go to purchasing new parts for the current FTC challenge CASCADE EFFECT, new spirit gear to allow us to better spread our excitement for engineering, and to be able to spread FIRST and STEM initiatives in Delaware. One of our main goals as a team is to enhance Delaware programs like FTC because we want other teams to have the opportunity to compete at the same level as any other state. Two years ago our team gave a donation to the Edison Charter Chess Team to help them go to their world championship. Along with that, our team has also donated to ALS over the summer. MOE FTC would love to be able to assist other STEM programs in the future with your help.

We look forward to hearing from you in the future. Thank you for your time.

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Rachel Pretzman

DATE

10/14/14

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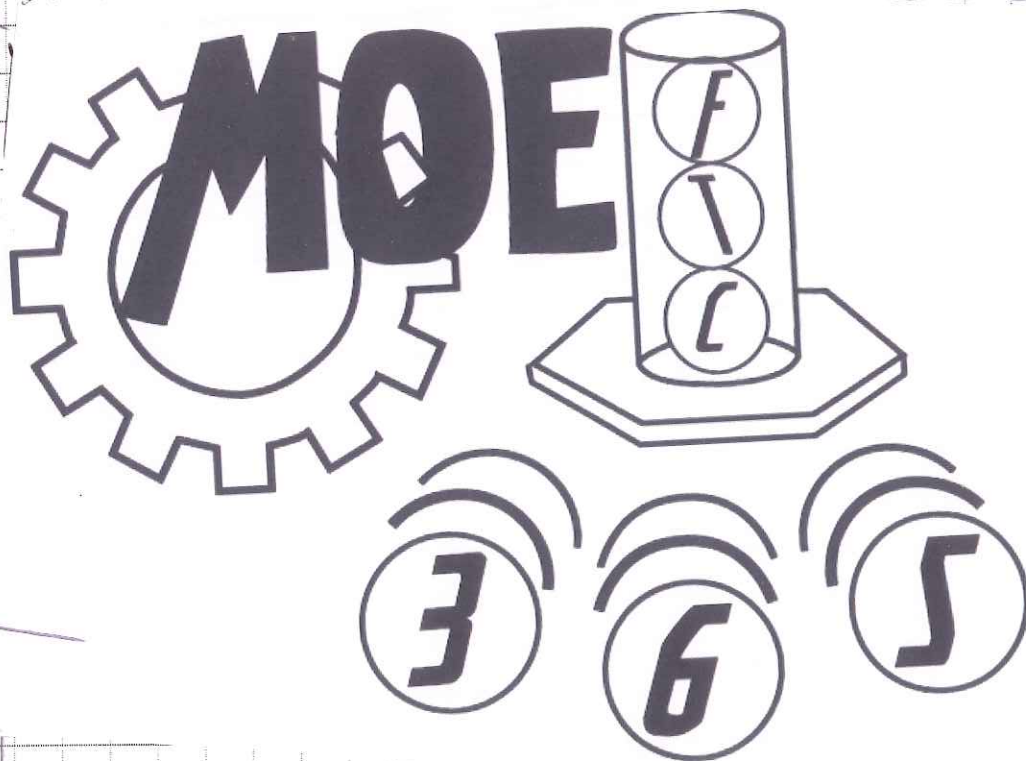
PROPRIETARY INFORMATION

Tasks

- Review Deal on the Delaware
- Figure out who is volunteering at Chemistry Week
- Review Team goals
- Finish Business plan
- Finish Jersey design
- Document team connections

Reflections

- The Jersey design is done, it just needs to be finished on Adobe Illustrator
- Sadly we could not review the goals but they will be remembered for next time
- We also discussed POSS. policies for interview and decide the next step would be to divide up time for the presentation



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Rachel Brettingham

DATE

10/21/14

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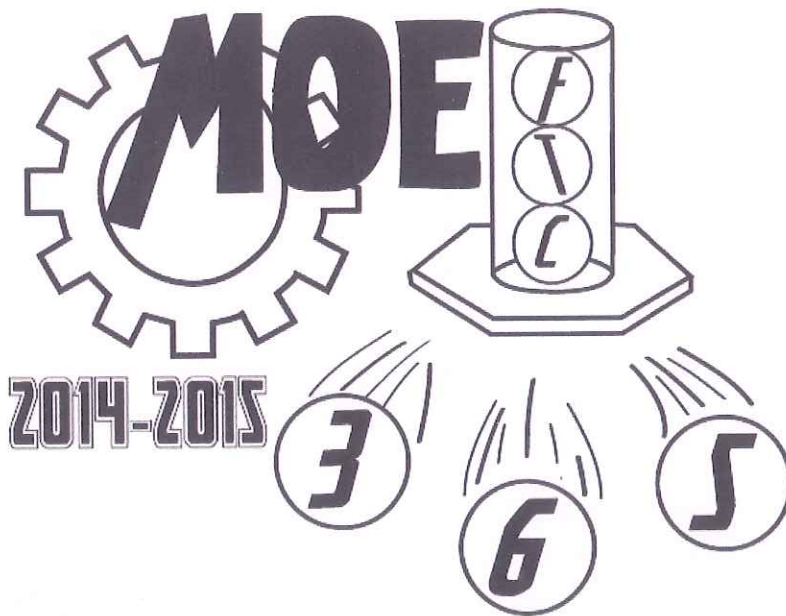
PROPRIETARY INFORMATION

Task

- Work on t-shirt
- Discuss interview visual aid
- Work on bios
- Discuss Independent Chemistry Week event
- Work on business plan

Reflection

- T-shirt is basically done
- We are a bit far behind on interview / bios hopefully that will get done Saturday
- The business plan is done so we can soon send it out to our sponsors



Completed front of Jersey !!!

Continued to page

SIGNATURE

Rachel Prethman

DATE

11/14/14

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PROPRIETARY INFORMATION

TASK	Reflections
<ul style="list-style-type: none"> • Bios / Bio Pics • Table of Contents • Summary Pages • Interview 	<ul style="list-style-type: none"> • I am very concerned that we won't be ready for our next competition • Kayla is doing a great job taking pictures for our team

WE DISCUSSED THE AMOUNT OF TIME WE HAVE BEFORE NEXT SUNDAY'S COMP AND WHAT WE HAVE TO DO LEFT.

- Interview 6-8
- Visual Aid
- Notebook 6
- STIMS 1
- Drive Team 3-4
- Summary Page
- Table of Contents
- Cross Matching

ROBOT

- Programming
- Drive ~~Team~~ ^{Chain} 1
- Harvester 1
- Mounting Lift 1
- Electronics 3
- Wiring
- Soldering
- Aesthetics 1
- Goal Manipulator 2-4
- Auton Testing 6

TOTAL - 34 HOURS

UPON FURTHER INSPECTION, WE WILL NOT BE READY FOR NEXT SUNDAY COMP. BECAUSE OF THIS WE HAVE DECIDED NOT TO ATTEND SO WE CAN USE THAT TIME TO GET READY FOR THE FOLLOWING WEEK.

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SIGNATURE

George M. M...

DATE

10-8-14

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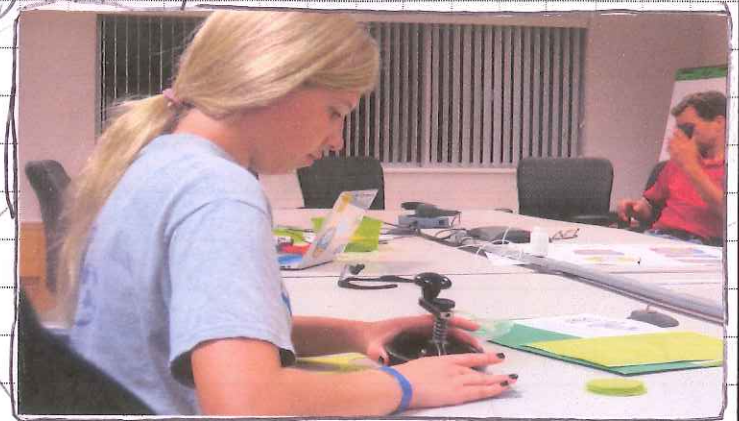
PROPRIETARY INFORMATION

Task

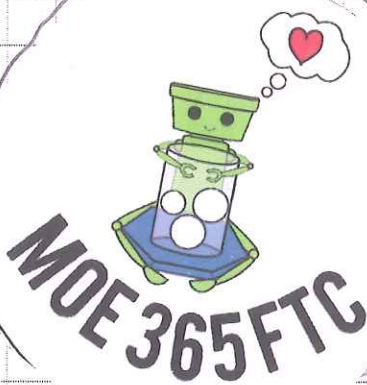
- Discuss BIOS
- Interview
- Prepare for competition
- Make new buttons

Reflection

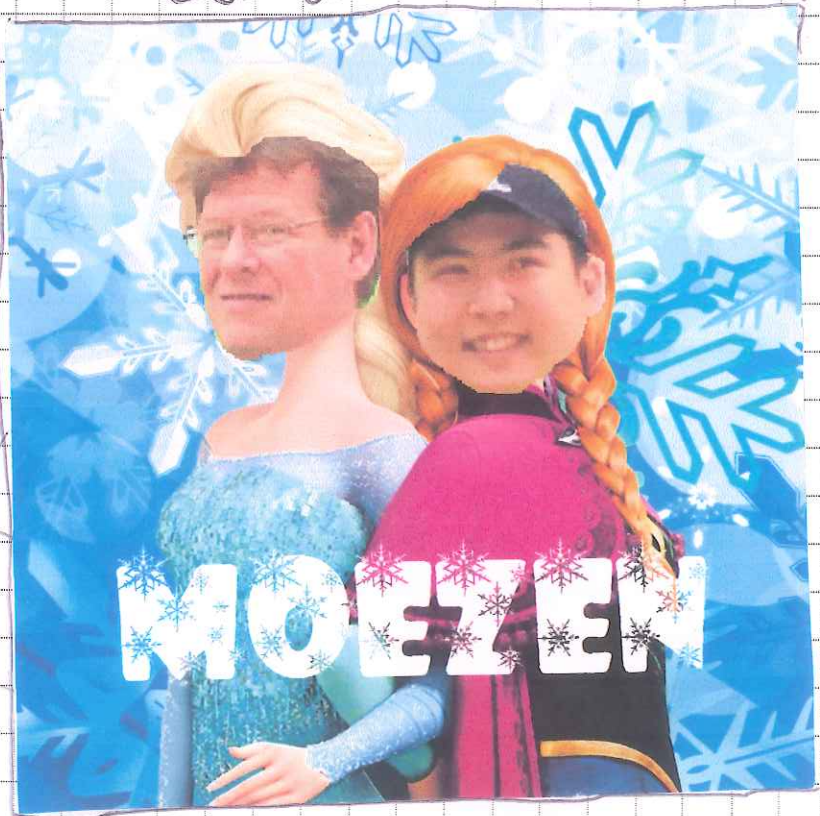
We had a lot of fun making new button designs and the BIOS are getting done



New Button Design!



Our other new button!



Continued to page 35

SIGNATURE

Rachel Dwyer

DATE

11/11/14

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PROPRIETARY INFORMATION

Meeting continued Jobs for Meeting

CAD Matt -
Scouting Georgia
Bios - Rachel
Bill of Materials
Stims - Ron

Bus Plan Georgia
Connections Georgia/Ron
Maintenance Readiness - pit crew - snare
Decorate
Autonomous Arrow
AR

Drive Team
Matt - Primary
Shane - Primary, 2nd BU, Coach
Rachel - Coach
Arnar - 2nd
Jack - Primary B/U 2nd coach
Kyle - 2nd

Continued to page

SIGNATURE

Rachel Pryor

DATE

11-11-14

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PROPRIETARY INFORMATION

TASKS

- WORK ON INTERVIEW
- FINISH BIOS
- TEAM PICTURE
- UPDATE SPONSORS
- SUMMARY PAGES
- INTERVIEW VISUAL AID

REFLECTIONS

- We have gotten a lot done
- Team picture was taken
- Summary pages is almost done
- We really need to get the visual aid done

TODAY WE REALLY PUSHED ON INTEGRATING THE BUSINESS PLAN INTO THE INTERVIEW PROCESS. WE ALSO TOOK OUR TEAM PICTURE!



WE ALSO LOOKED INTO OUR SOCIAL MEDIA ANALYTICS.

OUR SOCIAL MEDIA UPDATE IS ON OUR FOLLOWING PAGE.

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SIGNATURE

Georgina Morcay

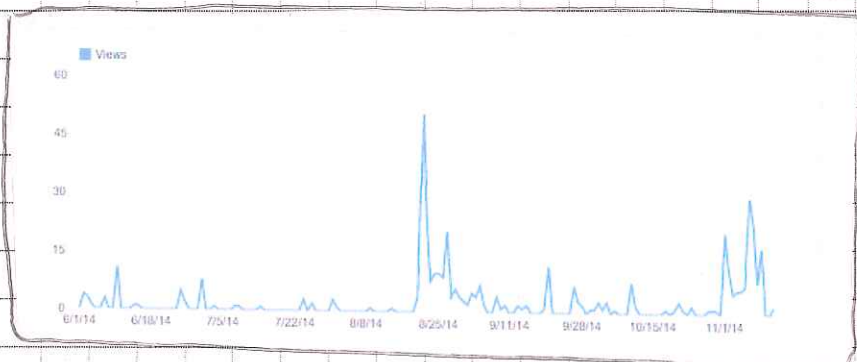
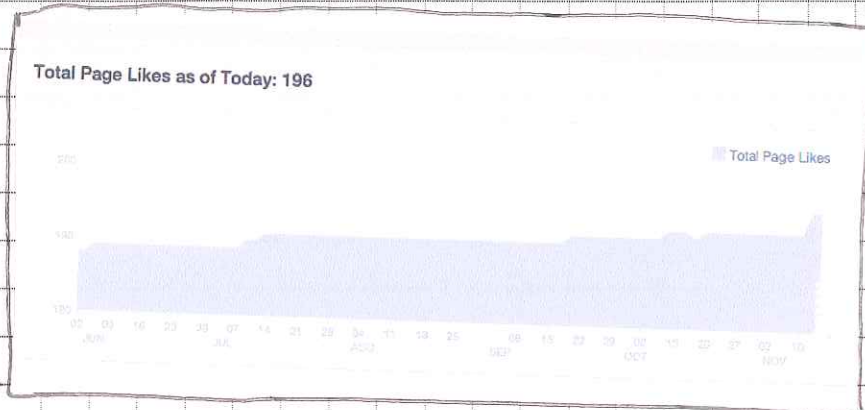
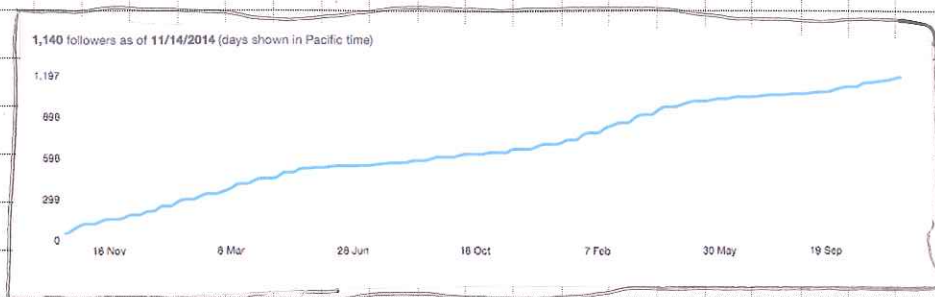
DATE

11/15/14

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PROPRIETARY INFORMATION

Social Media Update

OUR TWITTER FOLLOWERS ARE STEADILY INCREASING BUT THE ABSENCE OF MATERIAL ON OUR FACEBOOK AND YOUTUBE IS SHOWING IN OUR LACK OF LIKES & VIEWS.

Continued to page

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DATE

11-15-14

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PROPRIETARY INFORMATION

TASKS

REFLECTIONS

- JUDGING PREPARATION
- GET ROBOT DRIVING

TODAY THE TEAM SCHEDULED AN EXTRA MEETING TO GET US BEST PREPARED FOR THE UPCOMING COMP.

WE NEED TO ACCOMPLISH:

- JUDGING PPT
- BIOS
- BUSINESS PLAN FINALISATION

THE ROBOT TEAM NEEDS

- ★ • ROBOT DRIVE
- HARVESTER FOR BALLS
- ~~DISPATCH~~ WORKING
- ★ • ELECTRICAL
- ★ • TILGOP



ALL HANDS ON DECK TO GET READY FOR THE COMP! EVERYONES WORKING ON SEPARATE THINGS AND TRYING TO INTEGRATE AS FAST AS POSSIBLE.

Continued to page

SIGNATURE

Georgina Mckeay

DISCLOSED TO AND UNDERSTOOD BY

DATE

11-16-14

DATE

PROPRIETARY INFORMATION

Tasks

- Finish Judging Visual aid
- put Summary pages in the notebook

Reflections

We are as close as we are going to get for the Oxford competition

We decided to really push our business plan in judging because we feel it is very strong and it helps guide us while presenting.

We also decided to go with a tri-fold for our first competition because we ran out of time to do a power point

SIGNATURE

Rachel Prettyman

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DATE

11/20/14

Continued to page

PROPRIETARY INFORMATION

Today, we have summed up our wonderful weekend at Saturday's Oxford season. We were 1st Place Alliance Captain! We have cleared up some of the improvements needed to the robot and the improvements to the team. Some of these are communication, Autonomously, the Ball Harvester, as well the Drive practice.

TASKS

- Fix/improve Robot
- Drive practice
- Judging Self Eval. Sheet

Reflections

- We evaluated what we did well and what we needed to improve on for judging.
- It was very helpful

Continued to page

SIGNATURE

Alec Chylo

DATE

11/22/14

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PROPRIETARY INFORMATION

Priorities for the Dec. 6th

- ① - Harvester, Pick up Balls
- ② - PROGRAMMING
- ③ - Wiring / Sumantha / NXT
- ④ - HARVESTER → TUBE Connection
- ⑤ Manipulation of goals
- ⑥ Lift
Side Panels

Continued to page

SIGNATURE

DATE

11/22/14

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PROPRIETARY INFORMATION

OXFORD PA QUALIFIER

GOALS

- DO OUR BEST FOR THE FIRST COMPETITION
- DON'T BREAK THE ROBOT
- TRY TO GET NOMINATED FOR AT LEAST ONE AWARD

REFLECTIONS

- WE WON ALL BUT ONE OF OUR MATCHES
- WE WON THE FINALS
- WE WON THE CONNECT AWARD
- WE WERE NOMINATED FOR MOTIVATE, INNOVATE, AND INSPIRE.
- WE DON'T ACTUALLY NEED DRIVE PRACTICE TO WIN
- WE'RE BAD AT PICKING UP BALLS WITH THE ROBOT
- VARIOUS OTHER SMALL TWEAKS NEEDED TO BE MADE TO THE ROBOT
- INTERVIEW

OVERALL THE COMPETITION WENT VERY WELL FOR US. WE DID NOT EXPECT TO DO VERY WELL AT THIS COMPETITION, SINCE AS WE HAD NO DRIVE PRACTICE AND ONLY JUST FINISHED THE ROBOT. HOWEVER, WE ENDED UP DOING VERY WELL AND WERE THE FIRST RANKED ALLIANCE CAPTAIN. WE PICKED SMOKIN' MOTORS TO BE OUR PARTNER, AND WE ENDED UP WINNING AND SECURING A SPOT AT PA STATES. IN ADDITION TO THE ROBOT PERFORMANCE WE ALSO WON CONNECT AND WERE NOMINATED FOR INNOVATE, MOTIVATE, AND INSPIRE.

Continued to page

SIGNATURE



DATE

11-22-14

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PROPRIETARY INFORMATION

Photos From Oxford



Continued to page

SIGNATURE

Rachel Buttzman

DATE

11/22/11

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DATE

PROPRIETARY INFORMATION



FIRST Tech Challenge

Using the FTC Team Judging Session Self-Reflection Sheet

Why Team Self-Reflection?

Self-Reflection is an essential life skill. Whether it be your own behavior, job performance, or when brainstorming a new invention, learning how to step back and objectively provide self-feedback is invaluable. Not everyone around you will be willing or able to provide the type of feedback that you need to move ahead and improve. Some situations may not even allow for feedback to come your way. Instead of being left wondering questions like "why?" or "what did I do wrong?" or "how did I do?" over and over, we would like to help Teams develop the skill of providing their own feedback after objective self-reflection so they will be able to quickly reflect, adapt, and move forward.

The FTC Team Judging Session Self-Reflection Sheet

FIRST Tech Challenge knows that Judging can be a challenging part of the program for many students and Teams. Judging is subjective and Judges do not provide feedback to Teams on how the decisions were made. The Judging process is designed to help students develop interview and public speaking skills, which are necessary life skills, so it is important that Teams prepare for, do their best in, and benefit from each Judging interview. To assist Teams in maximizing the benefits of their Judging experience, FTC recommends (but does not require) Teams to complete a Judging Interview Session Self-Reflection Sheet designed just for this purpose. This document is for the Team's use ONLY and will not be collected by the Judges or any other Event Day staff. Judges do not use this document in any way as part of their deliberations or decision-making.

Using the Self-Reflection Sheet

Prior to the Event, Teams should complete the Self-Reflection sheet portion (top section only). After their Judging Interview, Teams should complete the remainder of the Self-Reflection sheet – ideally as soon as possible so that clear details can be recorded before they are forgotten. The type of feedback that is most useful should be specific: "everyone made eye contact" or "a few members interrupted the Judges". An example of less-helpful feedback might be "we did great" or "this area needs improvement". Over time, Self-Reflection will become second nature and the Team may not find it useful to use the Self-Reflection Sheet any more, which is fine – remember, Teams ARE NOT required to complete the Self-Reflection Sheet.

Ideas for When and How to do Team Self-Reflection

Every Team will approach goal-setting and self-reflection in their own unique way. No one method is best nor would it work for everyone. Here are a few possibilities for when and how a Team might approach the task, but Teams should develop the system that works best for them:

- Designate a student member of the Team to be an Interview Session observer and take notes on the Self-Reflection Sheet. This person should be a keen, unbiased observer and a good note-taker. Before the next Event, review the notes and prepare the Team for Judging with new goals and an adjusted Judging Interview session plan.
- Provide each Team member with a copy of the Self-Reflection Sheet to fill out at the Event. Collect the Sheets and review them together in a post-Event Team meeting.
- Have one Student or Team Member jot notes on the Self-Reflection Sheet immediately after the Judging Interview session. Hold a post-Event Team meeting to discuss the Judging Interview session, using the Self-Reflection sheet as a starting place.
- Collect the Team together immediately after the Judging Interview session to reflect on how it went. Have one Team member note what people say on the Team Self-Reflection Sheet. Before the next Event, review the notes and prepare the Team for Judging with new goals and an adjusted Judging Interview session plan.



Team Judging Session Self-Reflection Sheet

For Team use only – Not to be handed in

Skill	Comments
Pre-Assessment (to be completed prior to the Judging Session)	
Team has prepared for the Judging session and has a plan for who will speak, when, etc.	What did the Team do well in preparing for the Judging Interview? <i>we each prepared a different time</i>
Team has held practice Judging sessions.	What is one thing the Team can focus on improving before the next Event? <i>Not do it the day before only</i>
Team has identified a goal for the Judging session.	
First Impression (to be completed AFTER the Judging Session)	
All members exhibited Gracious Professionalism through their language and behavior.	What did the Team do well at making a First Impression? <i>we were dress very spoked/had energy</i>
Team spirit was visible in dress, energy, materials, or preparedness.	What is one thing the Team can focus on improving in this area? <i>Sound, less nerves</i>
Used Judging session time efficiently and effectively.	
Team Dynamic (to be completed AFTER the Judging Session)	
Team shares the spotlight in Judging, inspection, Competition, and in the Pits by ensuring every member has a role and communicates this by words and actions.	What did the Team do well in Team Dynamic? <i>We had fun and worked well together</i>
Team has a rapport that shows attention to Teambuilding and behaves as Gracious Professionals to each other.	What is one thing the Team can focus on improving in this area? <i>We need to work on transitions</i>
Speaking Skills (to be completed AFTER the Judging Session)	
Speakers spoke clearly and enunciated.	What did the Team do well in Speaking Skills? <i>we were enthusiastic</i>
Responded to Judges questions with thoughtful, thorough responses.	What is one thing the Team can focus on improving in this area? <i>Need to use less notecards</i>
Is there anything else you want to share? – Team prepared with a unique tidbit about the Team or the Robot.	
Presentation Skills (to be completed AFTER the Judging Session)	
Members made eye contact and maintained good posture when speaking to Judges, staff.	What did the Team do well in Presentation Skills? <i>We had an organ</i>
Team materials were professional, clean, easy to read.	What is one thing the Team can focus on improving in this area? <i>More eye contact, need visual aid</i>
If applicable, presentation was organized and well-rehearsed.	
Listening Skills (to be completed AFTER the Judging Session)	
Team understood the Judges questions or asked for clarification.	What did the Team do well in Listening Skills? <i>Answered all the questions well</i>
Team fully responded to the Judges questions.	What is one thing the Team can focus on improving in this area? <i>We talked over each other but we 11</i>
Team paused to allow for Judges follow-up questions.	
Content (to be completed AFTER the Judging Session)	
Team shared authentic stories, proud moments, and unique tidbits.	What did the Team do well in the Content of their Interview? <i>Had stories, talked about individual roles</i>
Team articulated how, as individuals and as a Team, they have grown and interacted with others during the season.	What is one thing the Team can focus on improving in this area? <i>Maybe give everyone a title</i>
Focused on what is unique about the Team.	
Team was able to show the breadth of their Team and how each member plays a key role.	
Overall Post-Assessment (to be completed AFTER the Judging Session)	
What are two Team Judging Interview strengths?	1. Spirit 2. Dynamic
What is one area the Team can focus on improving?	1. Visual aid, less note cards

Gracious Professionalism - "Doing your best work while treating others with respect and kindness - It's what makes FIRST, real."

Tasks

- Talk about sponsors
- Upload photos from competition
- Make a resource for our website
- Update social media

Reflections

- For sponsors we want to send out and ~~contact~~ personalize ~~our~~ our business plans
 - We want to add how we do at each competition
- We want to plan Outreach Events at:
 - CUB Scouts meeting
 - Ferris
 - Blue Hen Comics
 - The Garage Kennel + Youth Center
 - YMCA Sat. Mornings

TESLA
CIRCUIT
LEGO BRIX
FORTE
VANISH
CHINTZY CPU
Techno Overload
CHAND STATE

Today we made a blog/resource on our website with links to cool robotics/techno looking free fonts.

This can help teams spruce up their logos, posters, and presentations.

We've already gotten several likes/favorites on this post on facebook and twitter.

Today we also posted a video on youtube about when we consulted a unicorn at the PA Oxford Qualifier to help us pick our Alliance Partner



How MOE selects their Alliance Partners

✓ Your video has been published at <http://youtu.be/>

Continued to page

SIGNATURE

Rachel Prettyman

DATE

11/29/14

DISCLOSED TO AND UNDERSTOOD BY

DATE

PROPRIETARY INFORMATION

TASKS

- ~~WORK~~ REVIEW COMP
- WORK ON PROMOTE VIDEO
- MINOR TECH FIXING

REFLECTIONS

- WE GOT THE SCRIPT DONE FOR THE PROMOTE VIDEO AND ARE EXCITED TO START FILMING

TONIGHT WE CONTACTED TWO MORE POTENTIAL SPONSORS - OPLAN GRID AND LABWARE. WE ARE EAGERLY AWAITING THEIR REPLIES.

Hello Ralph and Tracy,

I'm a representative of the robotics team MOE FTC 365. Shane informed us you were interested in sponsoring us.

We are a FIRST Tech Challenge (FTC) team. We design, build, and program robots to compete in a challenge released every year by FIRST (FIRST stands for the Inspiration and Recognition of Science and Technology). Our full team name is MOE - the Miracle Workerz (Miracles of Engineering) Our team consists of 10 students, from 9 area schools, ranging from public, private, homeschool. We range in age from 14 to 17. We take the FIRST core value of Gracious Professionalism very seriously. Gracious Professionalism is a way of doing things that encourages high-quality work, emphasizes the value of others, and respects individuals and the community. We endeavor to exhibit it not only when working with other teams at competitions, but also to each other at meetings, and, perhaps most importantly, outside of MOE- related events to people who know nothing of FIRST. We have huge amounts of team spirit. Our spirit manifests itself in copious amounts of MOE green, MOE puns, and our famous MOE cheer. Most importantly, it's what drives us to be the best we can be, and to excel in all we do. Along with this our team has proudly had the chance to go to the FTC World Championship four times in the past five years.

Our team would greatly appreciate if your company considered sponsoring us for the 2014-2015 season. Your funding would go to purchasing new parts for the current FTC challenge CASCADE EFFECT, new spirit gear to allow us to better spread our excitement for engineering, and to be able to spread FIRST and STEM initiatives in Delaware. One of our main goals as a team is to enhance Delaware programs like FTC because we want other teams to have the opportunity to compete at the same level as any other state. Two years ago our team gave a donation to the Edison Charter Chess Team to help them go to their world championship. Along with that, our team has also donated to ALS over the summer. MOE FTC would love to be able to assist other STEM programs in the future with your help.

Donations can be sent to our parent non-profit organization at First State Robotics. Please designate that donation is specified for MOE FTC team if possible. Non-profit details can be found at <http://firststaterobotics.org/501c3-approval-and-tax-documents/>

We look forward to hearing from you in the future. Thank you for your time.

Sincerely,

Rachel Prettyman

Continued to page 47

SIGNATURE

Georgina MacFarlane

DATE

12-9-14

DISCLOSED TO AND UNDERSTOOD BY

DATE

PROPRIETARY INFORMATION

Dear Mr. Kershner,

I'm a representative of the robotics team MOE FTC 365. Shane informed us you were interested in sponsoring us.

We are a FIRST Tech Challenge (FTC) team. We design, build, and program robots to compete in a challenge released every year by FIRST (FIRST stands for the Inspiration and Recognition of Science and Technology). Our full team name is MOE – the Miracle Workerz (Miracles of Engineering) Our team consists of 10 students, from 9 area schools, ranging from public, private, homeschool. We range in age from 14 to 17. We take the FIRST core value of Gracious Professionalism very seriously. Gracious Professionalism is a way of doing things that encourages high-quality work, emphasizes the value of others, and respects individuals and the community. We endeavor to exhibit it not only when working with other teams at competitions, but also to each other at meetings, and, perhaps most importantly, outside of MOE- related events to people who know nothing of FIRST. We have huge amounts of team spirit. Our spirit manifests itself in copious amounts of MOE green, MOE puns, and our famous MOE cheer. Most importantly, it's what drives us to be the best we can be, and to excel in all we do. Along with this our team has proudly had the chance to go to the FTC World Championship four times in the past five years.

Our team would greatly appreciate if your company considered sponsoring us for the 2014-2015 season. Your funding would go to purchasing new parts for the current FTC challenge CASCADE EFFECT, new spirit gear to allow us to better spread our excitement for engineering, and to be able to spread FIRST and STEM initiatives in Delaware. One of our main goals as a team is to enhance Delaware programs like FTC because we want other teams to have the opportunity to compete at the same level as any other state. Two years ago our team gave a donation to the Edison Charter Chess Team to help them go to their world championship. Along with that, our team has also donated to ALS over the summer. MOE FTC would love to be able to assist other STEM programs in the future with your help.

Donations can be sent to our parent non-profit organization at First State Robotics. Please designate that donation is specified for MOE FTC team if possible. Non-profit details can be found at <http://firststaterobotics.org/501c3-approval-and-tax-documents/>

We look forward to hearing from you in the future. Thank you for your time.

Sincerely,
Rachel Prettyman

AS YOU CAN SEE, WE DIDNT PROPERLY DOCUMENT HOW TO ~~SPECIFY DONATION~~ SPECIFICALLY DONATE TO OUR TEAM SO MR KERSHNER GRACIOUSLY DONATED TO US THE LONG WAY. IN THE FUTURE WE WILL BETTER DESCRIBE HOW TO GET ~~TO US BETTER~~ ~~WHEN~~ DIRECTLY TO US.



WE ARE VERY EXCITED TO HAVE LABWARE AS A NEW SPONSOR!

Continued to page 48

SIGNATURE

Deborah McCreary

DATE

12-9-14

DISCLOSED TO AND UNDERSTOOD BY

DATE

PROPRIETARY INFORMATION

Video	Audio
Top screen ball rolling Bottom show people being a team	EVERYONE HAS A ROLE
	IT HELPS YOU MAKE LASTING FRIENDS
PROGRESSION OF FIRST PROGRAMS	TO HELP GET YOU TO THE NEXT LEVEL
	IT CELEBRATES SCIENCE AND TECHNOLOGY
	TO LEARN TO RESPECT OUR COMPETITORS
	TO LEARN FROM YOUR MISTAKES
	TO HELP FORM COMMUNICATION SKILLS AND SELF CONFIDENCE.
	TO INSPIRE THE NEXT GENERATION

WE PLAN ON USING ALOT OF STOCK FOOTAGE FROM OUR PREVIOUS SEASONS AS WELL AS VOICE OVERS FROM ALL 10 OF OUR CURRENT MEMBERS.

Continued to page

SIGNATURE



DATE

12-9-14

DISCLOSED TO AND UNDERSTOOD BY

DATE

PROPRIETARY INFORMATION

Tasks

- Discuss upcoming priorities till the next competition
- Update Social Media
- add photos to Facebook
- Update Business Plan
- Discuss Sponsors

Reflections

- We added photos to our Facebook
- We set up dates to work on our promote ~~video~~
- We emailed labware so they could give the money to the correct place

~~What~~
 - We will film / get the audio for the promote video Saturday for this we also decided that everyone would say "why first?" at the end.

Continued to page

SIGNATURE

Rachel Quethman

DATE

12-16-14

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DATE

PROPRIETARY INFORMATION

Task 5

- Film audio/B Roll for video
- Talk about possibly moving the Maryland Competition

Reflection

- We got all the audio and footage we needed.
- We even started editing
- We agreed to the one team who wanted to move the date of the competition for Maryland
- We also took the picture for the t-shirt design competition

Editing



Continued to page

SIGNATURE

Rachel Prekymon

DATE

12-20-14

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DATE

PROPRIETARY INFORMATION

Edited Script (with assigned parts)

Video	Audio
Top screen ball rolling Bottom show people being a team	EVERYONE HAS A ROLE - Al May
	Math
PROGRESSION OF FIRST PROGRAMS	IT HELPS YOU MAKE LASTING FRIENDS TO HELP GET YOU TO THE NEXT LEVEL Ethan
	IT CELEBRATES SCIENCE AND TECHNOLOGY Kyle
5 min Nthrs video	TO LEARN TO RESPECT OUR COMPETITORS Shane
	TO LEARN FROM YOUR MISTAKES Georgina
	TO HELP FORM COMMUNICATION SKILLS AND SELF CONFIDENCE. Jack
	TO INSPIRE THE NEXT GENERATION Rachel
	Let's you have a lot of fun Kayla

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DATE

PROPRIETARY INFORMATION

Rachel Prettyman

12-20-14

TASKS

- SECRET SANTA
- WORK ON BUSINESS PLAN AND UPDATE IT WITH NEW BUDGET INFO
- START PLANNING PROMOTE EDITING

REFLECTIONS

- SECRET SANTA WILL BE RETURNING NEXT SEASON
- FILM PROMOTE NEXT MEETING



PRESENTS FROM SECRET SANTA

SECRET SANTA WAS SO MUCH FUN! WE LOVED GIVING AND GETTING GIFTS. WE FEEL LIKE IT BROUGHT THE TEAM CLOSER TOGETHER.

WE ALSO GOT AN IDEA TO 3D PRINT COOKIE CUTTERS. WE HAVE A GEAR AND BABY GROOT FROM GUARDIANS OF THE GALAXY.



COOKIE CUTTERS

WE ALSO STARTED AND FINISHED THE UPDATES FOR THE BUSINESS PLAN.

PLANNING FOR OUR NEXT COMP, WE HAVE BEEN FILMING FOR PROMOTE. WE HAVE GATHERED ALL NEEDED FOOTAGE BUT HAVE TO FIGURE OUT THE BEST WAY TO ASSEMBLE EVERYTHING TOGETHER.

Continued to page

SIGNATURE

Georgie Hooley

DATE

12-23-14

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DATE

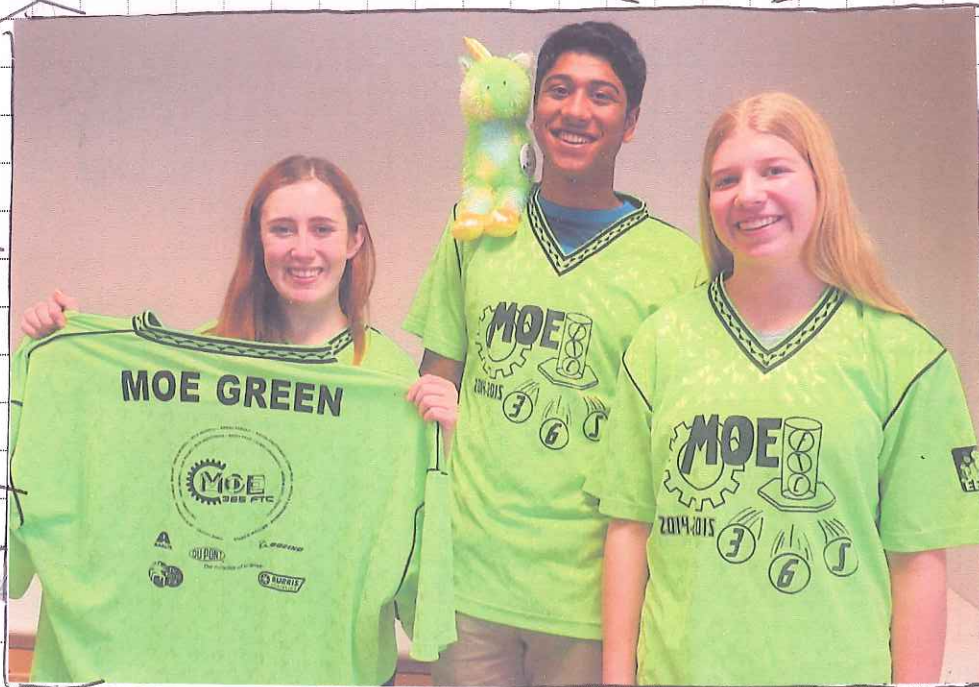
PROPRIETARY INFORMATION

Tasks

- ~~On~~ We need to finish the promote video
- ~~The editing~~ We need to put the animations with the audio.
- ~~Submit~~ Take picture for the T-shirt design contest

Reflection

- The promote video is finished but it turns out the Maryland Qualifier isn't doing the promote video so at least it is done for the next competition with it.
- We ~~submit~~ took the picture for the t-shirt design contest



Continued to page

SIGNATURE

Rachel Protzman

DATE

12/27/14

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DATE

PROPRIETARY INFORMATION

Tasks

- Update Social Media
- Submit picture for t-shirt design contest
- Experiment with printing on 3D printer

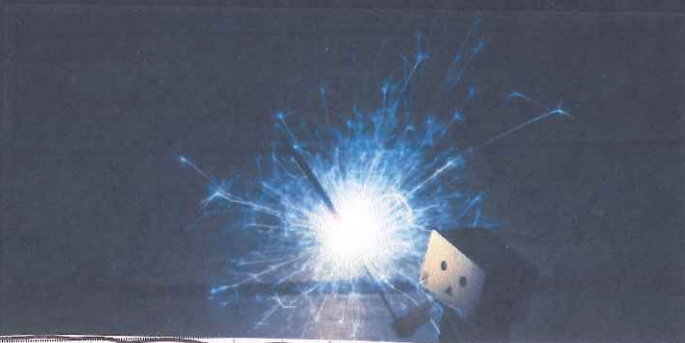
Reflection

- We posted a blog post on the website and then tweeted / posted it on face book.
- We also submitted the picture for the t-shirt contest
- We have experimented with our 3D printer and printed FIRST logos

Update!

Posted on December 30, 2014 by Rachel

2014 has been a great year and season. First we qualified for PA States at the Oxford Competition, as the winning alliance captain, as well as winning the Connect Award and were third place for Inspire. At the next competition, the Eastern PA competition, we were part of the winning alliance and won the Inspire Award!!!! So far we have also done some awesome Outreach events, like cohosting a scrimmage and the Duel on the Delaware. We are looking forward to next year, especially with our next competition, a Maryland Qualifier, just around the corner. Happy New Years everyone!



Continued to page

SIGNATURE

Rachel Dettymon

DATE

12/30/14

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DATE

PROPRIETARY INFORMATION

Tasks

- Finish interview visual aid
- Pack for Maryland competition
- Load pictures onto TV
- Interview practice

Reflection

- We packed up the stuff we needed for Maryland,

SIGNATURE

Rachel Beetham

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DATE

DATE

1/10/15

PROPRIETARY INFORMATION



Continued to page

Task 5

- New button
- Recap Scrimmage
- 3D Printer came
- Posters for ~~the~~ Delaware

Reflection:

- We made new buttons for Delaware
- Our new 3D printer came
- We didn't win the t-shirt contest. sadly

MOE <3(65)'s
the  
STATE

Continued to page

SIGNATURE

Rachel Prelynn

DATE

1/20/15

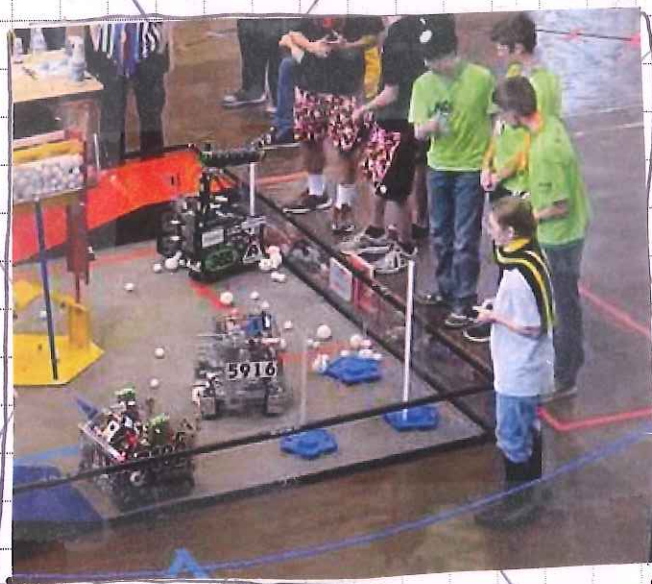
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PROPRIETARY INFORMATION

Maryland Reflections

The qualifying matches for Maryland went really well. We have won all of the qualifying matches. MOE was an alliance captain for the finals. We have gotten to the finals with one match to go. We did lose the match. When it came to the awards we won 3rd place Inspire award. Then 1st and 2nd was already moving on. So we qualified for Maryland with Inspire. 2nd place



Continued to page

SIGNATURE

Kyle Merrill

DATE

1/24/15

DISCLOSED TO AND UNDERSTOOD BY

DATE

PROPRIETARY INFORMATION

Tasks

- Make DE posters
- Buttons
- Update Notebook Table of Contents
- Interview practice

Reflections

- We made posters but Ethan spelled Delaware wrong. He had it so it was "DeleWae".
- We had to fix it.
- We did interview practice but we know it was a little shaky and the power point was off since we updated the speech, we will go back to it Tuesday.



Continued to page

SIGNATURE

Rachel Prettyman

DATE

1-24-14

DISCLOSED TO AND UNDERSTOOD BY

DATE

PROPRIETARY INFORMATION

TASKS

- PREPARE BILL OF MATERIALS
- HARDWARE & SOFTWARE CHECKLISTS
- TEAM ROSTER
- CONTROL AWARD
- PACKING CHECKLIST
- PACK SPIRIT GEAR
- JUDGING
- PROGRAMMING !!

REFLECTIONS

WE FEEL PRETTY READY FOR SATURDAY!
 CURRENTLY WE'RE DOING A LOT OF PACKING
 AND PAPERWORK. WE'RE STILL LAUGHING
 ABOUT THE SPELLING MISTAKE FROM LAST
 MEETING, SO HERE'S THE PICTURE WE
 TWEETED:

GOOD LUCK
 DELEWAE
 TEAMS!

Continued to page

SIGNATURE

Georgina Mackay

DISCLOSED TO AND UNDERSTOOD BY

DATE

1-27-14

DATE

PROPRIETARY INFORMATION

Meeting

We started writing a letter for our sponsors to go with the business plan. So the sponsors would have a better understanding of it. We had started organizing a lego drive. We also updated everything on social media. Then we started planning for the pit for Super Regionals.

Continued to page

SIGNATURE

Life Mover

DATE

2/10/15

DISCLOSED TO AND UNDERSTOOD BY

DATE

PROPRIETARY INFORMATION

Meeting

Tasks

- Finish Hoodie design
- Post poster for Lego Drive
- Update letter for business plan sendout
- Plan pit for Super Regionals
- Get video together
- Split it 6car
- Prepare for Maryland

Reflections

- We made a business letter to go with our business plan to send to sponsors so they know what we achieved and the meaning of each achievement
- The Lego poster was posted online
- We plan to add a shot to our pit & Super Regionals

Lego Drive poster

MCE
365 FTC

**NEEDS YOUR HELP WITH OUR
LEGO DRIVE**

For the Believe and Achieve Program at
the Oscar Lasko Youth Program Center

Believe and Achieve is an after school and summer camp enrichment program for at-risk children residing in the borough of West Chester.

Lego work and technology will help expose these children to elements of STEM, which minority populations are underrepresented in this country.

We are asking teams to bring in legos at competitions we are at if they can, to help this great cause!

SIGNATURE

Rachel Prettefman

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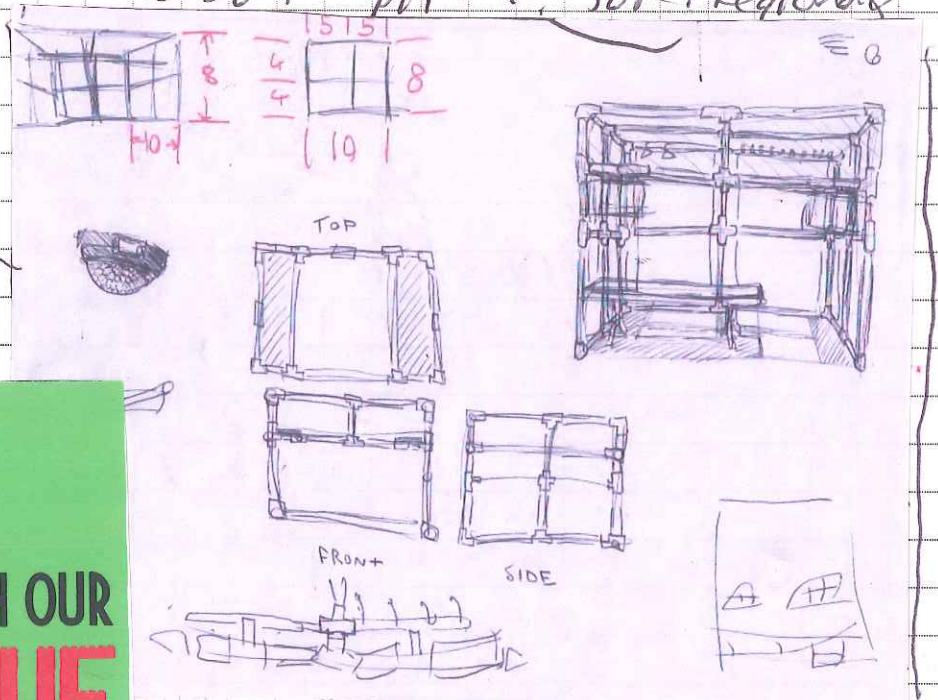
DATE

DATE

2/18/15

PROPRIETARY INFORMATION

Continued to page



Pit Design



Sponsors letter for business plan

Dear **Sponsors**, (There should be a individualized company or sponsor name for each letter. They need to feel special

MOE 365 FTC has had an exciting 2014-2015 season so far. We've competed in three states and have qualified for the State Championship for all of them. MOE has even already qualified for the Super Regional Competition.

This wouldn't have been possible without your support. We are very grateful for your support and would love to continue to connect with you.

Here is a short summary of our season's highlights as of mid-February. In addition, we have included a copy of our business plan for your review.

- Southeastern Pennsylvania Regional Qualifying Tournament:
 - MOE was Winning Alliance Captain
 - Awarded the Connect Award.
 - Nominated for the Motivate Rockwell Collins Innovate Award and Inspire Award.
- Eastern Pennsylvania Regional Qualifying Tournament
 - MOE was awarded Inspire Award. *Judges said "This team demonstrated how a model First Tech Robotics organization should run. Their comprehensive performance on and off the field shows their ability to move in every direction. Far from a miracle, they prove that victory is a product of hard work. Hailing from the First State, the winner of the Inspire Award is.....Judges do the MOE clap....."*
 - Nominated for Rockwell Collins Innovate and Think Awards
 - MOE was the Winning Alliance First Selection
- Annapolis2 US Naval Academy Maryland Qualifier
 - MOE was awarded the Think Award
 - Awarded first runner-up for Inspire Award
 - MOE was Finalist Alliance Captain
 - MOE qualified for Maryland State FTC Championship
- Delaware State FTC Championship (Won Connect, and 2nd place Inspire, nominated for Think award)
 - MOE was Winning Alliance Captain
 - Awarded first runner-up for Inspire Award
 - Awarded the Connect Award
 - Nominated for the Think Award
 - MOE qualified for Eastern Super-Regional Tournament for chance to compete for World Championship Tournament in April, 2015.



Thanks,

SIGNATURE

Matt, Georgia, Rachel, Kayla, Abhishek, Kyle, Arnav, Shane, Ethan, and Jack

DISCLOSED TO AND UNDERSTOOD BY

Rachel Brattym

DATE

2/19/15
PROPRIETARY INFORMATION

Meeting

TASKS

- finished hoodie design
- worked on and updated notebooks
- packed for competition
- prepared for Maryland

Reflections

- decided where to put "don't panic" on the hoodie.
- we got all the spirit gear and buttons packed for the Maryland competition.
- Both notebooks were caught up to today's meeting.

Continued to page

SIGNATURE

DATE

2/17/15

DISCLOSED TO AND UNDERSTOOD BY

DATE

2/17/15

PROPRIETARY INFORMATION

Kayla Merrill

Tasks

- Discuss problem with Maryland and PA
- We received an email yesterday that Maryland would be cancelled because of snow. The rescheduled date is the same day as PA States which is a **PROBLEM!!!**
- We decided to go to PA States because we know more people and we've gone to PA more.
- We also need to Personalize the letters for Sponsors
The Sponsors we need to send letters to are:
 - Axalta
 - Dupont
 - Labware
 - Be Barre Fit
 - Burris Logistics
 - Boeing
 - ~~Dupont~~ Verizon

Reflection

- We decided to go to PA
- We need to do drive practice
- Business letters need to be sent out

Continued to page

SIGNATURE

Rachel Brethmann

DATE

4/21/15

DISCLOSED TO AND UNDERSTOOD BY

DATE

PROPRIETARY INFORMATION

TASKS

- DRIVE PRACTICE
- MAKE BUTTONS
- BRIEF RUNDOWN TO TEAM OF WHAT WE'RE DOING SATURDAY

REFLECTIONS

- WE MADE BUTTONS
- WE PACKED EVERYTHING WE NEEDED FOR

TONIGHT WE DISCUSSED ALL THE PREPARATIONS WE NEED TO DO FOR THE STEM EXPO ON SATURDAY. WE PACKED SPIRT GEAR, BUTTONS, BUSINESS PLANS, AND WHATEVER PARTS WE WOULD NEED TO FIX OUR ROBOT AND ASSIST THE OTHER TEAMS. WE'RE ALSO BRINGING THE 3D PRINTER WE RECEIVED THROUGH EKOCYCLE.

Continued to page

SIGNATURE



DISCLOSED TO AND UNDERSTOOD BY

DATE

2-24-15

DATE

PROPRIETARY INFORMATION

Tasks

- Reflect on PA competition
- Prepare for Slingshot/STEM Expo tomorrow
- Prepare for Super Regionals
 - Pit
 - Figure out monitors
 - Try to do bat signal lights
 - More Wapos
 - CAD
 - Outreach
 - Possibly another animation
- Email Teams about Lego Drive
- Playlist for Pit

Reflection

- We met on a Friday because Tuesday there was ICE
- We wrote the Email to send to teams for the Lego Drive
- We evaluated our priorities for Super Regionals
- We need to buy 20 ft of pvc and 6 T fittings, 4 cross fittings, and 4 B fittings.

Priorities for Non-Technical

1. Email Teams about Lego Drive
1. Interview Practice
1. Notebook
2. Buttons
2. Pit
3. Get Business Plan Set

Continued to page

SIGNATURE

Rachel Prettyman

DATE

3/6/15

DISCLOSED TO AND UNDERSTOOD BY

DATE

PROPRIETARY INFORMATION

Pennsylvania State Championship

At the PA State Championship we gained a lot of knowledge and practice for Super Regionals. We realized we need to take better care of our robot between matches and keep up with ~~maintenance~~ maintenance.

We ended up winning 3 out of 5 qualifying matches. We were picked by MFS Hawks and were happy a fellow Delaware Team, Archmere Robotics also joined our alliance. Though we did not make it pass the Semi Finals we still had a lot of fun with our friend teams. At the end of the day we were nominated for Promote and won the PTC Design Award



Semi Finals



Having fun before alliance selection

Our alliance with MFS Hawks and Archmere



Robotics
We were very excited to have another DE team on our alliance.

Continued to page

SIGNATURE

Rachel Prethymann

DATE

3/10/15

DISCLOSED TO AND UNDERSTOOD BY

DATE

PROPRIETARY INFORMATION

TASKS

• Pack!!!

• Write email to teams

• Pit Prep

• Playlist

REFLECTIONS

We packed and headed
off to SLINGSHOT

Today we packed and got ready for
SLINGSHOT. We also sent out emails to
teams providing info for our LEGO drive.

At world and Supers we have a PVC
Pit and we have to make plans to improve
it. We also need to make a Pit
playlist

Continued to page

SIGNATURE

Georgina Mackay

DATE

3-7-15

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DATE

PROPRIETARY INFORMATION

TASKS

- Submit video to Super Regionals
- Fine tune the details on the pit.
- Celebrate Rachel's birthday
- Update Social Media

Reflection

- Parts have been ordered for the expansion of our pit
- The videos have been submitted
- We posted pictures from PA on Facebook and posted the videos on Youtube

Why I choose FIRST...

MOE FTC 365 2015 Promote Submission

Our youtube video uploaded

Continued to page

SIGNATURE

Rachel Prothman

DATE

3-10-~~2015~~ 15

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DATE

PROPRIETARY INFORMATION

Task	Reflections
• Tuning pit/making upgrades	Build structure of the pit
• Extra drive practice	• Drive Practice
• Preparing for Super Regionals	We want to make it more interesting
• What we want to change for interview	



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DATE

3/13/15

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PROPRIETARY INFORMATION

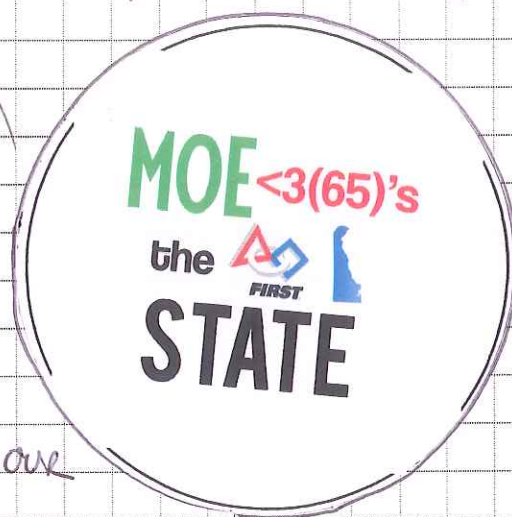
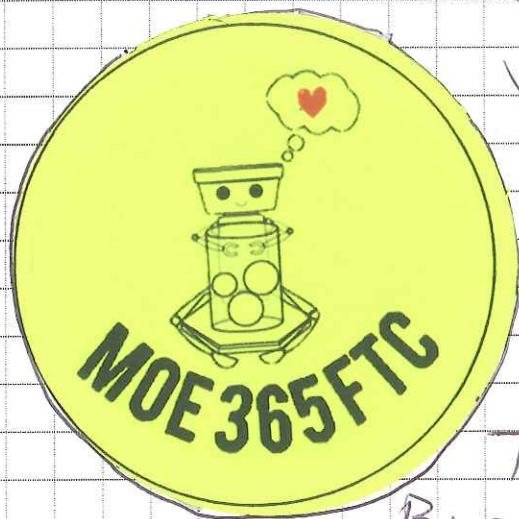
TASK

- INTERVIEW REVIEW & EDITS
- ORGANISE SPIRIT GEAR
- BUSINESS PLAN UPDATES
- JUDGING VISUAL AID
- DRIVE PRACTICE
- PIT FINE TUNING
- PACK OTHER ^{ROBOTS} ~~NOTEBOOKS~~
- CONTROL AWARD UPDATES
- PIT PLAYLIST
- MORE PACKING

REFLECTIONS

- WE MADE TONS OF BUTTONS
- WE UPDATED THE JUDGING PRESENTATION AND THE VISUAL AID
- DRIVE PRACTICE

TODAY WE REALISED OUR JUDGING PRESENTATION ALL YEAR SAID "WE AUTODESK INVENTOR", WHOOPS!



TWO OF OUR
BUTTON DESIGNS

Continued to page

SIGNATURE

Georgina MacEay

DATE

3-14-15

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DATE

PROPRIETARY INFORMATION

TASK

- INTERVIEW PRACTICE
- PACKING!
- DRIVE PRACTICE
- BUTTONS

REFLECTIONS

- We STILL DON'T FEEL LIKE WE ARE PREPARED SO WE WILL HAVE A MEETING TOMORROW IF POSSIBLE



ONE OF OUR BUTTONS

TONIGHT WE DID A LOT OF SUPER REGIONALS PREPARATION, INCLUDING BUT NOT LIMITED TO DRIVE PRACTICE, INTERVIEW PRACTICE, AND BUTTON PREP.

WE ALSO WORKED ON THE AWARDS FOR THE BUTTON PAGEANT WERE RUNNING AT SUPERS.



MOE 365 FTC

Would like to invite your team to get involved with our annual Button Pageant! On the first and second days of Super-Regionals please come submit your teams best buttons by the time pits close Friday. Our team will judge them and decide on the best buttons. There will be a 1st, 2nd, and 3rd place prize!

GOOD LUCK TO ALL THE TEAMS AND WE LOOK FORWARD TO SEEING YOU!

BUTTON
PAGEANT
INFO

Continued to page

SIGNATURE

Michael M...

DATE

3-17-15

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DATE

PROPRIETARY INFORMATION

SUPER REGIONALS

The 2014-2015 EAST SUPER-REGIONAL CHAMPIONSHIP WAS HELD MARCH 19-21st AT THE UNIVERSITY OF SCRANTON IN SCRANTON, PENNSYLVANIA. 72 TEAMS FROM MAINE TO VIRGINIA COMPETED AND 25 TEAMS ADVANCED. IN QUALIFIERS, WE WON 6 OUT OF 9 MATCHES, AND OUT OF THE 3 WE LOST WE SCORED OVER 500 POINTS IN 2 OF THEM.

WE ARE VERY EXCITED TO COMPETE AT WORLD BECAUSE OF QUALIFYING WITH THE MOTIVATE AWARD. OUR FRIENDS, FROM FAR AWAY MARYLAND, SOME DISSASSEMBLY REQUIRED ALSO QUALIFIED.



OUR TEAM AFTER WINNING MOTIVATE



OUR P.I.T



ONE OF OUR DRIVE TEAMS WITH OVERDRIVE DURING A MATCH

Continued to page

SIGNATURE

Georgina Macaay

DATE

3-24-15

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PROPRIETARY INFORMATION

TASKS

- BOOK FLIGHTS
- UNPACK
- TESTING OUT NEW GOAL GRABBER

REFLECTIONS

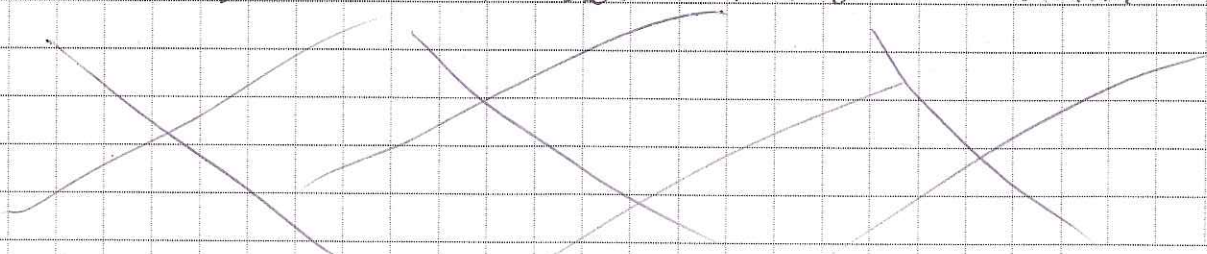
- WE HAVE BOOKED OUR FLIGHTS AND ORGANISED OUR ROOMING SITUATIONS
- WE HAVE UNPACKED EVERYTHING
- WE ADDED A NEW GOAL MANIPULATOR TO THE ROBOT

SUPERS REFLECTIONS/PLANS FOR WORLDS

- WE ALL PACK TOGETHER
- MOETOBOTH - MOE SPIRIT PHOTOBOOTH
- BETTER ORGANISATION
- RANK BETTER THAN LAST YEAR
- INTERVIEW / BUSINESS PLAN REVIEW
- DRIVE TEAM STRUCTURE
- VIP SPONSOR TOUR FOR VANCE
 - ↳ THE OWNER OF LABWARE IS COMING BY WORLDS FOR A DAY, WE SHOULD GIVE HIM A TOUR
- USB SURGE PROTECTOR
- PIT TRASH CAN
- BALLS TO TUBE WITHOUT SWINGING TUBE SIDEWAYS
- TUNNEL FOR BALLS
- MAKE NEW & BACKUPS FOR "V" GOAL MANIPULATOR
- SURGICAL TUBING ON GOAL GRABBER
- STOP BALLS FROM GOING IN ROBOT

PROGRAMMING

- GYRO + FASTER AUTO RAMP
- IR FOR CORRECTING POSITION READING
- SHIELD OLD PROTOBOARD? → NO FLOATING
- LIGHTS → REVISION THAT! OR A DUMMY ONE



Continued to page

SIGNATURE

DATE

3-24-15

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PROPRIETARY INFORMATION

Tasks

- We need to reassemble our drive teams since Shane can't go to worlds
- Tweak the promote video

Reflections

- We set up drive teams and back ups so we have are prepared
- We changed the video so some things are clearer
- We also uploaded the videos from Super Regionals

Drive Teams

Wed Thursday/Fridays

1. Rachel, Jack, Arnav

2. Matt, Kyle, Georgia

If we play Saturday Team 1 will play
back ups for Saturday

Arnav	Rachel	Jack
Matt	Georgia	Kyle
Ethan	Jack	Abi eshel
Austin		

SIGNATURE

Rachel Dethyman

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DATE

3/28/15

PROPRIETARY INFORMATION

Continued to page

TASKS

- work on promote video
- Discuss what we are going to do at the pits in worlds
- Discussing buttons so we can have a fresh new variety for worlds.

Reflection

We edited animation so it's easier to see
we will be doing the button pageant, limited edition buttons, Moeto booth in the pits
Decided on at least 4 (four) new buttons for worlds.

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Kayla Maxwell

DATE

3/31/15

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DATE

3/31/15

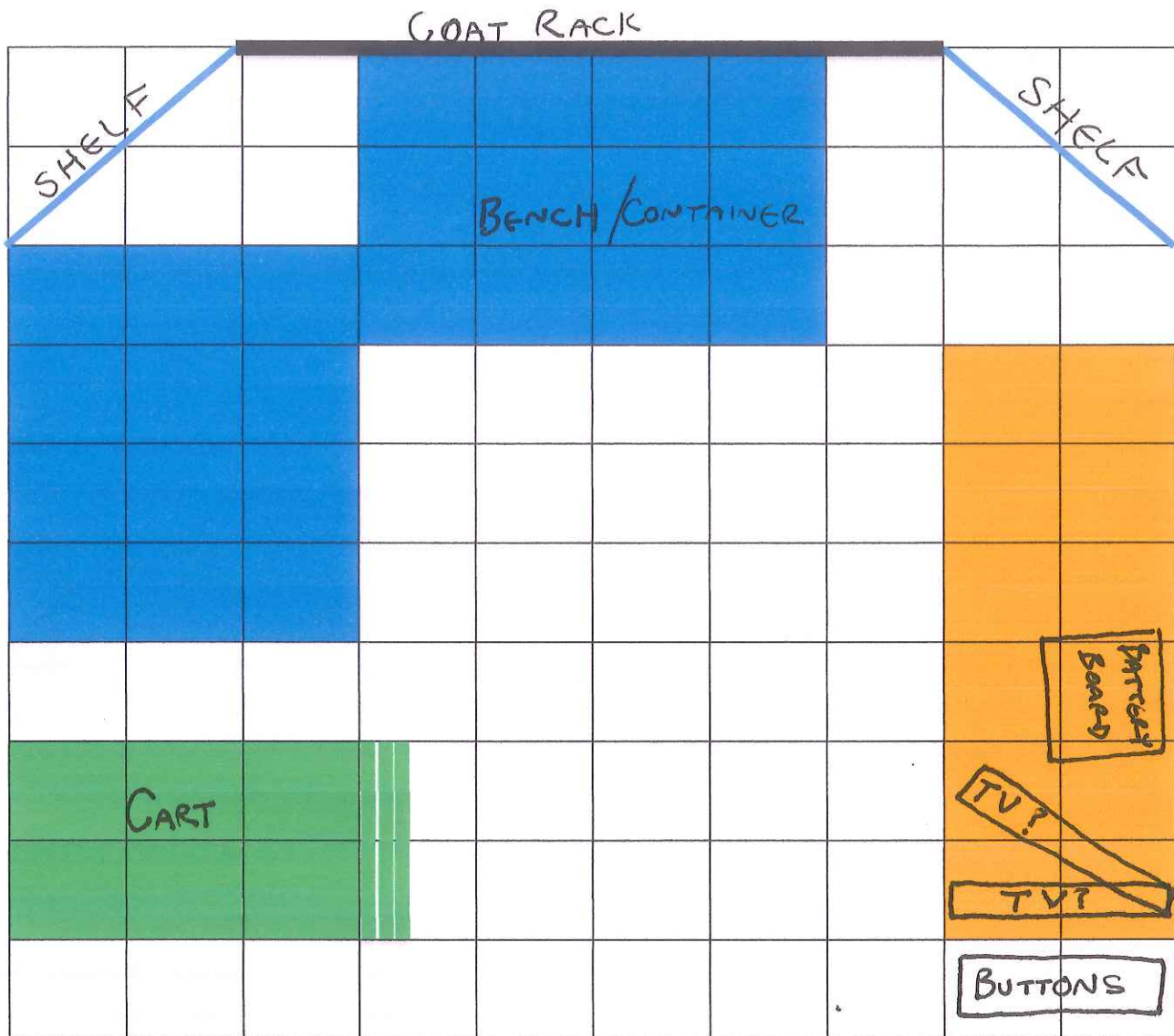
PROPRIETARY INFORMATION

TASKS

- FINISH TUBE
- PACK SPIRIT GEAR & BUTTON MAKERS

REFLECTIONS

- SPIRIT GEAR IS PACKED
- WE PLANNED OUT OUR PIT LAYOUT
- THE TUBE IS ALMOST COMPLETE, WE JUST NEED TO PAINT IT.



HERES A MAP OF OUR PIT AT WORLDS

Continued to page

SIGNATURE

Georgia Maceay

DATE

4-4-15

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PROPRIETARY INFORMATION

Tasks

Packing for
Champions Challenge

Button Pageant
Prizes

Preparing for Worlds

Add servos to pick
up spinner and
on the back

Reflections

Gear is packed

Wording on the
prizes

SIGNATURE

Kyle Morill

DATE

4-7-15

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PROPRIETARY INFORMATION

Continued to page

CHAMPIONS CHALLENGE

WE HAD A WONDERFUL EXPERIENCE AT THE CHAMPIONS CHALLENGE. 7 TEAMS ADVANCING TO WORLDS AND 3 LOCAL TEAMS GOT TOGETHER TO PREPARE AND PROVIDE INSIGHT INTO THE WORLD CHAMPIONSHIP EXPERIENCE.

THERE WAS A SMALL COMPETITION OCCURRING AND ROBOT/CODE INSPECTION. WE ENDED UP BEING 1ST ALLIANCE CAPTAINS AND PICKING OUR FRIENDS 28 POLYGNOMES.

THERE WAS A QUESTION AND ANSWER SESSION IN WHICH ONE OF OUR STUDENTS, GEORGIA, GAVE SOME GREAT TIPS FOR PACKING AND OTHER BITS OF LOGISTICS.

OVERALL, WE HAD FUN AND LEARNED A LOT.



A PICTURE OF THE ATTENDING MOE MEMBERS BONDING

SIGNATURE

Georgia Macey

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DATE

DATE

4-14-15

PROPRIETARY INFORMATION

Continued to page

Tasks

- Review Champions Challenge
- Re design / Discuss Pit to fit 10x10x9 / Practice installing
- Interred Practice
- Elevator Pitch
- Packing Saturday
 - Update everyone on Water into
- Business Plan update

Reflections

- The notebook was updated with Champion Challenge
- Decided we will do the Pit stuff and packing Saturday along with interview and Elevator Pitches
- We made LOTS OF buttons today



Rachel in our new crate

Continued to page

SIGNATURE

Rachel Prettyman

DATE

4/14/15

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PROPRIETARY INFORMATION

Tasks

- Prepare for Worlds
- Practice setting up the pit
- Send high res image for sign
- Interview practice
- Work on Mascot
- Create elevator pitch
- Pack
- Label everything

Reflections

- We packed and labeled everything for the truck
- We sewed a mane for our mascot
- We sent two versions of the logo (one black background, one white) since we didn't know which one would work for the sign.

- For our Elevator Pitch we have decided that we want to say "Hi, we are MOF 365, we try to stand out in our community like our jersey is stand out in the crowd"
- We also talked about standard interview a vesting
- We had the ~~whole~~ whole team listen to the judging presentation so if judges ask us questions, the judging team is not the only one who can answer them.

- What is unique about our team?
- Having 2 drives
- Only PE team to go to Worlds

• We packed the truck for
ST. LOUIS!!



Sewing Carl's Mane

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Rachel Ornetymann

DATE

4/18/15

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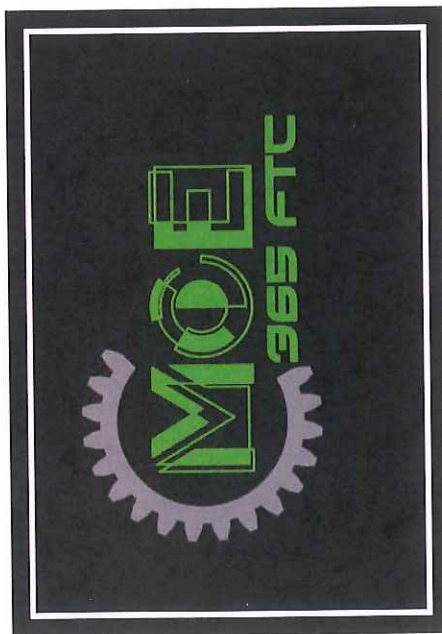
DATE

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 - 1.2 MOE 365
 - 1.3 Mission Statement
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 - 3.3 Competition Team
 - 3.3 Connections Team
- 4.0 Stakeholders
 - 4.1 Community
 - 4.2 Sustainability Plan
- 5.0 Resources
 - 5.1 Delaware Robotics
 - 5.2 Team Resources

MOE
Miracles of Engineering
FTC Team 365
2014-2015 Business Plan



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PROPRIETARY INFORMATION

1.0 Introduction

1.1 MOE 365

MOE 365 FTC is a FIRST Tech Challenge (FTC) team. We design, build, and program robots to play games released every year by FIRST (FIRST stands for For the Inspiration and Recognition of Science and Technology). Our full team name is MOE – the Miracle Workerz. MOE stands for Miracles of Engineering. Our team has proudly had the chance to go to the FTC World Championship three times in the past five years.

We take the FIRST core value of Gracious Professionalism very seriously. Gracious Professionalism is defined as part of the ethos of FIRST. Gracious professionals learn and compete together but still treat one another with respect and kindness in the process. We endeavor to exhibit it not only when working with other teams at competitions, but also to each other at meetings. Most importantly we use it outside of MOE events to people who know nothing of FIRST.

We have massive amounts of team spirit. Our spirit manifests itself in copious amounts of MOE green, MOE puns, and our famous MOE cheer. Our team's chemistry, gracious professionalism, and spirit are what drives us to be the best we can be and to excel in all we do.

1.2 Mission Statement

The MOE FTC 365 mission is to proudly represent FIRST to our stakeholders in the community by:

- Acting with Gracious Professionalism in all that we do.
- Competing ferociously, but with utmost sportsmanship to our partners, competitors, and all event personnel.
- Spreading the core values of FIRST including Cooperation, Gracious Professionalism, and STEM based programs to our stakeholders.
- Building a team based on respect of individual members that acts as a cohesive unit.

3

2.0 Team Organization

We have organized the team into sub-teams with specific job descriptions. Team members design and build the robot, with the guidance of adult mentors.

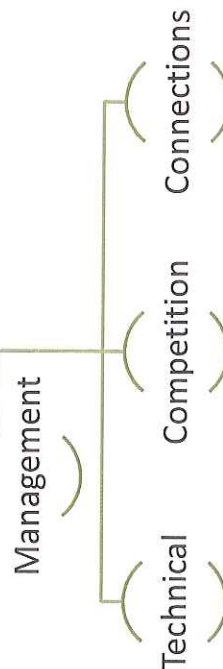
The Management team is an overarching sub-team that coordinates team activities such as meeting agendas, budget reviews, and team membership guidelines across our 3 main teams. These teams are the Technical team, Competition team, and Connections team.

The Technical team is responsible for building our competition robot. This team works on the robot design in CAD, programming and electrical, mechanical and build activities to construct a robot that can compete in the FTC competition. They also support team scoring strategies. Scoring strategies are achieved in brainstorming by the team and evolve during the season as we have time to adapt to key learnings.

The Competition team is responsible for organizing activities that support competitions and competition readiness. This includes having a process for choosing drive teams, each team member's roles at competition including scouting, team spirit, judging interview team preparation. It is important that team members understand their roles and other's roles.

The Connections team works on reaching out to the community via outreach, fundraising, and social media. This team promotes STEM based learning opportunities in schools and to other students. In addition, we reach out to local corporations to engage engineers to work with our team members to teach them industrial best practices. Another key activity of this team is to coordinate fund raising including corporate sponsorships and selling Horsey Youth Foundation chances to raise money. This team also looks for opportunities to give back to the community. We donate money to external charities to give back to the community. This includes donations to Edison Charter Chess team in Wilmington and ALS Ice Bucket Challenge. We plan on continuing this tradition going forward.

MOE FTC 365



3.0 Team Goals

4

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DISCLOSED

In the beginning of the season, the team members define a set of team goals to help us through the season. There are general goals for the whole team and goals for each of the sub-teams as listed below:

3.1 General

- Uphold FIRST's core values
- Uphold team's safety values
- Respect ourselves and others in all that we do.
- Share knowledge and help others
- Improve DE FTC teams and the program in general

3.2 Technical Team

- Have a competition ready robot by November 1st
- Utilize CAD in the design process
- Experiment with different parts including COTS materials, sensors and 3D printed parts
- Have autonomous and physical robot components that address every scoring method by the end of the season
- Properly present the design process in notebook

3.3 Competition Team

- Develop an achievable scouting approach
- Prepare a packing checklist
- Visual aid for the interview
- Have an initial draft for interview by October 18th
- Prepare a reasonable drive team process by October 8th

3.4 Connections Team

- Maintain the event calendar on a timely basis
- Procure sponsorships from at least 3 or 4 businesses
- Organize at least 3 events to support local FTC teams in Delaware (season)
- Stay up to date with social media: Facebook, Instagram, and Twitter (reach 1500 followers this season)
- Maintain a website that includes resources for other teams
- Reach out to the engineering community by sending letters asking for support
- Donate money to a program in the STEM community
- Participate in at least 17 outreach/fundraising events

5

4.0 Stakeholders & Sustainability

MOE FTC recognizes that we have a responsibility to serve our major stakeholders including:

4.1.1 Students and Youth

MOE FTC is committed to helping spreading a passion for STEM based activities to our local schools and youth organizations. Some of our STEM based demonstrations, seminars and outreach events in the community include:

- DOW Science day at Wilmington Blue Rocks baseball stadium
- Chemistry Week at The Independence School in Newark, DE
- Newark, DE library events including hands-on robot demonstrations and discussions around robot building in FIRST.
- Participate in Delaware Museum of Natural Arts sessions
- Delaware State demonstrations of our competition robot at FLL qualifiers to show FLL students next step in FIRST progression to FTC.

4.1.2 FIRST FTC program

MOE FTC is committed to connecting with FTC teams by doing the following:

- We have had multiple sessions helping teams including: Bionic Builders, Wilmington Friends, Rhyme No Reason, Flaming Phoenixes to help develop their robots and team strategies.
- Organized and hosted Delaware brainstorming session that was attended by 5 teams and approximately 30 students.
- Conducted several classroom sessions at Duel on the Delaware including judging preparation hints, 3D printing overviews, and social media program guidelines.
- Organized and hosted Delaware based scrimmage including inspections, matches and judging advice for 10 Delaware teams.
- Conducted a Hair Spraying event at Eastern Super Regionals.
- Conducted 2nd Annual Button Pageant at World Championships.
- MOE FTC has over 1100 Twitter followers to reach the general public.
- Secured a new corporate sponsorship from Axalta Coating Systems awarded a Delaware FTC college scholarship to a deserving Delaware FTC senior. Axalta awarded this scholarship to Noah Andrews in 2014. This was the first Delaware FTC scholarship.

4.1.3 Sponsors

MOE FTC has attracted several new FIRST FTC sponsors this year through grants and fundraising. These sponsors include:



Axalta Coating Systems

6

Our team is dedicated to building long term relationships with our sponsors by actively engaging them through the season. We have done employee demonstrations and events at Axalta, Boeing and Dupont. In addition, we ensure their logos are prominently displayed on our robot and team shirts.

We attract students from various schools and home school organizations. MOE FTC actively seeks new students before the season. The team usually has 2-3 new students every year to ensure a balance of experience that can be passed from more senior team members to new team members.

In addition, our team mentors are a mix of volunteers and parent volunteers. This allows us to ensure a continuity from year to year.

5.0 Finances

MOE FTC's budget is managed through First State Robotics.

5.1 Non-Budget Expenses

However, the largest expenses are not in the team budget:

- These are the travel budget for years that the team competes in FTC World Championships. We have competed in this event for 3 of the past 4 seasons. Our parents pay these expenses which are estimated at about \$12,000 in these seasons.
- MOE FTC is very grateful that DuPont provides facilities and access to full workshop. This is a benefit that is invaluable to our team. This is probably the largest expense that we have, but we have no way to quantify this benefit.
- The final expense would be the amount of time donated by mentors and students. Over the course of the season, each mentor and student spend hundreds of hours of their time to support our team.

8

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Burris Logistics



Be Barre Fit



Boeing



E.I. DuPont

4.1.4 Mentors and Parents

MOE FTC is proud to have the support of mentors from various engineering and technical fields. Our mentors include:

- Ajay K. Prasad - Engineering Alumni Distinguished Professor in the Department of Mechanical Engineering
- Andrew Szeto - Boeing - Lead Software Test Engineer
- Barry Price - Artesian Water - Engineer
- Ron Prettyman - Axalta Coating Systems - IT Architect
- Jim Morrell - Verizon - Technician
- Tim Chopko - Carpenter
- Jennifer Price - BioClinica - Director, Clinical Solutions at BioClinica, Inc

In addition to providing guidance and support to the students at MOE, Boeing and Verizon provide financial support through generous volunteer grants.

4.1.5 MOE Students

MOE FTC is committed to providing a fun outlet for our students to learn about robotics. Team members respect each other for their diverse skills and personalities. Our more senior members mentor newer students in understanding our core values. All students have a role that is valued and respected.

4.2 Sustainability

This is MOE FTC's eighth season. We are under the parent umbrella of First State Robotics as a non-profit organization. Our team raises all funds through direct sponsors, volunteer funds, team fund raising events and small team dues.

7

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Actual Income is greater than original budgeted forecast, due to success in attracting new sponsors.

Type	Budgeted Income as of July 1, 2014	Actual Income as of November 1
Corporate Sponsorships	\$ 2,500.00	\$ 3,375.00
Volunteer Matching	\$ 3,000.00	\$ 2,250.00
Lunch Fund Raising	\$ 400.00	\$ 100.00
Horsev Fundraiser	\$ 800.00	\$ 1,500.00
Bosco's Fundraiser	\$ 200.00	\$ 0.00
Restaurant Fundraisers	\$ 200.00	\$ 0.00
Student Dues	\$ 1,000.00	\$ 1,000.00
Totals	\$ 7,900.00	\$ 8,225.00

We have spent approximately half of our budgeted expenses as of November 1, 2014.

Type	Budgeted Expense - July 1, 2014	Actual Expenses as of November 1
Activities/Outreach	\$500.00	\$532.69
Build Expenses	\$2,500.00	\$1,998.70
Competition Expenses	\$400.00	\$225.00
Team Wear	\$1,100.00	\$ 0.00
Event Registration Fees	\$2,600.00	\$275.00
Software Expenses	\$299.00	\$299.00
ALS Ice Bucket Challenge Donation		\$300.00
Totals	\$ 7,399.00	\$ 3,630.39

5.0 Resources

5.1 FIRST Links

- FIRST Website: <http://www.usfirst.org/>
- FIRST Tech Challenge Website: <http://www.usfirst.org/roboticsprograms/ftc>
- FTC in Delaware: <http://www.delawareftc.org/>

5.2 Team Links

- Team Website: <http://moefc.org/>
- First State Robotics: <http://firststaterobotics.org/>
- Social Media
 - Facebook: <https://www.facebook.com/MOEFTC?fref=ts>
 - Twitter: <https://twitter.com/MOE365FTC>
 - You Tube Channel: <http://www.youtube.com/user/moe365ftc>

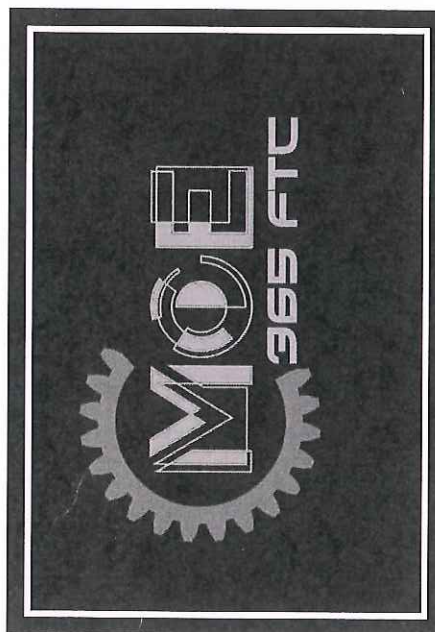
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Updated as of 3/14/2015

MOE, Miracles of Engineering

FTC Team 365

2014-2015 Business Plan



1.0 Introduction

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1.2 Mission Statement

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- Competing ferociously, but with utmost sportsmanship to our partners, competitors, and all event personnel.
- Spreading the core values of FIRST including Cooperation, Gracious Professionalism, and STEM based programs to our stakeholders.
- Building a team based on respect of individual members that acts as a cohesive unit.

2.0 Team Organization

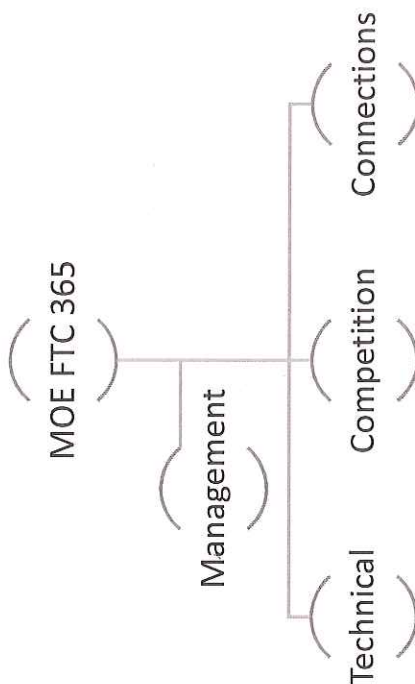
In order to properly organize the work we have to do, we have sub-teams with specific job descriptions. Team members design and build the robot, with the guidance of adult mentors.

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3.0 Team Goals

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3.1 General

- Uphold FIRST's core values
- Uphold team's safety values
- Respect ourselves and others in all that we do.
- Share knowledge and help others
- Improve DE FTC teams and the program in general

3.2 Technical Team

- Have a competition ready robot by November 1st
- Utilize CAD in the design process
- Experiment with different parts including COTS materials, sensors and 3D printed parts
- Have autonomous and physical robot components that address every scoring method by the end of the season
- Properly present the design process in notebook

3.3 Competition Team

- Develop an achievable scouting approach
- Prepare a packing checklist
- Visual aid for the interview
- Have an initial draft for interview by October 18th
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3.4 Connections Team

- Maintain the event calendar on a timely basis
- Procure sponsorships from at least 3 or 4 businesses
- Organize at least 3 events to support local FTC teams in Delaware
- Stay up to date with social media; Facebook, Instagram, and Twitter (reach 1500 followers this season)
- Maintain a website that includes resources for other teams
- Reach out to the engineering community by sending letters asking for support
- Donate money to a program in the STEM community
- Participate in at least 17 outreach/fundraising events

5

4.0 Stakeholders & Sustainability

MOE FTC recognizes that we have a responsibility to serve our major stakeholders including:

4.1 Stakeholders

4.1.1 Students and Youth

MOE FTC is committed to helping spreading a passion for STEM based activities to our local schools and youth organizations. Some of our STEM based demonstrations, seminars and outreach events in the community include:

- DOW Science day at Wilmington Blue Rocks baseball stadium
- Chemistry Week at The Independence School in Newark, DE
- Newark, DE library events including hands-on robot demonstrations and discussions around robot building in FIRST.
- Participate in Delaware Museum of Natural Arts sessions
- Delaware State demonstrations of our competition robot at FLL qualifiers to show FLL students next step in FIRST progression to FTC.

4.1.2 FIRST FTC program

MOE FTC is committed to connecting with FTC teams by doing the following:

- We have had multiple sessions helping teams including: Bionic Builders, Wilmington Friends, Rhyme No Reason, Flaming Phoenixes to help develop their robots and team strategies.
- Organized and hosted Delaware brainstorming session that was attended by 5 teams and approximately 30 students.
- Conducted several classroom sessions at Duel on the Delaware including judging preparation hints, 3D printing overviews, and social media program guidelines.
- Organized and hosted Delaware based scrimmages including inspections, matches and judging advice for 10 Delaware teams.
- Conducted a Hair Spraying event at Eastern Super Regionals.
- Conducted 2nd Annual Button Pageant at World Championships.
- MOE FTC has over 1100 Twitter followers to reach the general public.
- Secured a new corporate sponsorship from Axalta Coating Systems awarded a Delaware FTC college scholarship to a deserving Delaware FTC senior. Axalta awarded this scholarship to Noah Andrews in 2014. This was the first Delaware FTC scholarship.

4.1.3 Sponsors

MOE FTC has attracted several new FIRST FTC sponsors this year through grants and fundraising. These sponsors include:

6

SIGNATURE

DISCLOSED

ION

4.1.5 MOE Students

MOE FTC is committed to providing a fun outlet for our students to learn about robotics. Team members respect each other for their diverse skills and personalities. Our more senior members mentor newer students in understanding our core values. All students have a role that is valued and respected.

4.2 Sustainability

This is MOE FTC's eighth season. We are under the parent umbrella of First State Robotics as a non-profit organization. Our team raises all funds through direct sponsors, volunteer funds, team fund raising events and small team dues.

Our team is dedicated to building long term relationships with our sponsors by actively engaging them through the season. We have done employee demonstrations and events at Axalta, Boeing and Dupont. In addition, we ensure their logos are prominently displayed on our robot and team shirts.

We attract students from various schools and home school organizations. MOE FTC actively seeks new students before the season. The team usually has 2-3 new students every year to ensure a balance of experience that can be passed from more senior team members to new team members.

In addition, our team mentors are a mix of volunteers and parent volunteers. This allows us to ensure continuity from year to year.



Axalta Coating Systems



Burris Logistics



Be Barre Fit

In addition, we have sustained relationships with several existing sponsors including:



Boeing



Dupont



Labware

4.1.4 Mentors and Parents

MOE FTC is proud to have the support of mentors from various engineering and technical fields. Our mentors include:

- Ajay K. Prasad - Engineering Alumni Distinguished Professor in the Department of Mechanical Engineering
- Andrew Szeto - Boeing - Lead Software Test Engineer
- Barry Price - Artesian Water - Engineer
- Ron Prettyman - Axalta Coating Systems - IT Architect
- Jim Morrill - Verizon - Technician
- Tim Chopko - Business Owner and Carpenter
- Jennifer Price - BioClinica - Director, Clinical Solutions at BioClinica, Inc

In addition to providing guidance and support to the students at MOE, Boeing and Verizon provide financial support through generous volunteer grants.

5.0 Finances

MOE FTC's budget is managed through First State Robotics. However, the largest expense is not in the team budget. This is the travel budget for years that the team competes in FTC World Championships. We have competed in this event for 3 of the past 4 seasons. Our parents pay these expenses which are estimated at about \$12,000 in these seasons.

MOE FTC is very grateful that DuPont provides facilities and access to full workshop. This is a benefit that is invaluable.

5.1 Income

Actual Income is greater than original budgeted forecast, due to success in attracting new sponsors. In addition, MOE FTC, Rhyme Know Reason and MOE FRC from First State Robotics organized and hosted the first Delaware STEM Expo on March 7. This event was very successful. A total of 20 sponsors had exhibits on various STEM based initiatives in the state of Delaware. Approximately, 800 community members attended this event, which also hosted a FTC scrimmage with 8 area teams. In addition the movie Slingshot about Dean Kamen's efforts to purify water supplies in areas of limited access. We estimate that the MOE FTC team will receive about \$700 from this fund raising event, but have not included that in budget below.

We plan on using this season's surplus in the following 3 ways:

- Support a worthy STEM based activity in the Delaware community.
- We will designate a portion of any surplus to roll over to next year's budget to sustain the program.
- Team will attempt to assume some of the travel costs of students if we reach higher level tournaments.

Income Sources	Income Budget Forecast July 1, 2014	Actual Income March 15, 2015
Corporate Sponsorships	\$2,500.00	\$5,375.00
Volunteer Matching	\$3,000.00	\$3,250.00
Lunch Fund Raising	\$400.00	\$200.00
Horsey Fundraiser	\$800.00	\$1,364.78
Other Fundraiser	\$400.00	\$836.00
Student Dues	\$1,000.00	\$1,000.00
Totals	\$8,100.00	\$12,025.78

5.2 Expenses

MOE's expenses are higher than original estimates for the following reasons. However, income is also higher than original forecast

- Build expenses are higher than original forecast.
- Registration expenses are in line with forecast.
- Invoices for team wear close to original estimates.
- If MOE qualifies for World Championships, robot and team supplies transportation cost will be around \$800.00 and team registration is \$1000.
- MOE will continue to make charitable contributions to worthy organizations that encourage students to learn STEM based organizations.

Income Sources	Income Budget Forecast July 1, 2014	Actual Income March 15, 2015
Corporate Sponsorships	\$2,500.00	\$5,375.00
Volunteer Matching	\$3,000.00	\$3,250.00
Lunch Fund Raising	\$400.00	\$200.00
Horsey Fundraiser	\$800.00	\$1,364.78
Other Fundraiser	\$400.00	\$836.00
Student Dues	\$1,000.00	\$1,000.00
Totals	\$8,100.00	\$12,025.78

6.0 Resources

6.1 FIRST Links

- FIRST Website: <http://www.usfirst.org/>
- FIRST Tech Challenge Website: <http://www.usfirst.org/roboticsprograms/ftc>
- FTC in Delaware: <http://www.delawareftc.org/>

6.2 Team Links

- Team Website: <http://moeftc.org/>
- First State Robotics: <http://firststaterobotics.org/>
 - Social Media: Facebook: <https://www.facebook.com/MOEFTC?ref=ls>
 - Twitter: <https://twitter.com/MOE365FTC>
 - You Tube Channel: <http://www.youtube.com/user/moe365ftc>

MOE, Miracles of Engineering
FTC Team 365
2014-2015 Business Plan

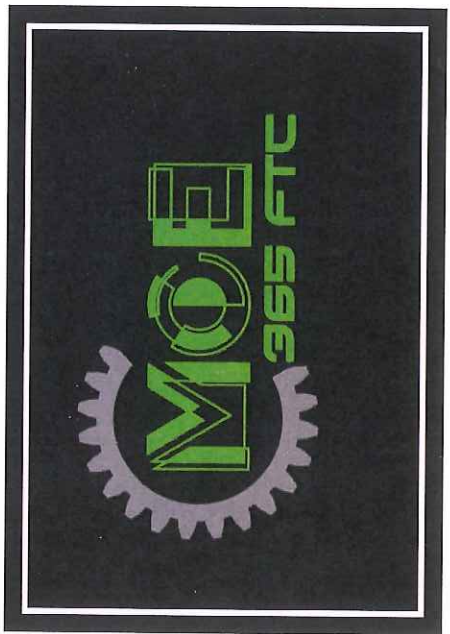


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Updated as of 3/14/2015

1.0 Introduction

1.1 MOE 365

MOE 365 FTC is a FIRST Tech Challenge (FTC) team. We design, build, and program robots to play games released every year by FIRST (For the Inspiration and Recognition of Science and Technology). Our full team name is MOE – the Miracle Workerz. MOE stands for Miracles of Engineering. Our team has proudly advanced to the FTC World Championship three times in the past four years.

We take the FIRST core value of Gracious Professionalism very seriously. Gracious Professionalism is defined as part of the ethos of FIRST. Gracious professionals learn and compete together but still treat one another with respect and kindness in the process. We endeavor to exhibit it not only when working with other teams at competitions, but also to each other at meetings. Most importantly we use it outside of MOE events to people who know nothing of FIRST.

We have massive amounts of team spirit. Our spirit manifests itself in copious amounts of MOE green, MOE puns, and our famous MOE cheer. Our team's chemistry, gracious professionalism, and spirit are what drives us to be the best we can be and to excel in all we do.

1.2 Mission Statement

The MOE FTC 365 mission is to proudly represent FIRST to our stakeholders in the community by:

- Acting with Gracious Professionalism in all that we do.
- Competing ferociously, but with utmost sportsmanship to our partners, competitors, and all event personnel.
- Spreading the core values of FIRST including Cooperation, Gracious Professionalism, and STEM based programs to our stakeholders.
- Building a team based on respect of individual members that acts as a cohesive unit.

2.0 Team Organization

In order to properly organize the work we have to do, we have sub-teams with specific job descriptions. Team members design and build the robot, with the guidance of adult mentors.

The Management team is an overarching sub-team that coordinates team activities such as meeting agendas, budget reviews, and team membership guidelines across our 3 main teams. These teams are the Technical team, Competition team, and Connections team.

3

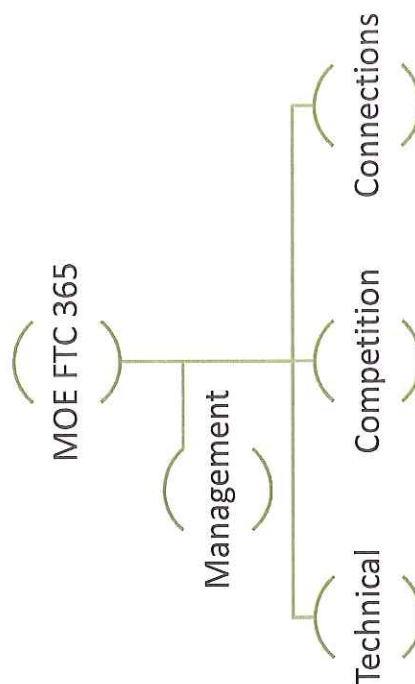
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IMATION

The Technical team is responsible for building our competition robot. This team works on the robot design in CAD, programming and electrical, mechanical and build activities to construct a robot that can compete in the FTC competition. They also support team scoring strategies. Scoring strategies are achieved in brainstorming by the team and evolve during the season as we have time to adapt to key learnings.

The Competition team is responsible for organizing activities that support competitions and competition readiness. This includes having a process for choosing drive teams, each team member's roles at competition including scouting, team spirit, judging interview team preparation. It is important that team members understand their roles and other's roles.

The Connections team works on reaching out to the community via outreach, fundraising, and social media. This team promotes STEM based learning opportunities in schools and to other students. In addition, we reach out to local corporations to engage engineers to work with our team members to teach them industrial best practices. Another key activity of this team is to coordinate fund raising including corporate sponsorships and selling Horsey Youth Foundation chance. This team also looks for opportunities to give back to the community. We donate money to external charities to give back to the community. This includes donations to Edison Charter Chess team in Wilmington and ALS Ice Bucket Challenge. We plan on continuing this tradition going forward.



4

3.0 Team Goals

In the beginning of the season, the team members define a set of team goals to help us through the season. There are general goals for the whole team and goals for each of the sub-teams as listed below:

3.1 General

- Uphold FIRST's core values
- Uphold team's safety values
- Respect ourselves and others in all that we do.
- Share knowledge and help others
- Improve DE FTC teams and the program in general

3.2 Technical Team

- Have a competition ready robot by November 1st
- Utilize CAD in the design process
- Experiment with different parts including COTS materials, sensors and 3D printed parts
- Have autonomous and physical robot components that address every scoring method by the end of the season
- Properly present the design process in notebook

3.3 Competition Team

- Develop an achievable scouting approach
- Prepare a packing checklist
- Visual aid for the interview
- Have an initial draft for interview by October 18th
- Prepare a reasonable drive team process by October 8th

3.4 Connections Team

- Maintain the event calendar on a timely basis
- Procure sponsorships from at least 3 or 4 businesses
- Organize at least 3 events to support local FTC teams in Delaware
- Stay up to date with social media; Facebook, Instagram, and Twitter (reach 1500 followers this season)
- Maintain a website that includes resources for other teams
- Reach out to the engineering community by sending letters asking for support
- Donate money to a program in the STEM community
- Participate in at least 17 outreach/fundraising events

4.0 Stakeholders & Sustainability

MOE FTC recognizes that we have a responsibility to serve our major stakeholders including:

4.1 Stakeholders

4.1.1 Students and Youth

MOE FTC is committed to helping spreading a passion for STEM based activities to our local schools and youth organizations. Some of our STEM based demonstrations, seminars and outreach events in the community include:

- DOW Science day at Wilmington Blue Rocks baseball stadium
- Chemistry Week at The Independence School in Newark, DE
- Newark, DE library events including hands-on robot demonstrations and discussions around robot building in FIRST.
- Participate in Delaware Museum of Natural Arts sessions
- Delaware State demonstrations of our competition robot at FLL qualifiers to show FLL students next step in FIRST progression to FTC.

4.1.2 FIRST FTC program

MOE FTC is committed to connecting with FTC teams by doing the following:

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MOE FTC is committed to providing a fun outlet for our students to learn about robotics. Team members respect each other for their diverse skills and personalities. Our more senior members mentor newer students in understanding our core values. All students have a role that is valued and respected.

4.2 Sustainability

This is MOE FTC's eighth season. We are under the parent umbrella of First State Robotics as a non-profit organization. Our team raises all funds through direct sponsors, volunteer funds, team fund raising events and small team dues.

Our team is dedicated to building long term relationships with our sponsors by actively engaging them through the season. We have done employee demonstrations and events at Axalta, Boeing and Dupont. In addition, we ensure their logos are prominently displayed on our robot and team shirts.

We attract students from various schools and home school organizations. MOE FTC actively seeks new students before the season. The team usually has 2-3 new students every year to ensure a balance of experience that can be passed from more senior team members to new team members.

In addition, our team mentors are a mix of volunteers and parent volunteers. This allows us to ensure continuity from year to year.

8



• Axalta Coating Systems



• Burris Logistics



• Be Barre Fit

In addition, we have sustained relationships with several existing sponsors including:



• Boeing



• Dupont



• Labware

4.1.4 Mentors and Parents

MOE FTC is proud to have the support of mentors from various engineering and technical fields. Our mentors include:

- Ajay K. Prasad - Engineering Alumni Distinguished Professor in the Department of Mechanical Engineering
- Andrew Szeto - Boeing - Lead Software Test Engineer
- Barry Price - Artesian Water - Engineer
- Ron Prettyman - Axalta Coating Systems - IT Architect
- Jim Morrill - Verizon - Technician
- Tim Chopko - Business Owner and Carpenter
- Jennifer Price - BioClinica - Director, Clinical Solutions at BioClinica, Inc

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5.0 Finances

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MOE FTC is very grateful that DuPont provides facilities and access to full workshop. This is a benefit that is invaluable.

5.1 Income

Actual income is greater than original budgeted forecast, due to success in attracting new sponsors. In addition, MOE FTC, Rhyme Know Reason and MOE FRC from First State Robotics organized and hosted the first Delaware STEM Expo on March 7. This event was very successful. A total of 20 sponsors had exhibits on various STEM based initiatives in the state of Delaware. Approximately, 800 community members attended this event, which also hosted a FTC scrimmage with 8 area teams. In addition the movie Slingshot about Dean Kamen's efforts to purify water supplies in areas of limited access.

We plan on using this season's surplus in the following ways:

- Support a worthy STEM based activity in the Delaware community.
- We will designate a portion of any surplus to roll over to next year's budget to sustain the program.
- We are anticipating an additional \$1200 in expenses associated with switching to new control systems that will be reflected in next year's budget.

Income Sources	Income Budget Forecast July 1, 2014	Actual Income April 15, 2015
Corporate Sponsorships	\$2,500.00	\$5,375.00
Volunteer Matching	\$3,000.00	\$3,250.00
Lunch Fund Raising	\$400.00	\$150.00
Horsey Fundraiser	\$800.00	\$1,500.00
Bosco's Fundraiser	\$200.00	\$0.00
DE STEM Expo	\$0.00	\$772.00
Restaurant Fundraisers	\$200.00	\$0.00
Student Dues	\$1,000.00	\$1,000.00
Totals	\$7,900.00	\$12,047.00

5.2 Expenses

MOE's expenses are higher than original estimates for the following reasons. However, income is also higher than original forecast

- Build expenses are higher than original forecast.

- Registration expenses are in line with forecast.

- Invoices for team wear close to original estimates.
- If MOE qualifies for World Championships, robot and team supplies transportation cost will be around \$800.00 and team registration is \$1000.
- MOE will continue to make charitable contributions to worthy organizations that encourage students to learn STEM based organizations.

Expenses	Expense Budget Forecast July 1, 2014	Actual Expenses April 15, 2015
Activities/Outreach	\$500.00	\$1,074.00
Build Expenses	\$2,500.00	\$3,700.00
Competition Expenses	\$400.00	\$425.00
Team Wear	\$1,100.00	\$1,127
Event Registration Fees	\$2,800.00	\$2,975.00
Software Expenses	\$299.00	\$299.00
Charitable Donations		\$800.00
Totals	\$7,399.00	\$10,400.00

6.0 Resources

6.1 FIRST Links

- FIRST Website: <http://www.usfirst.org/>
- FIRST Tech Challenge Website: <http://www.usfirst.org/roboticsprograms/ftc>
- FTC in Delaware: <http://www.delawareftc.org/>

6.2 Team Links

- Team Website: <http://moefrc.org/>
- First State Robotics: <http://firststaterobotics.org/>
 - Social Media: Facebook: <https://www.facebook.com/MOEFRC?ref=ls>
 - Twitter: <https://twitter.com/MOEFRC>
 - You Tube Channel: <http://www.youtube.com/user/moe365ftc>

3D Printer Seminar August 28

Arnav, Ethan and Rachel
went to a 3D printer
lesson at Dupont.

**PRINTED
SOLID**

We got to learn about
different types of material,
programs to use and
different tips when
it comes to designing.

Company that gave
the seminar



Along with ME several
other teams went like
Padma, Rhyme no Reason
and Flaming Phoenixes.

We hope we get to
print stuff soon with
our new knowledge and
3D printer.

3D printed Groot that
was brought!

Continued to page

SIGNATURE

Rachel Prettyman

DATE

11/11/11

DISCLOSED TO AND UNDERSTOOD BY

DATE

PROPRIETARY INFORMATION

MOE 365 FTC ROBOTICS

ARE SELLING RAFFLE TICKETS FOR A

2014 CORVETTE STINGRAY COUPE

As well as:

One \$5000 winner.

Four \$2500 winners.

All Taxes, Title, Tags and
Transportation are not
included !



In conjunction with The
Horsey Family Youth
Foundation, raffle tickets
will be available for
purchase (\$20 ea. or 3 for
\$50).

Drawing will be held October 18, 2014.

MOE is a FIRST Tech Challenge (FTC)
team. We design, build, and pro-
gram robots to play games released
every year by FIRST (FIRST stands
for For the Inspiration and Recogni-
tion of Science and Technology).

MOE stands for Miracles of
Engineering. The money raised from
the tickets would go to our
2014-2015 season.



This is our poster for our Horsey Ticket Fund raise Rachel Prettyman

The Delaware Museum outreach event was very successful. Lots of kids came to our station, fascinated by our robot. We let many kids get the experience of driving our robot. Emma, Ethan and I were the members who were at the outreach event.

Continued to page

SIGNATURE

Matt Warner

DATE

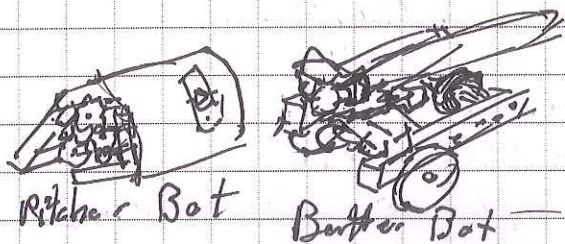
6/14/14

DISCLOSED TO AND UNDERSTOOD BY

DATE

PROPRIETARY INFORMATION

We had two set-ups at the Blue Rocks science day. The blue rocks are a Minor League Baseball team. We had one set-up with demonstration robots that the ~~the~~ childrens could control. We had two baseball-themed robots; one that pitched and one that batted.



Our other table had information about FIRST. We had a variety of posters and books and handouts.



This is our team showing kids how to use the base ball bots.

Continued to page

SIGNATURE

DATE

6/15/11

DISCLOSED TO AND UNDERSTOOD BY

DATE

PROPRIETARY INFORMATION

Title: Axalta Event

Early last season Axalta donated money to our team. We finally got the chance to meet them at the Axalta office and thank them with a 3D printed version of our robot. Our previous alumni also won a scholarship from ~~that~~ them. We were very proud of him and thank you for our sponsor. We also gave a presentation of our robot for them. It was great connecting to the scientific community.



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SIGNATURE

Rachel Prettyman

DATE

7/9/14

DISCLOSED TO AND UNDERSTOOD BY

DATE

PROPRIETARY INFORMATION

We did the Ice Bucket Challenge to raise awareness of ALS to the community. We have the video on Youtube. We nominated Woody Flowers, Dean Cainman, Joe Perrotto, Stina, and all FIRST teams. So far most have done this challenge but there are many more to be done.

Currently we have 150 views on this video



Continued to page

SIGNATURE

Deh Merrill

DATE

8/26/14

DISCLOSED TO AND UNDERSTOOD BY

DATE

PROPRIETARY INFORMATION

Burris Logistics Sponsorship

Today we received our sponsorship from my family business Burris Logistics. My family business specializes in frozen food business. Burris has 14 warehouses which contain frozen foods which are re-distributed to stores such as BJ's Wholesale Club and Fresh Market. My family business has proudly supported both my FLE and this FTC team the past 3 years. Go MOE!



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Jack Hopman

DATE

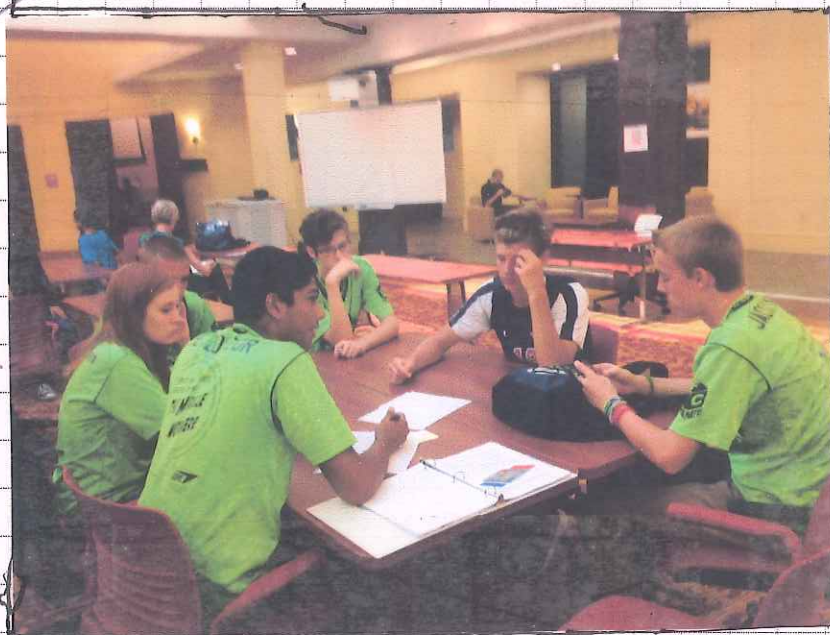
9/16/14

DISCLOSED TO AND UNDERSTOOD BY

DATE

PROPRIETARY INFORMATION

On Kickoff, the new game, Cascade Effect, was revealed. In previous years we had hosted the event, but this year it was in Dover, to be more centrally located. There were many teams there. We also had brainstorming there. The game seems to be more complex than previous game and there is many different scoring options. We also talked about the game and talked to Joe about the rules. We did try to see if last years robot ~~worked~~ worked for this game, but the batteries were dead. We also saw some of our friends on other teams.



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SIGNATURE

Wm Price

DATE

9-23-14

DISCLOSED TO AND UNDERSTOOD BY

DATE

PROPRIETARY INFORMATION

Newark Library Event.

We had a joined Outreach Event with MOE FRC. We talked to kids ages 4-8 about all robotics events in FIRST, and we also taught them about engineering. We read them books created by MOE FRC, about FLL and FRC as well. We brought one of our demo robots, the Mecanum bot, to show the kids. We gave the kids coloring books and handouts about FIRST. Most kids seemed very interested in joining/starting their own FLL team. Most students enjoyed driving around the test robot, and were fairly good at it! Parents at the event talked to us about the more technical side of things, and said they would be sure to get their kids involved in FIRST. Hopefully we managed to grow the FIRST community here in Delaware.

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Arnar Resaci

DATE

9/30/14

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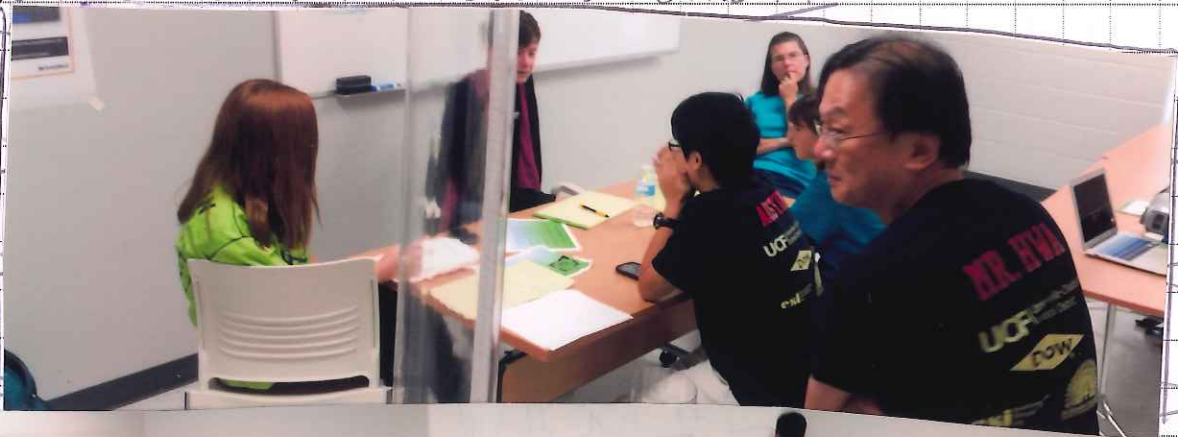
PROPRIETARY INFORMATION

BRAINSTORMING EVENT

WE HOSTED A BRAINSTORMING EVENT AT OUR NEW LOCAL FIRST BUILDING. THERE WERE FIVE TEAMS THAT ATTENDED. AFTER REVIEWING THE GAME RULES WE MIXED UP THE GROUPS AND WENT ON TO DISCUSS AUTONOMOUS AND TELE-OP STRATEGIES. ONCE WE WERE ALL READY, WE CAME BACK AS A LARGE GROUP AND PRESENTED OUR INDIVIDUAL FINDINGS. EVERY TEAM WALKED AWAY WITH A GOOD AMMOUNT OF IDEAS AND A GREAT COOPRETIVE EXPERIENCE.

SOMETHING THAT WE FELT WAS IMPOR TANT WAS TO BREAK UP THE GROUPS TO INCLUDED MEMBERS OF DIFFERENT TEAMS. THIS WAY WE COULD HAVE PERSPECTIVES OUTSIDE OF OUR NORMAL TEAM MEMBERS AND SET UP BETTER FUTURE CONNECTIONS BETWEEN MEMBERS.

GOING THROUGH THIS PROCESS WAS ESPECIALLY VALUABLE FOR NEW TEAM MEMBERS, ROOKIE TEAMS, AND TEAMS RETURNING FOR THEIR SECOND SEASON.



SIGNATURE

Georgina MacKay

DATE

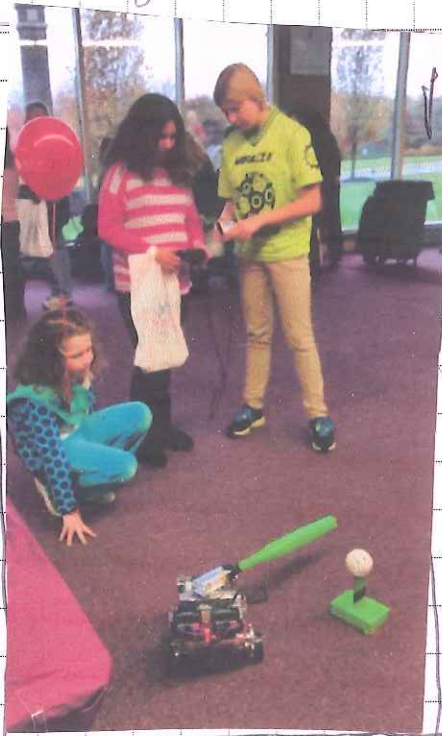
10-2-14

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DATE

PROPRIETARY INFORMATION

Chemistry Week at Independence School
 we had a good outreach event and we talked to kids from 1st grade to 7th graders. The kids were very interested in playing with the robot we brought the batterbot and the kids like to hit the ball. The parents talked to us a lot about the program and kids wanted to start their own team. 75% of the children were girls. lots of them seemed to be interested in engineering. we had a good event and got a lot of kids interested in robotics. Most of the outreach was girls and seemed to like robotics and maybe gave them a push since 2 girls on a robotics team were there.



Continued to page

SIGNATURE

Kayla morrell

DATE

11/4/14

DISCLOSED TO AND UNDERSTOOD BY

DATE

PROPRIETARY INFORMATION

Duel on the Delaware

At the Duel on the Delaware we had a lot of fun helping with the Judging presentation. We, along with Minnie Mash and Rhyne no. Reason gave an example of what not to do during an interview.

We included in what not to do/ to do

- Make eye contact with the judges
- Remember to bring the notebook
- Don't interrupt or correct someone speaking
- Don't eat while presenting
- Don't lie
- Make sure everyone there participates
- Stand up
- Don't blame others or make excuses
- Be positive when you take a bout your robot
- Don't blame others/ make excuses
- Practice before hand



← Our presentation on what not to do in judging

Continued to page .

SIGNATURE

Rachel Pellyman

DATE

11/08/14

DISCLOSED TO AND UNDERSTOOD BY

DATE

PROPRIETARY INFORMATION



October 2014

Dear FIRST@Boeing Mentor,

Congratulations on receiving a *FIRST* Boeing grant!

Team:	FTC 365
Mentor:	Szeto, Andrew N
Boeing Grant:	\$275

Boeing is excited to support your team during the 2015 FIRST Tech Challenge. Thank you for sharing your skills and knowledge and serving as a positive role model for *FIRST* competitors.

This year we were pleased to have a record 281 FRC and FTC teams apply for Boeing FIRST grants – a 36% increase over last year! The available funds were then distributed equally across three different categories: FTC, FRC Rookie and FRC Veteran. Your grant is being credited to your team via the U.S. FIRST organization to be used toward registration fees or kits.

Enclosed in this letter are a few helpful tips and resources as you embark on your *FIRST* experience. We've also included Boeing stickers for use on your team's robot or wherever else you may choose to place them.

Again, **congratulations** and best of luck during your competitions!

Sincerely,
The FIRST@Boeing Team

Using the Boeing Logo

If you choose to use the Boeing logo on items such as team websites, t-shirts or robots, we request that you use reference Boeing's **Corporate Identity Style Guide for FIRST Robotics Competition Sponsorship**. This document provides guidance about using the Boeing logo and how to obtain the artwork.

Promoting your *FIRST* team

Throughout the year and especially during the competition season, we realize there are many opportunities to promote your team. We welcome your photos, social media mentions and updates regarding your team's activities.

If you would like to nominate your team for news stories, use on Boeing's Facebook page, or are planning to use social media in your team's marketing plan, we ask that you contact the GCC corporate [communicator](#) for coordination.

Questions

Boeing Grant!

Today we recieved a letter from Boeing saying we recieved a Grant!

We plan on using this money to help us during the season and to provide assistance to other teams,

We sent this application in September and we were very excited to hear the news from them.

Continued to page

SIGNATURE

Rachel Prettyman

DATE

11/11/14

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DATE

PROPRIETARY INFORMATION

Be BARRE FIT GRANT

WE GOT AN EMAIL FROM TRISH MACKAY OF Be BARRE FIT SAYING WE RECIEVED A GRANT FROM HER COMPANY FOR THIS SEASON!

WE PLAN ON USING THIS MONEY TO SUPPORT US AND DONATE SOME BACK TO THE COMMUNITY HOWEVER WE CAN.

AFTER SENDING IN THE GRANT APPLICATION IN OCTOBER MRS MACKAY GLADLY SUPPORTED US.

MOST OF OUR SPONSORS ARE STEM BASED BUT BBF IS A FITNESS STUDIO IN HOCKESSIN DELAWARE. SOMETHING TO THINK ABOUT IS HOW NASCAR IS SUPPORTED BY DRINK COMPANIES LIKE MONSTER EVEN THOUGH NASCAR IS A RACING COMPETITION AND MONSTER IS AN ENERGY DRINK. THE STAFF AT

Be BARRE FIT IS EAGER TO COME TO OUR COMPETITIONS AND SEE THEIR GRACIOUS SUPPORT IN ACTION.

EVEN THOUGH THEY ARENT STEM BASED Be BARRE FIT IS READY TO INVEST IN AMERICAS FUTURE AND ENCOURAGE FITNESS IN ADULTS AND TEENS.

THANK YOU AGAIN
Be BARRE FIT!



Continued to page

SIGNATURE

Georgina Mackay

DATE

11/15/14

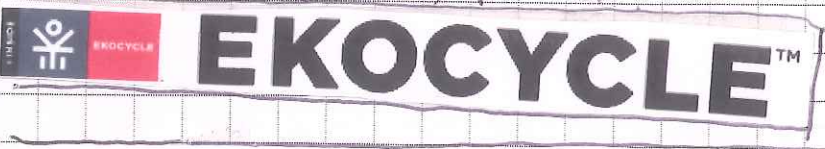
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DATE

PROPRIETARY INFORMATION

EKOCYCLE 3D printer Grant

Today we found out we received a grant for an EKOCYCLE 3D printer!



Hello Ronald Prettyman,

Congratulations! FTC Team 365 has been selected to receive an EKOCYCLE™ Cube® Printer thanks to 3D Systems and The Coca-Cola Company. You will receive an email at this address in the next few weeks following our verification that your team is financially cleared to participate this season. The follow up email will include detailed instructions on what you will need to do to register with 3D Systems to receive your printer. Be on the lookout for that email!

If you have any questions please email to 3dprinters@usfirst.org.

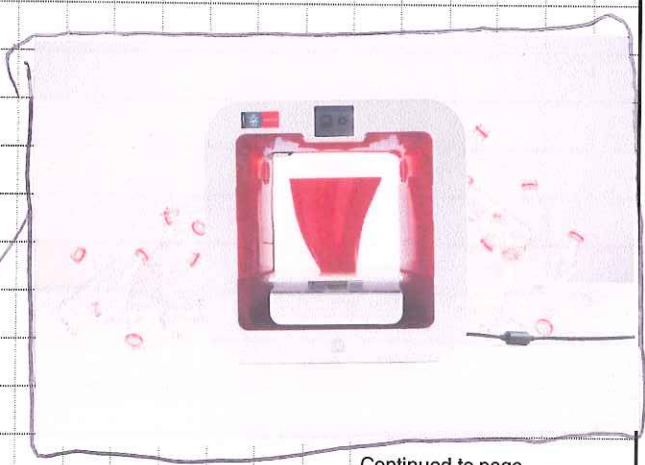
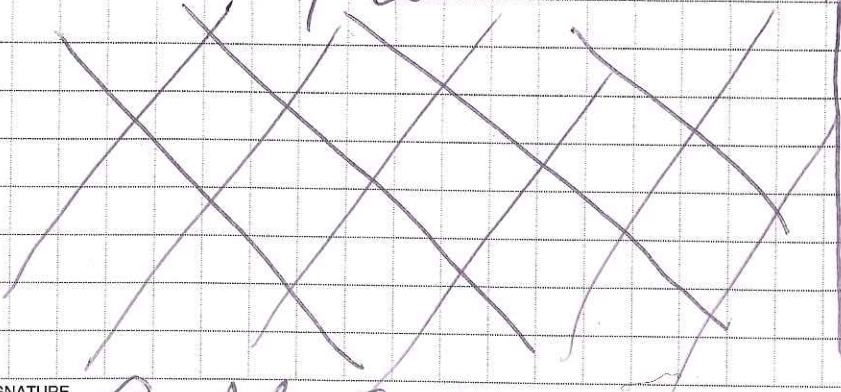
FIRST

We will use this for parts, spirit supplies and a lot more,

We submitted the application on October 7th.

The best part about this is the standard material color it comes with is MOE GREEN!!

We can't wait till it actually comes in.



Continued to page

SIGNATURE

Rachel Prettyman

DATE

11/15/14

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PROPRIETARY INFORMATION

Oxford Area Highschool Scrimmage

We attended the Oxford Area Highschool hosted by Ozone and Fabar. We were able to help ~~par~~ with programming and mechanical. We also were able to work ~~teams~~ on drive practice and allowing other team members to drive and work on and with the robot. Scrimmages are great opportunities to talk, help, and meet new teams and catch up with friends. The scrimmage also gave us opportunities to work and improve on the robot.



New people Trying the robot

Continued to page

SIGNATURE

Jack Harrison

DATE

12-13-14

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PROPRIETARY INFORMATION

Delaware STEM Expo / Slingshot movie poster



Delaware STEM Expo & Slingshot Movie

FIRST STATE ROBOTICS HOSTS
STEM (SCIENCE, TECHNOLOGY, ENGINEERING, MATH) EXPO
WITH EXCLUSIVE SLINGSHOT MOVIE SCREENING

Saturday, March 7, 2015 1:00 PM,
Cab Calloway School of the Arts, Wilmington Delaware

Movie Tickets go on sale February 7, 2015, the Expo is FREE

Expo Events:

- Connect with STEM Summer Camps and local robotics programs!
- Come see Robotics Demonstrations and a FIRST Tech Challenge scrimmage on an actual competition field!
- Hear guest speakers discuss local STEM projects!
- STEM displays and presentations!
- Slingshot Movie!

Exhibitors include:

- First State Junior and FIRST LEGO League
- FIRST Tech Challenge (MOE & Rhyme Know Reason teams)
- FIRST Robotics Competition (MOE team)
- First State Robotics
- Delaware Museum of Natural History
- University of Delaware MESS Program
- The Perry Initiative
- University of Delaware Formula SAE Team

This event is sponsored and hosted by First State Robotics
 For more info, see our facebook page
 (search for 'Delaware Slingshot STEM Event')
 or website: <http://moe365.org/slingshot.php>

SCAN TO BUY TICKETS & GET MORE INFO



Rachel has been a part of the planning group for the Delaware STEM Expo / Slingshot Movie Premiere

The event plans on showcasing Delaware FIRST/STEM programs as well as the movie Slingshot.

She was asked to make the poster advertising the event. Here is the finished product

SIGNATURE

Rachel Proffman

DATE

1/18/17

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PROPRIETARY INFORMATION

Continued to page

Delaware Scrimmage

This Saturday we hosted a scrimmage for Delaware teams at Delaware State University. There were 8 teams that participated most of which did not have working robots. We helped them get up and running and ready for competition. By the end of the day most of the teams were working. We shared space with a FLL qualifier, so we got lots of outreach to the FLL. We had a Field set up so the other teams could practice.



SIGNATURE

Ethan Price

DATE

1-17-15

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PROPRIETARY INFORMATION

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Charter Force FTC (Team 403)

This season, I spent several days helping Team 403-Charter Force. This is a freshman team from the Charter School of Wilmington. I helped teach them how to build, wire, and program their robot.

I taught the students how to fully program a Mecanum drive, allowing motion in all directions. I went over all the game rules and general FTC rules with the freshmen, to fully prepare them for the Delaware State Championship.

We worked almost every day during and after school since the beginning of the season. Today, they have a functioning robot, capable of collecting and scoring balls in every goal!! This is a great accomplishment, especially for a freshman team of students, all new to FTC.

They also came to visit our lab at DuPont, where we practiced driving matches with them on our field. We hope this better prepared them for the Delaware State Championships.

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SIGNATURE

Drew Prasad

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DATE

1/30/15

DATE

PROPRIETARY INFORMATION

Slingshot / Delaware STEM Expo

At the Delaware STEM expo we had a scrimmage with 8 teams there. It was very successful because some of these teams didn't make it to Super Regionals. So this gave them another chance for them to use ~~their~~ their robots. For the teams that qualified for Super Regionals they were able to get practice. The teams that were there were: Rhyme Know Reason, Wilmington Charter 1/2, Archmere Robarkies, Out of the Box, Vaughn Pat team, and Flaming Phoenixes.

The Delaware STEM Expo was very successful and achieved SOO MUCH for Delaware STEM. We were able to explain STEM and FTC to many little kids as well as many professionals. We were able to explain our 3D printing process to the owner of a 3D printing shop in Delaware. Georgia and Rachel were complimented by someone who does business plans and marketing for a living, on our own business plan. The coolest part was RACHEL EXPLAINED FTC TO THE GOVERNOR OF DELAWARE, JACK MARCELL!! He was very impressed and was excited about all aspects of the program. We had an amazing turnout and a lot of people enjoyed the Slingshot movie. We raised a lot of money but most importantly we were able to raise awareness to younger generations.



Ethan explaining our 3D printer work to the owner of a 3D printer shop!!

FTC Scrimmage



Continued to page

SIGNATURE

Rachel Prethymann

DATE

3/7/15

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PROPRIETARY INFORMATION



Man from UD who runs a business plan and advertising competition who was very impressed and interested in our own business plan and marketing. We might even submit our robotics business plan to the competition.

We took a selfie with one of our new fans and friend. She hung out with us all day and is now very interested in STEM.



Rachel talking to Governor Jack Markell of Delaware. He was very interested in the game Cascade Effect and the history of our team. He was also very impressed with our business plan and the organization of our team.



Continued to page

SIGNATURE

Rachel Pellyn

DATE

3/7/15

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PROPRIETARY INFORMATION

ONE OF OUR GRACIOUS SPONSORS BE BARRE F.I.T HAD THEIR GRAND OPENING AT THEIR NEW LOCATION ON JANUARY 21, 2015. THESE PHOTOS WERE FINALLY RELEASED. THE NEW CASTLE CHAMBER OF COMMERCE OFFICIATED THE OPENING. IT WAS A LOT OF FUN TO NETWORK WITH A COMMUNITY BUILT AROUND STRONG, INDEPENDENT WOMEN WHO ARE DOING AMAZING THINGS IN THE BUSINESS WORLD. IT WAS A VERY FUN EVENT TO ATTEND!



OWNER TRISH MACKAY CUTTING THE RIBBON



TRISH ACCEPTING HER OFFICIAL OPENING CERTIFICATE.

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SIGNATURE

Georgette Mackay

DATE

3-14-15

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DATE

PROPRIETARY INFORMATION

Our team is doing a Lego Drive for the Believe and Achieve Program for a Youth Center in West Chester. This area does not get exposed to STEM and it would really help them out.



Bag of legos and Inikesha

We already received one bag of legos, and are planning on donating more ourself and are asking teams at SUEC Regionals to bring legos as well.

MCE
365 FTC

**NEEDS YOUR HELP WITH OUR
LEGO DRIVE**

For the Believe and Achieve Program at the Oscar Lasko Youth Program Center

Believe and Achieve is an after school and summer camp enrichment program for at-risk children residing in the borough of West Chester.

Lego work and technology will help expose these children to elements of STEM, which minority populations are underrepresented in this country.

We are asking teams to bring in legos at competitions we are at if they can, to help this great cause!

← Lego Drive poster we have been posting on social media and other places.

Continued to page

SIGNATURE

Rachel Prattyman

DATE

3/14/15

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DATE

PROPRIETARY INFORMATION

Thomas A. Edison Charter School

2200 North Locust Street
Wilmington, DE 19802
302.778.1101 fax 302.778.2232
Salome Thomas-EL, Principal/Head of School
info@tecs.k12.de.us, www.thomasedison.charter.k12.de.us



March 5, 2015

Dear Chess Team Supporter,

We are writing to inform you that because of your outstanding support and encouragement, our students won a National Chess Championship in Dallas, Texas in May 2014! We are the first school in Delaware's history to win a National Chess title. As you are aware, our students come from some of the most impoverished areas in Delaware. With your support, Edison provides a safe and stable environment, and our students have gained acceptance into some of the best private, charter and traditional public schools in Delaware.

There are nearly 200 students in our school who play chess during the school day, in the lunchroom and after school. Your support is reaching a large number of children. In late April, we will be taking 25-30 students by chartered coach bus to defend our title at the Junior High National (Grades K-9) Chess Championship in Louisville, Kentucky. Our students are very excited about competing in the Nationals this year, which will take place from April 23rd-27th in Louisville, Kentucky. In order to provide each student on the team an opportunity to travel to Louisville for 6 days we will need your help. The cost, including transportation by coach bus, hotel, meals, and tournament fees for twenty-five to thirty students, will be approximately \$25,000-\$30,000 (\$1000 per student). Students in the inner-city rarely have the opportunity to travel, but with your support they can be exposed to many wonderful and diverse experiences.

Recent Accomplishments

2015 Mid-Atlantic Chess Championship, 1st Place, January 2015, Baltimore, Maryland
2014 National Elementary Chess Championship, 1st Place, May 2014, Dallas, Texas
2014 National Junior High Chess Championship, 2nd Place, April 2014, Atlanta, Georgia
3-Time Mid-Atlantic All-Girls Chess Champions, 2010-2013

We hope you will consider making a donation to our chess team. You can sponsor one or more students, or any amount you give will be appreciated. Please make all checks payable to *Thomas Edison Charter School* or you can donate through our "Go Fund Me" page at www.gofundme.com/EdisonChessTeam. Your donation is tax-deductible and you will receive a thank you letter confirming your donation and indicating our tax-exempt number. We will keep you updated on the progress of the students in the future. Your commitment to children is paying huge dividends. "Every Child Deserves Someone To Be Crazy About Them". They can't do it without you and you have been instrumental in their success!

Thanks for your support,

Salome Thomas-EL
Head of School

Edison Charter Chess Team Donation

We donated \$500 to Edison Charter Chess Team & STEM program in low income area.

We really love helping them out, because they are a very intelligent and ~~inspiring~~ inspiring group of kids. We hope we can visit them in person again and show off our robot (and maybe play a match of chess) soon.



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SIGNATURE

Rachel Brytton

DATE

3/17/15

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PROPRIETARY INFORMATION